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Transitioning towards more equality? Wealth gender differences and the changing role of explanatory factors over time

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Transitioning towards more equality? Wealth gender differences and the changing role of explanatory factors over time*

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Abstract

We investigate the explanatory factors that have contributed to changing wealth levels and the gender wealth gap in Germany over the period 2002-2012. In particular, we analyze the role of changes in labor supply, permanent income, portfolio composition, and marital status on wealth accumulation.
Using individual level micro data from the German Socio-Economic Panel results show that real mean wealth levels for the working age population have been decreasing for both women and men since 2002 and that the wealth gap has decreased by 13.5% to 30.700€. We show that the increased participation of women in the labor market and their occupational structure had an increasing positive role on women's wealth accumulation. Making use of the panel dimension in the data and of Oaxaca-Blinder and Firpo, Fortin, Lemieux decompositions, in comparison to previous analyses, a diminishing role of permanent income is observed, due both to a reduction in the gender difference in permanent income and in gender differences in its returns. Overall, the evidence points to more equal wealth accumulation both in terms of characteristics and returns.

JEL D31, D13
Keywords Wealth differences, Gender, SOEP, decomposition, labor supply, occupations

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1. Introduction

Given the increasing reliance of economic well-being on private assets, which also includes old age provisions in the form of pensions and retirement income, there is a growing interest in the study of private wealth. However, until recently the information about private wealth was scarce or non-existent in many European countries. With the availability of new data sources,[1] this knowledge gap has significantly diminished: economic well-being in terms of wealth is less of an unknown nowadays. Nevertheless, private wealth is typically surveyed only at the household level and what happens within the household for the most part remains a black box. Though, past literature has stressed the importance of looking at intra-household inequalities (Deere and Doss, 2006), and has shown that individual wealth differences could lead to substantial inequalities within the household (Sierminska et al., 2010; Grabka et al., 2015).

Research on wealth inequalities within the household has shown that a substantial gender wealth gap exists and points to labor market factors as being the most important ones in terms of explaining differences in wealth holdings between women and men (e.g. Sierminska et al. 2010). Yet, the literature so far has been silent on the evolution of wealth in light of changes in labor market outcomes. Our paper intends to fill in this gap. We investigate the evolution of wealth outcomes in the face of substantial changes in the labor market. We focus on whether an increased attachment to the labor market and changing occupational structure allow women to catch up in terms of wealth accumulation and consequently, the wealth gap is diminished. We also take into account other forces such as, for example, differential risk preferences and marital transitions, and see whether these affect the trends.

Our focus is on Germany between 2002 and 2012. Several developments in this country make it an interesting case study. First of all, Germany was hit hard by the 2008/2009 financial crisis. In addition, the recession was recorded as one of the strongest to hit this country after World War II: its GDP dropped by more than 5% in 2009 and this was felt throughout the economy (Eurostat, 2018). Over the period of interest, Germany's labor market also underwent substantial changes. Since the year 2000, numerous labor market reforms were introduced (the so called Hartz reforms), which helped transform Germany from being at the tail-light of European countries with respect to low unemployment and economic progress to being a front-

[1] Notably, the availability of Luxembourg Wealth Study (LWS) and the Household Finance and Consumption Survey (HFCS) data.

runner (e.g. Dustmann et al., 2014; Brenke, 2015).[2] During this time, women's labor market participation grew significantly from 55.9% in 2003 to 62.5% in 2013 (Brenke, 2015) reaching European levels. Entry into employment allowed women to earn wages that could have affected their savings and, consequently, enabled larger wealth accumulation, *ceteris paribus*.

Although eventually, unemployment among men dropped as well, during the crisis, men were initially severely affected by income losses. The manufacturing and engineering industry in Germany – which employs a majority of men – shrank by almost 20% (Burda and Hunt, 2011).[3] The precarious labor market condition for men at the beginning of the crisis and potential effects in the mid-term could have left women as the sole earner of the family, increasing their importance in the path of wealth accumulation.

A priori, our expectations would be that the financial crisis had a substantial impact on financial assets and net worth of private households. In particular, men's wealth would be affected more, given their higher wealth levels preceding the crisis and their larger income losses during the crisis due to labor market contraction. Yet, over the whole period in Germany there was almost no effect on the property market and the stock market recovered rather quickly (Grabka, 2015). Thus, wealth changes observed during this time period would rather be related to changes in the accumulation pattern than the valuation of assets.

The motivation for our paper is several fold. First, the increasing role of private assets in ensuring one's standard of living brings us to investigating the role of wealth in within gender inequalities. Second, given that women on average live a few years longer than men (Eurostat, 2015) and they have lower public pension entitlements (the gender pension gap for mandatory pensions is about 34% in OECD countries – OECD, 2012), there is pressure for women to take care of their own private wealth. We monitor the evolution of their situation. The concern with lower levels of wealth is further reinforced by the growing number of single-headed female households (UNECE, 2014; US Census Bureau, 2014) and in particular elderly women, who suffer more than men from old-age poverty (OECD, 2012). Third, as labor force participation of women heavily increased, we want to better understand if and how this factor contributed to changes in the gender wealth gap given that this has been found to be one of the most important

[2] The effect was a significant drop in unemployment rates from 10.5% to 6.9% in 10 years (between 2003 and 2013).

[3] The manufacturing and engineering industry made heavy use of short-term compensation during this time. The basic idea of short-time compensation is that a firm with financial difficulties can apply for financial aid from the Federal Employment Agency to prevent the need for layoffs. In return, the firm has to reduce working hours and pay. The replacement rate is 60% for single workers and 67% for workers with dependents.

factors contributing to this gap in the past literature. Fourth, we intend to investigate which other factors contribute to the changing wealth gap in Germany.

We first set out to investigate the explanatory factors that contribute to changing individual wealth levels before and after the Great Recession. These include a focus on whether the changing labor market supply of women had a significant impact on their wealth accumulation considering the full occupational structure for women and men. In doing so, we extend the work done by Sierminska et al. (2010) and provide a panel perspective of the wealth evolution by factors of women and men in Germany. In the second part of the paper, we extend the existing literature on the gender wealth gap and perform a detailed decomposition that points to the changes of the gap throughout the wealth distribution –not only at the mean.

Our ability to perform this analysis is governed by the availability of unique data. The German Socio-Economic Panel (SOEP) is one of rare data-sources that collects wealth information at the individual level and makes intra-household comparisons possible. With three waves that include wealth information available, we take a pre-crisis (2002-2007) and post-crisis (2007-2012) look at gender specific wealth accumulation.

We find that between 2002 and 2012 the gender wealth gap decreased. This occurred as women have been entering into full-time employment, especially as white collar workers, with a corresponding reduction in inactivity and unemployment rates; this is also reflected in an increase in their permanent income. Our estimates indicate that occupational choice is particularly important for women's wealth accumulation, with the effect becoming stronger over time similarly to that of permanent income. Decompositions indicate that the explained portion of the wealth gap decreased by about one third, and the unexplained component, which is negative, declined by about one-half. In other words, over time there is a decrease in differences in observed characteristics between men and women and the differences in returns, which favored women, decline. Thus, a move toward more equal wealth accumulation in terms of characteristics and returns and a smaller reliance on permanent income is observed. The gap is the largest at the bottom of the distribution (25^{th} percentile), and it decreases along the wealth distribution; however, at the bottom the gap also decreases the most over time, due to changing labor market and occupation returns for women.

The paper is organized as follows. The next section discusses the conceptual background within which wealth accumulation is analyzed and summarizes the literature on the gender wealth gap. Section 3 presents the SOEP data, sample and variables of interest. Section 4 describes the methods applied in the paper. Section 5 provides summary statistics of the wealth

situation in Germany over time. Section 6 reports the results of the estimation and decomposition. The summary and conclusions are found in Section 7.

2. Conceptual background and Literature review

Wealth is accumulated according to the standard life-cycle model, where the stock of assets in the current period is the outcome of past decisions regarding investment, labor market outcomes, savings and consumption.[4] In this model, wealth is accumulated during the working stage of one's life in order to be decumulated during retirement. Thus, the process of wealth accumulation before and after retirement differs in its purpose and exhibits different patterns.[5] As discussed in Sierminska et al. (2010), differences in any factors affecting wealth accumulation will give rise to a different wealth trajectory and consequently a different portfolio structure. Consequently, any type of macro-economic or life-shock will have a differential impact on individual portfolios depending on their structures. Women and men have been found to have systematically different portfolio structures, because they save differently, they invest differently with diverging levels of returns (Chang, 2010; Lersch, 2017a), and they have differential earnings resulting from a varying attachment to the labor market (Xiao, 1995; Sierminska et al., 2010). For example, women are significantly less likely to own business assets (e.g. Austen et al., 2014) and are more likely to have less risky assets than men (Sundén and Surette, 1998). One explanation for this finding is that women and men differ in risk attitudes, with women being less risk tolerant and more risk-averse (Bajtelsmit and Bernasek, 1996; Jianakopolos and Bernasek, 1998; Cartwright, 2011). A higher risk aversion for women could reduce the expected return of their portfolio and at the same time shelter them from unexpected asset fluctuations that occurred during the Great Recession. Thus, a lower risk aversion may have allowed women to lose less (or maybe even allowed to gain) during the Great Recession in Germany compared to men, but reduce their gains in the face of recovering markets. The saving patterns are also different among women and men (Fisher, 2010), and women have more difficulty with access to credit (Alesina et al., 2013). Fewer women are also in the position to pass-down self-made wealth compared to men (Edlund and Kopczuk, 2009). Addionally, financial literacy influences investment decisions (e.g. Huston 2010; Lusardi and Mitchell, 2008), and it has been shown that women have lower

[4] A discussion of the economic rationale of wealth accumulation can be found in Rossi and Sierminska (2018).
[5] Our focus is on the former.

financial knowledge than men, which leads them to have more conservative investments patterns (Almenberg and Dreber, 2015).

