The Relation between Divorce and Wealth

Dissertation zur Erlangung des akademischen Grades eines
doctor rerum politicarum (Dr. rer. pol.)
an der Fakultät Sozial- und Wirtschaftswissenschaften der
Otto-Friedrich-Universität Bamberg

vorgelegt von

Dipl.-Volksw. Anna Fräßdorf

Erstgutachter: Prof. Dr. Frank Westerhoff
Zweitgutachter: Prof. Dr. C. Katharina Spieß
Tag der mündlichen Prüfung: 13.07.2011

Danksagung

An dieser Stelle möchte ich den Personen danken, die mich bei der Umsetzung dieser Arbeit unterstützt haben. Mein Dank gilt vor allem meinem Doktorvater Johannes Schwarze für seine tatkräftige Unterstützung im Laufe der letzten Jahre. Seine Bereitschaft, neue Ideen zu diskutieren, und seine konstruktive Kritik haben die Entstehung der Arbeit stets gefördert. Des Weiteren danke ich Frank Westerhoff, dass er sich nach Johannes Schwarzes Tod bereit erklärt hat, das Erstgutachten meiner Dissertation zu übernehmen. Auch Katharina Spieß möchte ich dafür danken, dass sie mich weiter unterstützt hat.

Meine Arbeit profitierte von Diskussionen auf verschiedenen internationalen Konferenzen sowie dem regen Austausch mit Mitarbeitern und Doktoranden des DIW Berlin. Vor allem Markus Grabka bin ich für seine Unterstützung zu Dank verpflichtet. Den Mitarbeitern des RatSWD danke ich dafür, dass sie mich so herzlich bei sich aufgenommen haben. Außerdem gilt mein Dank Monika Sander und allen Mitarbeitern des Lehrstuhls für Empirische Mikroökonomik, die meine Arbeit durch ihre Kommentare und Vorschläge unterstützt haben. Bei der DFG möchte ich mich für die finanzielle Förderung im Rahmen des Graduiertenkollegs „Märkte und Sozialräume in Europa“ bedanken.

Meinen Eltern, meinen Freunden und Mathis bin ich sehr dankbar für ihre liebevolle Unterstützung in allen Lebenslagen. Ich danke ihnen für ihr Vertrauen, ihren moralischen Beistand und das Interesse an meiner Arbeit.

Table of Content

List of Figures

List of Tables

List of Acronyms

ATE	Average Treatment Effect
ATT	Average Treatment Effect of the Treated
BGB	Bürgerliches Gesetzbuch
CIA	Conditional Independence Assumption
CMIA	Conditional Mean Independence Assumption
CPS	Current Population Survey
DJI	Deutsches Jugendinstitut
EheRG	Ehereformgesetz
EVS	Einkommens- und Verbrauchsstichprobe
FDZ-RV	Forschungsdatenzentrum der Rentenversicherung
HINK	Swedish Household Income Survey
HRS	Health and Retirement Study
HSCV	Half the Squared Coefficient of Variation
IHS	Inverse Hyperbolic Sine-Transformation
ISCED	International Standard Classification of Education
IV	Instrumental Variable
LWS	Luxembourg Wealth Study
NLS	National Longitudinal Survey
NLSY79	National Longitudinal Survey of Youth 1979
OECD	Organisation for Economic Co-Operation and Development
OLS	Ordinary Least Squares
PSID	Panel Study of Income Dynamics
PSM	Propensity Score Matching
RCM	Rubin Causal Model
SCF	Survey of Consumer Finances

SOEP	Socio-Economic Panel
SUTVA	Stable Unit Treatment Value Assumption

Executive Summary

Wealth is a crucial parameter for economic well-being and fulfils several functions. It generates direct financial income such as capital gains, constitutes a source of consumption as well as a buffer during spells of economic stress and thus provides economic security, for instance. Wealth is of high importance with regard to intergenerational transfers and bequests which have a share in maintaining existing inequalities. Furthermore, the importance of wealth holdings accumulated for retirement purposes has increased in recent years. Despite of the particular importance of wealth as a measure of economic well-being and the various functions of wealth, its distribution on the individual level as well as the reasons for inequality in wealth holdings in Germany have not been fully explored.

Amongst other things, current wealth holdings are determined by previous wealth, (permanent) income and consumption, and hence by saving. Shocks with regard to these determinants, e.g. unemployment or sickness, can affect wealth holdings. Marital splits constitute another potential shock in relation to wealth. Divorce is likely to reduce wealth holdings directly, as court and lawyer fees are incurred by divorces. Additionally, divorce is related to wealth indirectly, since family status correlates with the determinants of wealth. Marital splits can reduce (permanent) income in consequence of ceasing eligibility for fiscal privileges or the loss of specialisation gains. Consumption needs may be relatively lower for a couple than for a single individual due to economies of scale. Assuming that married couples derive higher income, saving for retirement is likely to be higher for couples in comparison to divorced individuals pursuant to the life-cycle approach. Precautionary saving incentives, however, may be higher for divorced individuals, as the institution of marriage reduces future risks.

The incidence of divorce has become more and more prevalent. In Germany, divorce rates have increased over the last 50 years – while the ratio between divorces and new marriages was one to ten in 1960, it has risen to one divorce opposed to only two new marriages in 2008. Wealth is assumed to be negatively interrelated with

divorce and more and more marriages split up. Thus, divorce is likely to be an increasingly important determinant of the distribution of wealth on the individual level. Considering the increasing importance of wealth with regard to private retirement provision and other advantageous attributes of wealth like the generation of income or its transferability, the analysis of the relation between divorce and wealth can be conducive to explain differences in wealth holdings. An analysis of the relation between changes in marital status and wealth requires a careful consideration of the causal directions between the two parameters. On the one hand, marriage benefits the accumulation of wealth, e.g. as a result of economies of scale or the marriage wage premium. These advantages fall away in case of divorce. On the other hand, wealthier individuals are more likely to marry in the first place and less prone to divorce.

The purpose of this study is to identify the relation between divorce and wealth and to provide evidence whether the effects of marital splits on wealth are actually causal – i.e. whether divorce leads to a reduction of individual wealth holdings and hence to a reduction in economic well-being.

To analyse the relation between marital dissolution and wealth in Germany, data provided by the German Socio-Economic Panel (SOEP) is employed. Individual wealth holdings were surveyed in 2002 and 2007. The measure of net-wealth comprises owner-occupied and other property, financial assets, private pensions as well as business and tangible assets and consumer credits. Data are multiply imputed to account for item and partial unit non-response which prevalently arise surveying wealth. Furthermore, the SOEP collects (retrospective) information on martial histories. If marital status affects the accumulation of wealth, it would not be appropriate to analyse wealth holdings using only the current marital status. Using marital histories, it is taken into consideration whether an individual who is currently married has been continuously married or whether he or she underwent a divorce and remarried.

The skewness of the wealth distribution requires a transformation of the dependent variable. The inverse hyperbolic sine-transformation provides the opportunity to

include negative values and zero wealth holdings. To allow for the endogeneity of marital status with regard to wealth, the study applies propensity score matching methods. The bias caused by reverse causality could be completely eliminated by means of matching methods, if no unobserved variables had an impact on the outcome and the treatment status. With regard to divorce, however, unobserved heterogeneity is likely to occur. Prudence or the extent of caring for the partner constitute potential unobservable factors. To account for unobserved heterogeneity, conditional difference-in-differences matching is employed.

Empirical results indicate that wealth and divorce are negatively related. Divorced individuals hold less wealth than continuously married individuals. This finding persists controlling for the individuals' socio-economic background. Further analyses show that individuals who got divorced between 2002 and 2007 incurred losses in wealth, whereas individuals who remained married accumulated wealth, on average. Although female wealth decreases by a higher share of initial wealth in consequence of divorce, wealth holdings of men seem to be affected to a higher extent by divorce in relative terms: the relative difference in wealth between divorced and continuously married men increases to a higher extent than between women in the respective groups. In addition, the analysis provides some evidence that the effects observed are not actually causal – that divorce itself may not be considered to lead to a reduction of individual wealth holdings and hence to a reduction in economic well-being.

1 Introduction

Economic well-being constitutes a major component of overall well-being. In this context, the question arises how to measure economic well-being. The Canberra Group (2001, p. 3) states that "a household's economic well-being can be expressed in terms of its access to goods and services". According to Osberg and Sharpe (2002), economic well-being comprises four dimensions, namely consumption flows, income equality, economic security and wealth stocks.

Some studies use consumption as a measure of well-being (e.g. Meyer and Sullivan 2010). Smeeding and Thompson (2010, p. 7 et seq.) argue that this measure may be insufficient as consumption can be debt-financed and may therefore constitute a measure of hardship rather than well-being. An index for economic security can focus on several economic risks such as unemployment, sickness or old age (Osberg 2009). It is a moot question, however, how to weight these risks to achieve a single measure. The primarily applied benchmark of economic well-being is income. Even if income constitutes a major determinant of well-being, wealth is a decisive supplementary factor of the command over economic resources (cp. Burkhauser, Frick and Schwarze 1997).

Amongst other things, current wealth holdings are determined by previous wealth, (permanent) income and consumption, and hence by saving. Wealth can therefore be assumed to be a more permanent measure of economic well-being than current income. Furthermore, wealth is less volatile than income and can thus provide higher economic security (Frick and Grabka 2009b, p.579). While wealth and income are positively related, wealth is more unequally distributed than income (Grabka and Frick 2007). The correlation between income and wealth is far from perfect (cp. Wolff 2006a, p. 108, Smith 2001, p. 89 et seq., or Venti and Wise 1998), but their high interdependence is likely to exacerbate overall inequality (Davies 2009, p. 127). Moreover, the distribution of wealth is found to differ significantly by social groups such as gender (Sierminska, Frick and Grabka 2010) or immigrant and non-

immigrant families (Bauer, Cobb-Clark and Sinning 2011). These wealth gaps in addition to income gaps are likely to make the overall distribution of well-being more unequal in comparison to considering only the distribution of income.

Wealth fulfils several functions. Besides generating direct financial income such as capital gains, wealth constitutes a source of consumption as well as a buffer during spells of economic stress and thus provides economic security (e.g. Wolff 1998, p. 131). Wealth is of high importance with regard to intergenerational transfers and bequests which have a share in maintaining existing inequalities (Szydlik and Schupp 2004). Additionally, owning and using particular wealth components – such as tangible assets or housing wealth – can directly increase utility. A supplemental advantage of wealth is that it can promote power and prestige and therefore increase an individual's public influence (cp. Claupein 1990, p. 32 et seqq., or Davies 2009, p. 128). Furthermore, higher wealth holdings may facilitate obtaining a consumer credit (Canberra Group 2001, p. 3). Individual wealth also constitutes a relevant factor for retirement provisions. The importance of wealth holdings accumulated for retirement purposes has increased in in recent years (Davies and Shorrocks 2000, p. 663). In 2002, the so called "Riester Rente" was introduced in Germany which is targeted to extend private retirement provisions by means of tax incentives, for example. The consumption-smoothing and self-insurance functions of wealth are emphasised by Davies (2009, p. 147 et seq.) as well. He states that accumulating a wealth stock has become more important as individuals face rising levels of risk and a higher life expectation.

Despite of the particular importance of wealth as a measure of economic well-being and the various functions of wealth, its distribution on the individual level as well as the reasons for inequality in wealth holdings in Germany have not been fully explored. Amongst other things, shocks with regard to the determinants of wealth, e.g. unemployment or sickness, can affect wealth holdings. Marital splits constitute another potential shock in relation to wealth.

Wealth holdings are related to marriage and divorce directly and indirectly. Divorce has an immediate effect on the wealth stock as it causes direct costs which are

incurred primarily in the form of court and legal fees. Other direct costs of marital splits can arise, if expenditures for goods previously shared have to be financed. Furthermore, the credit line may be relatively lower for a single individual than for a married couple (cp. Fethke 1989, p. 122).

Besides the direct effects of divorce, marital status can indirectly affect wealth, as its determinants are also related to family status. Hence, different marital histories can constitute one reason for variations in wealth holdings. Becker (1974b) was one of the first to link marital patterns to economic behaviour like labour force participation or the allocation of resources. Subsequently, bargaining processes over labour supply or consumption within the household were addressed in game theoretic approaches (Manser and Brown 1980, McElroy and Horney 1981, Chiappori 1992). According to economic theory, marriage involves benefits which arise from joint production and consumption as well as from risk pooling. These advantages cease to exist in case of divorce. In the following, the relation between determinants of wealth and marital status are outlined to specify their links.

Family arrangements can have an impact on labour supply (Becker 1974b) and hence on current and future income (Heckman 1976). Marital gains resulting from specialisation corresponding to the spouses' comparative advantages are assumed to increase a couple's outcome. Legal regulations like taxation of the total income on the basis of equal halves ("Ehegattensplitting") additionally favour the income of married couples in Germany. Furthermore, couples benefit from economies of scale in consumption (e.g. Lazear and Michael 1980, p. 92 et seq.). In case a couple splits up, these benefits with regard to income and consumption fall away. Income subsequent to divorce will amongst other things depend on previous human capital accumulation, which hinges on previous labour supply and is thus related to the degree of specialisation during marriage. However, theory suggests that labour supply decisions and marital stability are determined simultaneously. If the spouse specialised in non-market work decides to increase their labour supply, the gains from marriage are assumed to decrease and thus the probability of divorce increases ceteris paribus. In turn, facing a higher propensity to divorce, the spouse not specialised in market work is likely to increase their labour supply (Becker 1985, p.

S34). In a bargaining approach, labour supply decisions are of additional concern as the bargaining position within marriage may be affected by unequal human capital accumulation of the spouses.

Assuming that married couples derive higher income and benefit from joint consumption, saving is higher for couples in comparison to divorced individuals as well. Furthermore, saving motives can differ by marital status. Pursuant to the life-cycle approach (Modigliani and Brumberg 1954), higher permanent income involves saving at a higher rate. As couples are assumed to derive higher permanent income than single individuals, they are likely to save more. Precautionary saving incentives, however, may be higher for divorced individuals as the institution of marriage reduces future risks (e.g. Lillard and Panis 1996 or Waite 1995, p. 486 et seqq.).

Children are assumed to be an important marriage-specific investment (Becker 1974b, p. 304). The presence of children can have an impact on consumption, labour supply decisions or saving and saving motives – and therefore on wealth accumulation. The presence of infants will most likely reduce the mother's labour supply, for instance (e.g. Smith and Ward 1980, p. 244, or Drobnič, Blossfeld and Rohwer 1999, p. 142). The consumption of the parents may change in consequence of the modified time allocation (Smith and Ward 1980, p. 244), the needs of children have to be met and the demand for goods complementary with children is likely to rise. Children can have an effect on income and consumption and consequently their presence can affect saving. Saving for intergenerational transfers is likely to be positively related to the presence of children. Saving for retirement, however, may be reduced in families with children since they can support their parents in case these outlive their income or asset base (Fethke 1989, p. 125). The precautionary saving motive could be weakened as elder children may assist their parents in times of unexpected changes in income or sickness.

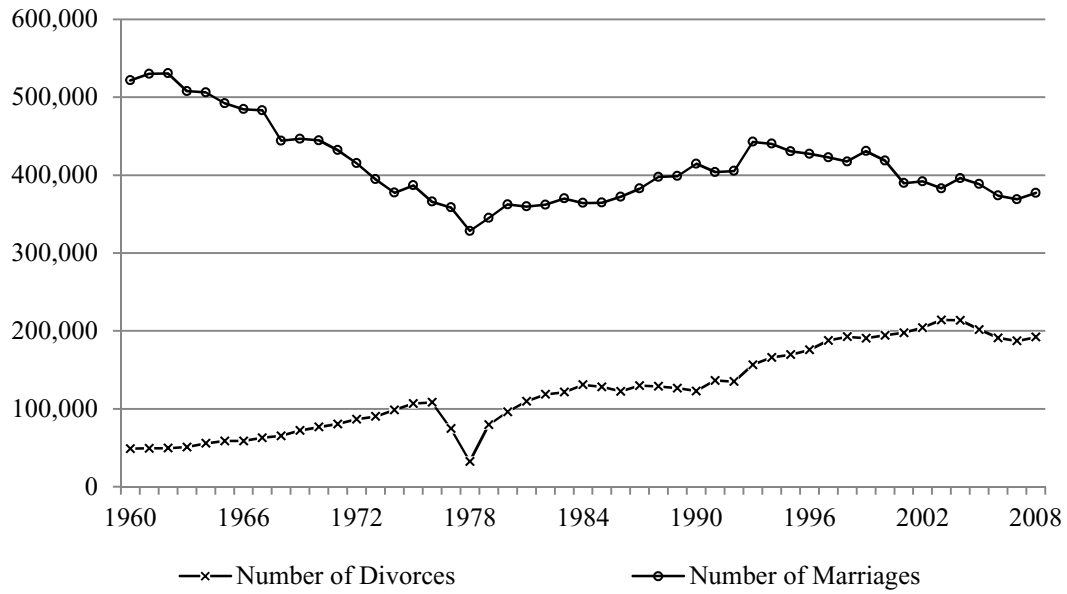
The determinants of wealth accumulation can differ between sexes in some respects (e.g. Bajtelsmit 2006, p. 125 et seqq.). Economic theory suggests that specialisation in market and home work increases the gains of marriage. Although female labour supply has increased over the last decades, a gendered division of household chores

is still observable (Klaus and Steinbach 2002). The gender wage gap is attributed to more discontinuous employment histories of women, their choice of occupations or labour market discrimination (e.g. Blau and Kahn 2000, p. 80 et seq.). The difference in (permanent) income between men and women is one of the main reasons for the gender wealth disparity (e.g. Warren, Rowlingson and Whyley 2001 or Sierminska, Frick and Grabka 2010). The partner who takes care of children during marriage and custody after divorce is mostly the woman (e.g. Burkhauser et al. 1991, p. 322, or Statistisches Bundesamt 2010, p. 14 et seq.). Living with children may have an effect on her labour supply and the consumption and saving behaviour of the household – and therefore on wealth.

Considering these links between marital status and the determinants of wealth accumulation, divorce can be assumed to decrease wealth holdings directly and indirectly: court and lawyer fees are incurred by divorces. Marital splits can reduce (permanent) income in consequence of ceasing eligibility for fiscal privileges or the loss of specialisation gains. Consumption needs may be relatively lower for a couple than for a single individual. Saving for retirement is presumably higher for married couples than for divorced individuals – in contrast to the incentive to save for precautionary reasons, however. Marital decisions are made simultaneously to labour supply, saving and fertility decisions. The causal direction between marital status, income, consumption or saving, and fertility is hence ambiguous and may differ between sexes. The effect of divorce on wealth can therefore be assumed to differ substantially depending on several decisions made before, during and after marriage. Even if divorce is likely to be negatively related to wealth, the correlation between marital status and wealth cannot arrive at completely unambiguous conclusions theoretically.

As in other countries, the number of marriages has decreased in Germany over the past decades. At the same time, the incidence of divorce has become more and more prevalent. Figure 1 exhibits that divorce rates have increased considerably over the last 50 years – while the ratio between divorces and new marriages was one to ten in 1960, it has risen to one divorce opposed to only two new marriages in 2008.

Figure 1: Number of divorces and marriages in Germany 1960-2008



Divorces: Until 30.6.1977 according to "Ehegesetz" ("Gesetz Nr. 16 des Kontrollrates", legislated 20.2.1946), since 1.7.1977 according to "Erstes Gesetz zur Reform des Ehe- und Familienrechts" (legislated 14.6.1976). Until 1990: West-Germany only. *Marriages*: Until 1992: West-Germany only.

Source: Statistisches Bundesamt (2009).

Wealth is assumed to be negatively interrelated with divorce and more and more marriages split up. Thus, divorce is likely to be an increasingly important determinant of the distribution of wealth on the individual level. Considering the increasing importance of wealth with regard to private retirement provision and other advantageous attributes of wealth like the generation of income or its transferability, the analysis of the relation between divorce and wealth can be conducive to explain differences in wealth holdings. The purpose of this study is to identify the relation between divorce and wealth and to provide evidence whether the effects of marital splits on wealth are actually causal – i.e. whether divorce leads to a reduction of individual wealth holdings and hence to a reduction in economic well-being.

Becker's (1974b) theory implies that wealth accumulation before marriage (or remarriage as regards divorced individuals) improves an individual's chances on the marriage market. As positive assortative mating is assumed to be optimal with respect to wealth, wealthier individuals are more prone to (re)marry and are more likely to mate a wealthier individual at the same time. Higher marital gains resulting

from higher wealth additionally involve higher martial stability and reduce the probability of divorce. Analysing the relation between divorce and wealth holdings, this endogeneity in the form of reverse causality or simultaneity must be accounted for. Moreover, potential unobserved heterogeneity can bias the results.

Some former studies examine the relation between marital status (or marital histories) and wealth holdings (e.g. Wilmoth and Koso 2002, Bolin and Pålsson 2001 or Yamokoski and Keister 2006). Most of the analyses do not account for endogenous parameters, though. Furthermore, the studies mostly apply measures of household wealth. Davies (2009, p. 129), however, states that concerning wealth the interest in ownership and thus in individual wealth holdings is essential. Analysing the relation between family status changes and wealth, it is reasonable to employ data on the individual level as this allows to gain insight into gender differences and the intra-household distribution of wealth (cp. Schmidt and Sevak 2006, p. 145 et seq.). Another shortcoming of some analyses is that they use the current marital status instead of accounting for marital histories. O'Rand (1996) argues that life-course trajectories can be held responsible for intra-cohort inequalities and that institutional benefits cumulate over time. If marital status affects the accumulation of wealth, it would not be appropriate to analyse wealth holdings using only the current marital status. Applying marital histories, it is taken into consideration whether an individual who is currently married has been continuously married or whether he or she underwent a divorce and remarried. Assuming that divorces are indirectly and directly related to wealth holdings, this differentiation is beneficial for the study.

To examine the relation between marital dissolution and wealth in Germany, data provided by the German Socio-Economic Panel (SOEP) is employed. Individual wealth holdings were surveyed in 2002 and 2007. Furthermore, the SOEP collects information on marital histories. To allow for the endogeneity of marital status with regard to wealth, this study applies propensity score matching methods. Conditional difference-in-differences matching is employed to account for unobserved heterogeneity.

Empirical results indicate that divorced individuals hold less wealth than continuously married individuals. This finding persists controlling for the individuals' socio-economic background. Further analyses show that wealth holdings of individuals who got divorced between 2002 and 2007 decreased, whereas wealth of individuals who remained married increased, on average. Multivariate analyses support this finding. In general, women hold less wealth than men. For both sexes, divorce is found to be negatively related to wealth. While the difference in wealth between continuously married women and women who got divorced between 2002 and 2007 is higher initially, the relative difference in wealth holdings of continuously married and divorced men increases to a higher extent in consequence divorce. Finally, results of conditional difference-in-differences matching suggest that the negative relation between divorce and wealth may rather be driven by the different distributions of background characteristics of ever married and divorced individuals and that the reduction in wealth of divorced individuals may not actually be involved by divorce.

In the following, the economic theory of marriage and divorce as well as the concept of wealth underlying this study are outlined. Subsequently, an overview of the relation between wealth accumulation and marital status is provided. Chapter 3 discusses the data and methods applied. Empirical evidence on the relation between divorce and wealth is summarised in Chapter 4. Finally, Chapter 5 summarises the results and provides an outlook for future work.

2 Theoretical Background

This chapter gives an overview of the economic theory and the legal regulation of marriage and divorce, the concept of wealth underlying the empirical analysis, the channels of wealth accumulation and the interrelation of wealth and marital status. Subsequently, analyses concerning the distribution of wealth and the economic consequences of marital splits are reviewed.

2.1 Economic Theory of Marriage

In general, two possibilities of intra-family allocation can be distinguished: unitary or common preference models, and collective or bargaining approaches, respectively. The first assume an aggregated family utility function which is maximised by a single decision-maker and hypothesise income pooling. The latter allow for distinct preferences and thus for more than one decider.

Unitary models

In 1956, Samuelson introduced his consensus model. In this attempt, the utility functions of household members are maximised as if they constituted one single consensus social welfare function. However, the modalities of decision-making are not specified.

One of the first economic theories of marriage and marital dissolution was developed by Becker (1973, 1974a, 1991). His neoclassical altruist or caring model assumes an unselfish head of the family[1] considering the inputs and preferences of all household members when maximising an aggregated utility function

[1]The marginal rate of substitution of the altruistic household head between his or her own consumption and the consumption of the other household members equals one (cp. Althammer 2000, p. 63).

(1) $\boldsymbol{maxU = \sum u_i(Z_i)}$ with $\boldsymbol{Z_i = f\ (x_1, \ldots, x_m;\ t_1, \ldots, t_k;\ E)}$,

where x_i stands for services and market goods, t_j for time inputs of the k household members and E for "environmental" variables. The utility function is maximised subject to a time and budget constraint

(2) $\boldsymbol{T = t_j + l_j}$ in combination with

(3) $\boldsymbol{\sum^m p_i x_i = \sum^k \left(w_j l_j + v_j\right) \Rightarrow}$

(4) $\boldsymbol{\sum^m p_i x_i + \sum^k w_j t_j = \sum^k w_j T + v = S}$

with p_i as the price of the respective market good, w_j as the wage rate and l_j as the time a household member spends for market work. T constitutes the total time and S the maximum income achievable assuming constant wage rates w_j, v stands for property income.

Labour supply decisions of the household members not only depend on their own wage rate but are also determined by the wage rate of the partner. Household non-labour income and the price of consumption goods constitute other determinants. Besides the substitution and income effects, a cross-substitution effect exists which is assumed to be equal for both spouses. All household members are affected by a change in prices or wages to the same extent. If the wage rate of one household member increases, the labour supply of the other individual will decrease ceteris paribus. This assumption is also referred to as the symmetry of the Slutsky matrix (cp. Mincer 1962 or Ashenfelter and Heckman 1974). Household members can specialise in non-market or market work, respectively, corresponding to their comparative advantages. Individual *f* will spend more time in the household than individual *m*, for instance, if $w_m > w_f$ and if $\frac{\partial Z}{\partial t_f} > \frac{\partial Z}{\partial t_m}$, given that $t_f = t_m$. A complete specialisation of individual *f* in non-market investments ($T = t_f$) would take place, if the quotient of the wage rates w_m and w_f was sufficiently large or if the marginal product of non-market investments was sufficiently higher for individual *f* than for individual *m*, respectively (Becker, 1973, p. 816 et seq.). In case an

individual does not take part in the labour market, their work in the household is assessed by means of a "shadow" price which equals the marginal product of the individual's time. It is assumed to be lower than the wage for market work so that there is an incentive to confine to non-market work. It is thus comparable to a reservation wage. The "shadow" price is positively related to the sum of nonhuman capital (Becker 1974b, p. 315).

As regards the decision to marry, Becker's choice-theoretic model assumes that the expected utility from marriage must exceed (or at least equal) the utility remaining single. An individual searches for a partner as long as the search costs are lower than the value of an expected improvement in the potential partner (Becker 1974, p. 22). In other words, the costs of continuing to search for a better match are composed of the income foregone in consequence of postponing marriage and the costs of searching (Becker, Landes and Michael 1977, p. 1148).

(5) $\boldsymbol{m_{mf} + f_{mf} \equiv Z_{mf} \geq Z_{m0} + Z_{0f}}$, with $\boldsymbol{m_{mf} > Z_{m0}}$ and $\boldsymbol{f_{mf} > Z_{0f}}$,

where m_{mf} and f_{mf} stand for the respective maximum obtainable outcome being married and Z_{m0} and Z_{0f} describe the output in the case of two separate households (Becker 1973, p. 818). Accordingly, marriage is continued as long as the gain of remaining married is higher than the expected loss sustained in consequence of separation, taking into account renewed search costs or legal fees.