Another aspect that could affect the differential changes in wealth levels are marital status transitions. Marriage is a wealth-enhancing institution because married couples benefit from the joining of assets, dual incomes, and lowered expenses due to economies of scale (Vespa and Painter, 2011; Ruel and Hauser, 2013; Lersch, 2017a; Lersch et al., 2017). On the other hand, substantial income and wealth losses occur due to divorce (Jarvis and Jenkis, 1999; Zagorsky, 2005; Addo and Lichter, 2013). However, Sierminska et al. (2010) showed that a gender wealth gap already exists prior to marriage on the basis of age alone, as man in Germany are on average 3 years older than their wife. Moreover, parenthood, within or outside of marriage, has a negative effect on women's employment and wages, impairing their individual wealth accumulation (Yamokoski and Keister, 2006; Lersch et al., 2017), while there exists a marriage premium for men in wages.

One of the most important factors that explains male-female differences in wealth accumulation are labor market differences. Individuals that work in stable, full-time, higher prestige occupations will consistently earn greater income (and have higher permanent income), which will improve their ability to save (Ruel and Hauser, 2013). Lower labor market participation rate of women, their lower working hours, the glass ceiling and the ever existing gender pay gap,[6] impairs the wealth accumulation for women (Warren et al., 2001). Thus, even holding saving rates constant, women are expected to accumulate lower levels of wealth. Moreover, women and men tend to cluster in occupations with different perspectives for advancement and different exposures to labor market fluctuations. Consequently they could be differentially exposed to the labor market consequences of the Great Recession.

Most of the above-mentioned papers are all confronted with the problem that individual wealth data was not available and the analysis of gender wealth differences has typically been conducted on men and women in single households (e.g., Schmidt and Sevak, 2006; Yamokoski and Keister, 2006; Chang, 2010; Ruel and Hauser, 2013; Austen et al., 2014) or on selected wealth components (see Warren, 2006).[7] However, without individual wealth

[6] Irrespective of the increased labour market participation of women, Germany stands out with respect to the gender pay gap. The raw pay gap in Germany is one of the highest in the European Union with a value of about 21% in 2016, remaining stable since 2001 (Federal Statistical Office, 2018a).

[7] A few surveys ask for selected individual wealth components like pension wealth, e.g. the Health and Retirement Study (HRS) conducted by the University of Michigan or the UK Family Resources Survey (FRS).

information it is not possible to determine asset ownership by each individual within married couples or multi-person households.

So far, only a limited number of papers analyze individual net worth, such as Frick et al. (2007), Sierminska et al. (2010), Grabka et al. (2015), and Lersch (2017a, 2017b), making use of unique individual wealth data from the German Socio-Economic Panel study. These authors show that there is a significant gender wealth gap in Germany, not only between single men and women, but even within married couples. The main conclusion from these papers is that the large gender pay gap in Germany and low women's labor market participation in the most recent past gave rise to higher wealth accumulation for men than for women. None of these papers examine the impact of changing labor market supply of women and men on the dynamics of the wealth gap. This is where our paper comes into play.

3. Data

The German Socio-Economic Panel (SOEP) is a representative, longitudinal survey on individuals in private households (Wagner et al., 2007). The survey started in 1984 in West Germany, and extended to East Germany in 1990. Every year, about 15,000 households are interviewed (25,000 people). In 2002, there was a boost of higher-income people to better capture the upper margin of the income and wealth distribution. There were other refreshment samples in 2006, 2010, 2011, and 2012, but the refreshment of 2012 did not collect information on wealth. Although the SOEP has a special high-income sample, it does not, similarly to most household surveys, capture the very rich. In fact, the person with the highest net worth in the sample only holds almost 63 million euro in 2002. We return to this in the last section of the paper.

Information on socio-demographic characteristics, as well as, information on education, employment, earnings, income, household composition, health and satisfaction are collected every year. In addition, there are topic modules, which are replicated about every 5 years. We use the theme modules, which contain information on individual wealth mostly from 2002, 2007 and 2012; the initial sample has more than 23,000 observations in 2002, about 21,000 in 2007 and slightly more than 18,000 in 2012.

3.1. Sample

We use two different samples in the paper. The first sample is used to provide a descriptive picture representative of the German population in 2002, 2007 and 2012 – in order to show the actual evolution of wealth over time (Cross-sectional sample with cross-sectional weights).

In the second sample, we use the panel component of the SOEP in order to track the evolution of wealth over time. First, to provide a 'pre-crisis' picture of wealth we track those present in the 2002 and the 2007 samples (Panel sample 2002-2007). Next, we have a second sample of those present in the 2007 and the 2012 surveys (Panel sample 2007-2012). These two samples (which are used for Table 2 onwards) have the advantage that they follow individuals over 5 years – not only their wealth, but also other characteristics. The latter sample also includes a refreshment sample, which takes into account the changing demographic structure of the population. We opted not to use a combined panel sample over the three waves as the longer a balanced panel population is, the more selective it is by neglecting young adults, the deceased and those who migrate. Additionally, attrition hampers a meaningful analysis. Thus, we have two samples that point to some clear findings. For the panel sample, we use panel weights, which are made available by the data provider.

In both of our samples we focus on the population 25 to 64 years old, in order to capture individuals during the time spent in the labor market,[8] i.e. the accumulation stage in the standard life-cycle model.

3.2. Outcome variable

The German SOEP contains information on individual wealth, and on the following assets: own property, other real estate, corresponding debts, financial assets, business assets, tangible assets, building loan agreements, private insurances, and consumer credits. Our main dependent variable is net total wealth, in 2010 real prices. In SOEP, the missing values for wealth are corrected with imputation techniques (see Grabka and Westermeier, 2016).

We apply a 0.1% top coding, and the inverse hyperbolic sine transformation (Pence, 2006), useful to mitigate the effect of outliers and to deal with the skewness of the wealth distribution (in comparison to the log transformation, the inverse hyperbolic sine transformation allows for the inclusion of negative and 0 values).[9]

[8] A small number of people under 64, pensioners in period 1, are excluded from the sample (about 150-200 observations in total).

[9] It is defined as $\log(y_i+(y_i^2+1)/2)$ and since, except for very small values of y, the transformation is approximately equal to $\log(2y_i)$, it can be interpreted in exactly the same way as a standard logarithmic dependent variable.

3.3. Control variables

The SOEP allows for a rich set of control variables. We outline the details regarding their construction in Appendix B and list them below. We use "lagged" control variables, i.e. from the previous period, and construct variables that identify changes over the previous 5 years. We control for *demographic* variables describing the migratory background, age, age squared, living in West or East Germany, lagged level of education, the number of children below age 5 in the household, number of marriages, length of the current marriage, changes in marital status; *labor market and income* variables, such as number of months spent in full-time and in part-time work in the previous 5 years, long-term unemployment in the previous 5 years, (inverse hyperbolic real) permanent income (defined using the 5-years average), inverse hyperbolic value of household windfall income over the previous 5 years (inheritance/bequest/lottery); and lagged risk preference and the share of financial assets. In a second specification, we also include *wealth*/*portfolio* variables that identify (0/1) whether a household received inheritance (bestowals) or lottery in the previous 5 years, was able to save some money in the previous 5 years, changed property ownership; changed consumer credits ownership; as well as lagged tangible assets, lagged property debts, changes in stocks (at the household level), and an indicator variable for being worried about personal economic/financial reasons.

4. Methods

To answer our research questions, we first, focus on the causes of changes in wealth levels over the 2002-2012 sample period, separately for men and women, and then investigate the changing wealth gap through decomposition techniques.

4.1. Determinants of wealth changes

To analyze the changes of wealth over time, we estimate a wealth function on selected control variables for the two time-periods using standard OLS techniques. Taking advantage of the panel dimension of our data, we take into account changes in select variables rather than levels as the former ought to be a better predictors for the structural change we are interested in. The estimated equation is:

$$w_t = \alpha_t + \beta \boldsymbol{T_t} + \gamma \boldsymbol{Z}_{t-1} + \delta \Delta \boldsymbol{C_t} + \varepsilon_t \qquad (1)$$

where w_t is the level of (inverse hyperbolic real) net wealth in a given year; $t = \{2007; 2012\}$, $t-1 = \{2002; 2007\}$.

$\boldsymbol{T_t}$ is a vector of the control variables (age, sex, etc.) mentioned above observed in the second period (i.e. in 2007 for the comparison 2002-2007, and in 2012 for the comparison 2007-2012). $\boldsymbol{Z_{t-1}}$is a vector of control variables observed in the first period (i.e. in 2002 for the comparison 2002-2007, and in 2007 for the comparison 2007-2012), referred to as "lagged variables" such as, level of education, occupational status, and risk-loving/risk aversion. $\boldsymbol{\Delta C_t}$ is a vector of variables indicating changes in control variables between $t-1$ and t, sometimes referred to as "change variables", and here includes e.g. changes in marital status. ε_t is a random error normally distributed. β, γ, δ are vectors of parameters to be estimated by OLS.

This is a typical formulation for the evolution of wealth found in other studies, but it is augmented by the lagged variables and the change variables in order to capture the time factors in the regressions. It also includes a rich list of labor market variables that will allow us to answer our questions.

We also estimate a second specification (the "long" specification), in which we add the *wealth*/*portfolio* variables mentioned above. In the robustness section, we discuss additional specifications.

Equation (1) is estimated separately for men and women, for the periods 2002-2007 and 2007-2012.

4.2. The gender wealth gap over time

To examine the evolution of the gender wealth gap over time, before and after the crisis, we first apply the Oaxaca-Blinder (OB) method (Blinder, 1973; Oaxaca, 1973), which allows for a detailed decomposition of mean wealth for women and men, and then the Firpo, Fortin, Lemieux detailed decomposition (Firpo et al., 2009) for the whole distribution. We describe both methods below.