Becker (1973, p. 818) argues that the main reason to get married is to rear own children. Furthermore, marriage can generate benefits if t_m and t_f (or l_m and l_f, accordingly) are imperfect substitutes and if specialisation within the household takes place (cp. Becker 1973, p. 819 et seq.). However, a sufficient extent of "caring" could involve that positive instead of negative assortative mating as regards productive capacities is optimal (Becker 1974a, p. 17). Additionally, the more partners care for each other the higher the gains from marriage since caring constitutes a (non-marketable) household commodity and reduces policing costs (Becker 1974a, p. 12 et seqq.).

The optimal output of a married household can be written as

$$(6) \qquad \boldsymbol{Z_{mf} = \frac{full\ income}{\emptyset\ cost\ of\ production} \equiv \frac{S_{mf}}{C_{mf}(w_m, w_f, p)} \equiv \frac{S_m + S_f}{C_{mf}}}$$

when returns to scale are constant. By means of equation (6) it can be shown that an exogenous increase in property income for both individuals by the same percentage ($v_m/S_m = v_f/S_f$) rises full income – and thus the respective gains from marriage – by the same percentage. If the individuals' allocation of time does not change, the costs of production remain unaffected by the rise in property income. Hence, an increase in property income would increase the propensity to get married or lower the probability of divorce, respectively. The effect of a rise in both wage rates (subsequent changes in the allocation in time to be ignored) on the incentive to enter into or to dissolve a marriage is ambiguous, though, as the costs of production rise simultaneously to the rise in income. Thus, whether the gains from marriage increase or decrease in consequence of the rise of both wage rates is equivocal. The (additional) output rather depends on the relation of the wage rates and the individuals' respective relative changes (Becker 1974b, p. 306 et seq.).

Becker's economic theory also provides indication for the quality of matches (1973, p. 823 et seqq., 1974a, p. 12 et seqq., 1974b, p. 308 et seqq., or Becker, Landes and Michael 1977). It is assumed that a market in marriages exists as individuals competitively search for a mate. Finding the optimal mate is therefore restricted by marriage market conditions: the sum of household output over all marriages is maximised instead of the output of every single marriage. In other words, the average gain from marriage compared to being single over all marriages is maximised (cp. Becker 1974b, p. 310).

Optimal sorting may depend on the differences in characteristics of mates.
Becker (1973, p. 825 et seqq.) shows that positive or negative assortative mating is optimal if

$$(7) \qquad \boldsymbol{\frac{\partial^2 Z(A_f, A_m)}{\partial A_f \partial A_m} \gtrless 0}.$$

In the case of positive assortative mating increasing the value of both individuals' traits ($A_i, (i = f, m)$) adds more to the output than the sum of the additions when each is increased separately. Negative assortative mating is optimal, if the sum of separate additions is higher than the addition when increasing both. In other words, if traits are complements, positive assortative mating is optimal, whereas negative assortative mating is optimal if characteristics constitute substitutes.

In the following, the optimal sorting with respect to some characteristics is outlined whereby individuals are assumed to differ only in the respective characteristic.
As regards wage rates, negative assortative mating is generally optimal.

(8) $$\boldsymbol{\partial^2 Z / \partial w_f \partial w_m \equiv Z^{mf} \equiv Z^{fm} \gtrless 0},$$

where $Z^{fm} = -C^{-2} C^m l_f + C^{-1}\, \partial l_f / \partial w_m$. The output is maximised if w_f and w_m are perfectly negatively correlated while t_f and t_m do not constitute gross complements[2] as the gain from the division of labour is maximised. However, if some individuals are not in the labour force ($\partial Z / \partial w_m = 0$ or $\partial Z / \partial w_f = 0$ and thus $Z^{fm} = 0$) or wages are sufficiently low, a sorting could also maximise the output although the correlation between wage rates is less negative or even positive. In this case, wage rates would not be a decisive factor of optimal sorting as several sortings may be ranked equally (cp. Becker 1974b, p. 313 et seq.). Assumed that every individual is in the labour force (and thus market wage rates constitute the value of time) and they only hold different stocks of nonhuman capital *K* with *r* as the rate of return[3], then

(9) $$\boldsymbol{\frac{\partial Z}{\partial K_f} = \frac{\partial Z}{\partial K_m} = r C^{-1} > 0} \qquad \text{and} \qquad \boldsymbol{\frac{\partial^2 Z}{\partial K_f K_m} = \frac{dr}{dK} C^{-1} > 0},$$

while $\frac{\partial C}{\partial K_f} = \frac{\partial C}{\partial K_m} = 0$.

[2] The term "gross complements" allows for the income as well as the substitution effect.
[3] Becker (1974b, p. 314) argues that *r* would be positively related to *K*, if *r* depended positively on the expenditure of time for portfolio management. Furthermore, he shows that $r = \partial S / \partial K$.

Hence, perfectly positive assortative mating as regards property income would be optimal (Becker 1974b, p. 314 et seq.). However, comparable to the modification with respect to wage rates, if some individuals do not participate in the labour force a perfectly positive correlation of nonhuman capital may not be optimal.

Differences in non-market productivity determine the part of differences in the output of commodities not explained by different wage rates or property. Becker (1973, p. 829 et seqq.) shows that positive assortative mating is optimal with respect to personal traits. However, he concedes that there are some psychological traits such as dominance or hostility for which negative assortative mating may be preferable (Becker 1974b, p. 318). As regards inheritable traits positive assortative mating may decrease the uncertainty about the "quality" of the child (Becker 1974b, p. 318 et seqq.).

Unitary models like Becker's can be criticised insofar as they do not account for intra-household allocation and as the aggregation of preferences to a household utility function does not allow for the neoclassical concept of individualism (cp. Bourguignon and Chiappori 1992, p. 356). Additionally, the aggregation may fail according to Arrow's impossibility theorem. Furthermore, the income pooling hypothesis – and thus the assumption that the allocation of time remains unaffected by an exogenous change in total income – have been rejected empirically by several studies as well as the assumption that all household members are affected by a change in prices or wages to the same extent (i.e. the assumption of cross substitution effects or the symmetry of the Slutsky matrix) (cp. Vermeulen 2002, p. 534 et seqq.). A shortcoming of the theory of optimal sorting is that only one trait is considered while other traits are held constant.

Bargaining approaches

Becker's common preference or unitary model was enhanced by Manser and Brown (1980) and McElroy and Horney (1981) who account for bargaining within marriage and therefore allow for distinct preferences and for more than one decider accordingly. For this purpose, they apply an axiomatic bargaining framework

whereupon a particular cooperative equilibrium model (for instance Nash-bargaining) is employed. These cooperative game theory approaches distinguish between family resources and resources controlled by each household member individually and provide the possibility of individual utility functions (cp. Lundberg and Pollak 1993, p. 992). Thus, in contrast to the unitary models which focus on the inter-household distribution of resources, the inequality within the household can be illuminated by means of collective models. The assumption that a change in prices affects all household members to the same extent does not have to be satisfied.

Manser and Brown (1980) consider two persons ($j = m, f$) who pool their incomes. Individual m maximises the utility $U_m(x_1, x_{2m}, l_m, \alpha_f)$ subject to a household income and time constraint (cp. equation (4)) and the utility function of the partner ($U_f(x_1, x_{2f}, l_f, \alpha_m)$) and vice versa. Marriage generates gains if there exists at least one market good that cannot be shared by single individuals but by a married couple. On the one hand, there are "family" or "collective" goods ($x_1 = (x_{11}, \dots, x_{1n})$) which every individual can consume. The consumption of these public goods by one individual does not reduce the amount available to other individuals. Other goods ($x_{2j} = (x_{2j1}, \dots, x_{2jn})$) constitute "private" goods that cannot be shared. The aspect of caring is introduced by means of an efficiency parameter α_j that is dependent on the marital state and affects the utility level received accounting for personal characteristics of the partner. Each individual will accede to form a household or to continue a marriage only if the utility level achieved in this state is higher relative to (or at least not lower than) their threat points – the utility arrived in case of staying alone or getting divorced. To assess their respective gains obtainable from living together, both individuals have to agree on a bargaining rule. Gains are allocated Pareto-efficiently within the household subject to the bargaining power of the household members (cp. Vermeulen 2002, p. 536). Manser and Brown (1980, p. 37 et seqq.) describe the dictatorial model and the symmetric Nash and Kalai-Smorodinsky models in more detail. The model of McElroy and Horney (1981) is comparable to the above approach and concentrates on a Nash-bargaining concept.

A drawback of these "divorce threat" models is that in order to assess the threat point, preferences have either assumed to be independent of the marital status or the

utility arrived in case of staying alone or getting divorced and in case of marriage have to be estimated simultaneously (cp. Chiappori 1988). Like in Becker's model it is assumed that household members pool their incomes. Additionally, predisposing a bargaining model raises problems when it comes to empirical testing as no distinction can be made between the rejection of the bargaining setting and the rejection of a particular allocation of gains, for instance (Vermeulen 2002, p. 536).

Therefore, Chiappori (1992) only assumes that decision making within the household is Pareto-efficient ("efficiency approach"). Individuals are allowed to have egoistic preferences as well as to be altruistic in terms of caring (Chiappori 1992, p. 462 et seq.). The income pooling hypothesis does not have to be corroborated. Instead, the existence of a "sharing rule" is assumed which is not explicitly determined by the model and is a function of individual incomes. Other factors possibly influencing the rule are the weight of tradition, the cultural environment or the state of the marriage market (Chiappori 1992, p. 443). Household members allocate their share of private expenditures subsequent to the division of household income disposable for private and public goods.

However, Lundberg and Pollak (1996, p. 150) argue that the assumption of efficient bargaining outcomes may be implausible as binding agreements cannot be made in case of the occurrence of asymmetric or incomplete information and as contracts with regard to intra-marital allocation or labour supply are not externally enforced. Another difficulty arises from assessing the sharing rule correctly.

Besides the unitary and cooperative approaches, non-cooperative household models exist. Here, the decision process is described as a game between the household members. Those models assume that individuals maximise their utility subject to an individual budget constraint. The behaviour of the remaining household member is taken as given. However, non-cooperative models prevalently do not result in Pareto-efficient allocations within the household (cp. Vermeulen 2002, p. 557 et seq., or Bourguignon and Chiappori 1992, p. 359). One example introduced by Lundberg and Pollak (1993) is the "separate spheres" bargaining model. The threat point in their

approach is a non-cooperative equilibrium which is determined by traditional gender roles.

Even if the modalities to assess the achieved utility levels differ between economic theories of marriage and divorce, one consistent assumption is that marriage is continued as long as the utility in the married state is higher than the utility in case of a divorce. Another inference important with regard to the relation between wealth and marital dissolution is that higher wealth holdings involve higher gains from marriage and therefore reduce the propensity to split up. Furthermore, the assumption that positive assortative mating is optimal concerning wealth implies that selection into marriage depends on wealth.

2.2 Legal Regulation of Marriage and Divorce

Marriage laws can affect wealth holdings directly and indirectly as they regulate the division of marital property and have an impact on consumption and saving behaviour during and after marriage (cp. Wilmoth and Koso 2002, p. 255). In the following, a short overview of the legal regulation of marriage and divorce in Germany focusing on the accumulation and division of wealth is given.[4]

The BGB (Bürgerliches Gesetzbuch) constitutes the legal foundation of German marriage and divorce law to a large extent. In 1977, a unilateral no-fault divorce law, namely the 1st EheRG (Ehereformgesetz), was enacted.[5] The most important change was the replacement of fault divorce by the principle of irretrievable breakdown ("Zerrüttungsprinzip"). Thus, the failure of marriage constituted a sufficient reason for divorce from then on. Since 1977, one year of separation (i.e. spouses may not share and must be willing not to re-establish a common household) suffices as a

[4]For a broader overview of legal regulations see BMJ (2009), Andreß and Lohmann (2000, p. 37 et seqq.) or Voegeli and Willenbacher (1992). Engelhardt, Trappe and Dronkers (2002) provide a comparison of divorce regulation in former East and West Germany.
[5] The 1stEheRG was passed on 14th June 1976 and came into force 1st July 1977.

precondition, if both spouses consent to divorce (§ 1565 BGB). In the case of unilateral divorce claims, a triannual separation is required (e.g. Gude 2008, p. 292).[6]

On the basis of the 1st EheRG the concept of sole breadwinner ceased to apply and marriage was established as a cooperative union of two individuals having equal rights and responsibilities. In this regard, the adjustment of pension rights ("Versorgungsausgleich") was implemented.[7] Entitlements to social security pensions accrued during marriage are shared equally between spouses in case of a divorce. The adjustment is made ex officio and thus independent of the needs of the spouses in order to allocate the social security pension rights acquired equitably (§ 1587 BGB). The adjustment of pension rights was reformed in 2009. Until then, all pension rights were summed up separately for each individual and the sum was equalised subsequently. Making the entitlements comparable was error-prone. The equalisation of private and occupational pensions was often inadequate. Accordingly, each pension right acquired during marriage is equalised separately since 1st September 2009. Furthermore, if the marriage lasted only up to three years, the adjustment is not made ex officio (cp. BJM 2009, p. 52).

Until 1977, only the spouse considered the guilty party of divorce was liable for alimony payments. The 1st EheRG detached the claim to maintenance from the fault. An individual is entitled to payments from the partner only on the basis of needs in consequence of the marriage. In principle, each (ex-)spouse has to care for themselves. However, (temporary) maintenance claims can be enforced in case of unemployment, on the basis of age or medical conditions or time for (further) education as well as for equity reasons. Furthermore, child support and subsistence allowance in the event of insufficient own income can be claimed. Claims to

---

[6] González and Viitanen (2009) show that introducing no-fault divorce legislation increased divorce rates in several European countries. The study by Kneip and Bauer (2009) reveals that the change to unilateral divorce involved a rise of divorce rates in Western Europe. Stevenson (2007) finds that the adoption of unilateral divorce laws lowers the incentives to invest in marriage-specific capital in the early years of marriage independent of the property division law. However, home ownership seems to be affected by prevailing property division laws.

[7] Weitzman (1992, p. 86) argues that career assets are "often the major assets acquired during marriage". According to her this "new property" should be divided at marital splits. The German law attempts to comply with that by means of pension right adjustment and alimony payments. However, Ott (1993, p. 134) argues that no equal distribution of earnings is stipulated and that alimony payments are often only temporary.

maintenance are regulated by §§ 1570-1576 BGB. In January 2008, some aspects concerning maintenance were reformed. The main focus was shifted to the best interest of the child and thus the child support. Furthermore, the principle of post-marital individual responsibility was consolidated (cp. BMJ 2009, p. 36 et seqq.).

In consequence of the law of equal rights ("Gleichberechtigungsgesetz") coming into effect in 1958, marriage constituted a community of acquisitions ("Zugewinngemeinschaft") in Germany (§§ 1363-1390 BGB). Wealth components accrued during marriage are owned jointly by the spouses. In consequence of divorce, gains accumulated in the course of marriage are equalised ("Zugewinnausgleich"), whereas wealth acquired before marriage ("Anfangsvermögen") as well as inheritances and gifts received while being married are added to the wealth accrued before marriage. However, the increase of the value of these inheritances and gifts constitutes a gain and has to be offset in case of a divorce. The gain acquired during marriage ("Zugewinn") is the value by which the wealth of one spouse after marriage ("Endvermögen") exceeds their wealth holdings before marriage (§ 1373 BGB). Before 2009, if net-wealth accumulated before marriage was negative, the value was set to zero for the calculation (cp. Table 1). After assessing the gain of each spouse, the difference between them is calculated and divided by two. The spouse who gained less during marriage has a claim for compensation in the amount of the resulting value.

According to the definition of the courts, objectively assessable wealth as well as legally protected positions (like an entitlement to severance payments) are described by the term property if they are vested. § 1376 BGB regulates the valuation of wealth holdings before and after marriage. Wealth is valued by means of respective current market prices. However, a particular method to assess the value of appreciation is not statutory. Conjugal homes or household effects are divided in consideration of a constricted compensatory principal in favour of the spouse that is worse off economically. Regulations in this regard are less explicit and provide higher latitude of judgement (cp. Andreß and Lohmann 2000, p. 50). Since September 2009, not only property but also debts incurred before marriage are accounted for. Furthermore, wealth holdings at the time of filing for divorce are considered instead

of wealth at the actual divorce to restrain spouses from diverting wealth during the separation period.

Table 1: Numeric example "Zugewinnausgleich"

	wife	**husband**
amount in €	before 2009/since 2009	before 2009/since 2009
wealth acquired before marriage ("Anfangsvermögen")	10,000	-5,000
wealth at divorce ("Endvermögen")	30,000	45,000
gain acquired during marriage ("Zugewinn")	20,000	45,000 / 50,000
equalised gains ("Zugewinnausgleich")	+12,500 / +15,000	-12,500 / -15,000

Table 1 provides a calculation example for the equalisation of the gains accumulated in the course of marriage. Here, the wife accrued 20,000 € during marriage, the husband 45,000 € applying the regulation in force until 2009. Since then, also debts incurred before marriage are included in the calculation of the "Zugewinn". Thus, the gains of the husband amount to 50,000 €. The gains accrued during marriage are summed up and divided by two subsequently. The amount of the "Zugewinnausgleich" is the result from the difference between these average gains and the respective gain accrued by either spouse. In the example, the wife would be entitled to a compensation amounting to 12,500 € until 2009. Since then, the husband would have to pay 15,000 € to his wife in case of a divorce.

By means of notarised marriage settlement (§§ 1408-1413 BGB) spouses can stipulate separation of property ("Gütertrennung", § 1414 BGB). If so, gains acquired during marriage are not equalised in case of divorce. On the other hand, marriage contracts can covenant community of property ("Gütergemeinschaft", § 1415 BGB) which implies that (parts of) wealth holdings brought into marriage of

either spouse are consolidated to joint property. An adjustment of pension rights and alimony payments can be stipulated as well. If, however, the notarised marriage settlement violates the interest of a child or if one spouse is unilaterally disadvantaged the contract may be voided (cp. BMJ 2009, p. 17 et seqq.).

As regards taxes, married couples can profit from the taxation of their total income on the basis of equal halves ("Ehegattensplitting", §§ 26b, 32a Abs. 5 EStG). Incomes of either spouse are added and the couple's taxable income is assessed jointly. Subsequently, the income subject to income tax is divided by two and afterwards the accrued taxes on this amount are doubled. Tax advantages arise for sole earner households, in particular, whereas no benefits accrue if both spouses contribute to the household income to the same degree. A married couple's saver's tax-free allowance is twice as high as for singles and losses can be offset between positive and negative income components of the spouses (cp. Vollmer 2006, p. 74 et seq.).

2.3 The Concept of Wealth

Before looking at the reasons for wealth accumulation and the distribution of wealth, the underlying concept is specified.

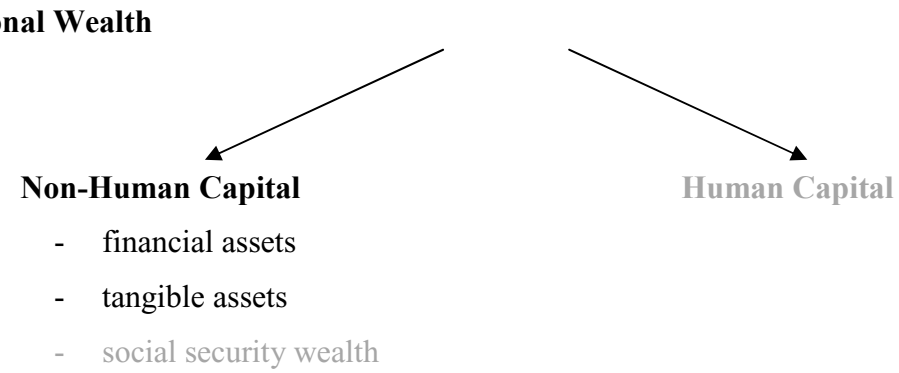
Almost every definition of wealth requires at least three conditions to be fulfilled: wealth is supposed to be a stock variable, it has to be disposable (inclusive of property rights), and the economic value of wealth should be assessable (cp. Claupein 1990, p. 20 et seqq., or Ring 2000, p. 40 et seqq.). The Royal Commission on the Distribution of Income and Wealth (1975, p. 9) states that the concept of personal wealth requires wealth to be owned and valuable. Jenkins (1990, p. 333 et seq.) defines an individual's wealth as "a monetary valuation at some point in time of the total stock of his or her current and future claims over resources". Moreover, he states that in order to specify the concept of wealth the resources considered, the valuation method and the concept of ownership have to be determined. As regards the assessment of the value of wealth holdings, one can distinguish between different concepts: the initial, the current, and the replacement value, for instance. For the

analysis of private households' wealth, the current value is of particular relevance (Claupein, 1990, p. 50 et seqq., or Royal Commission 1975, p. 71 et seq.).[8] The Royal Commission (1975, p. 9 et seq.) argues that the requirements of ownership and marketability are associated to the valuation method. To provide the opportunity to assess its value at a particular point in time, wealth is required to be a stock variable. Flows like income and saving contribute to changes in the wealth stock over a certain period. Hence, wealth holdings can reveal long-term differences in households' or individuals' saving behaviour (Stein 2004, p. 17). The requirement of disposability comprises several functions of wealth: it generates gains, provides economic security, wealth can be transferred (and bequeathed, respectively) or consumed and it is a source of power and prestige (Claupein 1990, p. 32). This implies that wealth should be marketable and acceptable as collateral, too.

A general concept of personal wealth implies human and non-human capital. The measure of non-human capital comprises financial and tangible assets. Financial assets can include bank money or market investments, bonds, building savings contracts or shares, for instance. Tangible property can be sub-classified into property which is used for consumption and property for production purposes. Cars, TVs or household appliances, for instance, are referred to as consumption property. Buildings or estate constitute immovable property and are also described by this term. Business assets represent productive property. All these components of non-human capital are disposable and they constitute a wealth stock. However, with regard to the assessment of the value of consumption property some problems can arise, whereas, in general, the value of productive property and financial assets is well ascertainable (cp. Ring 2000, p. 46 et seqq.).

[8]A general problem that arises when analysing the effect of divorce on income is the retrospective nature of income data which are surveyed for the year before the interview (cp. Schwarze and Härpfer 2000, p. 29 et seq.). This is not the case for wealth data as property is valuated at the time of the survey.

Figure2: The formation of personal wealth



Source: cp. Andreß and Lohmann (2000), p. 23.

Social security wealth (or social property) constitutes a supplemental component of non-human capital. Public pension rights are mostly referred to as social security wealth. A broader definition also comprises other social security benefits and access to health care or education, for instance (Atkinson and Harrison 1978, p. 4). Social security wealth is likely to constitute a considerable factor for the distribution of wealth. Not accounting for this additional wealth component presumably causes biased results as contributing to social pension schemes substitutes for other investments (Davies and Shorrocks 2000, p. 629, or Wolff 1996, p. 435).[9] In Germany, the defined benefit pension scheme is likely to incentivise some population subgroups differently with regard to old-age provision. While the pension

[9] Frick and Grabka (2010) use information on retirement pension expectancies provided by the Forschungsdatenzentrum der Deutschen Rentenversicherung (FDZ-RV) to extend the analysis of wealth holdings on the basis of 2007 SOEP data. They find that including pension wealth decreases the inequality of wealth. Applying the augmented measure increases wealth holdings in the lower quantiles of the distribution to a disproportional extent. However, the high concentration of wealth on the top of the distribution persists. In an earlier study, Dunn and Hoffman (1983, p. 252 et seqq.) show that including occupational and state pension rights in the measure of wealth decreases the share of total wealth for the upper percentiles of the distribution in the UK but increases differences among age groups. Disparities between men and women become smaller (Dunn and Hoffman 1983, p. 267). They argue that if other non-marketable components such as supplementary benefits or accommodation allowance were accounted for, the distribution would be even more equalised (Dunn and Hoffman 1983, p. 255). Gustman et al. (1999) analyse the distribution of wealth in the USA including social security wealth. They also find that social security tends to smooth the disparity. However, the general pattern of inequality by marital status persists. For a supplemental overview of studies that were capable of examining the effect of social security wealth on the distribution of wealth see Mazzaferro and Toso (2009, p. 780 et seqq.), for instance.

scheme is statutory for the major part of the population it is optional for self-employed or professionals ("Freiberufler"). A separate tax financed system without explicit contributions exists for civil servants, who are exempt from paying contributions to the statutory pension system. Wealth holdings of the different groups are likely to differ due to distinct incentives for retirement saving. The omission of social security pensions presumably leads to an underestimation of wealth holdings of employed people.[10] However, the exclusion of public pension rights from the measure of wealth is general practice (Davies 2009, p. 129) due to a lack of appropriate data. Davies and Shorrocks (2000, p. 607) argue that assessing the monetary value of entitlements to social security pensions raises difficulties like the determination of discount rates or the question of risk adjustment. Furthermore, the requirement of ownership and marketability and thus the transferability and disposability of this component are not fulfilled (cp. Royal Commission 1975, p. 9, Atkinson 1971, p. 253, or Claupein 1990, p. 88 et seqq.).

In addition to material assets, a more comprehensive concept of personal wealth, "total" wealth, comprises intangible property like human capital (e.g. Davies and Shorrocks 2000, p. 606). The capitalised value of the potential of income realisation and consequential wealth accumulation is sought to be included in this augmented measure of wealth. However, it is difficult to assess the monetary value of human capital. The human capital model of Heckman (1976) implies that the calculation of human capital requires information concerning factors like the extent of investment in, the depreciation rate of or the respective rate of return of human capital. The determination of all these parameters causes severe difficulties. Moreover, human capital cannot be considered disposable since it cannot (or at least can only at a fraction as in the case of notations or intellectual property rights) be transferred or merchandised (cp. Davies 2009, p. 127 et seq., or Ring 2000, p. 50 et seq.).

The observation unit when analysing the personal distribution of wealth may be the individual or the household. It is important to discuss the choice of observation unit as the pattern of the distribution can change depending on whether the household or

[10] An overview of the advantages and disadvantages of embracing social security wealth by the term of wealth is given by Stein (2004, p. 81 et seqq.).

the individual wealth is analysed (Dunn and Hoffman 1983, p. 274 or Canberra Group 2001, p. 108 et seq.). Wealth is likely to be less unequally distributed on the household level in consequence of redistribution within the household (Frick, Grabka and Sierminska 2007, p. 11 et seqq.). Davies (2009, p. 129) states that the ownership of wealth is essential and that individual wealth holdings should be analysed preferably. In case of analysing household wealth, the choice of a sharing rule is of vital importance. Even if one spouse was in possession of the whole amount of household wealth, other household members would be likely to partake in this wealth (cp. Atkinson and Harrison 1978, p. 241 et seqq.). Jenkins (1990, p. 337) argues that the degree of sharing may depend on the respective type of wealth component. According to him, real property is more equally shared than financial assets, for instance. In the context of family status changes, it is reasonable to analyse wealth holdings on an individual level as gender differences can be examined more precisely and the intra-household distribution of wealth can be accounted for, for instance. Schmidt and Sevak (2006, p. 145 et seq.) argue that by means of a measure of wealth on the household level, ownership structures within marriage and hence intra-household inequality cannot be taken into consideration. Changes in individual wealth due to changes in family status can provide a deeper insight into the distribution since only considering household wealth can distort the results (e.g. Atkinson and Harrison 1978, p. 241 et seqq.).

Imagine two married households with spouses disposing of 2,000 € in total. In household one, both individuals hold 1,000 € and in the other household one individual possesses the entire amount of 2,000 €, whereas the partner holds no wealth. Applying a per capita household measure of wealth, all these individuals would be equally wealthy and possess 1,000 €. In case of a divorce (assuming here that it involves no costs), both individuals of household one would still possess 1,000 €. However, the distribution would change in case of the second household where one individual would now hold 2,000 € and seem to have gained 1,000 €, whereas the other would seem to have lost 1,000 €. In contrast, employing an individual measure of wealth the distribution would not have changed in consequence of the separation.

The study at hand focuses on the current value of individual nonhuman capital (minus debts) which can be merchandised and transferred, i.e. individual net marketable wealth. Net-wealth can take negative values if debts exceed the positive wealth holdings. The analysis is restricted to a narrower concept of wealth. The exclusion of human capital and social security pension rights in the applied measure of wealth results from the non-availability of appropriate data. However, both components are of special importance in the context of family formation and dissolution, mainly due to the simultaneous causality of labour supply (and thus the accumulation of human capital and the acquisition of pension entitlements) and marital status (e.g. Johnson and Skinner 1986, van der Klaauw 1996, Lundberg 2005a or Bardasi and Taylor 2008).

2.4 Wealth Accumulation

In general, one can distinguish two possibilities to increase wealth holdings: via saving and via exceptional increases like inheritances or gifts. Moreover, as a result of revaluation the current value of the existent wealth holdings can change (e.g. Claupein 1990, p. 21 et seq., or Thiele 1998, p. 106 et seqq.).
A simple equation to express wealth accumulation is

$$(10) \quad \boldsymbol{W_t = (1 + r_t)W_{t-1} + Y_t - C_t + I_t = (1 + r_t)W_{t-1} + S_t + I_t}.$$

Wealth in period t (W_t) comprises wealth in the previous period (W_{t-1}) plus returns of investments ($r_t * W_{t-1}$), as well as income (Y_t), consumption expenditures (C_t) and received inheritances (I_t) in period t (Meade 1964, 1976). Thus, changes of these factors influence the wealth formation – the higher the income, inheritances, the initial wealth stock and the preference for risk (hence the higher r_t), and the lower the consumption (or the higher the saving, respectively) in period t, the higher becomes future wealth.

A distinction is drawn between active and passive saving. The amount of income not spent for the purpose of consumption constitutes active saving ($S_t = Y_t - C_t$). In

addition, the wealth stock can undergo a rise or decrease in value that is automatically reinvested. These capital gains are also referred to as passive saving and can be written as $(r_t W_{t-1})$ (e.g. Juster, Smith and Stafford 1999).[11] Keister and Moller (2000, p. 70) argue that the concentration of wealth tends to be connected to stock market trends as wealthier individuals are more likely to hold stocks. A change in the value of real estate, however, assumable benefits a larger part of the population as this wealth component is more equally distributed.

In the following, some saving inducements will be briefly outlined. Theoretically, there are several motives for saving[12]: e.g. wealth holdings can provide a buffer stock to protect against several risks such as earnings' fluctuation or illness (precautionary motive), people save to smooth consumption over the life-cycle (saving for retirement), or they intend to leave bequests (intergenerational transfers). Browning and Lusardi (1996, p. 1797) list additional saving motives.

.

Friedman's (1957) permanent income hypothesis assumes that people determine their consumption based on long-term income expectations instead of their current income and that transitory shocks do only marginally affect consumption behaviour. Accordingly, saving also depends on expected future income. The life-cycle hypothesis (Modigliani and Brumberg 1954) links wealth holdings to the position of individuals in their life-cycles directly. Thus, the wealth accumulated is assumed to be a consequence of saving or dissaving in different stages of life. People save to smooth consumption over the life-cycle and hence a motive to save for retirement is implied. In consequence of this approach, wealth holdings are expected to exhibit a hump-shaped distribution over an individual's life-cycle.[13] Dynan, Skinner and Zeldes (2004), for instance, find evidence for a positive relationship between life-time earnings and saving rates. However, like Atkinson (1971) or Kotlikoff and Summers (1981) they show that life-cycle factors alone do not account for the

[11] Using PSID and SCF data Juster, Smith and Stafford (1999) find that capital gains accounted for about one fifth of wealth accumulation between 1984 and 1994.According to Wolff and Zacharias (2009) the omission of capital gains leads to a decrease in income from wealth and its share in inequality between 1982 and 2000. Accounting for capital gains reverses the results. A study by Cannari, D'Alessio and Gambacorta (2008) shows that wealth varies about 40% due to unrealised capital gains in Italy.

[12] For a comprehensive survey on saving see Kotlikoff (1989) or Browning and Lusardi (1996).

[13] For a more detailed overview of the life-cycle approach see Ring (2000, p. 93 et seqq.), for instance.

observed inequality of wealth. Life-cycle theory is least suitable to explain the upper part of the wealth distribution (Royal Commission 1975, p. 116).

The simple life-cycle model can be extended by means of accounting for a precautionary and a bequest motive. People accumulate wealth for precautionary reasons to protect against unexpected future risks. Unanticipated changes in income due to spells of unemployment or in consequence of a household separation, for instance, constitute a major financial risk. Moreover, precautionary savings are sought to provide a buffer in case of impairment of health, which, besides direct financial liabilities for health care, can also affect the individual's earnings capacity. Obviating financial straits in the case of longevity is another precautionary saving motive (cp. Banks, Blundell, Smith 2003, p. 267 et seqq.). If the bequest motive is not explicitly incorporated into the life-cycle model, inheritances only occur in case of unexpected deaths and therefore are involuntary. However, assuming that individuals can increase their utility via investment in the human capital of, or inheritances and gifts inter vivos they have an incentive to save for bequest reasons (Cagetti 2003, p. 341). Thus, if the marginal utility of bequeathing is higher than the marginal utility of own consumption, saving takes place with intent to bequest. Transfers can be made based on altruistic as well as on strategic motives like receiving attention (for a discussion of the bequest motive see Kotlikoff 1989, p. 68 et seqq., Davies and Shorrocks 2000, p. 621 et seqq., Thiele 1998, p. 119 et seqq., Banks, Blundell, Smith 2003, p. 271 et seqq., or Stein 2004, p. 91 et seqq.). Lupton and Smith (2003, p. 132) argue that "significant asset accumulation for bequests may be operative only at high incomes".

Wealth holdings can increase as a result of revaluation of the current value in addition to a rise via saving. Reasons for changes in value are inflation or a change in scarcity. Furthermore, wealth policies like fiscal interventions[14] can have an impact on the value of the wealth stock as well as on the saving rate (e.g. Claupein 1990, p. 21, Stein 2004, p. 98 et seqq., Thiele 1998, p. 112, or Kotlikoff 1989, p. 167 et

[14] Ring (2000, p. 61 et seqq.) and Stein (2004, p. 101 et seqq.) give an overview of potential wealth policies and their history in Germany. Stein (2004, p. 131 et seqq.) describes how public policy can affect saving behaviour. Ring (2000, p. 297 et seqq.) analyses the effectiveness and efficiency of wealth policies.

seqq.). Another reason for a rise in wealth is the incidence of exceptional increases. Primarily, this includes intergenerational transfers like inheritances. Ring (2000, p. 101) argues that the amount inherited may inter alia depend on previous investments in the offspring's human capital. Kohli et al. (2006, p. 66 et seqq.) show that inheritances tend to reduce the relative inequality of the distribution of wealth. They argue that the relative increase of wealth is higher for households at the bottom of the distribution. The absolute disparity, however, rises in consequence of inheritances. Received inheritances are assumed to constitute a transitory income component in the context of the life-cycle model, involving a propensity to save that is higher than out of permanent income (cp. Davies and Shorrocks 2000, p. 618). In accordance with that, Westerheide (2005) finds that the main part of transfers received flows into saving. This is particularly true for household with lower initial wealth holdings, most probably resulting in a smoothing effect of inheritances on the distribution of wealth. Kohli et al. (2006, p. 63 et seqq.), however, show that inheritances do not affect saving behaviour substantially in the long run. Besides inheritances, gifts of private persons or capital-forming payments are referred to as exceptional rises (e.g. Claupein 1990, p. 21, Stein 2004, p. 121 et seqq., or Ring 2000, p. 98 et seqq.).

2.5 Wealth and Marital Status

The purpose of this chapter is to shed light on the relation between marital status and wealth. Theoretically, there are reasons why marriage could be positively related to wealth.[15] Incentives to accumulate wealth can be higher for singles than for married individuals, though. Moreover, the inducements can differ between sexes. In the following, the interrelation between marital status and factors which may have an impact on the accumulation of wealth are outlined.

Marital transitions can affect wealth directly and indirectly. Economic theory suggests that wealth and marital status are related. Wealth accumulation before marriage improves an individual's chances on the marriage market. It is assumed that

[15] A general overview on the benefits of marriage is given by Waite and Gallagher (2000), for instance.

positive assortative mating is optimal with regard to wealth. Thus, higher wealth not only increases the probability of getting married but also the chance to mate with a wealthier individual. Higher marital gains resulting from higher wealth additionally involve higher martial stability. In case of marriage failure, the wealth stock may be beneficial for covering the costs of divorce.

Divorce causes direct costs and thus has an immediate effect on the wealth stock. Transaction costs of a divorce are incurred primarily in the form of court and legal fees. Expenditures for goods previously shared have to be financed. Furthermore, the credit line may be relatively lower for a single individual than for a married couple (cp. Fethke 1989, p. 122).

Income and labour supply

Besides the direct costs, marital transitions can indirectly affect wealth. In reference to equation (10), one of the main factors that have an impact on wealth is income. Wealth accumulation or saving, in particular, is significantly determined by (permanent) income. Moreover, income is linked to marital status. On the one hand, regulations benefit the income of married couples in Germany. On the other hand, family arrangements can have an impact on the labour supply and hence on current and future income.

In Germany, family policy privileges married couples fiscally by means of taxation of the total income on the basis of equal halves ("Ehegattensplitting"). Additionally, spouses that do not work in the market sector as well as children are co-insured in the health insurance of the wage earner during marriage. Within three month after divorce, however, ex-spouses have to insure themselves. With regard to other insurances like liability insurance, spouses are also co-insured. Thus, tax savings and reduction of insurance costs are higher for married couples than for divorced persons. This applies to sole wage earner couples, in particular (for an overview of family policy instruments in Germany see Althammer 2000, p. 30 et seqq.).

Pursuant to the traditional micro-economic approach, households maximize their utility as their members specialise in home- or market work, respectively,

corresponding to their comparative advantages and therewith increase the total output compared to one person households (Becker 1991). Specialisation provides one possible explanation for the marriage wage premium. The partner who specialises in market work is enabled to invest more time in human capital accumulation leading to higher efficiency. In other words, specialisation increases the productivity and thus involves higher wages (e.g. Loh 1996, Daniel 1995 or Bardasi and Taylor 2008). Another explanation for the marriage wage premium is the selection of more productive individuals into marriage (e.g. Nakosteen and Zimmer 1987 or Korenman and Neumark 1991). Thus, married individuals are assumed to derive higher income than divorced individuals.

Working in the labour force is an important determinant of human capital accumulation. Human capital expresses future earnings potential and therefore has an impact on wealth accumulation as it affects permanent income. Human capital accumulation before marriage has an ambiguous effect on the gains from marriage. It can be assumed, depending on the age at marriage however, that human capital is primarily accumulated in the form of schooling before marriage. For highly educated individuals, positive assortative mating may be optimal as they have high levels of market and non-market skills and thus the gains of marriage are high. The gains may be offset, however, as specialisation between highly educated spouses is less likely (cp. Becker Landes and Michael 1977, p. 1146 et seq.).[16]

According to economic theory, intra-family labour supply decisions are made subject to comparative advantages. Specialisation implies higher gains of marriage. If the spouse that is specialised in non-market work decides to join the labour force, the gains from marriage decrease and the probability of divorce increases ceteris paribus. In turn, if divorce rates increase, the spouse not specialised in market work is likely to increase their labour supply (Becker 1985, p. S34). Labour supply decisions are of additional concern in a bargaining approach. The accumulation of human capital by the spouse working in the market sector is independent of the household context to a

[16] Chiappori, Iyigun and Weiss (2009) show that the incentives to invest in schooling increases for women relative to men, if the return from schooling on the labour market rises. They argue that in consequence of weakened intra-household labour division norms and facilitation of domestic tasks owing to technological progress the return from schooling within marriage has increased for women.

large extent, whereas the non-market human capital mostly does not express income capacity. The bargaining position within marriage may be affected by the unequal human capital accumulation. The spouse who is (primarily) in the labour force improves his or her options outside of marriage as a result of higher earnings potential, whereas the other spouse's options become worse in consequence of lost seniority and human capital depreciation (cp. Ott 1993, p. 122 et seqq.). Hence, a trade-off between the gains realised on the basis of specialisation and a higher divorce propensity in consequence of specialisation can arise. In other words, theory suggests that labour supply decisions and marital stability are determined simultaneously.

Labour supply during marriage affects employment opportunities and wages after marital disruption. In case of a divorce, the partner who was specialised in non-market work possibly faces difficulties to re-enter the labour market. Depending on the degree of specialisation during marriage and the length of the absence from the labour force, human capital accumulation is impaired. Formerly acquired human capital is depreciated in consequence of non-working times or part-time employment. The partner who was specialised in market work may be disposed to modify their labour supply in anticipation of or after divorce to reduce alimony claims (Zagorsky 2005, p. 410, or Schwarze and Härpfer 2000, p. 20). Another explanation for the potential labour supply adjustment of the partner specialised in market work during marriage is that financial needs may be lower as a result of decreased household size.

Consumption

A second determinant of wealth accumulation is consumption. This factor is also likely to be related to marital status and stability. The concept of economies of scale implies that needs are lower for a two-person household than for two single households. Lazear and Michael (1980, p. 92 et seq.) suggest that economies of scale in consumption can arise from family or collective goods, which every individual can consume without reducing the amount available to other individuals. They take electric light or a piece of art as examples. Economies of scale apply particularly on housing. However, sharing a flat is also possible without being married. Becker (1973, p. 819) argues that "the explanation of why men and women live together

must go beyond economies of scale". In a bargaining framework, consumption of the spouses and the sharing rule, respectively, depend on their bargaining power which is assumed to correspond to their incomes to a great extent (Chiappori 1992). In divorce-prone marriages, the incentive to consume while married is higher for an individual with higher decision power since the sharing during marriage will be in their favour, whereas savings are likely to be shared equally in consequence of divorce (cp. Mazzocco, Ruiz and Yamaguchi 2007, p. 3). Their current and future utility rises with higher consumption during marriage, if they expect to be obliged to compensate their partner after divorce. Browning (1995, p. 280) argues that "if [joint] assets are split equally [upon divorce] then saving has something of a character of a public good since foregone consumption now may only be partially compensated for by later consumption if the two partners do split up".

Saving

It is assumed that the part of income not consumed is saved. In the following, the interrelation of saving and marital status will be outlined. For this purpose the impact of marital status on precautionary saving, saving for retirement and intergenerational transfers is discussed. According to Becker's theory of marriage, single individuals have an incentive to save as higher wealth improves their chances to marry. Moreover, based on the assumption that positive assortative mating is optimal with regard to property, wealthy individuals are likely to marry other wealthy individuals.

As a result of family policy and specialisation gains, permanent income of married couples is assumed to be relatively higher than permanent income of single individuals. Assuming a positive correlation between higher permanent income and saving, married individuals are expected to save more than singles. The wealth holdings of couples are likely to increase relative to wealth of singles the longer couples can take advantage of the marital benefits. Accordingly, prospective wealth accumulation is higher for married households as well. Additionally, the incentive for married individuals to save for retirement may be higher than for singles as marriage benefits health and hence increases the life expectancy (e.g. Lillard and Panis 1996 or Waite 1995, p. 486 et seqq.). Precautionary saving incentives are higher for single households than for married couples as the institution of marriage

reduces the future risk (e.g. Waite 1995).[17] As regards the risk of loss in income or periods of unemployment, this applies in particular for dual-earner marriages. A divorce-prone couple may save for precautionary reasons to cope with the income uncertainty after the marital split and the expected costs of a divorce. Finke and Pierce (2006) argue that the extent of precautionary saving of divorce-prone couples depends on the ratio of the spouses' incomes. Couples where spouses contribute similarly to the household income are likely to increase precautionary saving to absorb the expected wealth shock caused by divorce. In marriages with more specialised division of labour or different spouses' incomes, respectively, the returns of saving for the spouse with the higher income are lower during than after marriage because they have to compensate the other spouse upon divorce. The lower- or non-earning spouse faces a higher income uncertainty, which results in a higher precautionary saving motive. Their expected income uncertainty decreases, however, due to the anticipated alimony payments which may in turn decrease the incentive to save for precautionary reasons. Besides saving for retirement and precautionary saving, intergenerational transfers in the form of inheritance or investment in human capital constitute a motive to save. According to Becker (1973, p. 818), the main reason to get married is to bear and rear own children. However, the incidence of extramarital births has increased in Germany and more married couples remain childless (e.g. BiB 2004, p. 27 et seqq.). Thus, an unambiguous conclusion whether marriage is conducive to savings for bequest reasons cannot be drawn.

Children

Children are assumed to be an important marriage-specific investment and to be positively related to marital stability. It may be, however, that children are rather born into stable marriages (e.g. Lillard and Waite 1993). Besides the impact on saving for the purpose of bequest, the presence of children can have an effect on wealth accumulation via adjustments in labour supply, consumption and saving for retirement or precautionary reasons. The presence of infants will most likely reduce the mother's labour supply (e.g. Smith and Ward 1980, p. 244, or Drobnič, Blossfeld and Rohwer 1999, p. 142). The reduction of working hours or the absence from the

[17] Using the example of Ireland, González and Özcan (2008) show that precautionary saving within marriage rises due to an increasing divorce risk.

labour market may not involve major losses in current income due to child-raising allowance. The extent will depend on the previous level of earnings, though. The relative reduction of income is likely to hinge on whether a woman is married or single as a married woman can rely on her husband's income in case of a maternity leave. If a partner exists who enhances his labour supply, potential gains from specialisation could at least partially offset the loss. Browning (1992, p. 1458) argues that mothers tend to increase their labour supply with increasing age of the children as the costs of child care decrease. This applies in particular when children reach school starting age. With increasing age of children they become more goods intensive and less time intensive. To meet these additional needs single mothers of school-aged children, in particular, are found to increase their labour supply (Drobnič, Blossfeld and Rohwer 1999, p. 142). However, future earnings capacities are impaired by gaps in the employment history due to child-rearing because of lost seniority and human capital depreciation (Mincer 1974). The presence of children in a household may also be relevant as regards consumption. The needs of children have to be met and the demand for goods complementary with children will rise. The consumption of the parents may change in consequence of the modified time allocation (Smith and Ward 1980, p. 244). Lupton and Smith (2003, p. 133) state that "[w]hether the family as a whole consumes more or less depends, however, on whether market-purchased goods are net substitutes for or complements of children and household time". Children can have an effect on income and consumption and consequently their presence can affect saving. The amount saved or dissaved will depend on the relation between income and consumption changes and thus may vary with the age of children. Additionally, there are reasons why the presence of children is likely to affect saving motives. Children are likely to have a positive impact on saving for intergenerational transfers. These transfers comprise human capital investments and financial bequests. In a large part, saving for monetary bequests will presumably occur when rates of return to human capital investments decline. Lupton and Smith (2003, p. 132) state that therefore wealth accumulation for the purpose of bequest is feasible particularly for high income families. Saving for retirement may be reduced in families with children. Fethke (1989, p. 125) argues that "[c]hildren are a way to insure against the probability of outliving one's income or asset base, if they support their parents in old age, they can substitute for retirement savings". In

line with that, the precautionary saving motive could be weakened as elder children may assist their parents in times of unexpected changes in income or sickness. In anticipation of childbirth, however, people are assumed to save for precautionary reasons in order to protect from income losses in consequence of childcare and changes in household size. The causality between wealth accumulation and fertility is ambiguous. Labour supply and fertility decisions are likely to be made simultaneously. Saving (or consumption) and the presence of children are interrelated as well. Thus, the presence of children can be assumed to be related to wealth accumulation.

Gender differences

The determinants of wealth accumulation can differ between sexes in some respects (e.g. Bajtelsmit 2006, p. 125 et seqq.). Economic theory suggests that specialisation in market and home work increases the gains of marriage. Although female labour supply has increased over the last decades, a gendered division of household chores is still observable (Klaus and Steinbach 2002). The causal direction between gender specific labour supply and divorce is ambiguous. Empirical studies provide evidence for both hypotheses: that increased labour force participation of women leads to a higher divorce risk (e.g. Greenstein 1990 or South 2001) as well as that women increase their labour supply in anticipation of divorce (e.g. Johnson and Skinner 1986 or Sen 2000). Poortman (2005) shows that the direction of causality between female labour supply and divorce is uncertain. Montalto and Gerner (1998) find a decrease in men's probability of labour force participation if they expect to be divorced. Inconsistent with that result, they show that men increase their hours worked in anticipation of divorce. The gender gap in wages has been analysed by numerous studies (for a review of literature on the gender wage gap see Weichselbaumer and Winter-Ebmer 2005 or Kunze 2008, for instance). Potential reasons for the pay gap are more discontinuous employment histories of women than of men, the choice of occupations or labour market discrimination (e.g. Blau and Kahn 2000, p. 80 et seq.). The difference in (permanent) income between men and women is likely to constitute one of the main reasons for the gender wealth disparity (e.g. Warren, Rowlingson and Whyley 2001 or Sierminska, Frick and Grabka 2010).

The partner that takes care of children during marriage and custody after divorce is mostly the woman (e.g. Burkhauser et al. 1991, p. 322, or Statistisches Bundesamt 2010, p. 14 et seq.). Living with children may have an effect on her labour supply and the consumption of the household. However, the presence of children has an ambiguous effect on wealth accumulation. Some studies find gender differences in financial literacy. Women seem to be less financially educated than men (e.g. Chen and Volpe 2002 or Lusardi and Mitchell 2008). Furthermore, according to Ladd (1998), women face discrimination in mortgage lending markets. Muravyev, Talavera and Schäfer (2009) show that women have a lower probability of receiving a loan and that they pay higher interest rates. Several studies find that women are more risk averse than men, which may involve lower wealth holdings even if saving rates are held constant (for a review of gender differences in risk preferences see Croson and Gneezy 2009, p. 449 et seqq., for instance). However, some analyses challenge this finding (e.g. Schubert et al. 1999). If women are more risk averse than men, they presumably are disposed to save more for precautionary reasons. A higher incentive for women to save for retirement results from their higher life expectancies compared to men. Whether women are actually able to save corresponding to their motives may, however, depend on their income or bargaining power if they are married (Browning 2000).

Altogether, divorce is likely to decrease wealth holdings directly and indirectly: court and lawyer fees are incurred by divorces. Marital splits can reduce (permanent) income in consequence of ceasing eligibility for fiscal privileges or the loss of specialisation gains. Consumption needs may be relatively lower for a couple than for a single individual. Saving for retirement is likely to be higher for married couples than for divorced persons as a result of higher permanent income and benefits arising by reason of joint consumption. The precautionary saving motive, however, is stronger for single individuals. Even if divorce is likely to have negative effects on wealth, the correlation between marital status and wealth cannot arrive at completely unambiguous conclusions theoretically. As outlined in this chapter, the causal direction between marital status, income, consumption or saving and fertility is ambiguous and may differ between sexes. Marital decisions are made simultaneously to labour supply, saving and fertility decisions. Furthermore, reverse

causality between these determinants of wealth accumulation occurs. The effect of divorce on wealth can therefore be assumed to differ substantially depending on several decisions made before, during and after marriage.

Current marital status or marital histories

O'Rand (1996) argues that life-course trajectories can be hold responsible for intra-cohort inequalities and that institutional benefits cumulate over time. If marital status affects the accumulation of wealth, it would not be appropriate to analyse wealth holdings using only the current marital status. Using marital histories, it is taken into consideration whether an individual that is currently married has been continuously married or whether he or she underwent a divorce and remarried. Assuming that divorces cause indirect and direct costs and therefore are related to wealth holdings, this differentiation is beneficial for the study. Besides former changes in family status, the duration of the particular periods can be included in the analysis.

2.6 Literature Review

After presenting some empirical findings concerning the distribution of wealth, literature dealing with the economic consequences of marital splits is outlined.

2.6.1 The Distribution of Wealth

During the last decades, the shortage of appropriate wealth data on the micro-level has been resolved. The distribution of wealth could therefore be analysed empirically (cp. Juster, Smith and Stafford 1999, p. 253 et seq.). In general, wealth is more unequally distributed than income and the distribution is highly skewed to the right (see e.g. Grabka and Frick 2007 or Juster, Smith and Stafford 1999, p. 265 et seqq.). Furthermore, the hump-shaped wealth-age profile is proved empirically (see e.g. Sierminska, Brandolini and Smeeding 2006 or Burkhauser, Frick and Schwarze 1997).

A review of empirical evidence of wealth inequality in several countries is provided by Davies and Shorrocks (2000, p. 628 et seqq.), the collection of essays by Wolff

(2006b) gives an overview of the allocation of household wealth as well. Sierminska, Brandolini and Smeeding (2006) use the Luxembourg Wealth Study (LWS) to analyse the wealth distributions of ten rich OECD countries. In comparison to the other countries, Germany turns out to be in the middle as regards wealth holdings and inequality.

Ring (2000, p. 204 et seqq. and p. 254 et seqq.) gives an overview of former studies dealing with the distribution of wealth in Germany. Combining the results of several analyses, he shows that the distribution of wealth holdings in Germany has been relatively constant in the long term. In the following, more recent analyses are outlined. The distribution of wealth in Germany is examined by Stein (2004) using the EVS (Einkommens- und Verbrauchsstichprobe), for instance. According to him, wealth holdings have risen substantially between 1983 and 1998 in West-Germany. Furthermore, he reveals a large intra-German wealth gap: net-wealth in East-Germany was about 3/5 lower than in West-Germany in 1998. Stein states that during the period under consideration wealth inequality in Germany increased. Frick and Grabka (2009a) who compare net-wealth in 2002 and 2007 applying SOEP data arrive at similar conclusions. They show that wealth inequality has risen in Germany and that the disparity of wealth holdings in West- and East-Germany increased. Ochmann and Steiner (2009) analyse the wealth distribution in Germany employing EVS data and support these findings.

Another study by Frick and Grabka (2009b) points out that the concentration of wealth on the top of the distribution increased between 2002 and 2007. The 10% wealthiest individuals were most likely to remain within the top decile of the distribution although the median change in wealth between the two years was higher and negative for this quantile in comparison to the lower deciles where people gained in wealth, on average, but on a lower level. A multivariate analysis suggests that educational attainment, labour market integration and income constitute the main determinants of changes in net-wealth. Besides, Krause and Schäfer (2005) show that women (single mothers, in particular) are less wealthy than men and that wealth holdings increase with age.

2.6.2 Marital Splits and Wealth

Most of the existing literature dealing with economic consequences of marital splits focuses on changes in income. This is most probably due to the long-time lack of appropriate longitudinal wealth data in household surveys (cp. Browning and Lusardi 1996, p. 1825). The impact of breakups on income is examined by Becker, Landes and Michael (1977), Duncan and Hoffman (1985), Smock (1993), McManus and DiPrete 2001 or Andreß et al. (2006), for instance. Some studies also deal with the question in what way the composition of income changes as a result of marital separation (e.g. Burkhauser et al. 1991, Jarvis and Jenkins 1999, Schwarze and Härpfer 2000, Jenkins 2008). Poverty as a consequence of breakups is analysed by Mc Lanahan, Sørensen and Watson (1989), Andreß and Güllner (2001), and Smeeding and Sandstrom (2004), for example. The correlation of female labour supply and divorce is examined in some studies as well. Altogether, the rising probability of marital breakups seems to increase labour force participation of women (Johnson and Skinner 1986, Seitz 1999, van der Klaauw 1996 or McKeever and Wolfinger 2001). In summary, the different studies show some similar results: the income of women drops in the course of marital dissolution (particularly if they take custody of the children), whereas almost every analysis states an increase of male income.[18] Additionally, women seem to recover partially by and by but they are not able to compensate completely for their loss. As regards the composition of household income, it is shown that labour income of women rises in consequence of divorce. However, the other income components do not change substantially. Moreover, marital dissolution turns out to increase the poverty risk. This is true for women in particular.