The Oaxaca-Blinder decomposition relies on the estimation of equation (1) for men and women separately, that we recall here:

$$w_t = \alpha_t + \beta \boldsymbol{T_t} + \gamma \boldsymbol{Z}_{t-1} + \delta \Delta \boldsymbol{C_t} + \varepsilon_t = \quad (2)$$
$$= \vartheta \boldsymbol{X_t} + \varepsilon_t$$

where included control variables remain as described above.

Then, the OB decomposition of the differences in wealth for women and men is as follows:

$$g_t = \bar{w}_t^M - \bar{w}_t^F = \quad (3)$$
$$= (\bar{\boldsymbol{X}}_{\boldsymbol{t}}^{\boldsymbol{M}} - \bar{\boldsymbol{X}}_{\boldsymbol{t}}^{\boldsymbol{F}})\hat{\vartheta}^M + \bar{\boldsymbol{X}}_{\boldsymbol{t}}^{\boldsymbol{M}}(\hat{\vartheta}^M - \hat{\vartheta}^F)$$

where M=male, F=female. The first component captures the average wealth differential which can be attributed to differences in characteristics (the "explained" effect), while the second one captures differences in returns, i.e. coefficients (the "unexplained" effect). The procedure also allows for a detailed decomposition, which identifies the contribution of each individual explanatory variable to the gap, differentiating, in turn, between the corresponding effects associated with endowments and returns.

4.3. Decomposition of the gender wealth gaps over the entire distribution

For the detailed decomposition of the gender wealth gaps over time and across the wealth distribution, we use the technique introduced by Firpo, Fortin, Lemieux (2009). It allows differences between two distributions of a variable to be decomposed and the individual contribution of each explanatory variable to be considered in the analysis via the characteristics and returns components. In our case, it will allow us to identify the explanatory factors and understand better how the differences in their distribution and returns change due to the financial crisis and the changing labor market circumstances (characteristics and returns) and contribute to the gender wealth gap in Germany. Unlike the DiNardo, Fortin, Lemieux (1996) method, it is not based on a reweighting technique and does not require computing a sizeable number of reweighting factors to compute the various elements of the detailed decomposition.[10]

The Firpo, Fortin, Lemieux method is regression based, which can be applied in a similar way as the OB method. The technique relies on the estimation of a regression, where the dependent variable is replaced by a recentered influence function (RIF) transformation and so any distributional statics can be decomposed based on the regression results.

In our case, we will focus on the differences in quantiles:

$$\Delta_{Q\tau} = (\bar{X}^M - \bar{X}^F)\hat{\vartheta}^M{}_{Q\tau} + \bar{X}^M(\hat{\vartheta}^M{}_{Q\tau} - \hat{\vartheta}^F{}_{Q\tau}) \qquad (4)$$

where $\Delta_{Q\tau}$ is the difference in quantile (or other statistic) τ of the wealth distribution. $\bar{X}^M$ and $\bar{X}^F$ are, as before, the average observed characteristics for men (M) and women (F); $\hat{\vartheta}^{M,F}{}_{Q\tau}$ are the coefficients obtained from the regression of the RIF variables of quantile $Q\tau$ on the set of explanatory variables for men (M) and women (F). As in the OB decomposition, the first terms of equation (4) captures the effect on the differential between the distributions caused by differences in characteristics (explained component). The second term corresponds to the effect

[10] A discussion of the advantages and limitations of both methods is found in Fortin et al. (2011).

of the coefficients in which the contribution of each individual explanatory factor can be distinguished.

5. Wealth in Germany and its determinants: A descriptive look

Wealth levels: According to Table 1, real mean wealth levels are decreasing since 2002 for both women and men.[11,12] Other studies also find this to be the case in Germany between 2003 and 2013 (Grabka and Westermeier, 2015). The authors show that wealth levels are decreasing mainly due to a reduction of nominal property prices, which make the bulk of individual wealth. The wealth gender gap in 2002 hovered around 35,500 Euros at the mean for the population 25-64; it declined to 33,000 Euros in 2007 and declined further to about 30,700 in 2012, with an overall reduction of almost 5,000 Euros, i.e. a reduction of 13.5%. Indeed, the decline in net worth was larger in absolute value for men than for women (9,800 Euros versus 7,600 Euros, in 2002-2007; 9,000 Euros versus 6,500 Euros, in 2007-2012). The effect at the median confirms the tendency, with a total reduction of about 3,000 Euros in the median gender gap (2002-2012). However, while in the pre-crisis period, median wealth for men decreased by about 6,700 Euros and by about 3,000 Euros for women, in the subsequent period, the reduction was very small for both. Thus, at the median the wealth gender gap remains virtually unchanged between 2007 and 2012. The different trends in terms of the median and mean gap during the second period suggest differential wealth changes along the wealth distribution for women and men and confirm the need for decompositions beyond the mean. We will explore the sources of this differential change as outlined in the previous sections.

Demographic variables and marital status: Table 2 provides the descriptive statistics in the sample used for the empirical analysis. Women are slightly younger, have more children, and are less educated than men, although the probability of having a university degree increases for both of women and men over time. When it comes to marital changes over the last 5 years, we find that in 2002/07 there is a small gap in favor of women in terms of who remains married. Men are also more likely to remain never married, but this rate is increasing for both men and women (25-30% versus 18-23%).

[11] These results are based on the cross-sectional sample representative of the German population in the respective years and are an appropriate description of the gender wealth gap in Germany. These descriptive findings are confirmed by the Income and Expenditure Survey (EVS) of the German Federal Statistical Office (2018b).

[12] As explained in the Data section, the results for the panel samples used in the empirical analysis, while they can be used for the regressions, slightly differ and are only partially comparable.

Labor market changes: Women increased the number of months spent working in full-time employment (by about 4 months in the last 5 years) and decreased the number of months spent in part-time employment (over two months). We observe a large drop in the share of women that are not in employment (by 6 ppt). Thus, since 2007 women are entering the labor market as full-time rather than part-time workers. Analogous numbers for men are not changing much. The number of men and women in long-term unemployment is decreasing.

In terms of occupations, women are for the most part entering white collar jobs and leaving blue collar jobs. Because of changes in their labor market participation and in their occupational structure, female permanent income is increasing by about 2,000 Euros, up to 18,000 Euros. For men, it remains about double this (34,000 Euros), but is not changing over time.

Wealth portfolios and Risk: Table 2 and Table 3 also provide information on movements occurring in the wealth portfolio of women and men and over time. A changing wealth portfolio could be evidence of changing wealth levels and to some extent explain the observed differences. The tables indicate that women have a lower preference for risk than men. Both men and women save regularly in a similar fashion. The household level inheritances and gifts received decreased for men by about 20,000 Euros on average compared to the previous period, while women's is not changing although exceeding that of men's.[13] Table 3 indicates that men in 2012 are more likely to own their house than women (by about 4 ppt) and nearly every type of asset (other real estate, financial, business, and tangible) as well as debt (building loan and private insurance, consumer credits).

Summary: Thus, women's labor market attachment, education and participation in white collar employment could be driving their increasing permanent income and thus affecting the way their wealth has been changing. Other aspects, which could also affect wealth levels, are changes in marital status and the changing composition of the portfolio.

6. Results: multivariate analyses

6.1. Changes in wealth levels: the role of explanatory factors

At the outset of the analysis, we estimate a wealth equation in order to isolate the factors that could affect changes in wealth levels and compare them for women and men. We regress the

[13] Receiving inheritances or lottery winning are rather rare events for the observed population, and these changes should be interpreted with caution.

inverse hyperbolic sine of wealth in the two periods on multiple explanatory factors as specified in equation (1).[14] We perform robustness checks in the following sub-section. Table 4 shows the results for the determinants of wealth over time and across genders. We focus the discussion on the main variables of interest: labor market and income, risk and portfolio, and marital status.

Demographic variables: Being a migrant has a significant negative effect on wealth for both men and women. Usually, one can argue that this is due to differences in the labor market (possibly discrimination), however we control for this aspect. Thus, it seems that in Germany a migrant "disadvantage" is present that affects wealth accumulation, in addition to the one stemming from the labor market (as has been well documented previously, for example, in Bauer et al. 2011 and in Mathae, Porpiglia and Sierminska, 2011), which in part may be due to remittances. However, the effect is declining over time, which could also suggest the changing composition of migrants over time. Living in East Germany is also a strong factor determining wealth accumulation, which impairs absolute wealth changes due to persistenly lower earnings and lower wealth levels in that formerly socialist region.

The higher the educational level, the higher is absolute wealth. Besides yielding higher earning profiles, higher education is associated with higher financial literacy, which may facilitate better investment decisions. Having a university education seems to be more benefical for women than for men when it comes to wealth, although the impact for men has substantially increased.

Labor market and income: As discussed, Germany underwent some interesting labor market changes over the past decade and we examine these with particular interest. Apart from labor supply, we also examine occupations. Full-time employment, which facilitates savings on a regular basis, has a positive effect on wealth. For women the effect is significant only in the 2007 period and it disappears in 2012, when the effect of occupations and of permanent income becomes stronger (and significant for part-time employment). Long-term unemployment has an increasing negative effect on wealth accumulation for men and a decreasing negative effect for women. Indeed, income losses due to job losses are often offset by reduced saving or dissaving.

Being self-employed has an increasing positive effect on wealth for both sexes (stronger for women). When it comes to occupations, it seems that the type of occupation chosen is

[14] We also performed the same regressions with changes in wealth as dependent variables, but the results do not differ significantly. For simplicity, we decided to retain only one specification.

particularly important for women, with the effect becoming stronger over time. Compared to blue collar workers, being in a white collar profession has a positive effect on wealth, but it is fairly stable for men, while it doubles for women in the second period, and similarly for lower level civil servant jobs.