Holden and Smock (1991, p. 72), for instance, state that one should include measures of wealth to assess the economic well-being following marital dissolution. A major part of the literature dealing with wealth and marital breakups employing survey data

[18] It should be mentioned here that McManus and DiPrete (2001), for instance, provide evidence for a decrease in economic status of men in consequence of partnership dissolution. According to them, men are not able to compensate the loss of former partner's income. Additionally, paying alimony impairs men's economic situation. Furthermore, Andreß and Bröckel (2007) show that men are more negatively affected by separation as regards life satisfaction. According to Aassve et al. (2009) women suffer disproportionally more financially from divorce. However, as regards non-monetary deprivation indices a significant impairment of well-being can be found for men.

focuses on the current marital status of individuals. Only some studies account for marital histories. Mostly, the consideration of different family structures is due to a lack of wealth data on the individual level.

The study of Haider, Jacknowitz and Schoeni (2003) analyses the economic status of elderly women applying the HRS and the Current Population Survey (CPS). They find that older female divorcees hold considerably less wealth than women who are married or remarried. Zagorsky (2005) compares wealth holdings of young baby boomers depending on marital status using the National Longitudinal Survey of Youth (NLSY79). By means of median wealth, he shows that continuously married respondents are wealthier than singles and that wealth begins to decrease in anticipation of divorce. However, wealth seems to increase again after divorce. While there are only marginal gender differences in median wealth for married individuals, men are found to be better off than women after divorce. Additionally, regression results show that divorce not only involves lower wealth levels but also less growth of wealth. Schmidt and Sevak (2006) arrive at similar conclusions applying PSID data on household wealth. Using OLS and quantile regression they find that single-female headed households are considerably less wealthy than married couples. However, this gap partly closes when controlling for observable characteristics that are correlated with gender and marital status. The wealth holdings of single women are lower than that of single men. The gender wealth gap cannot be verified for younger households controlling for observable characteristics.

The impact of marital status on savings is analysed by Lupton and Smith (2003) applying HRS and PSID data. They find that married people are considerably wealthier than divorced or never-married individuals. This pattern persists when including social security and pension wealth in the analysis. Furthermore, they show that couples that remain married between 1984 and 1989 or 1989 and 1994, respectively, are wealthier than individuals who are continuously divorced or never married. The transition from marriage to divorce seems to decrease wealth, whereas remarriage increases wealth. Married couples who are about to divorce are initially less wealthy. However, according to Lupton and Smith, an interpretation of the changes in wealth holdings of families that undergo marital transitions as savings is

hindered, as these changes largely depend on the additional (or fewer) number of household members. By means of a regression analysis, Lupton and Smith show that marriage and the duration of the married status positively affect wealth and that the wealth gap between married and single households increases. On the other hand, duration effects of the changes in wealth (i.e. saving) for married couples and unmarried individuals seem to decrease over time. Applying pooled cross-section NLSY79 data for eleven years between 1985 and 2000, Yamokoski and Keister (2006) show that married households are wealthier than single male or female households. By means of descriptive statistics as well as general linear regression, they find that for the younger baby boomer generation the wealth gap does not exist between sexes primarily. Main differences occur depending on parenthood in combination with being single. Divorced mothers, however, are disadvantaged in particular.

A study by Bolin and Pålsson (2001) employs wealth data on an individual level provided by the Swedish Household Income Survey (HINK). It shows that being married involves higher wealth than being unmarried. This difference appears also when looking at men and women separately. Furthermore, men hold more wealth than women. According to Bolin and Pålsson, the gender wealth gap decreased between 1978 and 1992. These descriptive results are confirmed applying OLS regression. The negative effect of divorce on wealth seems to be higher for men. Sierminska, Frick and Grabka (2010) analyse the gender wealth gap in Germany applying individual wealth data provided by the German Socio-Economic Panel (SOEP) for 2002. Employing semi-parametric decomposition methods, they find a significant gender wealth gap which seems to be driven by gender-specific characteristics. In particular, individual income and labour market experience have an influence on wealth accumulation according to Sierminska, Frick and Grabka (2010). They also show that currently divorced individuals hold less wealth than those who are married at present.

Applying propensity score matching in combination with a difference-in-differences estimator to account for endogeneity, Aassve et al. (2009) as well as Ongaro, Mazzuco and Meggiolaro (2009) find that women suffer more from separation than

men in monetary terms. However, as regards non-monetary deprivation indices, Aassve et al. (2009) show that the well-being of men is significantly impaired. In Italy, the standard of living of non-custodial fathers who live alone decreases in consequence of marital break-ups according to Ongaro, Mazzuco and Meggiolaro (2009).

Some analyses also account for the influence of complete marital biographies on wealth accumulation. Wilmoth and Koso (2002) apply the HRS to study wealth in 1992 of households where at least one person is aged between 51 and 61 depending on marital histories. Per capita logged wealth[19] is used as the dependent variable and thus equal sharing is assumed. In the analysis, two models (basic and elaborated marriage models) employing only the current marital status are compared to two models which make use of measures that account for marital histories. The "elaborated marriage history measure" comprises 13 categories like "continuously married", "divorced once" or "divorced twice, remarried". Using OLS semilog regression, Wilmoth and Koso show that divorced persons possess 75% less wealth than continuously married people. Remarriage partly compensates for the losses: those who remarry after one divorce only have 24% less wealth. According to the study, women suffer more from divorce. Furthermore, the results suggest that accounting for marriage histories primarily has an effect on the outcome of women. As regards the simultaneous causality of the probability of being married and the amount of wealth holdings, Wilmoth and Koso (2002, p. 265) argue that their "analysis does include variables that indirectly control for potential selection factors including demographic characteristics (i.e., gender and race) and socioeconomic status (i.e., education, income, and occupation)".

In their study, Zissimopoulos, Karney and Rauer (2008) examine the influence of life-time marital history on household wealth levels near retirement employing the HRS. For this purpose, they create five single and five married categories which are based on the current marital status and account for past family status. The dependent variable is per capita logged wealth. Employing linear regression methods, Zissimopoulos, Karney and Rauer find that, on average, continuously married

[19] Negative values are set to one (Wilmoth and Koso 2002, p. 260).

couples own the highest level of wealth, also compared to remarried couples. Independent of former marital splits, single households hold lower wealth than ever married couples. Within the marital status categories, single women's wealth holdings are lower than those of single men.[20] These results persist when including social security and pension wealth in the measure of wealth. However, the extent of the differences between single and married individuals declines. Zissimopoulos (2009) finds that divorce leads to a decrease in wealth already before the divorce occurs and that savings increase after the marital break. The change in wealth change does not differ between constantly married and not constantly married individuals controlled for fixed and unobserved heterogeneity. Remarriage involves an increase in wealth.

Guner and Knowles (2007) develop a three-stage macro-economic calibration model accounting for the endogeneity of marriage formation in wealth accumulation. Starting from the last period, they model the effect of decisions with regard to marriage and divorce as well as work and saving decisions in younger and old adult ages on the economic status of the elderly. Furthermore, marriage market effects in the respective age groups which depend on income and saving decisions are modelled as is the effect of the marriage market on optimal decisions. Thus, the model allows for endogeneity. By means of their model, Guner and Knowles generate relative median wealth by marital history comparable to that resulting from an empirical analysis applying HRS and PSID data. They find that wealth holdings of elderly people are influenced by marital events when young since those affect midlife income and old age marital status. The results indicate that about one fifth of the difference in wealth holdings is due to selection on productivity in the first period. Differences in saving resulting from economies of scale and second-period marriage market incentives account for about 80% of the differences. When the marriage process is modelled as exogenous savings are reduced.

[20] Since the dependent variable in this study is equally shared household wealth, one cannot distinguish which spouse actually holds which amount of wealth within a marriage.

3 Data and Methods

The dataset applied for this study is the German Socio-Economic Panel (SOEP). The SOEP is suitable to analyse the interrelation of marital status and wealth as it provides data on individual wealth, on marital biographies as well as on a variety of socio-demographic and economic indicators. Subsequent to a more detailed description of the dataset, potentially applicable methods to tackle the problem of endogeneity are discussed.

3.1 Data

The German Socio-Economic Panel (SOEP) is a representative yearly survey of randomly selected private households and persons in Germany which commenced in 1984. The first wave contained about 12,000 surveyed persons in approximately 6,000 households. Sample household members aged 17 and over are interviewed annually with respect to socio-demographic and economic factors. Until 2006, eight subsamples were added which approximately doubled the initial sample size. The survey was extended to East Germany in 1990. Other subsamples comprise an immigrant sample in 1994/1995 and a refreshment sample in 1998, for instance. In 2002, the SOEP introduced a high income sample which over-represents households at the top of the income distribution (Frick et al. 2007). More information about the SOEP can be found in the codebook of Haisken-DeNew and Frick (2005) or in Wagner, Frick and Schupp (2007).

3.1.1 Wealth Data in the SOEP

In 2002 and 2007, information on the wealth holdings on the individual level was surveyed (see Appendix A for the 2002 and 2007 wealth modules in the person questionnaires). Respondents were asked for the current value of the following wealth components:

- owner-occupied property (including debt)
- other property (including debt)
- financial assets
- private pensions (comprising building savings contracts, private pensions and life insurance)
- business assets (before tax but after credit)
- tangible assets (excluding cars)
- consumer credits (ex interest)

These components add up to net-wealth which can take negative values in case debts exceed wealth holdings. In 2002, building saving contracts, private pensions and life insurance were pooled in one question, whereas in 2007, building savings contracts were surveyed separately. If a wealth component was co-shared, the respondents were asked for their individual share.

Financial and tangible assets as well as consumer credits amounting to less than 2.500 € were not considered in the 2002 questionnaire. Hence, small wealth holdings may be systematically underestimated. The lower threshold was abolished in the 2007 wealth module. Tangible assets comprise gold, jewellery, coins and other valuable collections. Other personal belongings and durables are not surveyed. One may argue that almost every household is in possession of household effects and that their value does not differ substantially. The inclusion of consumption property would therefore have an impact on the level of wealth but not on its distribution. However, with regard to the question of this analysis the value of household effects would be of interest. If a couple splits up, at least one partner will have to leave the household and may have to purchase new home appliances reducing the wealth stock. The question of 2002 explicitly excludes motor vehicles. In 2007, the value of cars remains unconsidered only implicitly. About three-fourths of German households own a car. Only one third of the low income households possess a car contrary to almost every household at the top of the income distribution (Statistisches Bundesamt 2008). The exclusion of cars in the measure of wealth is therefore likely

to contribute to lower inequality. It is arguable, however, whether cars constitute wealth. Furthermore, the assessment of the current value of vehicles can be complex. Pension entitlements from the statutory pension fund ("Gesetzliche Rentenversicherung") and from company pensions are not included in the list of questions. The potential consequences of the exclusion of pension entitlements are discussed in Chapter 2.3.

3.1.2 Editing and Imputation to Account for (Non-) Sampling Errors

In general, the collection of wealth data on the basis of a sample survey may raise some problems. Firstly, the considerable skewness of the wealth distribution can impair estimations as a result of sampling errors (Davies and Shorrocks 2000, p. 629 et seq.). Since 2002, the SOEP includes a high income sample which contributes to reduce this insufficiency (Frick et al. 2007, Royal Commission 1975, p. 77 et seq.). Additionally, surveying wealth data, non-sampling errors can occur. The problem of misreporting, i.e. underreporting, rounding or item non-response, as well as (partial) unit non-response (Royal Commission 1975, p. 77, or Davies and Shorrocks 2000, p. 630) are likely to arise (Davies 2009, p. 129 et seq., or Riphahn and Serfling 2005). Opposite to unit non-response, where the whole household does not answer the questionnaire, cases where at least one household member refuses to participate are referred to as partial unit non-response. Evidence suggests that survey non-response is more common among wealthier individuals (Davies and Shorrocks 2000, p. 630). The oversampling of better-off households probably helps to mitigate this problem. Partial unit non-response will lead to an underestimation of wealth holdings on the household level.

Even if response is obtained, misreporting in case individuals are not able or willing to state exact details on their wealth holdings may bias the results. Davies (2009, p. 129 et seq.) argues that the incidence of underreporting and item non-response depends on the wealth component. Financial assets, stocks and bonds in particular, tend to be frequently underreported, whereas, in general, housing property is under-valuated only slightly. The large degree of heterogeneity in the components of financial assets is one explanation of the high rate of underreporting and non-response with respect to financial assets (cp. Frick, Grabka and Marcus 2007, p. 24).

The value of other components like business assets can only be ambiguously assessed which can involve misvaluation (Davies and Shorrocks 2000, p. 630). Furthermore, rounding and heaping of the value of wealth holdings are widespread when collecting wealth data. These phenomena are likely to distort the distribution. As regards net-wealth, 80% of the wealth holdings in the national balance sheet are captured by the SOEP questions in 2002. Thus, wealth has to be considered slightly underreported. Some wealth components, like real property, seem to be well assessable by means of the SOEP questions. Financial assets, however, are found to be strongly underestimated (Frick, Grabka and Marcus 2007, p. 29 et seqq.).

The SOEP 2002 and 2007 person questionnaires ask for the estimated market value of owner-occupied and other property as well as financial assets and the corresponding percentages owned by the individual. Assuming that there exist no part owners outside of the household, i.e. that the wealth component is owned by a couple solely, the shares are supposed to sum up to 100%. The information provided by the co-owning couple regarding the market value of the components should coincide. If household members state their shares or the market value inconsistently or implausibly, this measurement error is attempted to be eliminated by means of editing or logical imputation. Logical imputation uses information surveyed by further questions in the questionnaire and/or answers of other household members to assess the share in or the value of a wealth component. Editing means that a non-missing but inconsistent value is changed into a reasonable value. Logical imputation is generally based on survey information provided by the household questionnaire or by other household members (for details see Frick, Grabka and Marcus 2010, p. 16 et seqq.).

The problems of item or partial unit non-response are tackled applying multiple imputation if neither logical imputation nor editing is implemented (see Frick, Grabka and Marcus 2007 and 2010; Schäfer and Schupp 2006 provide a preliminary study of imputation). In case of item non-response, logistic regression is applied to impute missing values on whether an individual holds a specific wealth component or not or to assess their share of this component. If information is missing on the market value of a component, the imputation is based on a Heckman maximum

likelihood estimation using clustering information to control for selection effects. First, a cross-sectional imputation is implemented for 2002. To assess information on wealth in 2007, values for 2002 are applied subsequently. In a next step, the imputed and observed values for 2007 are used to recalculate the values for 2002. This procedure is carried out four times in order to produce convergence of the results. To allow for uncertainty resulting from the imputation process and to maintain variance, a randomly chosen error term is added to the prediction of the regression model. The procedure is repeated seven times with seven different error terms involving a multiply imputed dataset. The lowest and the highest implicates are discarded so that five implicates remain. Frick, Grabka and Marcus (2007, p. 9 et seqq., and 2010, p. 12 et seqq.) provide a detailed outline of the editing and regression-based multiple imputation process for the respective wealth components.

The imputation process results in five values, i.e. five implicates, for each wealth component per individual. These values do not differ if the surveyed information is consistent and full or if the value was edited. In case multiple imputation had to be applied, five different variables per observation are generated. To estimate simple statistics like means and medians, the measures are calculated for each of the five implicates separately and averaged subsequently. Other point estimators like inequality measures can be computed applying the same procedure. Implementing regression analyses it has to be taken into account that the five values per individual cannot be considered independent of each other. Treating the implicates as if they were independent will probably result in inflated significance and an underestimation of standard errors. Kennickell (1998, 2006) provides an approach to account for multiple imputation in regression analyses. Another possibility is to apply a STATA-module provided by Robinson and Blanchette (2009). To assess the variance correctly, its "within" and "between" component have to be calculated where the first is the mean of the variances estimated for the five implicates I (with $\overline{W} = \frac{1}{5}\sum_{I=1}^{5} var(\hat{\beta}_I)$). The "between" component results from the variances of the five estimated coefficients $\hat{\beta}$ (where$B = \frac{1}{5-1}\sum_{I=1}^{5} var(\hat{\beta}_I - \bar{\beta})$). The overall variance ($\widehat{V_\beta} = \overline{W} + \left(1 + \frac{1}{5}\right) B$) can then be calculated from the two components (cp. Leopold and Schneider 2010, p. 268).

Small wealth holdings are underreported for 2002 as the questionnaire does not ask for financial and tangible assets as well as consumer credits lower than 2,500 €. This threshold was eliminated in 2007. Data for 2007 were used to carry out a logistic regression in order to assess whether an individual did possess wealth worth less than 2,500 € in 2002. Afterwards, values up to 2,500 € observed in 2007 were drawn and assigned randomly (Frick, Grabka and Marcus 2010, p. 14 et seq.).

In general, the imputation process may have an impact on the results. Frick, Grabka and Marcus (2010, p. 26 et seqq.) show that the mean for the majority of wealth components increases in consequence of imputation. The effect is significant for owner-occupied property and net-wealth only, however. Inequality of net-wealth measured by the Gini-coefficient is found to be reduced after imputation. The top-sensitive half the squared coefficient of variation (HSCV) rises for 2002 and decreases for 2007. The correction of data can hence be considered to have an impact on the distribution of net-wealth and its components. The degree of the change in the distribution is likely to depend on the share of imputed data. In total, approximately 30% of net-wealth was imputed or edited. The share of imputed values differs between wealth components: about 40% of information on business assets was imputed (42% in 2002 and 36% in 2007), whereas only 19% of the values concerning consumer credits in 2002 and 9% in 2007 are affected, for instance. To account for whether a value was imputed, edited or remained unchanged, Frick, Grabka and Marcus (2010, p. 32) recommend to include this information as a control variable in regression analyses.

As the purpose of this study is to analyse the relation between marital histories and wealth, it has to be noted that the current marital status has been used to impute missing values of the personal share of other real estate based on OLS regression (approximately 10% of the personal shares exhibit imputed values in 2002, 8% in 2007). With respect to financial assets and consumer credits, current marital status constitutes a control variable in the logistic regression model in case of item non-response in order to impute the filter variable whether a person owns financial assets or whether they have a credit. In total, approximately 12% of the financial assets

filters and 11% of the consumer credit filters are imputed in 2002 and 8% of both filters in 2007. Imputation due to item non-response cannot be distinguished from imputation due to partial unit non-response in the data provided. The share of values that has been imputed using the current marital status may therefore be smaller than these percentages. Finally, the covariate is also applied to impute the personal share of financial assets using logistic regression (imputation is carried out for about 17% of the shares in 2002 and 15% in 2007). As imputation using the current marital status is implemented in a small fraction of data and as the marital status is not applied to impute the value of any wealth component, the results of the study at hand are assumed to be affected only marginally by imputation.

Although it is likely that the incidence of extreme values is reduced in consequence of the editing and imputation processes, the values of the respective implicates of the wealth components as well as net-wealth are 0.1% top-coded in order to avoid distortion of the distribution caused by extreme outliers. For those components which can take negative values, a supplemental 0.1% bottom-coding is carried out. Analysing wealth holdings of the whole sample, outliers may affect measures like the mean to a lesser extent than in case smaller subsamples are examined. For the purpose of this study it is therefore appropriate to implement top- and bottom-coding.

3.1.3 Martial Histories in the SOEP

Besides information about individual wealth holdings, the SOEP provides data concerning the individual biography of family status (Pischner and Groh-Samberg 2008). Marital histories have been recorded retrospectively since 1985, first by the use of person questionnaires, subsequent 1985 using the supplementary biographical questionnaire “Lebenslauf” (life history) (see Figure A3 in Appendix A for the retrospective survey). In the following, changes of the family situation and the current marital status have been surveyed annually (see Figures A4 and A5 in Appendix A). In case of temporary non-response, a supplemental collection of information on marital status is undertaken in subsequent years if possible. The SOEP provides individual spells of marital status which are generated using information on the family status “single”, “married”, “divorced” and “widowed”. The “married” category does not differentiate between couples who live together and

those who are separated. One spell is defined by at least four variables: the individual identifier, the marital status as well as the beginning and the end of the spell.

In the following, the generation process of the spells implemented in the SOEP (Pischner and Groh-Samberg 2008) is outlined in more detail. Persons under the age of 15 are assumed to be single. If a change in family status is surveyed, the marital status is changed for the stated month of the change up to the date of the survey. In case that the family status is missing for one year, it is carried forward if the status of the immediately subsequent year is the same as in the previous year, provided no indication of family status change in the additional questions for temporary drop outs. In a next step, inconsistencies are eliminated. For example, assume that a person states that they changed their status from “single” to “married” to “single” to “divorced” to “married". In this case, the sequence would be changed to “single”, “married”, “divorced”, “divorced” and “married". Through the corrected time series, monthly spells are generated. Monthly data are available from the month of the first survey until the month of the last survey. Furthermore, yearly spells are generated. Annual data are available for the year of birth until the year of the last survey.

For this study a combination of the annual and the monthly family status data is applied. First, marital histories are constructed using yearly data. The two years of particular interest are 2002 and 2007 as individual wealth holdings were surveyed in these years. If in these years an individual was interviewed in a month before the change in marital status took place, their family status is changed to the previous status. For example, if an individual was interviewed in March 2002 and got married in August 2002 their marital status applying the yearly data would be “married”. For this analysis, their status is changed to the previous status, for instance “never married”. If individuals divorce and remarry in the course of one year, this change is considered. Regarding wealth holdings, short divorced spells are of importance as well given that court fees accrue and due to the equalisation of gains accumulated in the course of marriage.

Inconsistent cases where a “divorced” spell follows a “never married” spell or a “widowed” spell comes after a “divorced” spell are omitted. Cases of gaps as a result

of temporary missings that could not be closed in subsequent years are also not considered. The timing of divorce, for instance, cannot be reconstructed on the basis of this data nor can the potential marital changes during the years of lacking information.

The retrospective survey of family status could have an impact on the quality and reliability of the data. Individuals may not remember the exact year a relationship began or ended, depending on the time passed since the change or specific personal characteristics like state of health, for instance. Klein and Fischer-Kerli (2000) analyse the quality of retrospective data. Applying data provided by the Familiensurvey des Deutschen Jugendinstituts (DJI), they find that information on the retrospective marital status is reliable. Data on first relationships and on persistent marriages seem to be remembered correctly, in particular. An earlier study by Peters (1988) which employs data of the National Longitudinal Survey of Labor Market Experience (NLS) finds that applying a retrospective survey leads to information generally consistent with panel information. Inconsistencies seem to occur systematically subject to education, for example. Furthermore, Peters (1988, p. 501) argues that the exact date of a divorce is likely to be less accurately surveyed than the date of marriage as divorce constitutes a process rather than an event.

When analysing divorced individuals applying panel data, the problem of right censoring has to be discussed. The SOEP is conceptualised to follow up both spouses after a split. In consequence of a divorce, one ex-spouse or even both may refuse to continue their participation in the survey due to mental strain or may not be contactable as their new address is unknown, for instance (cp. Schwarze and Härpfer 2000, p. 15). As regards the descriptive analyses, panel attrition as a result of divorce is accounted for by means of weighting. To assess the probability that an individual is re-interviewed, covariates like whether a couple separated or whether the head of the household is married are employed (Kroh 2010).

On the basis of marital history data, eight family status categories are generated (cp. Table 2). These classes constitute the current marital status accounting for past family formations and comprise four single and four married categories. Individuals

who are currently divorced and had been widowed before are not included in the analysis as well as currently widowed persons who had been divorced.[21]

Table 2: Marital status categories

Current marital status	**Single**	**Married**
Marital History	1) never married	5) ever (continuously) married
	2) divorced once[1]	6) remarried after one divorce[1]
	3) divorced more than once[1]	7) remarried after more than one divorce[1]
	4) widowed[2]	8) remarried after widowhood[2]

[1]never widowed, [2] never divorced

Some studies allude to the increasing importance of cohabitation as a substitute for marriage (e.g. Stevenson and Wolfers 2007, p. 36 et seqq.). Hao (1996, p. 274) argues that cohabitation does not involve obligations to the partner and therefore saving as well as labour supply decisions are likely to be made differently than in a legal marriage. The analysis at hand therefore refrains from accounting for cohabitation in a distinct category and is limited to legal marital status.

Individuals in the course of legal separation period are not considered in a distinct category. Advantages of marriage as the taxation of the total income of a married couple on the basis of equal halves do not apply for the period of separation. Separated individuals are likely to differ from married individuals living together as regards labour supply or saving decisions, for instance, depending on the duration of the period of separation. But the equalisation of gains accumulated in the course of marriage, which is likely to affect wealth holdings substantially, is implemented only

[21] For the economic consequences of widowhood see Burkhauser et al. (2005), Hurd and Wise (1989) or Zick and Holden (2000), for instance. Morgan (1989) compares divorced and widowed women's economic well-being.

with legal divorce (cp. Zissimopoulos, Karney and Rauer 2008, p. 11 footnote 1). Court and legal fees are not incurred until legal divorce in large part as well. Using data provided by the Familiensurvey des Deutschen Jugendinstituts (DJI), Brüderl and Engelhardt (1997) find that the effects of determinants of marital splits do not differ significantly depending on whether separation or divorce is the applied definition of marital breakup. They suggest, however, to carry out distinct analyses for both definitions. 80% of the marriages are found to be divorced after two years of separation, 90% after five years. 5% of the separated couples, however, are not divorced even after a ten year separation period. Thus, it would be advantageous for this study, if a distinction between couples who are married and live together and individuals who are married but separated could be drawn by means of the marital history data. A lack of SOEP life history data concerning separation impedes the inclusion of this marital status.[22]

Additional to the eight categories in Table 2, categories that account for the *change* in marital status between 2002 and 2007 are generated (see Table 3). The only category in comprising individuals who may have experienced divorce and widowhood is the "married > once → married > once" category.

[22] One approach to restrict the analyses to individuals, who were not separated in 2002, could be to examine only married persons living in one household with their partner in 2002. However, the partner in the household may not be the actual spouse but a new partner, as couples do not mandatorily divorce after separation. It could be, for instance, that a couple separated twenty years ago and never got a divorce and both spouses have lived with their new partners for the last twenty years. A more practical reason to refrain from this procedure is the very small number of individuals who were married once and lived in one household with a partner in 2002 and got a divorce until 2007.

Table 3: Categories of marital changes

Marital status in 2002	Single	Married
	2002→2007	2002→2007
Change in marital status between 2002 and 2007	1) never married → never married	9) married once → married once
	2) never married → married	10) married once → divorced once[1]
	3) divorced once → divorced once[1]	11) married once → widowed once[2]
	4) divorced once → remarried[1]	12) married > once → married > once
	5) divorced > once → divorced > once[1]	13) married > once → divorced >once[1]
	6) divorced > once → remarried[1]	14) married > once → widowed >once[2]
	7)widowed → widowed[2]	
	8) widowed → remarried[2]	

[1] never widowed, [2] never divorced

3.2 Methods

In the following, potential methods for the analysis and problems that can arise when analysing the influence of marital histories on wealth holdings are discussed.

3.2.1 The Problem of Endogeneity

Let a regressor x_j in an OLS regression model

(11) $$\boldsymbol{w = \beta_0 + \beta_1 x_1 + \cdots + \beta_j x_j + \cdots + \beta_k x_k + u}$$

stand for marital status. To obtain an unbiased and consistent estimator for the relationship between the dependent variable, wealth (w), and family status (x_j), the error term u has to be stochastically independent of x_j. If $E(u|x_j) = 0$, i.e. if the expected value of the error term was not correlated with the regressor x_j, marital status could be referred to as exogenous with regard to wealth. If, however, a correlation exists (and thus $Cov[x_j, u] \neq 0$) marital status must be considered endogenous involving biased coefficients and standard errors (for an overview see Wooldridge 2002, for instance).

One source of endogeneity is referred to as simultaneity or reverse causality, respectively. It occurs if one or more regressors affect the dependent variable and at the same time this dependent variable has an impact on the explanatory variable. Hence, x_j and u would be correlated and therefore x_j could not be considered exogenous. Marital status must therefore deemed to be endogenous with regard to wealth, if the level of wealth has an impact on the propensity to marry or divorce and if marital status affects the amount of wealth held.

On the one hand, economic theory suggests that higher wealth holdings increase the gains from marriage and therefore involve higher marital stability, i.e. a lower propensity to divorce, and an increase in the probability of getting married in the first place (Becker 1973, p. 821). In other words, selectivity into and out of marriage in dependence of wealth holdings is implied. On the other hand, divorce can be considered to affect wealth and its accumulation directly and indirectly. Marital splits cause court fees, for example. Moreover, marriage and divorce are associated with adjustment of labour supply and other determinants of wealth accumulation.

Lundberg (2005a, p. 601) argues that "[i]f men and women decide with whom they are going to live, if these decisions are not irrevocable, and if family structure is related to economic opportunities in complex ways, then treating family status as exogenous or even predetermined can result in biased inferences". Waite (1995, p. 497 et seq.) states that "perhaps we have been too quick to assign *all* the responsibility to selectivity [...], and not quick enough to consider the possibility that

marriage *causes* some of the better outcomes we see for the married". As both directions of causality between wealth and marriage or divorce are possible, marital status can be considered endogenous in terms of simultaneous causality as regards wealth levels.

Another form of endogeneity, omitted variable bias, can emerge, if a variable not considered in the analysis is correlated with the dependent variable as well as with one or more regressors. In case of an unobservable variable, this bias is also referred to as unobserved heterogeneity. Thus, if a factor not observed had an impact on wealth accumulation as well as on marital status decisions, the regression results would be biased. Lupton and Smith (2003, p. 148) argue that prudence is the most likely source of unobserved heterogeneity when analysing the relationship between family status and wealth accumulation. Other potential unobservable factors are the distribution of power within the household, values and norms or the extent of caring for the partner, for instance.

An overview of empirical techniques like fixed-effects methods or the use of an instrumental variable (IV) that have been employed to estimate the benefits of marriage in conjunction with health, earnings and children is given by Ribar (2004). Fixed-effects estimation would be suitable only if the correlation between marital status and the error terms was time-invariant and the effect of marriage emerged solely while an individual was actually married (e.g. Lundberg 2005a, p. 600). Furthermore, by means of a fixed-effects model the effect of remaining married or remaining divorced between 2002 and 2007, for instance, could not be estimated. Applying IV-estimators can be difficult in practice since finding capable instruments is complicated.

3.2.2 Instrumental Variable Approach

A couple of studies have tried to tackle the problem of endogenous marital status applying an instrumental variable. In the following, possible IVs are briefly discussed.

A valid instrumental variable is supposed to fulfil two requirements: the IV has to be correlated with the endogenous variable ($Cov[IV, m] \neq 0$) but uncorrelated with the error term u (thus $Cov[IV, u] = 0$). The first requirement is referred to as "relevance of the instrument" and the latter as "exogeneity of the IV". An IV appropriate for the purpose of this study would have to affect the probability of getting divorced but must not be correlated with the process of wealth accumulation.

Applying an invalid IV, i.e. a variable that does not fulfil the exogeneity-assumption and has an impact on wealth aside from affecting the marital status, can involve even more biased estimates than an OLS regression (Murray 2006, p. 114). Furthermore, the instrumentalisation of weak IVs which are of little relevance raises problems as they cause only little variation.[23] In the context of this study, this suggests that the correlation between a potential IV and an individual's marital status should be high. Thus, to solve the problem of endogeneity by means of the IV approach, a variable that features no correlation with the amount of wealth holdings and that is highly correlated with marital status (or the probability of divorce, respectively) is to be detected.

Factors that have an influence on the probability of divorce theoretically are summarised by Finke and Pierce (2006, p. 228 et seq.) or Bryant and Zick (2006, p. 290 et seqq.), for instance. However, most of these parameters (such as education and education of the parents, age at marriage, income or the presence of children) affect wealth accumulation directly or indirectly, as well. Living in urban areas is likely to impair the stability of marriages (Gautier, Svarer and Teulings 2009). At the same time the incidence of owner-occupied property is lower, though. Some studies (Hank 2003 or Lloyd and South 1996) use female labour force participation rates on a regional level to explain differences in marital transition. The variation in women's economic independence measured by the participation rates is assumed to have an impact on the regional marriage markets. Amongst other things, due to the increasing importance of internet use in order to search for potential partners (cp. Stevenson and Wolfers 2007, p. 47 et seq.), even in distant regions these regional differences cannot be seen as appropriate IVs.

[23] On the handling of weak instruments see Murray (2006), for instance.

In recent years, some researchers instrumentalised the gender of the first born child. Former studies show that having a boy decreases the probability of marital instability for US-American couples (for an overview see Lundberg 2005b, p. 347, Dahl and Moretti 2008, p. 1094 et seq. or Raley and Bianchi 2006, p. 411 et seqq.). Bedard and Deschênes (2005) use the sex of the first born child as an IV to analyse the impact of divorce on the economic status of women. The same approach is chosen by Ananat and Michaels (2008) who estimate the effect of marital dissolution on female income. However, exploiting child gender as an IV is disputable. First, it implies the absence of sex-selective abortion. Second, the sex of the first born child may have an impact on the allocation of the resources and time of the parents (Lundberg 2005a, p. 601 et seq. or Lundberg 2005b, p. 352 et seq. or Choi, Joesch and Lundberg 2008, p. 798 et seq.). To account for the fact that women who gave premarital birth to a boy are more likely to marry subsequently than mothers of girls who are born outside marriage (e.g. Raley and Bianchi 2006, p. 412), only individuals conceiving during marriage should be considered to avoid another stage of endogeneity. Furthermore, this approach limits the analysis to men and women with children by omitting childless individuals. Aside from that, offspring gender can influence parental investment decisions (Bogan 2010) and therefore cannot be considered exogenous regarding wealth holdings.

According to Borghans et al. (2009), personality measures can be conducive to economic analyses. Psychologists linked marital stability to the "Big Five" personality traits, i.e. agreeableness, conscientiousness, extraversion, neuroticism and openness (for an overview see Donnellan, Conger and Bryant 2004, p. 482 et seqq. or Bodenmann 2001). Neuroticism seems to impair marital quality in particular (e.g. Bouchard, Lussier and Sabourin 1999). Recently, economists have started to include psychological traits in their analyses. Lundberg (2010) finds that several psychological traits are strongly related to marital stability. However, personality traits turn out to have an impact on the economic outcome as well. They can affect saving behaviour and portfolio choice (Wärneryd 1999 or Nyhus and Webley 2001) or earnings (Mueller and Plug 2006 or Heineck and Anger 2010), for instance.

Wealth can therefore not be considered independent of the "Big Five". Hence, personality traits are not a feasible IV for the purpose of this study, as well.

Another IV one can possibly think of applying is the divorce rate. However, if divorce rates are high, single individuals are assumed to save less as divorced individuals raise the quality of the marriage pool and thus anticipated income (or wealth) is higher as finding an appropriate match may be easier. As regards married couples, one could argue that higher divorce rates increase precautionary saving to protect against income losses in case of a divorce. On the other hand, saving could be impaired, especially for women, if investments in human capital were increased, for instance. The net impact of divorce rates on wealth is of minor importance at this point. What matters is that both cannot be seen as uncorrelated.

Marriage is highly valued in almost every religion (Mahoney et al. 2001). Marital status can be affected by religion as beliefs have an impact on the subjective costs (like feelings of guilt or reprobation) in case of a divorce as well as on the probability of getting married in the first place (cp. Lehrer 2009, p. 175 et seqq.). Furthermore, religion may provide support in matters of marital conflict. However, the importance of these effects seems to differ with religious affiliation (cp. Mahoney et al. 2001, Lehrer 2004a, p. 709, 2004b, or Vaaler, Ellison and Powers 2009). On the other hand, the religious belief can affect wealth accumulation indirectly through differences in educational attainment, gender roles or income, for instance (Lehrer 2009, p. 205 et seqq.). A direct effect can arise from the value of saving, the allocation of time and money or sacrificial giving (cp. Keister 2003, 2008, p. 1239 et seq., or Lehrer and Chiswick 1993, p. 386). Waite and Lehrer (2003) show that marriage and religion have an influence on similar domains of life such as health, happiness or economic well-being, and that the pathways of their effect on these outcomes are comparable.

As can be deducted from this section finding an appropriate and valid IV is associated with various difficulties (see also Blundell and Dias 2009, p. 607 et seq.). Another approach to account for endogenous regressors is by means of quasi-experimental approaches.

3.2.3 Quasi-experimental research design

The intention of quasi-experimental research is to approximate the design of a true experiment. By these means it is intended to avoid the pitfall of selection bias and provide the opportunity to estimate causal effects.

One potential quasi-experimental approach is to compare outcomes before and after an exogenous intervention like an amendment of law. A change from fault to no-fault divorce, the implementation of a unilateral divorce law or changes in property division rules or alimony payment regulation can have an impact on the bargaining power of spouses and thus on intra-marital allocation and the propensity to divorce (e.g. Stevenson 2007, González and Viitanen 2009, Whittington and Alm 2003, or Kneip and Bauer 2009). As outlined in Chapter 2.2, major changes in the legal regulation of marriage and divorce in Germany occurred in the late 1970s and after 2007. Thus, these adjustments are not capable to analyse the impact of marital status on wealth in 2002 and 2007 within a quasi-experimental framework.

Another quasi-experimental design, the matching approach, provides the opportunity to compare the (counterfactual) outcomes of individuals who receive a treatment (e.g. divorce) to untreated individuals.

3.2.4 Matching

Appling matching methods is a possibility to implement the Rubin Causal Model (RCM) (Rubin 1974) statistically. This approach allows to estimate causal parameters without the need for restrictive assumptions (cp. Rosenbaum and Rubin 1983, p. 48).

To assess the effect of participation in a treatment T (with $T = 0,1$) on an outcome variable Y, i.e. in case of the study at hand to assess the effect of divorce on wealth, the individual outcome in the case of participation, divorce, ($Y_{1i} = Y|T = 1$) is compared to the outcome in the case of no treatment, remaining married, ($Y_{0i} = Y|T = 0$) with individual characteristics X_i

(12) $\Delta_i = \boldsymbol{Y_i(X_i, T_i = 1) - Y_i(X_i, T_i = 0) = Y_{1i} - Y_{0i}}$

in the RCM. However, this difference (or *unit effect*) is not measurable, as an individual that participates in the treatment cannot belong to the group of the untreated at the same time. In the context of this study this means that an individual's observed marital status can either be divorced or continuously married. The actual individual outcome can be written as

(13) $\boldsymbol{Y_i^* \equiv T_i Y_{1i} + (1 - T_i) Y_0}$, with $\boldsymbol{T_i = 0, 1}$.

To determine the causal effect, a counterfactual estimation of the latent outcome has to be implemented (cp. Gangl and DiPrete 2006, p. 400).

Table 4: Counterfactual inference

	Y_1	Y_0
treated group ($T = 1$)	observable	counterfactual
control group ($T = 0$)	counterfactual	observable

One solution is to oppose the average outcome of the treated divorced individuals to the average outcome of individuals in the control group who are not divorced

(14) $\Delta^* = \boldsymbol{E(Y_{1i}^*) - E(Y_{0i}^*)}$.

Causal interpretation of this *(population) average treatment effect* (ATE) is possible only if treated and untreated individuals are comparable in terms of characteristics and if no self-selection into the respective status takes place (see Gangl and DiPrete 2006, p. 401). For the purpose of this study, the ATE constitutes no appropriate measure as selection into divorce is likely to depend on individual characteristics.

Making some assumptions, a treatment effect can be assessed, however. The *conditional independence assumption* (CIA) presumes that the outcome variable (Y_1, Y_0), wealth, and the exposure to treatment (T), i.e. divorce, are independent

conditional on characteristics X which simultaneously affect wealth and marital stability

(15) $\boldsymbol{Y_1, Y_0 \perp T|X}$.

This assumption is also referred to as *unconfoundedness* or *selection on observables* (e.g. Caliendo and Kopeinig 2008, p. 35, Blundell and Dias 2009, p. 294).

To assess the *average treatment effect of the treated* (ATT)

(16) $\boldsymbol{ATT = E(Y_1|X, T = 1) - E(Y_0|X, T = 1)}$

the CIA can be weakened insofar as the actual treatment status is assumed not to affect the potential outcome in case of non-treatment (*conditional mean independence assumption* CMIA or *unconfoundedness for controls*)

(17) $\boldsymbol{Y_0 \perp T|X}$,

where $0 < Pr(T = 1|X) < 1$ (Heckman, Ichimura and Todd 1997, p. 610 et seq.). This requirement is referred to as *common support* or *overlap condition* ($support(X|T = 1) \cap support(X|T = 0)$). In other words, the distributions of participants and non-participants have to overlap as regards the relevant characteristics X (Heckman and Navarro-Lozano 2004, p. 35 or Caliendo and Hujer 2006, p. 204). If both the unconfoundedness and the common support assumption are satisfied, the assignment to treatment is *strongly ignorable* according to Rosenbaum and Rubin (1983, p. 43).

The CMIA implies that

(18) $\boldsymbol{E(Y_0|X, T = 1) = E(Y_0|X, T = 0) = E(Y_0|X)}$.

Conditional on characteristics X, the mean counterfactual outcome of the untreated ($E(Y_0|X, T = 1)$), i.e. the mean wealth of ever married individuals, if they had gotten

a divorce, can be constructed from the actual mean outcome of the ever married individuals ($E(Y_0|X, T = 0)$). The ATT can therefore be written as

(19) $$\boldsymbol{ATT = E(Y_1|X, T = 1) - E(Y_0|X, T = 0) = E(Y_1|X) - E(Y_0|X)}.$$

Under the *stable unit treatment value assumption* (SUTVA) the participation of a treated individual has no effect on the outcome of other individuals, i.e. that whether an individual gets a divorce or not, is assumed not to affect the wealth holdings of other individuals (Rubin 1980, p. 591, or 1990, p. 475). Interference between the treated and the untreated group or peer and general equilibrium effects are ruled out (e.g. Angrist, Imbens and Rubin 1996, p. 446).

Since self-selection into divorce is likely to occur, the affiliation to a particular group cannot be considered random. An experimental design has to be simulated ex post. Therefore, the distributions of covariates of the groups have to be aligned by means of a matching method.[24]

Matching provides one opportunity to account for confounding factors when estimating treatment effects on an outcome variable. The basic idea behind the approach is to match individuals in the treated group to individuals in the control group whose characteristics are as similar as possible to eliminate systematic differences.

According to Rosenbaum and Rubin (1983, p. 42), a balancing score $b(X)$ can be employed to make comparisons between the groups possible. The distribution of the observed characteristics conditional on the balancing score is supposed to be the same for the treated and the control group so that

(20) $$\boldsymbol{X \perp T|b(X)}.$$

[24] For an overview, see Gensler, Skiera and Böhm (2005), Gangl and DiPrete (2006), Caliendo and Kopeinig (2008) or Blundell and Dias (2009), for instance.

Applying an exact matching method (where $b(X) = X$), individuals are matched on the basis of an n-dimensional vector of characteristics, which impedes finding appropriate matching partners for a large n since all confounding factors have to be in accordance (cp. Blundell and Dias 2009, p. 596 et seq.).

Another possibility to implement matching is by means of the *Mahalanobis Distance*

$$(21) \quad \boldsymbol{d^2 = \left(X_i - X_j\right)' C^{-1}\left(X_i - X_j\right)},$$

where X_i are the vectors of characteristics of a treated individual and X_j those of an untreated individual. C constitutes the covariance matrix (cp. Mahalanobis 1936, Rosenbaum and Rubin 1985, p. 36 et seq., Gangl and DiPrete 2006, p. 410). Thus, the Mahalanobis metric maps the multiple characteristics into a scalar.

By contrast, Rosenbaum and Rubin (1983, p. 42 et seq.) propose to implement the matching procedure by means of a single one-dimensional measure, the propensity score $P(X)$. The index constitutes the probability of being exposed to the treatment subject to characteristics X

$$(22) \quad \boldsymbol{P(X) \equiv Pr(T = 1|X) = E(T|X)}$$

with $0 < P(X) < 1$, i.e. within the region of common support. In the context of this study, the propensity score expresses the probability of getting a divorce dependent on individual characteristics.

Rosenbaum and Rubin (1983, p. 45) show that if the CIA applies for the characteristics X it is also valid for a balancing score like $P(X)$

$$(23) \quad \boldsymbol{Y_1, Y_0 \perp T|P(X)}.$$

This implies that receiving a treatment is random for a given propensity score $P(X)$ (see Becker and Ichino 2002, p. 359 or Heckman, Ichimura and Todd 1997, p. 612). Like with respect to exact matching the CIA can be weakened

(24) $\boldsymbol{Y_0 \perp T|P(X)}$ and thus

(25) $$\boldsymbol{E(Y_0|P(X), T = 1) = E(Y_0|P(X), T = 0) = E\big(Y_0|P(X)\big)}.$$

The ATT in consideration of the propensity score can then be written as

(26) $$\begin{aligned}\boldsymbol{ATT} &= \boldsymbol{E(Y_1|P(X), T = 1) - E(Y_0|P(X), T = 1)} \\ &= E\big(Y_1|P(X)\big) - E\big(Y_0|P(X)\big).\end{aligned}$$

The ATT assesses the mean difference of outcomes within the region of common support which is weighted by means of propensity score distribution (Caliendo and Kopeinig 2008, p. 36).

Matching methods

In general, one can distinguish between four PSM approaches: Nearest Neighbour Matching, the Caplier Algorithm, Stratification Matching and Kernel Matching. Since matching methods can be perceived as weighting procedures, the outcome of the untreated group can be generalised (cp. Gensler, Skiera and Böhm 2005, p. 53)

(27) $$\boldsymbol{E\big(Y_{0i}|P(X)\big) = \frac{1}{n_1}\sum_{i\in T=1}\sum_{j\in T=0} w_{ij} Y_{0j}},$$

with n_1 as the number of treated individuals and w_{ij} as the weight subject to the applied matching method. The ATT can then be written as (cp. Heckman et al. 1998, p. 1024)

(28) $$\boldsymbol{ATT = \Big(\frac{1}{n_1}\sum_{i\in T=1} Y_{1i}\Big) - \Big(\frac{1}{n_1}\sum_{i\in T=1}\sum_{j\in T=0} w_{ij} Y_{0j}\Big)}.$$

Applying *Nearest Neighbour Matching*, the *n* (with $n \geq 1$) individuals from the control group who are closest as regards the propensity score are matched to a treated individual. An untreated individual can serve as the matching partner for several individuals (matching with replacement) or for solely one (matching without replacement).[25] The set of matching partners from the control group (C_i) can be written as

$$(29) \quad \boldsymbol{C_i^{NN} = \min_j |P(X_i) - P(X_j)|}$$

(cp. Heckman et al. 1998, p. 1023 et seq.). The weighting parameter to construct the counterfactual mean is

$$(30) \quad \boldsymbol{w_{ij}^{NN} = \begin{cases} 1, & if j \in C_i^{NN} \\ 0, & else \end{cases}}.$$

To avoid bad matches, i.e. matches with wide distances between $P(X_i)$ and $P(X_j)$, *Caliper Matching* implements a tolerance level ε of the maximum propensity score distance and hence imposes a common support condition:

$$(31) \quad \boldsymbol{C_i^{CM} = |P(X_i) - P(X_j)| < \varepsilon}, \text{ and}$$

$$(32) \quad \boldsymbol{w_{ij}^{CM} = \begin{cases} 1, & if j \in C_i^{CM} \\ 0, & else \end{cases}}.$$

If no matching partner can be found within the caliper, the observation is excluded (cp. Heckman et al. 1998, p. 1024 or Smith and Todd 2005, p. 315).[26]

---

[25] Smith and Todd (2005, p. 315) point out that the decision between matching with or without replacement involves a trade-off between the variance and the average quality of the matches. Allowing for replacement reduces the bias but increases the variance of the estimator. Caliendo and Kopeinig (2008, p. 44) provide an overview of the trade-offs in terms of bias and efficiency in respect of several matching methods.

[26] The Caliper Matching method can be modified insofar as the average outcome of all untreated individuals within the caliper is used as a counterfactual. This modification is referred to as *Radius Matching*. Furthermore, observations are not excluded but matched to the nearest neighbour outside the caliper, if no appropriate matching within the caliper is possible (Dehejia and Wahba 2002, Smith and Todd 2005, p. 315 et seq.).

Applying *Stratification Matching* the common support of propensity scores is subdivided into a set of strata. The average treatment effect is assessed by calculating the mean difference between the outcome of the treated and untreated group within the respective intervals$q$

$$(33) \quad \boldsymbol{ATE_q^S} = \frac{\sum_{i \in I(q)} \boldsymbol{Y_{i \in T=1}}}{\boldsymbol{n_{q,T=1}}} - \frac{\sum_{j \in I(q)} \boldsymbol{Y_{j \in T=0}}}{\boldsymbol{n_{q,T=0}}},$$

with $I(q)$ as the set of units in stratum q (cp. Becker and Ichino 2002, p. 364).
The ATT

$$(34) \quad \boldsymbol{ATT^S} = \sum_{\boldsymbol{q=1}}^{\boldsymbol{Q}} \boldsymbol{ATE_q^S} \frac{\sum_{i \in I(q)} \boldsymbol{n_{i \in T=1}}}{\sum_{\forall i} \boldsymbol{n_i}}$$

results from weighting the strata-specific treatment effects ATE_q^S by the corresponding share of treated individuals in the interval (e.g. Caliendo and Kopeinig 2008, p. 43 et seq. or Smith and Todd 2005, p. 316).[27]

In contrast to the algorithms mentioned above that use only one or few individuals from the control group as matching partners, *Kernel Matching* uses a kernel-weighted average of several (or all) untreated individuals to construct the counterfactual mean with

$$(35) \quad \boldsymbol{w_{ij}}^{\boldsymbol{K}} = \frac{\boldsymbol{K}\left(\frac{\boldsymbol{P(X_i)} - \boldsymbol{P(X_j)}}{\boldsymbol{h_n}}\right)}{\sum_{\boldsymbol{k \in T=0}} \boldsymbol{K}\left(\frac{\boldsymbol{P(X_i)} - \boldsymbol{P(X_k)}}{\boldsymbol{h_n}}\right)}$$

where h_n is a bandwidth parameter and $K(\cdot)$ a kernel function. Weights depend on the distance between the propensity scores of the treated individual and each individual from the control group whereby the highest weights are given to those individuals that are closest in terms of a propensity score (see Heckman et al. 1998, p. 1024 or Smith and Todd 2005, p. 316). As more individuals are included in the

[27] On the determination of the number of strata see Caliendo and Kopeinig (2008, p. 43), for instance.

estimation, this approach helps to reduce the variance. On the other hand, the quality of matches can decrease on account of this (Caliendo and Kopeinig 2008, p. 43). Concerning the bandwidth parameter, a trade-off between bias and variance arises. A large bandwidth evens the estimated density function and thus decreases the variance between the true underlying and the estimated density function. However, the quality of matches can decrease as underlying features may be smoothed away (Caliendo and Kopeinig 2008, p. 44).

Some authors propose *Local Linear Matching* as a generalised implementation of Kernel Matching whereby a linear term is added to the propensity scores of a treated individual. The weighting parameter can be written as

$$(36) \quad \boldsymbol{w_{ij}^{LL}} = \frac{\boldsymbol{K_{ij}} \sum_{k \in T=0} \boldsymbol{K_{ik}} \left(\boldsymbol{P(X_k)} - \boldsymbol{P(X_i)}\right)^2 - \left[\boldsymbol{K_{ij}}\left(\boldsymbol{P(X_j)} - \boldsymbol{P(X_i)}\right)\right]\left[\sum_{k \in T=0} \boldsymbol{K_{ik}}\left(\boldsymbol{P(X_k)} - \boldsymbol{P(X_i)}\right)\right]}{\sum_{j \in T=0} \boldsymbol{K_{ij}} \sum_{k \in T=0} \boldsymbol{K_{ik}} \left(\boldsymbol{P(X_k)} - \boldsymbol{P(X_i)}\right)^2 - \left[\sum_{k \in T=0} \boldsymbol{K_{ik}}\left(\boldsymbol{P(X_k)} - \boldsymbol{P(X_i)}\right)\right]^2},$$

with $K_{ij} = K\left(P(X_i) - P\left(X_j\right)/h_n\right)$. This helps if the observations of the untreated group are distributed asymmetrically around the observations of the treated group, which would be the case if the distribution of the propensity scores exhibits gaps or boundary points (e.g. Heckman, Ichimura and Todd 1997, p. 630 et seq., Heckman et al. 1998, p.1041, Smith and Todd 2005, p. 316 et seq. or Caliendo and Kopeinig 2008, p. 43 et seq.).

Gangl and DiPrete (2006, p. 409 et seq.) note that matching algorithms can be combined to some extent: kernel-based matching within strata or Nearest Neighbour Matching in combination with a caliper, for instance. Thus, the analysis can benefit from the respective advantages of the methods.

Propensity Score Matching (PSM) can be applied to assess the effect of a treatment when selection into treatment cannot be considered random. To achieve valid results, comparable frameworks for the treated and untreated individuals have to be constructed (e.g Blundell and Dias 2009, p. 600 et seq., or Gangl and DiPrete 2006, p. 417). Two individuals with the same characteristics have to be equally likely to get a divorce. It has to be assured that for divorced and ever married individuals the

distributions of relevant characteristics, i.e. parameters affecting wealth as well as the probability of divorce, overlap. After the matching process, the distribution of characteristics of the divorced individuals should resemble the distribution of characteristics of the ever married individuals to rule out self-selection into divorce depending on observable characteristics. The bias caused by reverse causality could be completely eliminated by means of matching methods, if no unobserved variables had an impact on the outcome and the treatment status. Otherwise the bias can only be reduced (cp. Becker and Ichino 2002, p. 358, or DiPrete and Gangl 2004, p. 276).

Whether the common support assumption and the CMIA can be fulfilled is likely to depend on the quality and richness of the dataset as well as on the degree of selectivity. Imbens and Wolldridge (2009, p. 46) state that the unconfoundedness assumption is not directly testable. In practice, the quality of matching can be assessed by means of different approaches, however (Caliendo and Kopeinig 2008, p. 47 et seq.). It can be checked whether significant differences between the means of the covariates of the treated and untreated group exist using t-statistics. Another suggestion is to compare the standardised bias of every covariate before and after matching. The standardised bias is the difference of the sample means of the treated and untreated group as a percentage of the square root of the average of the sample variances in the groups (Rosenbaum and Rubin 1985). According to a rule-of-thumb, standardised biases lower than 5% are considered sufficient (cp. Caliendo and Kopeinig 2008, p. 48). A third alternative is to re-estimate the propensity score using the matched sample. The pseudo-R^2 should be low after matching, if systematic differences have been eliminated. Besides, it has to be assured that the distributions of characteristics of the treated and untreated group overlap, i.e. that a region of common support exists. One solution is to confine the analysis to individuals whose propensity score lies between the minimum and the maximum propensity score of the other group. Furthermore, the region of common support can be restricted by excluding propensity scores for which the estimated density is below a particular value (cp. Caliendo and Kopeinig 2008, p. 45 et seq., or Smith and Todd 2005, p. 317).

Whether the SUTVA can be considered fulfilled, i.e. whether the divorce of one individual can be assumed not to have an effect on the potential wealth holdings of other individuals, has to be decided theoretically. Marriage and divorce always affect two persons and consequently an interaction between the spouses exists. As men and women are analysed separately, however, this interference is eliminated. Also, due to the common incidence of divorce and since divorce has become socially accepted to a large extent, peer group effects are unlikely. Assuming that a market in marriage exists, one could argue that the wealth of single individuals can be affected by the divorce of other individuals, insofar as divorced persons improve the quality of the marriage pool and therefore anticipated income (and subsequently wealth) is higher as marriage becomes more likely. However, this effect can be regarded as rather indirect and time-lagged. Furthermore, in practice, is rather unlikely that two individuals from different households surveyed in the SOEP interact with each other. Thus, analysing the relation between divorce and wealth, the SUTVA can be considered fulfilled.