Permanent income has a positive and significant, albeit decreasing effect on wealth for men. For women, the effect becomes significant in 2012, reducing the overall gap of income returns.

Marital status changes: Changes in marital status could have a substantial effect on wealth levels. Divorce, which is costly, has a strong negative effect on wealth, and the effects are of similar magnitude for women and men. Although widowhood is expected to bring a positive effect on wealth, in our sample – which focuses on those in the labor market and consequently is fairly young – there is no significant effect. As discussed in Section 2, one would expect a positive effect for those getting married compared to those unmarried, as both partners now profit from the joining of assets, dual incomes, and lowered expenses from economies of scale. However, here our reference category is always married, signifying that those with longer marriage tenure are as well off or slightly better off than newly married couples. The effect diminishes for women. One potential explanation for this finding could be that marriage usually coincides with childbirth and finding a new home, these additional costs may interfere with the wealth accumulation process. It can also be that the number of marital status changes in the 5 years is too small to identify significant changes. We observe a significant negative effect for those that are always never married or stayed single,[15] with larger coefficients for women.

The number of marriages has a negative effect on wealth levels, which is stronger for men. Marital property regime is in place in Germany and women may somehow be compensated due to divorce. The negative effect increases over time and more so for women, possibly due to their increasing contribution to the settlement in case of divorce.

Portfolio effect: The change in wealth also depends on the performance of the portfolio and, as seen from Table 3, this is different for women and men. If the portfolio consists of risky assets with a high expected return it will most likely perform better during an expansion (i.e. 2002-2007) compared to a financial crisis (i.e. 2007-2012), while a less risky portfolio with low expected returns would exhibit lower losses as well as lower gains. A larger share of financial assets contributes positively to wealth and the effect is stronger for men (although

[15] Note that we distinguish between never married and single individuals (divorced, separated, and widowed).

increasing for women). This confirms the fact that women have a larger share of assets in real estate and possibly a less risky portfolio. In the Appendix Table A.2, we include portfolio controls to examine the effect of portfolio decisions on the direction of wealth. These controls include variables relating to property, consumer debts, and stocks.[16] In accordance with the literature, homeowners (reference category) have the highest wealth levels. Renting and selling property has a negative effect of similar magnitude with the effects being stronger for women and increasing over time among property sellers. Newly acquired property also has a somewhat stronger, negative effect for women. Compared to people that have consumer debts in both periods, those that get rid of consumer debts show a positive wealth change, as they are forced to pay back their loan on a regular basis. Stock owners also seem to have higher levels of wealth compared to those that do not, and the effects are similar for women and men. Thus, it seems that wealth differences stem more from wealth levels and how the money is invested and not specifically that there is a gendered effect on wealth, which would stem from differential returns of some kind. The gender specific effects of the portfolio composition on wealth that are observed are very small for the main components: property, consumer credit, and stock.

6.1.1. Robustness checks

As a robustness check on the determinants of wealth changes, we also estimate equation (1) without controlling for the occupational status. The results for our labor market variables remain robust in this exercise (Table A.3).

We also estimate equation (1) only for those that were married in $t-1$, to investigate the role of spouse/household characteristics that are not available for single people. In this case, we control for the (lagged) permanent income of the spouse in $t-1$, which has a positive and increasing effect on women's wealth, and for the (lagged) bargaining power in $t-1$, which is not significant (Table A.4). Here, we observe few changes: the association between labor market participation and wealth is confirmed, whereas the type of occupation does become less important, particularly for women and particularly in the second period. With respect to the

[16] In the first specification (Table 4), we try to isolate the influence of individual characteristics on wealth accumulation, while in the second specification (see Appendix Table A.2, we focus on how differences in the portfolio composition affect wealth accumulation, when controlling for other relevant control variables. When adding portfolio variables, other controls have smaller importance, both in terms of magnitude and of significance, and this is not surprising, as wealth levels and portfolio composition are highly interrelated.

changes in marital status, widowhood has no effect as before and divorce maintains its direction and magnitude.

6.2. Comparing the gender wealth gap in different periods

Having shown that both labor market participation is changing for women and that there is in fact a changing role of labor market, occupations and income variables that could explain the changes in wealth levels for women and men, we move onto investigating to what extent they contribute to explaining the changing wealth gap among women and men in Germany.

Previous work showed that labor market factors contribute a substantial amount to explaining the gender wealth gap across the distribution (Sierminska et al., 2010). We investigate this further by incorporating additional covariates and examining this both at the mean and across the distribution. Although the process of women's increased labor force participation is not completed, we may nevertheless see some notable changes.

6.2.1. Oaxaca-Blinder decomposition

The Oaxaca-Blinder decomposition of the gender wealth gap for the overall population is presented in Table 5. First of all, the wealth gap is largely due to differences in income (2007) and in labor market outcomes (2012). The differences in returns reduce the gap (the unexplained component is negative). The explained portion decreases by about one third, and the unexplained component, which is negative, declines by about one-half. In other words, differences in characteristics between men and women decline from one period to the next and so do the differences in returns, which favor women. Thus, there seems to be a move toward more equal wealth accumulation in terms of both characteristics and returns.

In 2007, age, education, income, number of marriages and length ("other marital variables") contributed to explaining the gap. The differences in age between women and men stopped playing a role in explaining wealth differences in 2012, but the differences in returns associated with age contributed to a decrease in the gap substantially and significantly. The level of education contributed to explaining the differences in the gap similarly in both periods, but the returns only contributed to closing the gap in 2007 and no longer in 2012. Indeed, the higher return to education for women which is present in 2007, in 2012 is at the same level for both sexes.

Labor market variables began contributing to the gap in 2012 as the share of women in full-time employment increased. In 2007, this was more the role of permanent income, whose

role fell by one third in 2012. Moreover, from Table 4 we noticed that the permanent income has a positive effect for men, while for women the effect is much smaller and only significant in 2012. Consequently, the role of differences in permanent income levels substantially decreased from 2007 to 2012, as well as the role of returns to permanent income, which largely affected the gap before.

Apart from the less significant role of returns to permanent income and age, the greatest factor diminishing the gap in 2012 is the return to occupations. In both periods, differences in the occupational status are not significant in explaining the level of wealth, but the returns are. In 2012, they contribute to decreasing the wealth gap. In both periods, women are more likely to be in white collar jobs than before and more likely than men. We can imagine that as women continue to enter the labor market, into well-trained and consequently better paid occupations, and as their education level improves, their permanent income will have an increasing effect on closing the wealth gap, and differences in income levels and returns will continue narrowing.

Since factors may be offsetting each other at the mean (particularly those at the bottom of the distribution in relation to those at the top), next we investigate what is happening throughout the wealth distribution.

6.2.2. Firpo, Fortin, Lemieux decomposition for the whole distribution

The results from the detailed decomposition discussed hereafter serve to complement the OB decomposition at the mean. We present results for the 25th, 50th and 90th percentile in Table 6 (we do not examine the gap at the 10th percentile as wealth levels are virtually non-existent). Interestingly, the gap is largest at the bottom of the distribution (25th percentile), and it decreases along the wealth distribution; however, at the bottom the gap decreases the most between 2007 and 2012, mainly thanks to labor market and occupation returns for women. Moreover, we should keep in mind that we miss the top-wealth, and our estimates of the top-gap are likely a lower bound. At the median and at the top of the distribution, there are only very small changes in the wealth gap.

The gap is largely due to differences in characteristics, while differences in returns reduce the gap. Over the period considered, the share explained and unexplained falls, especially at the bottom of the distribution, and the unexplained portion at the 90th percentile becomes no longer significant in the second period. These findings confirm our results at the mean – although with more detail.

Additional factors with respect to the OB decomposition that contributed to explaining the gap in 2007 include labor market participation at the bottom of the distribution and changes in marital status, especially at the median. Occupation and risk preferences also contributed to the gap at the 90th percentile, though with different signs: these factors were offsetting each other at the bottom and at the top of the distribution in the mean specification.

We find that age no longer played a role in 2012 and that the role of education in explaining the gap slightly decreased over time. As was the case at the mean, the labor market experience differences began to explain the wealth gap significantly at the median in the second period, and their effect at the bottom of the distribution increased.

The returns to changes in the marital status are significant throughout the distribution and contribute to an increase of the gap. Returns to education, instead, contribute significantly to the reduction of the gap. The returns to labor market variables contribute to the reduction of the gap only at the top of the distribution in a consistent manner over time. Thus, high wealth women have favorable returns in the labor market compared to men. Additionally, the returns to labor market variables become significant at the 25th percentile indicating that in 2012 low wealth women now have an advantage over men.

Differences in occupational status consistently and significantly contribute to the gender wealth gap at the top of the distribution. The returns have a statistically significant negative effect at the 25th percentile, especially in 2012, once again confirming the importance of changes in the labor market to reduce the wealth gap, particularly at the bottom of the wealth distribution. As in Sierminska et al. (2010), differences in permanent income play a sizeable role, with a decreasing effect along the wealth distribution; this role diminishes in the second period, when the gap decreased. The returns to permanent income also contribute to the gap substantially, but this effect largely diminishes in the second period, similarly as it happens at the mean.

Risk preference differences do matter at the top of distribution and are significant in both periods.

The detailed decomposition allowed us to confirm the increasing role of labor market variables including occupational choice throughout the wealth distribution (with favorable returns for women) and the diminishing effect of permanent income on the gender wealth gap. A persistent role of risk preferences is also noted at the top of the distribution that was hidden at the mean.