The calculation of standard errors for the treatment effects should include the variance resulting from the estimation of the propensity score as well as the imputation of the region of common support. Bootstrapping constitutes one possibility to assess standard errors. It has to be noted, however, that bootstrapping has not been formally justified (Imbens 2004) and may fail for nearest neighbour matching with replacement (Abadie and Imbens 2008). Bootstrapping is likely to be valid for kernel estimators, though (Imbens and Wooldridge 2009, p.42). Another approach by Abadie and Imbens (2006) uses the average of the conditional variances in the two treatment groups to assess standard errors.[28]

3.2.5 Conditional Difference-in-Differences Matching

The above-mentioned matching methods assume that conditional on observable characteristics mean outcomes can be considered independent of treatment status. However, treated and untreated individuals could differ systematically in terms of

[28] For a broader overview see Caliendo and Kopeinig (2008, p. 51 et seqq.) or Imbens and Wooldridge (2009, p. 42 et seq.).

unobserved characteristics. Even if the bias of the treatment effect can be reduced applying matching methods, reverse causality between the outcome and the treatment cannot be completely eliminated if unobserved heterogeneity occurs (cp. Becker and Ichino 2002, p. 358).

Heckman, Ichimura and Todd (1997, p. 622 et seqq.) and Heckman et al. (1998, p. 1030 et seq.) decompose the conventional measure of evaluation bias

$$(37) \quad \boldsymbol{B = E(Y_0|T = 1) - E(Y_0|T = 0)}$$

into three components

$$(38) \quad \boldsymbol{B = \int_{S_1} E(Y_0|X, T = 1)\, f(X|T = 1) dX - \int_{S_0} E(Y_0|X, T = 0)\, f(X|T = 0) dX = B_1 + B_2 + B_3}$$

where S_i (with $i = 0,1$) is the support of X for $T = i$.[29] The particular components of bias can be written as

$$(39) \quad \boldsymbol{B_1 = \int_{S_1 \setminus S_{10}} E(Y_0|X, T = 1)\, f(X|T = 1) dX} - \int_{S_0 \setminus S_{10}} E(Y_0|X, T = 0)\, f(X|T = 0) dX\,,$$

$$(40) \quad \boldsymbol{B_2 = \int_{S_{10}} E(Y_0|X, T = 0)\, \{f(X|T = 1) - f(X|T = 0)\} dX},$$

$$(41) \quad \boldsymbol{B_3 = \int_{S_{10}} \{E(Y_0|X, T = 1) - E(Y_0|X, T = 0)\}\, f(X|T = 1) dX},$$

with S_{10} as the region of common support and $S_i \setminus S_{10}$ (with $i = 0,1$) as the region that is contained in S_i but not in S_{10}. Bias B_1 arises, if supports of the observed characteristics for the treated and the control group do not overlap. Bias B_2 arises from differences in the distribution of observable characteristics between the two

[29] In other words, S_i is the set of values of the characteristics in the particular treatment status.

groups (observed heterogeneity). Bias B_3 depends on selection on unobservables (unobserved heterogeneity). Hence, it constitutes a bias that can arise even if the outcomes are compared in a region of common support and outcomes are conditioned on observable characteristics. By means of the *common support condition* and the matching procedure, the two first components of bias can be eliminated. The third part is zero if the CIA applies. Otherwise, the selection into treatment caused by unobservables can be accounted for employing difference-in-differences matching.

Heckman, Ichimura and Todd (1997, p. 612 et seq.) and Heckman et al. (1998, p. 1029 et seq.) define a non-parametric conditional difference-in-differences estimator that extends matching to a cross-sectional or panel context and thus allows to control for selection on unobservables. In the classical difference-in-differences approach, the outcomes of individuals before and after treatment are compared (e.g. Caliendo and Hujer 2006, p. 207 et seq.)

(42) $$\boldsymbol{DD = E\left(Y_{1i}^{t+1} - Y_{1i}^{t}\right) - E\left(Y_{0i}^{t+1} - Y_{0i}^{t}\right).}$$

The conditional difference-in-differences estimator opposes the before and after treatment outcomes conditional on the propensity score

(43) $$\boldsymbol{DD^{PSM} = E\left(Y_{1i}^{t+1} - Y_{1i}^{t} | P(X), T = 1\right) - E\left(Y_{0i}^{t+1} - Y_{0i}^{t} | P(X), T = 0\right).}$$

Heckman, Ichimura and Todd (1997, p. 613) show that if

(44) $$\boldsymbol{E\left(Y_{0i}^{t+1} - Y_{0i}^{t} | P(X), T = 1\right) = E\left(Y_{0i}^{t+1} - Y_{0i}^{t} | P(X), T = 0\right)}$$

holds, i.e. if the relevant characteristics are balanced between the groups and the common support assumption is fulfilled, DD^{PSM} can identify the ATT. Furthermore, if it is assumed that unobserved heterogeneity is stable over time

(45) $$\boldsymbol{B^{t+1}(X) = B^{t}(X)}$$

the conditional difference-in-differences estimator does account for selection on unobservables. Thus, applying matching methods in combination with difference-in-differences estimators constitutes an approach to account for selection into treatment, simultaneity and unobserved heterogeneity.

3.3 Dependent and Explanatory Variables

The skewness of the distribution of net-wealth requires a transformation of the dependent variable. The method applied must be able to account for the negative values as well as the frequent occurrence of zero wealth holdings which impede the implementation of log-transformation. One possible solution lies in employing the inverse hyperbolic sine-transformation (IHS).[30] Net-wealth (w) is transformed as follows:

$$(46) \quad \boldsymbol{w_{hyper} = \ln\left(w + \sqrt{(w^2 + 1)}\right) = \sinh^{-1} w}.$$

For large absolute values of w this transformation approximates $\ln(w)$. The derivative of w_{hyper} is

$$(47) \quad \boldsymbol{w'_{hyper} = 1/\sqrt{w^2 + 1}}\ .$$

To account for the highly skewed distribution of wealth, 0.1% top-coding is implemented for every contemplated source of wealth and thus also for net-wealth. Wealth components that can take negative values are additionally 0.1% bottom-coded.

[30] See Burbidge, Magee and Robb (1988) or Pence (2006, p. 5 et seqq.) for a detailed description of the IHS. In general, the transformation contains a scaling parameter θ ($w_{hyper} = \ln\left(\theta w + \sqrt{(\theta^2 w^2 + 1)}\right)/\theta = \sinh^{-1}(\theta w)/\theta$). Following Frick and Grabka (2009b), θ is set to one.

In the following, the implementation of theoretic determinants of wealth applied in an OLS regression is described. As the purpose of this study is to analyse the relation of wealth and divorce, marital history categories which account for the current marital status as well as former family changes (cp. Table 2) are included in the regression.

One main determinant of wealth is income. Pursuant to the life-cycle approach, higher permanent income involves saving on a higher rate and therefore higher wealth. On the one hand, *household income* averaged over the last three years is considered as a proxy for permanent income.[31] Instead of using equivalised household income, the *logarithmised household size* is included as a distinct explanatory variable.[32] A dummy variable contains the quintiles of permanent household income. On the other hand, accounting for the fact that saving is likely to depend on the level of individual income as well (e.g. Browning 1995), a measure of *individual earnings* is introduced which is also averaged out over the last three years.[33] In consequence of using averaged income measures, the data are restricted to individuals who have been surveyed two years before the year information on wealth holdings have been observed. One shortcoming of the restriction to a balanced panel is the drop out of cases. Systematic differences between married and unmarried individuals may arise with respect to individual earnings. As these differences constitute one potential reason for variation in wealth holdings, however, it is feasible to apply a measure of permanent individual earnings. The same applies for household income.

Because the age-wealth-distribution is assumed to be hump-shaped it is controlled for *age* and *squared age*. Wealth is expected to be positively correlated with *health* (e.g. Meer, Miller and Rosen 2003). Although precautionary saving can arise by

---

[31] For the use of average income as a proxy for permanent income see Smith (2001, p. 87) or Juster, Smith and Stafford (1999, p. 265 et seqq.), for instance.

[32] Schwarze (2003) shows that including the logarithmised income and logarithmised household size instead of a measure of equivalent income increases the flexibility since no assumption with regard to the equivalent scale applied has to be made.

[33] The indicator takes the value zero if an individual does not have any earnings. The variable becomes one if a person earns up to 5,000 €, two for 5,001 € to 10,000 €, three for 10,001 € to 30,000 €, it takes the value four for earnings between 30,001 € and 50,000 € and five for earnings higher the 50,000 €.

reason of poor health higher medical expenses and loss of wages are expected to abate wealth levels (Finke and Pierce 2006, p. 230). Bad health can impede an individual's labour supply and involve medical expenses. The dummy variable for health status takes the value zero if health is rated "(very) good", one if "satisfactory" and two if it is rated "not so good or bad". One determinant for the earnings potential is *educational attainment*. Applying the ISCED classification, four educational classes are generated: low, middle, (higher) vocational and higher education.[34]

To account for the different feasibilities to accumulate wealth in former East-Germany and West-Germany, a dummy variable which indicates whether an individual lived in *East-Germany before 1989* is introduced. Amongst other things, the difference in wealth holdings between former East- and West-Germany exists since real estate property is less prevalent in East-Germany (Frick and Grabka 2009b, p. 590). Because owner-occupied property is more common in *rural areas*, a dummy variable is included which takes the value zero if an individual lives in a rural area with up to 5,000 inhabitants, one if he or she lives in a city (5,000-100,000 inhabitants) and three if they live in a town with more than 100,000 inhabitants. Furthermore, it is controlled for whether a person has a *migration background*, i.e. whether they do not have the German citizenship or were not born in Germany.

To account for whether a value was *imputed*, edited or remained unchanged, Frick, Grabka and Marcus (2010, p. 32) recommend to include this information as a control variable in regression analyses. Children can have an impact on labour supply and therefore on income and on saving behaviour. Thus, the *number of children in the household* is controlled for. As the effect of children is likely to decrease with an increasing number of children the *squared number of children in the household* is also included. Wealth accumulation may differ depending on the age of children. Three dummy variables taking the value one if an individual has at least one *baby* aged 0-4, a *child of school age* (5-17) or children *elder than 17*, respectively, are therefore considered.

[34] The corresponding ISCED specifications are: low: ISCED=0,1,2; middle: ISCED=3; (higher) vocational: ISCED=4,5; higher education: ISCED=6.

To assess the employment history, the *years an individual spent in full-time employment*, in *part-time employment* or *unemployed* are included. Moreover, it is controlled for whether an individual is *in the labour force at the moment*. The defined benefit pension scheme provides different incentives for different occupational groups with regard to old-age provision. While the pension scheme is statutory for the major part of the population, it is optional for *self-employed* or professionals ("Freiberufler"). A separate tax financed system without explicit contributions exists for *civil servants* who are exempt from paying contributions to the statutory pension system. Thus, wealth holdings are likely to differ depending on whether an individual is self-employed or a civil servant due to distinct incentives for retirement saving.

Other determinants of current wealth are inheritances and gifts received. One dummy variable comprises information about whether an individual received *inheritances or gifts* before 1992. Another dummy variable becomes one if a person inherited before 2002 but after 1992. Since 2002 information on inheritances and gifts in the SOEP is available only on the household level. A third dummy variable expresses whether an individual lived in a household where any of the household members received inheritances and gifts in between 2002 and 2007. *Saving* is assumed to determine wealth. The dummy variable included takes the value one if the household an individual has lived in has saved continuously over the last three years and zero otherwise. Information on saving is provided on the household level only. Changes in the composition of the household may have an impact on the saving behaviour. As with regard to income, it is reasonable to introduce a proxy of permanent saving instead of a measure concerning one year only.

The *educational level of an individual's parents* constitutes one determinant of their well-being as well as their descendants' education – and is therefore likely to be related to wealth (e.g. Black, Devereux and Salvanes 2005 or Heineck and Riphahn 2009). Hence, two dummy variables are considered taking the value one if the mother or the father, respectively, is highly educated. Another explanatory variable included to assess the families' socio-economic background concerns the *regional environment a person (predominantly) grew up* in. The dummy variable takes the

value one if a person grew up in a small town or in a rural area, and zero otherwise. As owner-occupied property is more common in less densely populated areas, individuals from rural areas may be more likely to inherit, for instance.

Wealth accumulation can be affected by *religion* indirectly through differences in educational attainment, gender roles or income, for instance (Lehrer 2009, p. 205 et seqq.). A direct effect can arise from the value of saving, the allocation of time and money or sacrificial giving (cp. Keister 2003, 2008, p. 1239 et seq., or Lehrer and Chiswick 1993, p. 386). A dummy variable contains information on whether an individual stated to be Catholic or Evangelical, to be a member of a different Christian denomination or religious community, an Islamic religious community or another religious community or to be undenominational.

The level of wealth can differ by the willingness to take *risks in financial matters*. Risk preferences were surveyed in 2004 by means of a scale from zero (no willingness to take risks in financial matters) to ten (very willing to take risk). *Life satisfaction* is correlated with determinants of wealth like consumption or investment behaviour (Frey and Stutzer 2002, p. 430). Overall life satisfaction is surveyed by means of a scale ranging from zero (completely dissatisfied) to ten (completely satisfied).

Pursuant to equation (10), wealth holdings are determined by wealth holdings in the previous period. In the regression for 2007, the value of *net-wealth held in 2002* is therefore included (cp. Frick and Grabka 2009, p. 594). The measure is transformed by means of the hyperbolic sine-transformation.

All regression analyses are implemented for men and women separately. The determinants of wealth accumulation are likely to differ in their influences between the sexes. With regard to marital status these differences can be considered relevant, in particular.

In a second step, an OLS regression on the change in net-wealth between 2002 and 2007 is implemented. The dependent variable is the difference between net-wealth in

2007 and 2002, each value transformed applying the inverse hyperbolic sine-transformation.

It is controlled for the *change in marital status* between the two years (cp. Table 3). Categories containing less than 50 individuals are omitted. Atkinson and Harrison (1978, p. 250 et seqq.) suggest to analyse the accumulation of wealth by *age class* to account for the hump-shaped pattern of saving over the life-cycle. The dummy variable comprises ten age classes (17-25, 26-30, 31-15, 36-40, 41-45, 46-50, 51-55, 56-60, 61-65 and older than 65). Further control variables included different from the variables in the OLS regression model are a proxy for *permanent earnings*, average earnings over the period from 2002 to 2007. A further variable represents the years a person was *in the labour force between the five years*. *Quintiles of permanent household income* contain information on the average income of the household(s) an individual lived in between 2002 and 2007.

Whether an individual lived in a household that has *constantly saved* between 2002 and 2007 is expressed by a dummy variable. Furthermore, information on whether an individual lived in a household where *loans had to be paid off permanently* is included. A variable considered as a proxy for a precautionary saving motive is whether an individual *worried about their health* in 2002. *Inheritances* can positively affect wealth holdings. Thus, a dummy variable taking the value one if any person in the current household received an inheritance or gift between 2002 and 2007 is included. Information on whether wealth was *imputed*, edited or remained unchanged is provided by a dummy variable with three values: zero if information on wealth remained unchanged, one if the value was imputed for 2002 or 2007, and two if imputation was carried out for both years.

To account for changes in income between 2002 and 2007, two categorical variables express the *change in individual earnings* and the *change in household income*. Both variables comprise nine categories comparing income in the two years: a loss higher than 50%, up to 50%, up to 25% or up to 10%, a change in either direction not higher than 5%, and four categories if an individual's income increased corresponding to the loss-categories. Other changes considered are whether an individual *had a child* or

retired between 2002 and 2007. Furthermore, it is controlled for whether their *health worsened*.

The same explanatory variables as for the OLS regression on the change in wealth are applied to carry out probit regressions on whether an individual increased their wealth stock by more than 5% or incurred a loss higher than 5% between 2002 and 2007. In a third model, the dependent variable is a dummy which takes the value one if an individual's wealth changed up to 5% in either direction. Moreover, an ordered probit regression is implemented. The categorial dependent variable takes the value zero if the wealth stock of a person more than halved. It becomes one if the loss amounts to 25% to 50%, two for 10% to 25% losses and three for 5% to 10% losses. If the changes in wealth are not higher than 5%, regardless of whether it increases or decreases, the variable takes the value four. The categories for an increase in wealth correspond to the loss-categories. The dependent variable amounts to five if wealth increased by 5% to 10%, six in case of an 10% to 25% increase and seven for 25% to 59% increases. It becomes eight if an individual more than doubled their wealth.

Table 5: Overview of dependent and control variables for OLS regressions and (ordered) probit regression models

	OLS regression on wealth	**OLS regression on the change in wealth**	**probit regressions on the change in wealth**	**ordered probit regression on the change in wealth**
dependend variable	IHS-transformed net-wealth 2007	(IHS-transformed net-wealth 2007) - (IHS-transformed net-wealth 2002)	(1) decrease > 5% (2) increase > 5% (3) change up to 5%	nine categories of changes in wealth
control variables				
marital history	x			
marital status change between 2002 and 2007		x	x	x
age	x			
squared age	x			
age class		x	x	x
physical health	x	x	x	x
education	x	x	x	x
region	x	x	x	x
East-Germany before 1989	x	x	x	x
migration background	x	x	x	x
imputed	x	x	x	x
number of children	x	x	x	x
squared number of children	x			
child(ren) aged 0-4	x	x	x	x
child(ren) aged 5-17	x	x	x	x
child(ren) older than 17	x	x	x	x
quintiles of permanent HH-income	x	x	x	x
log(household size)	x	x	x	x

…continued

…continued (overview of dependent and control variables for regression models)

permanent earnings	x	x	x	x
years full-time employment	x	x	x	x
years part-time employment	x	x	x	x
years unemployment	x	x	x	x
in the labour force	x	x	x	x
years in the labour force between 2002 and 2007		x	x	x
self-employed	x	x	x	x
civil servant	x	x	x	x
IHS-transformed net-wealth 2002	x	x	x	x
saved the last three years	x			
saved continuously between 2002 and 2007		x	x	x
inheritance before 1992	x			
inheritance between 1992 and 2002	x			
inheritance between 2002 and 2007	x	x	x	x
paid off loans continuously between 2002 and 2007		x	x	x
worried about health		x	x	x
father highly educated	x	x	x	x
mother highly educated	x	x	x	x
grew up in rural area	x	x	x	x
religion	x	x	x	x
risk	x	x	x	x
life satisfaction	x	x	x	x
change in individual earnings		x	x	x
change in household income		x	x	x
birth		x	x	x
retired		x	x	x
health worsened		x	x	x

To assess the causal effect of divorce on wealth, conditional difference-in-differences matching is implemented. The dependent variable estimating the propensity to divorce takes the value zero if an individual was continuously married between 2002 and 2007. It amounts to one if an individual underwent a divorce during this period.

In the following, factors that are assumed to have an impact on the probability of divorce are specified taking the theory of marriage and wealth accumulation into account. Caliendo and Kopeinig (2008, p. 38) or Smith and Todd (2005, p. 333) note that variables included in the estimation of the propensity score should simultaneously influence the outcome variable to ensure that the CIA is fulfilled. Thus, parameters considered should have an impact on the probability of divorce as well as on wealth holdings. It should be kept in mind that – although the likelihood of divorce should be validly estimated – the main purpose is not to predict the probability of divorce but to balance the distribution of relevant characteristics.

In order to estimate the propensity score, individual and marital characteristics as well as information concerning the family background are considered.[35] To avoid that a male is matched to a female individual, direct matching with respect to sex is applied.

According to economic theory of marriage, the higher a person's *educational attainment* and *age* the lower is the likelihood of divorce. The *physical health* of a person can influence the probability of divorce insofar as poor health increases the search costs and thus increases the gains from marriage. However, sustaining a relationship may be better feasible for individuals in good health (cp. Lillard and Panis 1996, p. 314 et seq.). The same is true for *mental health* (e.g. Bartel and Taubman 1986 or Wade and Pevalin 2004).[36]

As marital disruptions are more likely to occur in urban areas (e.g. Gautier, Svarer and Teulings 2009) the *region of residence* is included as a control variable. To

[35] For an overview on factors that are expected to affect marital dissolution see Finke and Pierce (2006, p. 228 et seq.), Bryant and Zick (2006, p. 290 et seqq.), Smock, Manning and Gupta (1999, p. 802 et seq.) or White (1990), for instance.
[36] The mental health scale in the SOEP ranges from 0 to 100 (see Andersen et al. 2007 on the construction of the measure).

account for the different attitudes to divorce in former East-Germany and West-Germany (Engelhardt, Trappe and Dronkers 2002 or Böttcher 2006), information on whether a person *lived in East-Germany before 1989* is considered. As attitude towards divorce may also differ depending on cultural factors, it is controlled for whether a person has a *migration background*, which also constitutes a determinant of wealth.

A further parameter which is related to divorce as well as to wealth accumulation is *religious affiliation*. Since marriage is highly valued in almost every religion, divorce probabilities of religious individuals are presumed to be lower than for non-denominational persons. Moreover, *life satisfaction* is assumed to be related to marital happiness and thus lower the propensity of divorce (cp. Waite and Lehrer (2003, p. 257 et seq.).[37]

Children can be seen as marriage-specific capital which lowers the probability of divorce (Becker, Landes and Michael 1977, p. 1152). Hence, the *number of children living in the household* and the *age of children* are considered in the analysis. Younger children are assumed to stabilise marriages, whereas this effect is likely to decrease with their increasing age.

Household income is considered since couples with higher socio-economic status have a lower probability of divorce and are able to save more. Additionally, *individual earnings* are included as a measure for economic independence.[38] Furthermore, it is controlled for the *years an individual spent in employment* or *unemployed* to assess the employment history.

A further variable included is the *ratio between the years an individual worked and the duration of marriage*. It is sought to represent human capital accumulated during marriage as well as a proxy for bargaining power within marriage. According to economic theory of marriage, search costs decrease with age and as a consequence

[37] Personality traits are related to both wealth and marital status (cp. Chapter 3.2.2). However, as the "Big Five" were surveyed in 2005 in the SOEP and divorce may change personality traits (Mroczek and Spiro Ill 2003), the measure is not included in the analysis.
[38] Both income measures are averaged over three years and logarithmised. As earnings can amount to zero, one Euro is added to the original amount before taking the logarithm.

the gain of marriage increases (Becker, Landes and Michael 1977, p. 1151). Diekmann and Klein (1993, p. 351) or Rapp (2008, p. 507 et seq.) discuss in more detail why the probability of divorce is likely to decrease with the *age at first marriage*. As the effects are assumed to decrease with increasing age at marriage, the logarithm of the parameter is taken. Marital-specific capital increases with the *duration of marriage* and thus lowers the risk of a separation (Becker 1974a, p.23). The marginal utility of marital-specific capital diminishes over the years (Becker, Landes and Michael 1977, p. 1152 et seq.). Thus, the risk of divorce differs subject to the duration of marriage (cp. Rapp 2008). The risk is the highest at the beginning of marriage and decreases subsequently. Hence, the duration of marriage is logarithmised. Additionally, wealth accumulation is likely to increase with the duration of marriage as couples may take advantage of the marriage institution benefits proportionately longer. If an individual *inherited during marriage*, has an impact on the power within marriage. Moreover, inheritances increase the wealth stock.

To assess the families' socio-economic status, the *parental education* is considered. Lyngstad (2006, p. 50) states that "[i]f education had a positive correlation with the divorce rate for the parental generation, then, for their offspring, parental education will be correlated with having experienced parental divorce".[39] Additionally, a variable concerning the *regional environment a person (predominantly) grew up in* is included. As living in an urban area is assumed to increase the probability of divorce, an individual who grew up in a rural area may be less likely to have undergone parental divorce.

[39] Parental divorce is found to increase the probability that their offspring undergoes a divorce (e.g. Diekmann and Engelhardt 1999).

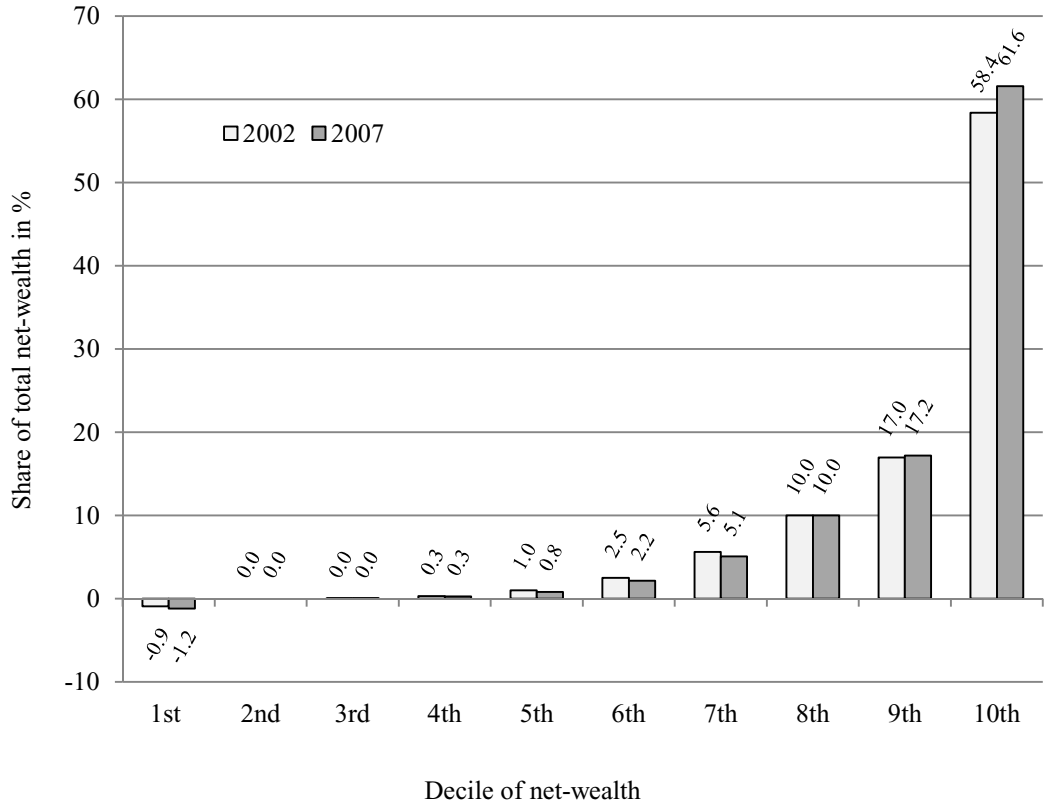
4 Empirical Evidence

In the following, the distribution of wealth is outlined by means of some descriptive statistics. Subsequently, the distribution of wealth depending on marital status is examined. Wealth changes in consequence of changes in marital status are analysed in Chapter 4.3. In a next step, the causal effect of divorce on wealth is sought to be assessed.

4.1 The Distribution of Wealth

Figure 3 exhibits the percentage share of net-wealth held in 2002 and 2007 over the deciles of the wealth distribution. The high concentration of wealth becomes evident. The wealthiest 10% hold more wealth than the individuals of all other deciles combined. As net-wealth can also take negative values in case debts exceed positive wealth holdings, the share of wealth can become negative as in case of the lowest decile. Net-wealth is slightly more concentrated in 2007 than in 2002. The share of wealth in the lower deciles decreased, whereas the percentage possessed in the ninth and tenth decile increased between 2002 and 2007.

Figure 3: Percentage share of net-wealth over deciles in 2002 and 2007.



Source: SOEP, author's calculations.

The measures in

Table 6 and Table 7 provide additional evidence that wealth and its single components are distributed unequally. On average, i.e. regarding the mean and the median of net-wealth, the level of wealth remained stable between 2002 and 2007.[40] Compared to 2002, fewer individuals did not possess any wealth in 2007, but the share of persons with debts increased from about 5% to 6.5%. Owner-occupied property is the most important source of wealth in Germany. The slight decrease in the value of owner-occupied property is compensated by a rise in private pensions. This increase is most likely due to the "Riester Rente" which was introduced in 2002

[40] The parameters for 2002 and 2007 can only be compared nominally. The SOEP provides a consumer price index which may be used to make income comparable over the years. The index is not appropriate for the adjustment of wealth holdings, however, as it focuses on consumer prices only. An index suitable to adjust wealth holdings would have to incorporate inflation rates for every contemplated component of net-wealth like housing wealth or financial assets. Hence, the calculation of such an indicator is extremely complex, if feasible at all.

and is targeted to extend private retirement provisions. Furthermore, financial assets gained in importance.