7. Limitations, discussion and extensions

One limitation of our results is related to the underrepresentation of multi-millionaires and billionaires in SOEP (Westermeier and Grabka, 2015). The fact that there are very few women among the top 1,000 riches persons in Germany, as argued by the rich list of the German Manager-Magazin (Neßhöver, 2017), indicates that our estimates of the wealth gap can be treated as a lower bound of the real gap at the top. Examining the wealth gap for the top 1% or 5% would most likely lead us to conclude the existence of substantial wealth gap in that part of the distribution due to the glass-ceiling, among other factors.

A second limitation is that among married couples and couples more generally, we do not have a perfect measure for power within couples, which could explain better the imbalances within couples. As well as, special agreements couples may have agreed to may explain these imbalances. This is left for future work.

We also mention a technical limitation: our measure of wealth is net worth. This concept does not include pension entitlements from statutory or occupational pension schemes (as is the case for the majority of wealth surveys like the HFCS). However, pension entitlements from pay-as-you-go pension schemes do not fulfill typical wealth functions: pension entitlements do not generate additional income like interest or dividends; they cannot be used as collateral, and cannot be fully passed over to third party and cannot be liquefied. Thus, there is no special power arising from pension entitlements. Still, one might expect that the gender wealth gap will increase if this wealth component would be considered, due to the still existent significant labor market differences between the sexes; also, probably the decrease of the gap over time would be more marked, thanks to the positive effect of female entrance into the labor market not only on immediate income, but also on future pension.

8. Summary and conclusions

In this paper we investigate the way wealth accumulation has changed for women and men over the past decade. Germany had a relatively strong, albeit short recession in terms of GDP and experienced substantial changes in the labor market. Women profited significantly from the labor market changes and increased their participation in the work force by over 10 ppt during the 2000's. We investigate how each of these in turn contributes to the change in wealth accumulation and whether we can observe any changes in the way wealth has been accumulated over time in Germany.

We find that the gender wealth gap for the working-age population – as measured by net worth – has declined from about 35,500 Euros (2002) to 30,700 Euros (2012). This is mostly due to a stronger decline in real net worth for men compared to women.

Our regression results indicate that there has been an increase in the role of labor market covariates particularly for women in the accumulation of wealth. Occupations especially play a significant and important role in this respect. Consequenlty, permanent income also has an increasing effect on female wealth accumulation, which was absent in the first period.

When we decompose the gender wealth gap over time, we find a declining role of differences in characteristics in explaining the gap, as well the returns in these characteristics (unexplained part), suggesting that both differences in characteristics and in returns have diminished; thus, there seems to be a move toward a more equal wealth accumulation in terms of characteristics and returns. In our decompositions, we find an increasing role of labor market variables (full-time and part-time employment, unemployment) and a decreasing role of permanent income. The return to occupations that women are attracted to has an increasing, negative effect on the wealth gap over time. The role of differences in changes in marital status (and their returns) exhibit a stable role in explaining the gender wealth gap over time.

Further research could envision expanding our measure of permanent income, which considers only 5 years, and develop a measure of life-time permanent income in order to provide additional insights into the role of labor market variables on the evolving gender wealth gap.

Future research on the gender wealth gap could also focus on younger age cohorts as women achieve higher educational degrees among these than their counterparts. It is an open question whether this yields to a decrease of the wealth gap or whether the still existing gender pay gap overlays this general development.

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TABLES

Table 1. Mean and median wealth over time, by gender, and gender gap. Cross-sectional sample, population aged 25-64 (2010 Euros)

		Mean	Median
Men	2002	112,516	31,643
Men	2007	102,678	24,974
Men	2012	93,617	24,976
Women	2002	77,030	18,059
Women	2007	69,393	15,088
Women	2012	62,902	14,409
Gender gap	2002	35,487	13,585
Gender gap	2007	33,284	9,886
Gender gap	2012	30,715	10,567

Source: SOEPv30, individuals aged 25-64..
Note: Cross-sectional weights are used.

Table 2. Descriptive statistics, overall population aged 25-64

Variables	Men 2007	Men 2012	Women 2007	Women 2012
Wealth	101,217.21	97,780.90	71,617.98	57,831.75
IHS wealth	7.79	7.61	7.26	6.87
Migrant	0.15	0.15	0.17	0.18
Age	45.44	45.37	44.67	44.83
Number of children	0.10	0.09	0.12	0.11
Lagged low educated	0.13	0.11	0.14	0.11
Lagged lower vocational educ.	0.52	0.51	0.54	0.53
Lagged upper vocational educ.	0.15	0.15	0.14	0.15
Lagged university degree	0.18	0.20	0.15	0.17
East Germany	0.20	0.20	0.18	0.19
Full-time employment (months) [a]	47.40	47.88	20.98	24.98
Part-time employment (months) [a]	2.16	1.80	16.37	14.18
Long-term unemployment [a]	0.17	0.13	0.16	0.12
Lagged not employed	0.02	0.01	0.20	0.14
Lagged trainee	0.06	0.05	0.05	0.06
Lagged self employed	0.09	0.10	0.04	0.04
Lagged white collar	0.34	0.33	0.43	0.49
Lagged blue collar	0.36	0.36	0.17	0.14
Lagged low civil servants	0.03	0.03	0.01	0.02
Lagged high civil servants	0.04	0.04	0.02	0.02
Permanent income [a]	34,329.79	34,082.86	16,565.16	18,210.13
Always married	0.53	0.48	0.55	0.49
Married to widowed	0.00	0.00	0.01	0.01
Married to divorced/separated	0.04	0.04	0.04	0.03
Never married to married	0.05	0.05	0.05	0.05
Always never married	0.25	0.30	0.18	0.23
Single to married	0.03	0.03	0.03	0.04
Single (other)	0.10	0.09	0.14	0.15
Number of marriages [b]	1.19	1.18	1.21	1.23
Length of marriage [b]	15.94	15.17	15.97	14.71
Lagged risk preferences	5.01	5.03	4.24	4.21
HH Value inherit./bestowal/lottery [c]	46,536.89	28,428.29	52,948.96	54,455.94
Financial assets share	0.20	0.20	0.28	0.35
Hold own property	0.33	0.32	0.29	0.27
Sell own property	0.03	0.03	0.04	0.04
Buy own property	0.09	0.09	0.10	0.09
Always tenant	0.55	0.57	0.57	0.61
Hold consumer debts	0.10	0.13	0.06	0.13
No more consumer debts	0.09	0.11	0.08	0.09
Acquire consumer debts	0.15	0.12	0.13	0.10
No consumer debts	0.66	0.63	0.73	0.68
Lagged tangible assets	0.09	0.08	0.08	0.05
Lagged property debts	0.25	0.25	0.23	0.21
HH Hold stocks	0.22	0.22	0.21	0.21
HH Sell stocks	0.12	0.11	0.13	0.11
HH Buy stocks	0.09	0.06	0.09	0.08
HH No stocks	0.56	0.61	0.57	0.61
HH Inheritances/bestowals	0.12	0.16	0.12	0.15
HH Lottery	0.01	0.01	0.01	0.02
HH Savings	0.82	0.82	0.80	0.81
Lagged worried for financial reasons	1.99	2.06	2.01	2.09
Observations	5,240	3,813	5,824	4,388
Weighted obs.	4,922	3,591	5,504	4,151

Source: SOEPv30, individuals aged 25-64. Panel samples 2002–2007 and 2007–2012 are used.
Note: [a] It refers to the previous 5 years (e.g. 2002-2007; 2002-2012). [b] It refers to those who have been married at least once (i.e. excluding never married) (obs: 3958, 2798, 4678, 3460). [c] Here shown the value only for people with positive inheritances/gifts/lottery (obs: 699; 602; 797; 704) – for all the others the value is 0.
IHS stands for "inverse hyperbolic sine" transformation; HH stands for household.

Table 3. Portfolio composition: Percentage of people who have the following assets. Overall population aged 25-64

Variables	Men 2007	Men 2012	Women 2007	Women 2012
Own property	0.42	0.40	0.39	0.36
Other real estate	0.12	0.13	0.10	0.09
Financial assets	0.49	0.48	0.44	0.43
Business assets	0.08	0.09	0.03	0.03
Tangible assets	0.06	0.08	0.06	0.07
Building loan and Private insurances	0.69	0.68	0.61	0.60
Consumer credits	0.24	0.26	0.19	0.22
*Property debts**	0.65	0.63	0.65	0.62
*Other real estate debts**	0.52	0.53	0.45	0.55

Source: SOEPv30, individuals aged 25-64. Panel samples 2002–2007 and 2007–2012 are used
Note: * Conditional on having that type of property.