Table 6: The distribution of wealth in 2002

2002	net-wealth	owner-occ. property	other property	financial assets	private pensions	business assets	tangible assets	consumer credits
Wealth in €								
mean	81,756	42,952	12,316	9,375	8,921	7,265	1,299	2,239
median	15,000	0	0	0	0	0	0	0
% share wealth=0	21.1	60.4	88.0	53.0	49.0	95.0	89.6	87.8
% share wealth< 0	5.2	0.5	0.5	0	0	0	0	0
Percentiles								
10%	0	0	0	0	0	0	0	0
25%	0	0	0	0	0	0	0	0
75%	97,780	66,400	0	8,975	7,798	0	0	0
90%	208,266	140,000	0	25,000	24,392	0	0	3,000
Inequality								
Gini	0.776	0.781	0.980	0.825	0.827	0.989	0.963	0.959
HSCV	3.418	1.826	19.893	4.333	4.622	62.380	19.944	22.265

n= 23,158

Source: SOEP, author's calculations.

The high skewness of the distribution becomes evident by comparison of the mean and the median of net-wealth. The former is about five times as large as the latter in both years. As regards the different components, the median is zero in almost all cases. The selected quantiles contribute more evidence for the unequal distribution of wealth. The 10% and 25% least wealthy individuals do not possess any wealth. The 90% percentile on the other hand is about 2.5 times as high as the mean and 14 times higher than the median in both years.

Table 7: The distribution of wealth in 2007

2007	net-wealth	owner-occ. property	other property	financial assets	private pensions	business assets	tangible assets	consumer credits
Wealth in €								
mean	82,138	39,945	11,953	11,331	11,444	7,123	724	2,415
median	15,000	0	0	0	309	0	0	0
% share wealth=0	17.3	59.0	88.5	48.8	45.9	95.4	93.9	84.0
% share wealth< 0	6.5	0.6	0.8	0	0	0	0	0
Percentiles								
10%	0	0	0	0	0	0	0	0
25%	0	0	0	0	0	0	0	0
75%	93,335	52,500	0	9,202	10,000	0	0	0
90%	210,052	135,983	0	28,727	30,000	0	0	5,000
Inequality								
Gini	0.795	0.807	1.026	0.842	0.821	0.991	0.980	0.940
HSCV	4.048	2.135	24.782	5.398	4.000	73.946	31.196	13.116

n= 20,623

Source: SOEP, author's calculations.

The inequality measures listed support the picture of the dispersion. Gini-coefficients turn out to be relatively high.[41] The coefficient takes values close to one for those components that are owned by a minority of the population such as business assets. Besides, the comparison of the values for half the squared coefficient of variation (HSCV) in 2002 and 2007, which is sensitive to changes at the top of the distribution, provides evidence that the increase in inequality of wealth is affected more strongly by the top of the distribution, as the rise in the latter measure is larger

[41] As net-wealth and some of its components can take negative values the estimates of the Gini for these measures may be higher than one because the Lorenz curve lies under the horizontal axis in these cases (cp. Jenkins and Jäntti 2005, p. 16).

compared to the increase in Gini-coefficients, which are sensitive to changes in the middle of the distribution.[42] This is in accordance with the changes over the deciles of the wealth distribution shown in Figure 3. Thus, although the level of net-wealth remained relatively stable between 2002 and 2007 the inequality of the wealth distribution increased.[43]

Table 8 and Table 9 exhibit the distribution of net-wealth and its different sources with respect to gender. They show that women hold less wealth than men. This applies for every contemplated component and measure. Over the distribution, men are found to own approximately 1.4 times more net-wealth than women, on average. Furthermore, the share of women not holding any wealth is higher than of men throughout the sources. Only with regard to tangible assets the shares are slightly lower for women. However, women seem to be less often in debt.

A decrease of the level of wealth between 2002 and 2007 can be shown for women, whereas male wealth holdings increased, on average. As regards the median, the changes run in the other direction. Median wealth holdings increased for women and decreased for men. The share of individuals not holding any wealth decreased for both sexes. However, a higher share of men and women in debt can be observed in 2007 compared with 2002. Male wealth holdings in the 90% quantile increased between the two years, whereas women in the ninth decile seem to have incurred losses. The changes at the upper end of the distribution can therefore be considered the major determinant of the respective changes in the means for men and women.

[42] Not implementing top-coding of the wealth measures involves an even more substantial increase of half the squared coefficient of variation relative to Gini-coefficients.
[43] Keeping in mind that the HSCV increased for 2002 and decreased for 2007 in consequence of the data imputation process, the increase in inequality between the two years affected by changes at the top of the distribution may rather be underestimated.

Table 8: The distribution of wealth by gender 2002

2002	net-wealth		owner-occ. property		other property		financial assets		private pensions		business assets		tangible assets		consumer credits	
	male	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*
mean	95,987	68,566	45,698	40,407	14,138	10,628	10,905	7,956	12,176	5,904	11,627	3,222	1,498	1,115	2,772	1,744
median	21,932	10,851	0	0	0	0	0	0	1,140	0	0	0	0	0	0	0
% share wealth=0	18.1	23.2	58.2	61.7	86.4	89.4	49.4	55.7	43.6	53.8	92.4	97.3	89.6	89.4	85.4	89.8
% share wealth< 0	5.8	4.7	0.5	0.4	0.6	0.4	0	0	0	0	0	0	0	0	0	0
10% percentile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25% percentile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75% percentile	109,920	85,745	71,356	61,460	0	0	10,000	7,301	10,014	5,000	0	0	0	0	0	0
90% percentile	237,617	184,607	149,570	133,000	5,000	0	25,852	20,000	30,000	15,609	0	0	0	0	5,000	0

n (male) = 11,178; n (female) = 11,979

Source: SOEP, author's calculations.

Table 9: The distribution of wealth by gender 2007

2007	net-wealth		owner-occ. property		other property		financial assets		private pensions		business assets		tangible assets		consumer credits	
	male	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*
mean	99,566	65,960	43,370	36,766	14,789	9,320	12,879	9,895	15,416	7,757	11,864	2,722	826	630	3,017	1,856
median	20,236	11,037	0	0	0	0	0	0	1,839	0	0	0	0	0	0	0
% share wealth=0	15.2	19.1	56.3	60.9	87.0	89.7	46.7	50.5	41.4	50.1	93.0	97.5	94.2	93.5	81.4	86.2
% share wealth< 0	7.1	6.0	0.7	0.6	0.7	0.6	0	0	0	0	0	0	0	0	0	0
10% percentile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25% percentile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75% percentile	108,110	78,983	60,000	49,726	0	0	10,000	7,976	14,589	6,988	0	0	0	0	0	0
90% percentile	247,466	178,496	142,111	125,985	2,896	0	30,000	25,000	41,834	20,564	0	0	0	0	7,516	3,000

n (male) = 9,817; n (female) = 10,806

Source: SOEP, author's calculations.

4.2 The Distribution of Wealth by Marital History

The distribution of wealth depending on the marital history and current marital status can be read off Table 10 and Table 11. The mean as well as the median of net-wealth are lower for singles than for married individuals in 2002 and 2007. Values in the "never married" category are the lowest in 2002, whereas in 2007 individuals, who were divorced more than once, possess even less wealth than never married individuals. The share of individuals who do not hold any wealth at all is higher for the single than for the married categories. Wealth holdings are comparatively high in the widowed category where age averages out the highest. If one partner dies, the widow or widower usually inherits a large part of their partner's wealth, which can be considered one reason for higher wealth holdings in this category. Additionally, elder individuals are likely to hold more wealth (cp. Figure A 1 in the Appendix). Amongst other things, the relatively low wealth holdings of never married individuals can be attributed to their lower average age.

Table 10: The distribution of wealth by marital history 2002

2002	SINGLE				MARRIED			
	never married	divorced once	divorced more than once	widowed	ever married	remarried after one divorce	remarried after more than one divorce	remarried after widowhood
Net-wealth in €								
mean	30,208	56,748	48,134	109,553	111,271	97,944	75,071	112,170
median	1,301	5,869	925	19,088	50,946	18,817	24,247	50,771
share wealth=0	40.8	24.1	32.7		13.0	12.4	16.8	16.2
share wealth< 0	5.1	10.8	11.1	1.9	4.8	8.2	11.7	4.7
Percentiles								
10%	0	-1,916	0	0	0	0	0	0
25%	0	0	0	0	4,008	11	108	3,386
75%	15,429	53,972	34,483	158,336	134,436	92,384	102,470	161,807
90%	75,820	175,587	150,295	307,088	256,680	223,327	187,396	295,085
Components(mean)								
owner-occ, property	11,548	28,694	25,814	71,534	60,153	43,142	36,190	60,941
other property	4,160	6,786	9,055	16,604	15,836	17,015	8,398	25,873
financial assets	6,773	9,097	5,282	13,834	10,807	10,879	10,076	11,358
private pensions	5,401	8,615	5,940	3,409	12,033	14,927	12,409	7,161
business assets	2,228	4,389	1,936	2,271	10,820	12,945	16,260	10,525
tangible assets	562	1,712	2,129	1,166	1,635	2,030	1,497	2,115
consumer credits	1,319	3,114	2,246	529	2,827	4,077	6,693	6,627
Inequality								
Gini	0.915	0.850	0.888	0.731	0.704	0.807	0.777	0.683
HSCV	7.616	4.014	3.121	1.904	2.655	4.553	3.491	1.460
n	5,332	1,186	187	1,222	12,938	1,225	130	217
Ø age	31	51	52	73	51	53	56	65

Source: SOEP, author's calculations.

Table 11: The distribution of wealth by marital history 2007

2007	SINGLE				MARRIED			
	never married	divorced once	divorced more than once	widowed	ever married	remarried after one divorce	remarried after more than one divorce	remarried after widowhood
Net-wealth in €								
mean	38,739	55,582	32,670	107,287	104,092	83,218	61,512	127,243
median	2,608	6,124	0	23,360	40,420	18,270	12,254	19,828
share wealth=0	29.5	19.5	29.6	19.4	11.1	15.6	14.8	16.7
share wealth< 0	7.5	11.9	16.7	2.1	5.4	8.9	15.4	4.1
Percentiles								
10%	0	-3,100	-8,000	0	0	0	-8,900	0
25%	0	0	0	1,000	2,500	0	0	0
75%	19,836	49,900	32,255	150,000	125,222	89,366	64,732	126,324
90%	89,431	160,239	106,340	292,646	246,588	193,701	146,671	373,841
Components(mean)								
owner-occ. property	12,372	24,981	15,098	68,776	53,171	34,038	27,335	52,002
other property	5,559	6,959	10,358	9,941	15,386	12,831	3,444	12,208
financial assets	7,752	9,842	4,187	18,824	12,177	12,290	8,922	13,824
private pensions	8,085	9,918	5,931	4,283	14,325	15,081	11,029	10,072
business assets	3,875	5,210	3,012	3,970	8,714	9,749	13,712	39,878
tangible assets	349	712	89	904	830	1,045	1,052	829
consumer credits	1,296	3,299	6,098	577	2,819	3,759	5,258	4,744
Inequality								
Gini	0.901	0.886	1.102	0.721	0.725	0.809	0.858	0.779
HSCV	12.045	4.753	9.223	1.797	2.919	4.686	5.045	2.021
n	4,795	1,190	209	1,145	11,060	1,266	158	128
Ø age	32	53	55	74	53	54	56	66

Source: SOEP, author's calculations.

Except for the “widowed” or “widowed and remarried” categories, the largest values are realised by people who have been continuously married, whereas individuals in the two divorced categories hold the least net-wealth. Remarriage seems to compensate for losses resulting from divorce to some extent, but the level of wealth holdings in the “ever married” category is not achieved. The mean of net-wealth of ever married individuals is about twice as high as of divorced persons and three times higher than the mean net-wealth of individuals, who had been divorced several times by the year 2007. Net-wealth is higher in the “ever married” category over the entire distribution. For instance, the 75% quantile is 2.5 times and the 90% quantile still 1.5 times higher than in the “divorced once” category in 2002 and 2007. Furthermore, more individuals who do not hold any wealth as well as more individuals who are in debt can be found among the divorced than the ever married individuals.

As regards the single components of wealth, the pattern of the distribution is similar as for net-wealth. On average, wealth holdings of the “ever married” category are higher than for divorced individuals. This applies in particular concerning owner-occupied property. Inequality measures show that dispersion of wealth is below the overall inequality as regards ever married individuals. Amongst divorced individuals, however, net-wealth seems to be even more unequally distributed than in the case when all individuals are considered.

Table 12 and Table 13 exhibit the distribution of net-wealth depending on the sex of the individual and their marital histories. The mean as well as median wealth holdings of men are higher for every marital status category. The share of men without any wealth holdings is generally lower than the corresponding share of women.

Table 12: The distribution of wealth by marital history and gender 2002

2002	SINGLE								MARRIED							
	never married		divorced once		divorced more than once		widowed		ever married		remarried after one divorce		remarried after more than one divorce		remarried after widowhood	
	male	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*
Net-wealth in €																
mean	32,377	23,137	68,890	41,514	83,428	18,740	122,988	96,754	122,034	83,854	127,864	54,792	88,572	42,788	112,866	96,071
median	1515,4	1,000	10,104	4,000	8,852	0	43,162	14,820	56,583	35,942	26,674	13,540	32,177	9,340	59,297	41,706
share wealth=0	38.8	42.7	18.7	28.1	24.7	38.6	15.5	25.6	10.3	15.6	9.3	15.2	17.8	16.1	13.3	19.3
share wealth< 0	5.7	4.3	13.6	8.9	10.1	12.3	10.9	2.1	5.2	4.5	8.7	7.9	9.6	12.6	6.5	2.8
Percentiles																
10%	0	0	-2,948	0	0	-1,396	0	0	0	0	0	0	0	0	0	0
25%	0	0	0	0	0	0	6,600	0	5,976	1,950	2,900	0	1,000	0	4,294	2,240
75%	16,391	10,296	65,562	39,538	103,249	12,587	180,578	132,580	139,518	110,400	113,444	62,105	109,126	64,007	156,000	127,454
90%	82,332	54,800	204,959	143,299	350,198	55,471	311,393	274,789	270,247	200,470	289,590	139,220	284,323	128,097	285,555	235,956

… continued

.. continued (distribution of wealth by marital history and gender 2002)

	never married		divorced once		divorced more than once		widowed		ever married		remarried after one divorce		remarried after more than one divorce		remarried after widowhood	
	male	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*
Components (mean)																
owner-occ. property	10,927	10,526	28,143	25,673	46,250	9,035	82,523	62,637	60,701	50,914	51,043	29,347	33,255	34,246	69,898	43,892
other property	4,154	3,540	10,463	3,408	15,401	3,724	11,971	16,290	17,257	12,051	25,042	6,725	7,943	7,621	11,883	35,855
financial assets	6,846	5,668	11,744	6,166	9,092	2,099	17,776	11,671	11,826	8,172	14,371	5,920	14,143	2,493	12,694	8,502
private pensions	6,204	3,656	11,388	5,651	9,908	2,574	5,325	2,646	14,788	7,382	18,162	9,659	15,634	5,641	6,681	6,641
business assets	3,423	506	7,382	1,774	2,748	1,163	3,687	1,729	15,333	4,482	21,635	2,565	19,554	8,734	9,678	9,896
tangible assets	647	379	2,695	821	2,200	1,833	800	1,154	1,702	1,329	1,826	1,949	955	2,023	2,947	1,019
consumer credits	1,304	1,138	4,210	1,977	2,687	1,687	466	498	3,200	2,025	5,057	2,544	2,706	11,302	2,474	9,735
n	2,841	2,491	501	685	75	112	256	966	6,441	6,497	597	628	72	58	109	108
Ø age	31	31	50	52	54	52	72	74	53	50	55	50	57	54	68	63

Source: SOEP, author's calculations.

Table 13: The distribution of wealth by marital history and gender 2007

2007	SINGLE								MARRIED							
	never married		divorced once		divorced more than once		widowed		ever married		remarried after one divorce		remarried after more than one divorce		remarried after widowhood	
	male	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*
Net-wealth in €																
mean	47,723	28,379	74,230	42,078	56,166	18,864	146,275	97,041	126,221	81,184	107,642	59,109	73,288	49,467	211,643	39,015
median	2,663	2,597	8,904	5,036	3,218	0	63,331	19,486	51,804	30,760	25,521	12,200	21,533	9,849	68,000	0
share wealth=0	29.6	29.3	16.8	21.4	25.6	32.5	13.4	21.0	8.6	13.6	13.2	18.0	7.1	23.1	10.0	26.9
share wealth< 0	8.3	6.7	13.6	10.7	16.4	16.8	2.5	1.9	5.7	5.1	9.9	8.0	15.7	15.1	3.8	4.6
Percentiles																
10%	0	0	-7,000	-1,660	-15,000	-6,800	0	0	0	0	-340	0	-3,200	-13,200	0	-3,540
25%	0	0	0	0	0	0	7,700	0	5,000	210	40	0	580	0	6,904	0
75%	23,338	15,325	65,446	40,020	57,244	18,837	203,599	136,049	144,287	106,795	101,307	66,988	64,634	63,895	235,278	54,714
90%	111,200	69,477	192,069	147,832	200,601	72,390	371,768	265,235	284,498	198,111	242,373	152,296	173,203	126,000	591,688	117,400

… continued

.. continued (distribution of wealth by marital history and gender 2007)

	never married		divorced once		divorced more than once		widowed		ever married		remarried after one divorce		remarried after more than one divorce		remarried after widowhood	
	male	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*	*male*	*female*
Components (mean)																
owner-occ. property	12,995	11,654	26,908	23,586	23,851	9,955	94,451	62,028	59,667	46,446	36,253	31,852	27,474	27,193	78,551	24,249
other property	7,208	3,657	12,920	2,641	20,144	4,607	13,712	8,950	18,280	12,390	17,956	7,772	3,338	3,553	17,914	6,244
financial assets	8,290	7,131	11,455	8,674	6,312	2,938	25,204	17,148	14,449	9,825	17,707	6,943	9,075	8,765	21,698	5,594
private pensions	10,291	5,541	13,062	7,642	8,323	4,526	4,405	4,251	18,739	9,756	20,130	10,097	15,710	6,240	16,507	3,345
business assets	6,397	967	11,115	933	7,081	621	7,559	3,027	13,784	3,466	16,329	3,254	17,658	9,675	77,711	329
tangible assets	464	217	815	637	62	105	1,064	861	958	698	963	1,126	1,172	929	1,049	600
consumer credits	1,572	977	5,043	2,036	9,653	4,009	305	648	3,290	2,331	4,767	2,764	4,557	5,974	7,996	1,345
n	2,502	2,293	493	697	87	122	251	894	5,445	5,615	619	647	83	75	77	51
Ø age	32	32	52	53	57	54	75	74	55	51	56	51	59	52	68	63

Source: SOEP, author's calculations.

For both sexes, the mean and the median of net-wealth in the single categories turn out to be lower than for individuals who are currently married. They are considerably lower in the "divorced" classes than for ever married individuals. The differences are substantial for women, in particular. Although remarriage after a divorce is beneficial for both, it seems to pay off more for men than for women in relative terms.[44] The mean of the single components of net-wealth is mostly lower for divorced than for ever married individuals for both sexes. Currently divorced men and women own less owner-occupied and other property than ever married individuals, in particular.

The descriptive results so far show that wealth holdings of divorced individuals are lower than those of ever married individuals. Women hold less wealth than men. This difference seems to be amplified in consequence of divorce.

The coefficients of the OLS regressions in Table 14 provide insight into the relation of divorce and wealth when controlling for the individual's socio-economic background. However, the results have to be considered descriptive and do not identify causal effects. As results for 2002 are comparable to those for 2007, only the findings for 2007 are presented here.

The results of the OLS regressions confirm the findings of the previous descriptive analyses. In comparison to ever married individuals, being divorced once is found to be negatively related to wealth holdings. For both men and women the coefficients for being divorced once are highly significant. Controlling for the socio-economic background, the coefficients decrease in absolute value but remain negative and significant at a 0.01 level. The results of the OLS regressions also confirm that being divorced more than once is related to lower wealth holdings compared to being divorced only once. This applies for women, in particular. Furthermore, the results indicate that remarriage is beneficial with regard to wealth. The supplemental control variables (cp. Table A 2 and Table A 1 in the Appendix) show that wealth holdings are positively related to age – to a decreasing degree, however. Also, the positive

[44] The low value for net-wealth held by women who remarried after widowhood may hinge on the increased share of zero and negative wealth holdings compared to 2002. However, as the number of observations in rather small, the value has to be interpreted with caution.

relation between permanent household income and wealth is supported by the results. The negative correlation of female individual earnings and wealth can be explained considering the distribution of earnings by age and marital status. The omitted category – zero earnings – mainly comprises elder women who are continuously married. The negative sign for the other categories may not actually be due to the amount of earnings, but rather be driven by the life situation, i.e. by factors like age or family background. That low earnings are related to lower wealth in comparison to zero earnings for men can also be explained by the high share of older men who do not have any earnings. As more men derive higher income, however, this effect ceases to apply for higher earnings categories.[45] A further correlate of wealth is the presence of children. The number of children in the household is positively linked to wealth for both men and women. This applies for having an infant, too. Elder children, however, are found to be associated with lower wealth holdings, which may be a consequence of their higher consumption needs.

[45] Adding an interaction term between individual earnings and age the coefficients for earnings categories of women are no longer significant. As regards men, only the highest two categories are found to be significantly positive related to wealth.

Table 14: Coefficients for marital status

(OLS regression on IHS-transformed net-wealth 2007)

	MEN		WOMEN	
	(1)	(2)	(1)	(2)
MARRIED				
remarried after one divorce	-1.715*** (0.346)	-1.357*** (0.315)	-1.597*** (0.329)	-1.485*** (0.300)
remarried after more than one divorce	-2.780*** (0.846)	-3.031*** (0.755)	-2.357*** (0.864)	-1.909** (0.777)
remarried after widowhood	-0.0684 (0.830)	-0.638 (0.743)	-0.0649 (1.002)	0.299 (0.896)
SINGLE				
never married	-3.085*** (0.229)	0.212 (0.308)	-2.486*** (0.234)	-0.435 (0.288)
divorced once	-2.789*** (0.378)	-1.587*** (0.367)	-2.431*** (0.306)	-1.464*** (0.298)
divorced more than once	-4.422*** (0.863)	-3.564*** (0.777)	-5.573*** (0.682)	-4.384*** (0.627)
widowed	-0.229 (0.469)	-0.641 (0.452)	-0.433* (0.259)	-0.978*** (0.297)
R^2	4.34	25.90	3.48	24.27
adj. R^2	4.23	25.38	3.37	23.79
n	5,693	5,693	6,386	6,386

omitted category: ever married; *dependent variable*: IHS-transformed net-wealth 2007
(1): controlled for marital status only; (2): controlled for socio-economic background
see Table A 1 and Table A 2 in the Appendix for a detailed overview of supplemental coefficients

Source: SOEP, author's calculations.

Table 15 exhibits coefficients for the "divorced once" category resulting from augmented model specifications. Model (3) additionally controls for savings and inheritances. Model (4) adds covariates concerning the parental background and model (5) includes religious affiliation, risk preferences and life satisfaction. Finally, model (6) is extended by wealth holdings in 2002. The exhaustive models can be found in Table A 1 and Table A 2 in the Appendix. Adding supplemental control variables to the OLS regression model, the coefficients for being divorced once decrease for men as well as for women. They remain negative, however, and are highly significant for all models.

Important determinants of wealth are saving and inheritances. Living in a household that has constantly saved for the last three years comes along with higher wealth holdings. Furthermore, inheritances, independent of when they were received, are

found to be positively related to wealth. Individuals who grew up in a rural area possess more wealth than individuals who spent their childhood in towns or cities, which may be a consequence of higher inheritances in the form of owner-occupied property. Having a highly educated mother seems to be beneficial as regards wealth holding of men. Religion is found to be significantly related to wealth as well. Catholic individuals hold the most wealth in comparison to persons with other religious affiliations. This applies for members of Islamic religious organisations, in particular. As assumed, the willingness to take risk in financial matters is related to higher wealth holdings. The positive relation between previous and present wealth holdings supports the assumption that a higher initial wealth stock is conducive to current wealth. Their high correlation becomes apparent, as the addition of net-wealth in 2002 approximately halves the coefficients for being divorced once for both sexes.

Table 15: Coefficients for the "divorced once" category

(OLS regression on IHS-transformed net-wealth 2007, augmented models)

	(1)	(2)	(3)	(4)	(5)	(6)
MEN						
divorced once	-2.789***	-1.587***	-1.424***	-1.424***	-1.344***	-0.803**
	(0.378)	(0.367)	(0.361)	(0.361)	(0.362)	(0.343)
adj. R^2	4.23	25.38	28.04	28.10	28.52(*	38.70(*
n	5,693	5,693	5,693	5,693	5,639	5,635
WOMEN						
divorced once	-2.431***	-1.464***	-1.272***	-1.237***	-1.178***	-0.619**
	(0.306)	(0.298)	(0.292)	(0.292)	(0.291)	(0.279)
adj. R^2	3.37	23.79	26.96	27.02	27.76(*	36.32(*
n	6,386	6,386	6,386	6,386	6,271	6,262

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

omitted category: ever married; *dependent variable*: IHS-transformed net-wealth 2007
(1): controlled for marital status only; (2): plus socio-economic background; (3): plus saving and inheritances; (4): plus parental information; (5): plus religion, risk and life satisfaction; (6) plus IHS-transformed net-wealth 2002
see Table A 1 and Table A 2 in the Appendix for a detailed overview of supplemental coefficients
(*not comparable to other adjusted R^2 because of different sample size; results for the previous models do not change, however, if they are estimated on the basis of the smaller sample

Source: SOEP, author's calculations.

So far, marital status categories applied do not account for changes in family status between 2002 and 2007. Analysing the changes in wealth between the two years by marital status changes categories (cp. Table 3 in Chapter 3.1.3) can bring additional insight into the relation of divorce and wealth.