Table 4. Determinants of wealth for overall population aged 25-64, by gender

y = IHS wealth	Men 2007	Men 2012	Women 2007	Women 2012
Migrant	-1.95***	-1.49***	-1.90***	-1.27***
	(0.26)	(0.31)	(0.24)	(0.28)
Age	0.08	-0.04	0.14+	0.18+
	(0.09)	(0.10)	(0.08)	(0.09)
Age squared	0.00	0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Number of children	-0.16	-0.11	-0.13	-0.76*
	(0.27)	(0.32)	(0.25)	(0.30)
Lagged lower voc. education	0.53+	1.38***	1.50***	1.08***
	(0.29)	(0.36)	(0.25)	(0.31)
Lagged upper voc. education	0.91*	2.04***	1.98***	1.68***
	(0.35)	(0.43)	(0.31)	(0.38)
Lagged university degree	1.38***	2.54***	2.61***	2.63***
	(0.35)	(0.42)	(0.31)	(0.37)
East Germany	-0.72**	-1.12***	-0.90***	-0.98***
	(0.22)	(0.24)	(0.21)	(0.23)
Full time employment (months)	0.03***	0.02*	0.01*	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)
Part time employment (months)	0.01	-0.01	0.01	0.01*
	(0.01)	(0.01)	(0.01)	(0.01)
Long term unemployment	-2.50***	-2.89***	-2.72***	-2.03***
	(0.34)	(0.43)	(0.28)	(0.34)
Lagged Not employed	1.28	0.84	0.43	1.83***
	(0.82)	(0.87)	(0.32)	(0.37)
Lagged Trainee	0.49	0.10	0.97*	2.34***
	(0.47)	(0.57)	(0.43)	(0.54)
Lagged Self-employed	1.29***	1.65***	1.12**	1.89***
	(0.33)	(0.38)	(0.41)	(0.45)
Lagged White collar	0.91***	0.95***	1.09***	2.04***
	(0.24)	(0.27)	(0.24)	(0.27)
Lagged Low civil servants	0.75	2.57***	2.20**	2.97***
	(0.57)	(0.69)	(0.80)	(0.86)
Lagged High civil servants	0.24	0.99*	1.40**	1.43**
	(0.45)	(0.50)	(0.49)	(0.55)
IHS permanent income	0.78***	0.31***	0.00	0.13*
	(0.12)	(0.09)	(0.04)	(0.05)
Married to widowed	1.41	3.09	0.64	-1.75+
	(1.81)	(1.98)	(0.92)	(0.99)
Married to divorced/separated	-2.35***	-2.26***	-2.65***	-2.32***
	(0.51)	(0.63)	(0.45)	(0.57)
Never married to married	-0.47	-0.06	-0.86+	0.34
	(0.49)	(0.57)	(0.48)	(0.55)
Always never married	-2.01***	-1.66**	-2.47***	-2.77***
	(0.50)	(0.57)	(0.47)	(0.52)
Single to married	-0.00	-1.15+	-1.54**	-0.43
	(0.56)	(0.64)	(0.53)	(0.58)
Single (other)	-1.93***	-1.36**	-2.22***	-2.49***
	(0.43)	(0.50)	(0.38)	(0.43)
Number of marriages	-1.34***	-1.61***	-0.94***	-1.49***
	(0.23)	(0.27)	(0.20)	(0.22)
Length of marriage	0.01	0.03	0.00	-0.01
	(0.01)	(0.02)	(0.01)	(0.01)
Lagged risk preferences	-0.05	-0.06	0.01	-0.04
	(0.04)	(0.05)	(0.04)	(0.04)
HH Value inheritances/bestowal/lottery	0.13***	0.08**	0.17***	0.09***
	(0.02)	(0.03)	(0.02)	(0.02)
Financial assets share	0.50***	0.51***	0.44***	0.46***
	(0.10)	(0.11)	(0.08)	(0.09)
Constant	-4.32+	2.99	1.85	-0.64
	(2.34)	(2.48)	(1.92)	(2.30)
Adj. R2	0.21	0.20	0.19	0.18
Observations	5,240	3,813	5,824	4,388

Source: SOEPv30, individuals aged 25-64. Panel samples 2002–2007 and 2007–2012 are used.

Note: + p-value <0.10; * p-value < 0.05; ** p-value < 0.01; *** p-value < 0.001. Standard errors in parentheses. Controlling for missing variables. Reference categories: German, lagged low educated, West Germany, lagged blue collar, always married. HH stands for household.

Table 5. Oaxaca-Blinder decomposition of the wealth gap, overall population aged 25-64

	2007		2012	
Overall gap decomposition	**Means**	**SE**	**Means**	**SE**
Men	8.449***	0.096	8.490***	0.111
Women	7.969***	0.088	7.974***	0.101
Difference	0.479***	0.130	0.517***	0.150
Explained	1.580***	0.250	1.043***	0.239
Unexplained	-1.101***	0.269	-0.526*	0.267
Explained gap				
Migration	0.005	0.014	0.013	0.012
Age	0.055**	0.021	0.023	0.022
Kids	0.001	0.002	0.000	0.001
Education	0.051***	0.015	0.049**	0.019
Residence	-0.007	0.006	-0.006	0.011
Labor market participation	0.364	0.245	0.615**	0.229
Occupation	-0.016	0.024	-0.000	0.031
Income	1.138***	0.171	0.351***	0.100
Marital status	-0.035	0.030	-0.054	0.037
Other marital variables	0.085**	0.030	0.121**	0.039
Risk preferences	-0.040	0.035	-0.052	0.041
HH Value inherit./bestowal/lottery	-0.006	0.009	-0.002	0.007
Financial assets share	-0.016+	0.010	-0.013	0.011
Other (missing)	0.001	0.005	-0.002	0.006
Unexplained gap				
Migration	-0.008	0.056	-0.031	0.057
Age	-1.340	2.643	-5.932+	3.080
Kids	-0.003	0.044	0.068	0.046
Education	-0.885**	0.312	0.180	0.405
Residence	0.043	0.071	-0.034	0.084
Labor market participation	0.468	0.503	-0.101	0.515
Occupation	-0.162	0.194	-0.677**	0.238
Income	7.427***	1.173	1.771+	0.981
Marital status	0.181	0.182	0.352	0.230
Other marital variables	-0.364	0.492	0.335	0.547
Risk preferences	-0.247	0.231	-0.094	0.260
HH Value inherit./bestowal/lottery	-0.058	0.048	-0.008	0.060
Financial assets share	0.013	0.029	0.012	0.032
Other (missing)	0.005	0.026	0.008	0.028
Constant	-6.172*	3.026	3.625	3.382

Source: SOEPv30, individuals aged 25-64. Panel samples 2002–2007 and 2007–2012 are used.

Note: + $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$. Controlling for all the variables listed in Table 4. Labour market participation include full time, part-time, unemployment, not employed. For the variables included in the other groups, see the Appendix B; HH stands for household.

Table 6. Firpo decomposition, overall population aged 25-64

	2007			2012		
Overall gap decomp.	**Q25**	**Q50**	**Q90**	**Q25**	**Q50**	**Q90**
Men	8.941***	11.375***	13.326***	8.954***	11.425***	13.257***
Women	7.489***	10.947***	12.998***	8.430***	10.956***	12.948***
Difference	1.452***	0.428***	0.328***	0.523	0.468***	0.309***
Explained	3.058***	0.619***	0.501***	2.026***	0.576***	0.381***
Unexplained	-1.606**	-0.191	-0.173*	-1.502+	-0.107	-0.072
Explained gap						
Migration	0.010	0.002	0.001	0.022	0.005	0.003
Age	0.083*	0.029*	0.016*	0.024	0.015	0.006
Kids	0.001	0.000	0.000	-0.001	0.000	0.000
Education	0.091***	0.028***	0.017***	0.079*	0.022*	0.013*
Residence	-0.007	-0.006	-0.005	-0.007	-0.004	-0.004
Labor market part.	1.150**	-0.113	-0.108	1.263***	0.281*	0.125
Occupation	-0.049	0.010	0.073***	-0.005	-0.004	0.060***
Income	1.831***	0.666***	0.464***	0.759***	0.259***	0.148***
Marital status	-0.037	-0.033*	-0.004	-0.071	-0.050**	-0.007
Other marital var.	0.086+	0.014	0.013	0.121*	0.051**	0.009
Risk preferences	-0.059	0.020	0.033**	-0.133*	0.007	0.025+
HH Value inherit.	-0.009	-0.003	-0.002	-0.004	-0.001	-0.000
Financial assets share	-0.034+	0.002	0.002	-0.026	-0.003	0.001
Other (missing)	0.001	0.001	0.001	0.004	-0.001	0.002
Unexplained gap						
Migration	0.646***	0.034	0.001	0.925**	0.024	0.013
Age	-2.202	0.023	-1.308	-30.629*	-1.006	0.540
Kids	-0.083	-0.008	-0.010	0.376+	0.009	0.012
Education	-5.202***	-0.296*	-0.110	-9.004***	-0.236	0.051
Residence	0.258	0.027	0.032	1.028*	0.016	0.004
Labor market part.	0.539	0.077	-0.404*	-4.332*	-0.389	-0.395*
Occupation	-0.951+	-0.088	-0.047	-8.622***	-0.217+	-0.049
Income	10.110***	4.019***	3.037***	-5.791	1.747***	1.372***
Marital status	1.774***	0.377***	-0.014	5.513***	0.307*	0.180*
Other marital var.	1.436	0.386	-0.046	8.501**	-0.018	0.323+
Risk preferences	-0.936	-0.071	0.082	-0.449	0.047	0.134
HH Value inherit.	-0.450***	-0.089***	-0.017	-0.816**	-0.047	-0.042*
Financial assets share	-0.191**	-0.035*	-0.002	-0.597***	-0.014	0.007
Other (missing)	-0.006	-0.002	-0.011	-0.111	-0.011	-0.000
Constant	-6.349	-4.545**	-1.357	42.508*	-0.320	-2.223*

Source: SOEPv30, individuals aged 25-64. Panel samples 2002–2007 and 2007–2012 are used.

Note: + $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$. Controlling for all the variables listed in Table 4. Labour market participation include full time, part-time, unemployment, not employed. For the variables included in the other groups, see the Appendix B; HH stands for household.

APPENDIX A

Additional Tables

Tab. A.1 Mean and median wealth over time, by gender, and gender gap. Panel sample (2010 Euros)

		Mean			Median		
		Overall	Married in period 1	Never married in period 1	Overall	Married in period 1	Never married in period 1
Men	2002	101,677	120,459	52,746	28,217	50,790	7,901
Men	2007	100,867	125,298	60,237	29,136	53,695	10,406
Women	2002	73,001	88,116	41,817	16,930	30,949	4,740
Women	2007	71,677	87,405	44,563	17,690	33,819	7,960
Gender Gap	2002	28,676	32,343	10,929	11,287	19,841	3,160
Gender Gap	2007	29,190	37,894	15,674	11,446	19,876	2,445
Men	2007	98,869	118,433	71,300	23,413	41,623	10,406
Men	2012	96,406	122,839	61,816	28,050	49,952	9,585
Women	2007	58,599	73,775	33,816	13,736	26,327	5,411
Women	2012	57,603	77,688	29,871	13,256	30,019	6,724
Gender Gap	2007	40,270	44,658	37,484	9,677	15,297	4,995
Gender Gap	2012	38,803	45,152	31,945	14,793	19,933	2,861

Source: SOEPv30, individuals aged 25-64. Panel samples 2002–2007 and 2007–2012 are used.
Note: Panel weights are used.

Table. A.2 Determinants of wealth for overall population aged 25-64, by gender. Long regressions

y = IHS wealth	Men 2007	Men 2012	Women 2007	Women 2012
Migrant	-0.92***	-0.78**	-0.76***	-0.44+
	(0.22)	(0.26)	(0.19)	(0.23)
Age	0.05	-0.08	0.10+	0.13+
	(0.07)	(0.08)	(0.06)	(0.08)
Age squared	0.00	0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Number of children	-0.39+	-0.16	-0.62**	-0.57*
	(0.23)	(0.27)	(0.20)	(0.24)
Lagged lower voc. Education	0.19	1.02***	0.98***	0.52*
	(0.24)	(0.30)	(0.20)	(0.25)
Lagged upper voc. Education	0.44	1.45***	1.08***	0.61*
	(0.30)	(0.36)	(0.24)	(0.30)
Lagged university degree	0.28	1.56***	1.45***	1.34***
	(0.29)	(0.35)	(0.25)	(0.30)
East Germany	-0.20	-0.60**	-0.13	-0.36+
	(0.19)	(0.20)	(0.17)	(0.19)
Full time empl. (months)	0.03***	0.02***	0.02***	0.01+
	(0.01)	(0.01)	(0.00)	(0.01)
Part time empl. (months)	0.01	0.00	0.01	0.01*
	(0.01)	(0.01)	(0.01)	(0.01)
Long term unemployment	-1.18***	-1.63***	-1.48***	-0.77**
	(0.29)	(0.36)	(0.23)	(0.28)
Lagged Not employed	0.16	0.36	-0.03	0.86**
	(0.69)	(0.72)	(0.26)	(0.30)
Lagged Trainee	-0.43	-0.11	0.43	1.37**
	(0.40)	(0.48)	(0.34)	(0.44)
Lagged Self-employed	1.26***	1.64***	0.45	1.00**
	(0.28)	(0.31)	(0.33)	(0.37)
Lagged White collar	0.25	0.31	0.39*	0.96***
	(0.20)	(0.23)	(0.19)	(0.22)
Lagged Low civil servants	-0.08	1.57**	1.34*	1.38*
	(0.48)	(0.57)	(0.63)	(0.70)
Lagged High civil servants	-0.42	-0.17	-0.12	-0.13
	(0.38)	(0.42)	(0.39)	(0.45)
IHS permanent income	0.31**	0.08	0.03	0.11**
	(0.10)	(0.07)	(0.03)	(0.04)
Married to widowed	0.12	2.21	0.24	-0.31
	(1.52)	(1.64)	(0.72)	(0.80)
Married to divorced/separated	-0.72	-0.97+	-1.11**	0.25
	(0.44)	(0.53)	(0.36)	(0.48)
Never married to married	0.20	0.62	0.28	1.09*
	(0.42)	(0.47)	(0.38)	(0.44)
Always never married	-0.27	-0.37	0.01	-0.25
	(0.42)	(0.48)	(0.37)	(0.43)
Single to married	0.29	-0.86	-0.47	0.34
	(0.47)	(0.53)	(0.42)	(0.47)
Single (other)	-0.58	-0.21	-0.18	-0.38
	(0.36)	(0.42)	(0.31)	(0.35)
Number of marriages	-0.41*	-0.82***	-0.03	-0.58**
	(0.20)	(0.22)	(0.16)	(0.18)
Length of marriage	-0.01	0.01	-0.01	-0.02
	(0.01)	(0.01)	(0.01)	(0.01)
Lagged risk preferences	-0.02	-0.05	0.03	-0.02
	(0.03)	(0.04)	(0.03)	(0.03)
HH Value inheritances/bestowal/lottery	-0.04	0.14+	0.09	0.01
	(0.06)	(0.08)	(0.06)	(0.07)
Financial assets share	0.57***	0.54***	0.53***	0.50***
	(0.09)	(0.10)	(0.06)	(0.07)
Sell own property	-4.56***	-4.94***	-4.97***	-5.35***
	(0.45)	(0.52)	(0.33)	(0.43)
Acquired own property	-1.04**	-0.54	-0.84**	-0.69*
	(0.33)	(0.40)	(0.30)	(0.35)
Always tenant	-4.80***	-4.81***	-5.71***	-5.53***
	(0.27)	(0.29)	(0.24)	(0.26)
No more consumer credits	6.30***	5.77***	7.88***	5.60***

	(0.32)	(0.33)	(0.34)	(0.34)
Acquire consumer credits	2.21***	1.46***	2.73***	0.07
	(0.29)	(0.33)	(0.31)	(0.33)
No consumer credits	6.39***	5.80***	7.82***	5.62***
	(0.25)	(0.26)	(0.27)	(0.27)
Lagged tangible assets	0.42+	0.79*	0.38+	0.61+
	(0.25)	(0.36)	(0.22)	(0.31)
Lagged property debts	-0.03	0.16	0.08	-0.14
	(0.26)	(0.28)	(0.23)	(0.26)
HH Sell stocks	-0.55*	-0.38	-0.63**	-0.20
	(0.25)	(0.29)	(0.22)	(0.26)
HH Buy stocks	-0.23	0.14	-0.22	-0.39
	(0.28)	(0.35)	(0.25)	(0.32)
HH No stocks	-1.22***	-0.79***	-1.19***	-1.10***
	(0.20)	(0.23)	(0.18)	(0.21)
HH Inheritances/bestowal	1.15+	-0.95	-0.26	-0.04
	(0.65)	(0.77)	(0.60)	(0.68)
HH Lottery	0.04	-1.43	-0.73	-0.13
	(0.76)	(0.98)	(0.73)	(0.86)
HH Saving	1.86***	2.50***	1.96***	2.43***
	(0.22)	(0.25)	(0.18)	(0.22)
Lagged worried for financial reasons	-0.55***	-0.42**	-0.43***	-0.53***
	(0.12)	(0.13)	(0.10)	(0.12)
Constant	-0.56	4.01+	-0.67	0.24
	(2.06)	(2.16)	(1.60)	(1.95)
Adj. R2	0.45	0.46	0.50	0.47
Observations	5,240	3,813	5,824	4,388

Note: + p-value <0.10; * p-value < 0.05; ** p-value < 0.01; *** p-value < 0.001. Standard errors in parentheses. Controlling for missing variables. Reference categories: German, lagged low educated, West Germany, lagged blue collar, always married, always own property, always consumer credits, HH hold stocks. HH stands for household. Source: SOEPv30, individuals aged 25-64. Panel samples 2002–2007 and 2007–2012 are used.

Table. A.3 Regression of overall population aged 25-64, by gender. Short regressions, without occupational status

y = IHS wealth	Men 2007	Men 2012	Women 2007	Women 2012
Migrant	-2.11***	-1.67***	-2.09***	-1.47***
	(0.25)	(0.31)	(0.23)	(0.28)
Age	0.08	-0.03	0.11	0.11
	(0.08)	(0.10)	(0.08)	(0.09)
Age squared	0.00	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Num. of children	-0.14	-0.05	-0.06	-0.69*
	(0.27)	(0.32)	(0.25)	(0.30)
Lagged lower voc. education	0.53+	1.19***	1.57***	1.29***
	(0.28)	(0.35)	(0.24)	(0.31)
Lagged upper voc. education	1.18***	2.13***	2.16***	2.06***
	(0.34)	(0.42)	(0.30)	(0.37)
Lagged university	1.71***	2.81***	2.90***	3.01***
	(0.32)	(0.40)	(0.30)	(0.36)
East Germany	-0.82***	-1.22***	-1.02***	-1.14***
	(0.22)	(0.24)	(0.21)	(0.23)
Full time employment (months)	0.03***	0.03**	0.02**	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Part time employment (months)	0.01	-0.00	0.01*	0.02**
	(0.01)	(0.01)	(0.01)	(0.01)
Long term unemployment	-2.66***	-3.07***	-2.96***	-2.63***
	(0.33)	(0.42)	(0.28)	(0.34)
Lagged Not employed	1.01	0.55	-0.23	0.62+
	(0.81)	(0.86)	(0.29)	(0.34)
IHS permanent income	0.84***	0.33***	0.00	0.14**
	(0.11)	(0.09)	(0.04)	(0.05)
Married to widowed	1.42	3.23	0.55	-1.78+
	(1.82)	(1.99)	(0.92)	(1.00)
Married to divorced/separated	-2.30***	-2.22***	-2.59***	-2.33***
	(0.51)	(0.63)	(0.45)	(0.58)
Never Married to married	-0.43	-0.06	-0.92+	0.39
	(0.49)	(0.57)	(0.48)	(0.55)
Always never married	-2.01***	-1.75**	-2.52***	-2.78***
	(0.50)	(0.57)	(0.46)	(0.52)
Single to married	-0.04	-1.10+	-1.61**	-0.43
	(0.56)	(0.64)	(0.53)	(0.59)
Single (other)	-1.93***	-1.32**	-2.27***	-2.52***
	(0.43)	(0.50)	(0.38)	(0.43)
Num. of marriages	-1.37***	-1.66***	-0.97***	-1.52***
	(0.23)	(0.27)	(0.20)	(0.22)
Length	0.01	0.02	0.00	-0.00
	(0.01)	(0.02)	(0.01)	(0.01)
Lagged risk	-0.02	-0.03	0.01	-0.04
	(0.04)	(0.05)	(0.04)	(0.04)
HH Value inheritances/bestowal/lottery	0.13***	0.09**	0.17***	0.10***
	(0.02)	(0.03)	(0.02)	(0.02)
Financial assets share	0.51***	0.51***	0.45***	0.48***
	(0.10)	(0.11)	(0.08)	(0.09)
Constant	-4.53*	2.65	3.02+	2.05
	(2.20)	(2.36)	(1.83)	(2.17)
Adj. R2	0.21	0.20	0.18	0.17
Observations	5,240	3,813	5,824	4,388

Source: SOEPv30, individuals aged 25-64. Panel samples 2002–2007 and 2007–2012 are used.
Note: + p-value <0.10; * p-value < 0.05; ** p-value < 0.01; *** p-value < 0.001. Standard errors in parentheses. Controlling for missing variables. Reference categories: German, lagged low educated, West Germany, always married. HH stands for household.

Tab. A.4 Determinants of wealth for married (t-1) population aged 25-64, by gender. Short regressions with occupational status

y = IHS wealth	Men 2007	Men 2012	Women 2007	Women 2012
Migrant	-2.35***	-1.07**	-2.27***	-1.66***
	(0.31)	(0.38)	(0.28)	(0.35)
Age	0.38**	0.47**	0.23*	0.36*
	(0.14)	(0.18)	(0.12)	(0.15)
Age squared	-0.00+	-0.00*	-0.00	-0.00+
	(0.00)	(0.00)	(0.00)	(0.00)
Number of children	0.14	-0.07	-0.02	-0.20
	(0.35)	(0.43)	(0.35)	(0.44)
Lagged lower voc. Edu	0.32	1.24**	1.75***	1.15**
	(0.36)	(0.48)	(0.29)	(0.39)
Lagged upper voc. Edu	0.77+	1.91***	2.40***	1.78***
	(0.43)	(0.55)	(0.36)	(0.47)
Lagged university degree	0.99*	2.30***	2.27***	2.27***
	(0.42)	(0.54)	(0.37)	(0.47)
East Germany	-0.87**	-0.90**	-0.70**	-0.67*
	(0.28)	(0.32)	(0.26)	(0.31)
Full time employment (months)	0.04***	0.02	0.02*	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)
Part time employment (months)	0.03+	0.01	0.01	0.01
	(0.02)	(0.02)	(0.01)	(0.01)
Long term unemployment	-1.90***	-2.53***	-1.48***	-1.63***
	(0.46)	(0.58)	(0.35)	(0.47)
Lagged Not employed	1.73	1.65	0.88*	0.92*
	(1.14)	(1.23)	(0.37)	(0.45)
Lagged Trainee	0.82	-3.80	1.10	1.88
	(1.37)	(2.41)	(0.87)	(1.41)
Lagged Self-employed	1.85***	1.29**	0.85+	0.94+
	(0.38)	(0.45)	(0.47)	(0.56)
Lagged White collar	1.16***	0.79*	0.89**	1.39***
	(0.28)	(0.33)	(0.29)	(0.34)
Lagged Low civil servants	1.15+	2.13*	2.93**	0.98
	(0.67)	(0.84)	(0.98)	(1.10)
Lagged High civil servants	1.08*	1.33*	1.22*	0.83
	(0.50)	(0.56)	(0.57)	(0.66)
IHS permanent income	0.75***	0.60**	0.07	0.10
	(0.17)	(0.20)	(0.05)	(0.06)
IHS partner permanent income	0.02	0.15*	0.90***	1.09***
	(0.04)	(0.06)	(0.13)	(0.17)
Lagged Bargaining power	-0.38	1.73+	-0.41	-0.10
	(0.83)	(0.98)	(0.87)	(1.06)
Married to widowed	0.86	3.05	0.69	-0.02
	(1.80)	(1.91)	(0.93)	(1.05)
Married to divorced/separated	-2.48***	-2.56***	-2.86***	-1.82**
	(0.50)	(0.65)	(0.44)	(0.58)
Number of marriages	-1.17***	-1.61***	-1.22***	-1.85***
	(0.29)	(0.34)	(0.26)	(0.31)
Length of marriage	-0.01	0.02	-0.00	0.01
	(0.02)	(0.02)	(0.02)	(0.02)
Lagged risk preferences	-0.09+	-0.02	0.01	0.03
	(0.05)	(0.06)	(0.04)	(0.05)
HH Value inherit./bestowal/lottery	0.09**	0.08*	0.12***	0.07*
	(0.03)	(0.03)	(0.03)	(0.03)
Financial assets share	0.31*	0.33*	0.29**	0.30*
	(0.14)	(0.15)	(0.10)	(0.13)
Constant	-11.51**	-15.47**	-10.75***	-15.82***
	(3.73)	(4.77)	(3.09)	(4.02)
Adj. R2	0.19	0.17	0.18	0.17
Observations	3,286	2,251	3,739	2,593

Source: SOEPv30, individuals aged 25-64. Panel samples 2002–2007 and 2007–2012 are used.
Note: + p-value <0.10; * p-value < 0.05; ** p-value < 0.01; *** p-value < 0.001. Standard errors in parentheses. Controlling for missing variables. Reference categories: German, lagged low educated, West Germany, lagged blue collar, always married.

APPENDIX B

Control variables

In the following section, the control variables are described. Note that when we used the "*lagged variable*", it means that we are exploiting the information of 5 years before (e.g. information from 2002 in 2007, and from 2007 in 2012). We also define *changes* in marital status, own property status, consumer credits, and stocks, which are defined comparing the status in year 1 (e.g. 2002, or 2007) and year 2 (2007 or 2012).

Socio-demographic variables: migration status (German – ref. group – or migrant background), age and age squared, number of children under 5 years old in the household, a dummy equal to 1 if living in East Germany.

Lagged level of education: low educated (ISCED 0, 1, 2), lower vocational (ISCED 3), upper vocational (ISCED 4, 5), university (ISCED 6); if the individual is still in education, the next completed level of education is imputed as lagged.

Marital history: number of marriages, length of current marriage.

Employment history: months spent in full-time employment in the previous 5 years, months spent in part-time employment in the previous 5 years, and a dummy for long term unemployement, equal to 1 if the person spent 12 months or more in unemployement.

Lagged occupational status: categorical variables: not employed, trainee (=1 if military, apprentice or trainee), self-employment, white collar (employee), blue collar (=1 if untrained, trained or semi-trained worker, foreman; ref. group), low civil servants (low and middle), high civil servants (high and executive).

Permanent income: (inverse hyperbolic sine transformation) of 5-years average of individual total income (individual labor earnings, unemployment benefits, old age or other pensions, subsistence allowance, maternity benefit, student grants, alimony, company or private pension).

Lagged permanent income of the spouse: defined as above, but for the spouse (included only in specifications for married people).

Bargaining power: this variable is constructed as the ratio among the personal permanent income and the permanent income of the couple (partner permanent income added to the personal one). included only in specifications for married people.

Lagged risk preferences: self-defined, answering to the question "Are you generally a person who is fully prepared to take risks or do you try to avoid taking risks?", and the possible answer are from 0 to 10. Since the preference for risk is not collected every year, we use information from 2004 for 2002, and from 2008 for 2007 (or 2006 if missing in 2008).

HH Inheritance/bestowals; HH lottery: takes value 1 if the household had inheritances (/lottery) in the previous 5 years (for the previous 3 years in 2002).

HH value of inheritances/bestowals/lottery: amount of inheritances/bestowals/lottery received in the previous 5 years (for the estimations, the inverse hyperbolic sine transformation is applied).

HH savings: is a dummy variable equal to 1 if the household was able to save regularly at least for one year in the previous 5.

Financial assets share: is constructed using the ratio among financial assets and non-financial assets, interacted by a dummy which takes value 1 if the household have stocks (because fin. assets can also be savings accounts).

Lagged worried for financial reasons: every year, individuals are asked to answer to the question "are you concerned with your own economic situation?". The variable, in our setup, takes value 1 if the person is not concerned at all, 2 if she is somewhat concerned, 3 if very concerned. Missing values are imputed with value 2.

Changes in status:

Marital status: the individual can be always married (ref. category), can become widowed from married, divorced or separated from married; she can be always never married, or got married if she was previously never married, or previously single (widowed/divorced/separated). She is considered "single (other)" if she remained widowed, divorced or separated, or if she had any change among there 3 categories, or from never married into separated.

Property: the individual can be always owner (ref. category), sell the property, acquire property, or be always tenant.

Consumer credits: the individual can have consumer credits in both periods (ref. category), get rid of them, take out consumer credits, or never have consumer credits.

Stocks: the household can have stocks in both periods (ref. category), selling them, acquire them, or never have stocks.

In addition, we also include some "*missing variables*": the appropriate variable is imputed, and the "missing variable" takes value 1. "Missing employment" takes value 1 if the employment history or the occupational category was missing; "missing bequest" takes value 1 if the inheritance, gifts, lottery (or their value), saving variable is missing, "missing personal" takes 1 if variables for education, marital status or marital history, migration background, risk preference, are missing.

When we perform the Oaxaca-Blinder decomposition and the Firpo, Fortin, Lemieux decomposition, the explanatory variables are grouped in the following way:

Migration: migratory status;
Age: age and age squared;
Kids: number of children;
Education: lagged level of education;
Residence: residence in East Germany;
Labor market participation: labour market (full time, parttime, unemployment, not employed);
Occupation: lagged occupational status (trainee, self empl., white collar, civil servants low or high);
Income: personal permanent permanent income;
Marital status: changes in marital status;
Other marital variables: number of marriages and length of current marriage;
Risk preferences: lagged risk preferences;
HH value inerit./bestowal/lottery: value of inheritances/bestowal/lottery;
Financial assets share: financial assets share;
Other (missing): missing variables.

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