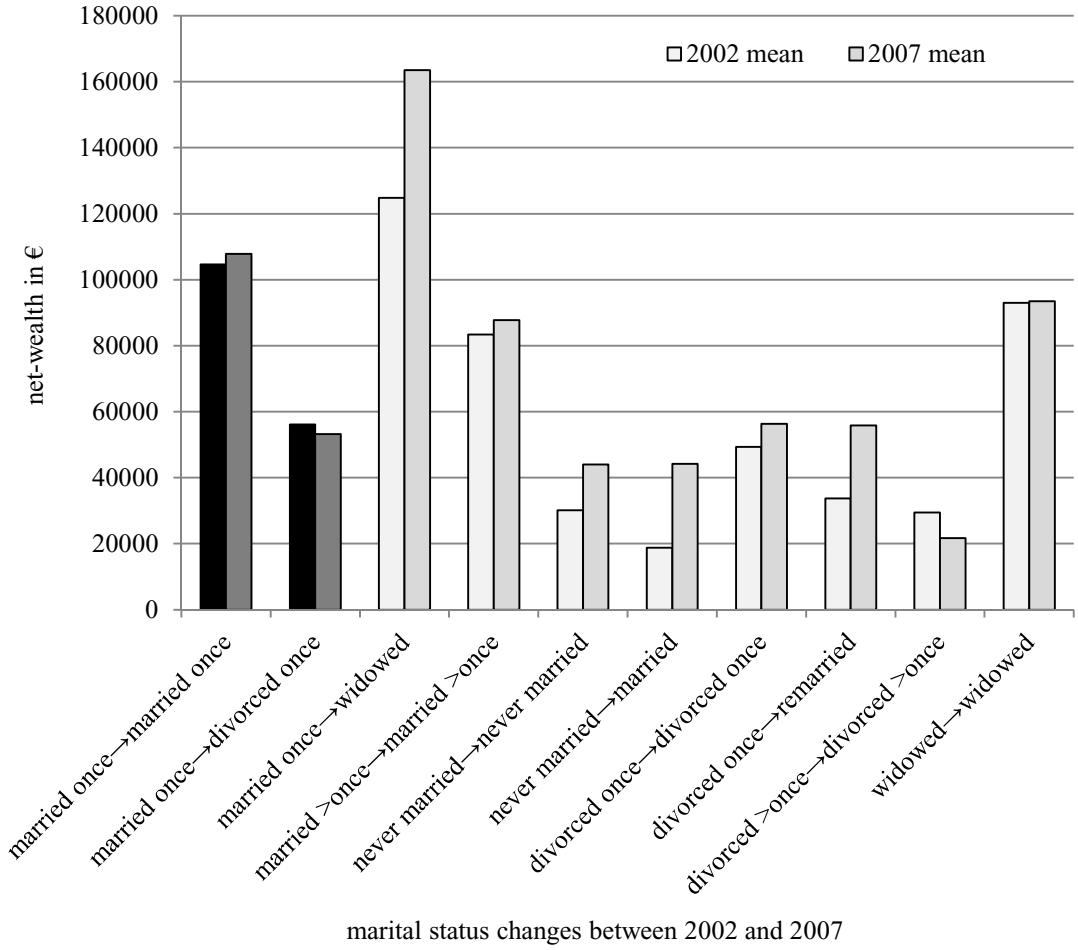
4.3 The Distribution of Wealth by Marital Changes

Mean wealth holdings in 2002 and 2007 by changes in marital status between the two years can be read off Figure 4. Categories comprising less than 50 individuals are excluded.[46] The level of average net-wealth of individuals who were single in 2002 is lower than for individuals who were married. Marriage or remarriage, respectively, seems to be beneficial with regard to wealth. The level of wealth differs considerably between the categories. Except for individuals who were married in 2002 and widowed in 2007, individuals who were continuously married over this period hold the highest wealth, on average. Wealth holdings increase for every category (albeit to a different extent) except for the "married once → divorced once" and the "divorced more than once → divorced more than once" classes. The two categories of particular interest for this study are the "married once → married once" and the "married once → divorced once" categories.

Individuals who are married in 2002 and got a divorce during the next five years initially hold less wealth, on average, than individuals who were continuously married over the period from 2002 to 2007 (cp. Figure 4). This suggests that selection out of marriage on the basis of lower wealth holdings has to be considered. However, on average, individuals in the "ever married" category are ten years older than individuals who got divorced for the first time between 2002 and 2007, which may be a reason for their higher wealth holdings. Furthermore, a loss in net-wealth between the two years can be observed for the group that underwent a divorce, whereas wealth holdings of ever married individuals increased. This indicates that divorce involves a decrease in wealth.

[46] The categories excluded are "divorced > once → remarried", "widowed → remarried", "married > once → divorced >once" and "married > once → widowed >once".

Figure 4: Net-wealth in 2002 and 2007 by marital status changes categories



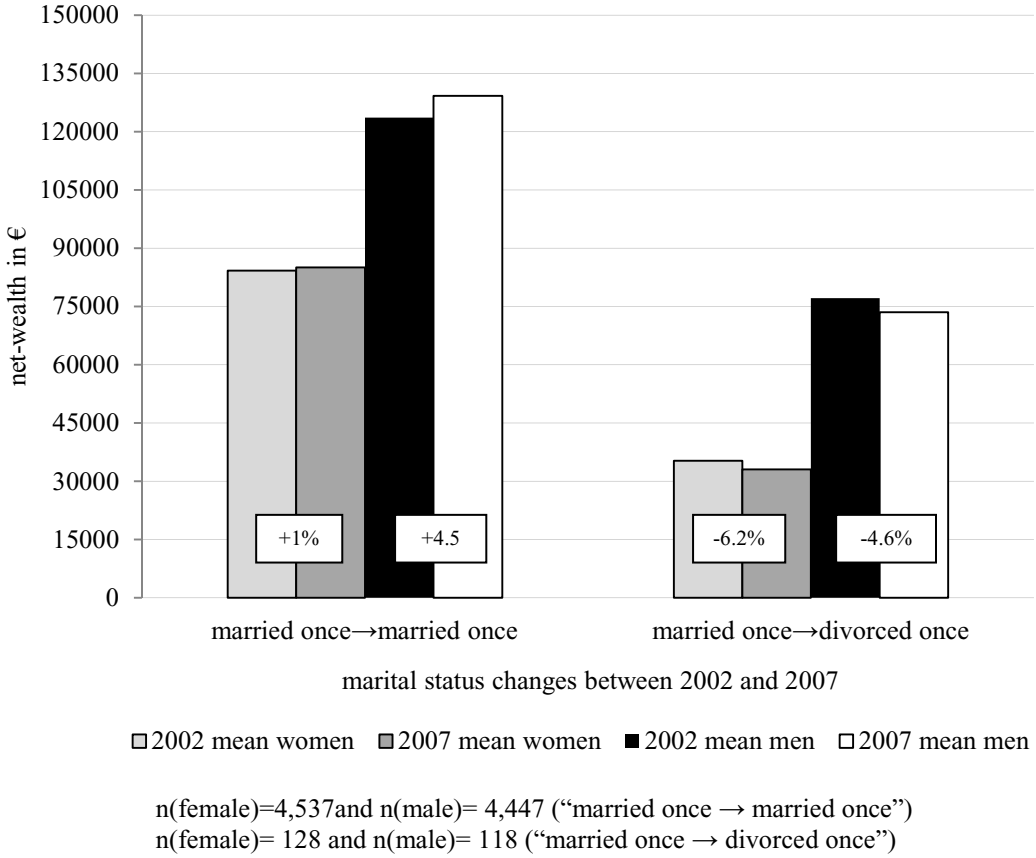
n("never married→ never married") = 2,836; n("never married → married") = 619;
n("divorced once → divorced once") = 726; n("divorced once → remarried") = 143;
n("divorced > once → divorced > once") = 106; n("widowed → widowed") = 777;
n("married once → married once") = 8,984; n("married once → divorced once") = 246;
n("married once → widowed") = 224; n("married > once → married > once") = 1,069;

Source: SOEP, author's calculations.

The change in mean net-wealth between 2002 and 2007 by gender for the "married once → married once" and the "married once → divorced once" category can be read off Figure 5. On average, men hold more wealth than women in the respective categories. Individuals who were continuously married possess more wealth in 2007 than in 2002, on average. Wealth holdings of ever married men increased by a higher share compared to wealth of ever married women. Wealth held by individuals who underwent a divorce decreased. The losses incurred between 2002 and 2007 are higher for divorced women in relative terms. In absolute terms, the differences in initial wealth holdings between continuously married women and those who got

divorced until 2007 are slightly higher than for men, on average, whereas the absolute difference is higher for men in 2007. Relative differences between the two categories are higher for women in both years, however. On average, women who got divorced hold 58% less wealth than continuously married women in 2002 and 61% less in 2007. As regards men, the relative differences amount to 38% and 43%. Thus, the relative difference between men increased to a slightly higher extent than between women in the respective categories. These findings imply that the pathways, through which the difference in wealth holdings between individuals in uninterrupted marriages and divorced persons emerge, may differ by gender. Male wealth holdings are reduced by a lower share in consequence of divorce than female wealth, but wealth of divorced men is reduced to a higher extent relative to wealth of continuously married men. On the other hand, although women lose a higher share of their wealth, the difference in the change in wealth between women who got divorced and women who remained married is relatively smaller compared to men. The higher difference between net-wealth in 2002 for women in the distinct categories could be an indicator for higher selection of women out of marriage due to wealth compared to men.

Figure 5: Net-wealth in 2002 and 2007 by marital status changes categories and gender



n(female)=4,537and n(male)= 4,447 ("married once → married once")
n(female)= 128 and n(male)= 118 ("married once → divorced once")

Source: SOEP, author's calculations.

By means of the results from an OLS regression on the change in IHS-transformed net-wealth, it can be checked whether the negative relation of divorce and wealth accumulation persists controlling for several individual characteristics. Table 16 exhibits that individuals who got divorced between 2002 and 2007 accumulated less wealth than continuously married individuals during this period. The coefficients are higher for men. One explanation may be the relatively higher increase in net-wealth for continuously married men in comparison to men who got divorced (cp. Figure 5).

Table 16: Coefficients for marital status changes between 2002 and 2007

(OLS regression on IHS-transformed change in net-wealth)

		MEN		WOMEN	
		(1)	(2)	(1)	(2)
marital status 2002	**marital status 2007**				
married once	divorced once	-1.432**	-2.437***	-0.0314	-0.878*
		(0.661)	(0.572)	(0.598)	(0.507)
married once	widowed	-0.384	-0.0494	0.147	0.822*
		(0.817)	(0.688)	(0.526)	(0.445)
married more than once	married more than once	-0.0961	-0.674***	-0.391	-0.592**
		(0.291)	(0.247)	(0.338)	(0.286)
never married	never married	0.628***	-0.177	0.951***	-0.429
		(0.197)	(0.281)	(0.223)	(0.279)
never married	married	1.700***	0.325	1.492***	-0.260
		(0.436)	(0.413)	(0.402)	(0.442)
divorced once	divorced once	0.202	-0.536	0.133	-0.688**
		(0.403)	(0.363)	(0.345)	(0.302)
divorced once	remarried	1.673**	-0.571	0.171	-1.158*
		(0.809)	(0.700)	(0.822)	(0.685)
divorced more than once	divorced more than once	-1.714	-2.311**	-1.020	-2.898***
		(1.209)	(0.986)	(0.770)	(0.651)
widowed	widowed	-0.561	-0.293	-0.675**	-0.733***
		(0.511)	(0.444)	(0.277)	(0.279)
R^2		0.65	31.53	0.71	33.40
adj. R^2		0.51	30.93	0.59	32.88
n		6,419	6,419	7,077	7,077

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

omitted category: married once → married once; *dependent variable*: difference between IHS-transformed net-wealth 2007 and IHS-transformed net-wealth 2002
(1): controlled for marital status only; (2): plus socio-economic background, saving, inheritances and IHS-transformed net-wealth 2002
see Table A 3 and Table A 4 in the Appendix for a detailed overview of supplemental coefficients

Source: SOEP, author's calculations.

Adding supplemental control variables, the coefficients decrease only slightly. They are significant at a 1% level for men and on a 10% level for women. The augmented model specifications (cp. Table A 3 and Table A 4 in the Appendix) reveal that

wealth accumulation increases with age and household income. In comparison to women who do not derive individual earnings, earning an income is found to be negatively related to the change in wealth for women. The same applies for men in the lower earnings categories compared to men without individual earnings. This finding is likely to be due to the high share of older and continuously married individuals in the zero earnings categories. The number of children in the household is negatively related to the change in wealth for men. One reason may be the additional consumption needs of children. In contrast, for women the coefficients with regard to children are not significant. The relation between having an infant and wealth is found to be positive for men. Potential explanations are higher specialisation gains when mothers reduce their labour supply and fathers enhance theirs or a higher extent of saving for precautionary or bequest reasons. Furthermore, continuous saving and inheriting are positively related to wealth accumulation, whereas a negative relation between paying off loans steadily and wealth is found. Why the signs of the coefficients of net-wealth in 2002 are negative for both men and women, is less obvious. One explanation is the higher probability of high losses in the upper deciles of the wealth distribution (cp. Frick and Grabka 2009b, p. 249). Another reason may be that in consequence of the transformation of the wealth variable, changes in wealth are relatively lower for individuals at the top of the distribution in comparison to individuals who held only little wealth in 2002.

The exhaustive models with respect to the coefficients listed in Table 17 can be found in Table A 3 and Table A 4 in the Appendix. Adding supplemental control variables, the coefficients decrease only slightly. They are significant at a 1% level for men and on a 10% level for women. In model (3), it is additionally controlled for the change in household income and individual earnings. Despite of an increase in household income up to 50%, which is found to be positively related to wealth accumulation for both men and women only the coefficients for men whose earnings decreased by more than half are significantly negative. Model (4) adds covariates concerning changes in living conditions. The retirement of an individual is positively related to a change in wealth, which is likely to be due to the higher age of individuals who retire. The impairment of health seems to abate wealth holdings of

men, in particular. As regards parental background (model (5))[47], a highly educated father is found to be conducive to female wealth accumulation. Other family background variables are not significantly related to wealth accumulation. Finally, model (6) reveals that higher risk preferences are correlated with higher changes in wealth for women, in particular.

Table 17: Coefficients for the "divorced once" category

(OLS regression on IHS-transformed net-wealth 2007, augmented models)

	(1)	(2)	(3)	(4)	(5)	(6)
MEN						
married once → divorced once	-1.432** (0.661)	-2.437*** (0.572)	-2.368*** (0.572)	-2.354*** (0.572)	-2.349*** (0.573)	-2.319*** (0.571)
adj. R^2	0.51	30.93	31.16	31.32	31.30	31.58(*
n	6,419	6,419	6,419	6,419	6,419	6,374
WOMEN						
married once → divorced once	-0.0314 (0.598)	-0.878* (0.507)	-0.839* (0.509)	-0.849* (0.509)	-0.838* (0.509)	-0.717 (0.509)
adj. R^2	0.59	32.88	32.90	32.91	32.93	33.43(*
n	7,077	7,077	7,077	7,077	7,077	6,981

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

omitted category: married once → married once; *dependent variable*: difference between IHS-transformed net-wealth 2007 and IHS-transformed net-wealth 2002
(1): controlled for marital status only; (2): plus socio-economic background, saving, inheritances and IHS-transformed net-wealth 2002; (3): plus changes in income; (4): plus other changes; (5): plus parental information; (6) plus religion, risk and life satisfaction;
see Table A 3 and Table A 4 in the Appendix for a detailed overview of supplemental coefficients
(*not comparable to other adjusted R^2 because of different sample size; results for the previous models do not change, however, if they are estimated on the basis of the smaller sample

Source: SOEP, author's calculations.

The OLS regression on the change in IHS-transformed net-wealth shows that getting a divorce is negatively related to changes in wealth compared to remaining married. By means of the results, it is not possible to infer, however, whether divorced individuals only accumulate less wealth than continuously married individuals or whether they are more likely to incur losses in wealth. For this purpose, subsidiary

[47] It should be mentioned here that the explanatory power of model (5) decreases slightly compared to model (4) for men.

probit regressions on whether wealth decreased or increased by more than 5% or changed only up to 5% are carried out (see Table 18 and Table 19).[48] Additionally, an ordered probit on the degree of changes in wealth is implemented. The dependent variable categorises changes in wealth as follows: a loss in wealth higher than 50%, up to 50%, up to 25% or up to 10%, a minor change up to 5% in either direction or an increase in wealth up to 10%, up to 25%, up to 50% or higher than 50%.

Table 18: Results of (ordered) probit regressions on the change in wealth for men

marital change (omitted: married once → married once)		**Model (1)**	**Model (2)**	**Model (3)**	**Model (4)**	**Model (5)**	**Model (6)**
probit decrease	married once → divorced once	0.359***	0.565***	0.517***	0.513***	0.517***	0.516***
		(0.136)	(0.150)	(0.151)	(0.151)	(0.152)	(0.152)
	Pseudo- R^2	1.04	10.09	10.77	10.86	10.88	10.90(*
probit increase	married once → divorced once	-0.353**	-0.501***	-0.451***	-0.448***	-0.450***	-0.444***
		(0.137)	(0.147)	(0.149)	(0.150)	(0.150)	(0.151)
	Pseudo-R^2	0.52	7.58	8.39	8.51	8.54	8.65(*
probit no change	married once → divorced once	-0.0178	-0.211	-0.235	-0.222	-0.233	-0.248
		(0.208)	(0.269)	(0.268)	(0.268)	(0.270)	(0.271)
	Pseudo-R^2	2.62	24.52	24.91	25.04	25.14	25.15(*
ordered probit change	married once → divorced once	-0.358***	-0.547***	-0.498***	-0.495***	-0.499***	-0.494***
		(0.118)	(0.124)	(0.125)	(0.126)	(0.126)	(0.126)
	Pseudo-R^2	0.32	4.45	4.79	4.84	4.86	4.91(*
observations		6,415	6,415	6,415	6,415	6,415	6,371

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

omitted category: married once → married once; *dependent variable*: difference between IHS-transformed net-wealth 2007 and IHS-transformed net-wealth 2002
(1): controlled for marital status only; (2): plus socio-economic background, saving, inheritances and IHS-transformed net-wealth 2002; (3): plus changes in income; (4): plus other changes; (5): plus parental information; (6) plus religion, risk and life satisfaction;
see Table A 6 to Table A 11 in the Appendix for a detailed overview of supplemental coefficients
(*not comparable to other adjusted R^2 because of different sample size; results for the previous models do not change, however, if they are estimated on the basis of the smaller sample

Source: SOEP, author's calculations.

[48] The augmented models can be found in Table A 6 to Table A 11 in the Appendix.

The results show that – in comparison to continuously married individuals – both men and women who underwent a divorce were less likely to accumulate wealth as well as more likely to incur a decrease in wealth between 2002 and 2007. The estimated coefficients for men are highly significant and higher than for women. The probability of minor changes in wealth, i.e. a decrease or increase up to 5%, is lower for men who got a divorce than for constantly married men. The coefficients are not significant, however. By contrast, no substantial differences between the categories can be found for women as regards minor changes.

Table 19: Results of (ordered) probit regressions on the change in wealth for women

marital change (omitted: married once → married once)		**Model (1)**	**Model (2)**	**Model (3)**	**Model (4)**	**Model (5)**	**Model (6)**
probit decrease	married once → divorced once	0.0258	0.150	0.121	0.127	0.126	0.125
		(0.127)	(0.141)	(0.142)	(0.142)	(0.142)	(0.145)
	Pseudo-R^2	0.68	12.71	13.18	13.22	13.23	13.30(*
probit increase	married once → divorced once	-0.141	-0.127	-0.110	-0.109	-0.111	-0.103
		(0.126)	(0.133)	(0.134)	(0.134)	(0.134)	(0.136)
	Pseudo-R^2	5.90	7.56	7.98	8.01	8.02	8.26(*
probit no change	married once → divorced once	0.246	0.0229	0.0266	0.0162	0.0195	-0.00112
		(0.157)	(0.197)	(0.202)	(0.203)	(0.203)	(0.211)
	Pseudo-R^2	1.35	27.54	28.05	28.15	28.16	28.49(*
ordered probit change	married once → divorced once	-0.0825	-0.155	-0.138	-0.139	-0.139	-0.133
		(0.110)	(0.115)	(0.116)	(0.116)	(0.116)	(0.117)
	Pseudo-R^2	0.36	5.05	5.28	5.29	5.30	5.41(*
observations		7,075	7,075	7,075	7,075	7,075	6,979

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

omitted category: married once → married once; *dependent variable*: difference between IHS-transformed net-wealth 2007 and IHS-transformed net-wealth 2002
(1): controlled for marital status only; (2): plus socio-economic background, saving, inheritances and IHS-transformed net-wealth 2002; (3): plus changes in income; (4): plus other changes; (5): plus parental information; (6) plus religion, risk and life satisfaction;
see Table A 6 to Table A 11 in the Appendix for a detailed overview of supplemental coefficients
(*not comparable to other adjusted R^2 because of different sample size; results for the previous models do not change, however, if they are estimated on the basis of the smaller sample

Source: SOEP, author's calculations.

In accordance with the results of the probit regressions, an ordered probit regression reveals that in comparison to continuously married persons, individuals of either

gender who got a divorce between 2002 and 2007 are less likely to be found in a higher category of wealth change. These subsidiary results show that getting a divorce is negatively related to wealth accumulation as well as that divorced individuals are more likely to incur losses in wealth than individuals in uninterrupted marriages. The correlation between changes in wealth and divorce seems to be of importance for men, in particular.

The previous results show that wealth and divorce are negatively related. However, whether the causal direction runs from divorce to wealth or whether the lower wealth holdings of divorced persons can be explained by selection out of marriage on the basis of wealth and related determinants cannot be identified by means of these descriptive statistics.

4.4 Assessing the Causal Effect of Divorce on Wealth

It may be that the differences in wealth holdings and wealth accumulation between continuously married individuals and individuals who undergo a divorce hinge on the different distribution of background characteristics of individuals in the two groups. In order to assess the causal effect of divorce on wealth accounting for selection into divorce, for simultaneity and for unobserved heterogeneity, conditional difference-in-differences matching is applied. If relevant characteristics for wealth accumulation and the propensity to divorce can be considered balanced between those individuals who got divorced (treated) and those who remained married (untreated) between 2002 and 2007, the estimator can be regarded as the impact of divorce on wealth (cp. Chapter 3.2.4 and Chapter 3.2.5).

Table 20 and Table 21 exhibit the conditional difference-in-differences estimators resulting from several matching methods. As no matching algorithm can be considered best a priori, different matching methods are applied. Besides nearest neighbour matching with replacement within a certain caliper and with a different number of neighbours, kernel matching as well as local linear matching are carried out using a biweight kernel. To confine the analysis to the region of common support, individuals whose propensity score lies under the minimum or over the

maximum propensity score of the other group are excluded. Furthermore, trimming is carried out for some estimators.[49] Standard errors listed are calculated by means of bootstrapping for kernel-based estimators and on the basis of the approach suggested by Abadie and Imbens (2006) as regards nearest neighbour matching. The measure for the standardised bias listed is the mean of standardised biases for the single characteristics applied to implement matching.

The distribution of background characteristics before and after matching for the treated and untreated group differ (cp. Table A 16 to Table A 25). On average, continuously married individuals are older, they have been married for a longer time, lived less often in East-Germany before 1989 and more often grew up in rural areas than individuals who got a divorce between 2002 and 2007, for instance. To make the mean outcome comparable between the treated and the untreated group, i.e. to assess the average treatment effect, the distributions of characteristics have to be comparable or "balanced". For this purpose, propensity score matching methods are implemented. To account for potential unobserved heterogeneity, a difference-in-differences estimator is applied.

The results of the conditional difference-in-differences matching can be found in Table 20 and Table 21.[50] One possibility to assess whether the sample can be regarded as balanced between the treated and the untreated group is by means of standardised biases. If the measure of the standardised bias after matching is lower than 5%, the unconfoundedness assumption can be deemed to be fulfilled (cp. Caliendo and Kopeinig 2008, p. 48). Furthermore, low values for the pseudo-R2 after matching indicate that the model implemented for matching has no explanatory power after matching. The estimators, which can be considered to be calculated on the basis of a balanced sample according to these two requirements, are printed in bold. An additional approach to assess whether the samples can be considered balanced is on the basis of t-statistics for the differences between the means of the covariates of the treated and untreated group. For a selection of the matching models carried out, the t-statistics can be read off Table A 16 to Table A 25. As regards the

[49] See Chapter 3.2.4 for an overview of matching estimators and underlying assumptions.
[50] For the calculation of the propensity scores see Table A 15 in the Appendix.

models which were considered to fulfil the conditional independence assumption (CIA) on the basis of the two other validation approaches, no significant differences between the means of the control variables after matching can be found for any parameter. Thus, the distribution of the characteristics can be regarded as balanced for those estimators which are printed in bold.

For both men and women the estimators of the average treatment effect of the treated are negative. However, none of the estimators is significant. Some estimators – such as that based on matching to ten nearest neighbours within a 0.05 caliper and 5% trimming for men – are positive, i.e. they suggest that divorce is beneficial for wealth holdings. For none of the positive effects the sample can be considered balanced, though, neither for men nor for women. The extent of the treatment effects differs depending on the matching method applied. This may be due to the small number of individuals in the treated groups (74 men and 100 women).[51] As the measure expresses mean changes and wealth holdings are distributed rather unequally, the extent of the average treatment effect is likely to be sensitive to the number and selection of treated individuals into the region of common support.

None of the treatment effects estimated is found to be significant. Thus, divorce cannot be considered to actually reduce wealth on the basis of these results. The negative relation between divorce and wealth rather seems to hinge on differences in background characteristics of individuals who remain married and individuals who undergo a divorce. However, the lack in significance may also be linked to difficulties in the calculation of standard errors for the treatment effects (cp. Chapter 3.2.4). The suitability of bootstrapping to assess standard errors has not been formally justified (Imbens 2004). The standard errors do not differ to a great extent depending on whether they are assessed by means of bootstrapping in case of kernel-based matching or on the basis of the approach of Abadie and Imbens (2006) for nearest neighbour matching, though. Thus, the insignificance of the estimators is not very likely to be driven by the failure of the calculation of standard errors.

[51] The number of individuals who got a divorce between 2002 and 2007 is reduced compared to previous statistics (cp. Figure 5). Firstly, as a measure of permanent income is used to estimate the propensity scores, individuals must have been surveyed in the years 2000, 2001 and 2002. Additionally, missing observations for single control variables reduce the sample.

On the basis of the results of the conditional difference-in-differences matching, a causal direction from divorce to a reduction in wealth cannot be inferred. Minimising differences in the distribution of factors, which influence the propensity to divorce and which are related to wealth at the same time, no significant difference in the change in wealth holdings of divorced and continuously married individuals can be found. This suggests that the differences in the change in wealth, which were described in the previous chapters, are likely to depend on the different background characteristic of individuals in uninterrupted marriages and individuals who get a divorce. Furthermore, unobservable determinants of marital stability and wealth such as prudence or values and norms may bias the descriptive results. Unobserved heterogeneity, which may emerge in connection with both wealth and the propensity to divorce, is accounted for by means of the difference-in-differences analysis. Thus, the results of this study suggest that wealth and divorce are negatively related, but no evidence can be provided that divorce itself actually causes losses in wealth.

Table 20: Results of conditional difference-in-differences matching for men

Model	DD^{PSM}	S. E.	t-stat	# treated off support	# treated on support	# untreated off support	# untreated on support	standardised bias after matching(1	pseudo-R2 after matching(2
10 nearest neighbours									
caliper 0.005	-0.412	1.266	-0.325	4	70	876	2,580	6.755	2.50
caliper 0.05	**-0.300**	1.225	-0.245	2	72	838	2,618	3.897	1.30
caliper 0.01	-0.385	1.196	-0.321	2	72	844	2,612	5.008	1.80
caliper 0.05, trim 1%	**-0.113**	1.194	-0.094	11	63	34	3,422	4.466	1.50
caliper 0.05, trim 5%	0.396	1.245	0.318	19	55	172	3,284	7.036	4.50
caliper 0.01, trim 1%	**-0.110**	1.282	-0.086	16	58	34	3,422	4.917	2.20
caliper 0.01, trim 5%	0.421	1.250	0.336	25	49	172	3,284	5.938	4.00
5 nearest neighbours									
caliper 0.005	-0.207	1.284	-0.161	4	70	876	2,580	6.660	2.90
caliper 0.05	**-0.153**	1.277	-0.120	2	72	838	2,618	4.625	2.00
caliper 0.01	-0.121	1.233	-0.098	2	72	844	2,612	5.130	2.50
caliper 0.05, trim 1%	0.042	1.210	0.034	11	63	34	3,422	5.085	2.20
caliper 0.05, trim 5%	0.397	1.205	0.329	19	55	172	3,284	8.669	5.00
1 nearest neighbour									
caliper 0.005	-0.686	1.400	-0.490	4	70	876	2,580	8.888	8.40
caliper 0.05	-0.369	1.433	-0.258	2	72	838	2,618	8.972	8.80
caliper 0.01	-0.369	1.387	-0.266	2	72	844	2,612	8.972	8.80
caliper 0.05, trim 1%	-1.019	1.432	-0.712	11	63	34	3,422	9.515	11.50
caliper 0.05, trim 5%	-0.465	1.286	-0.361	19	55	172	3,284	12.259	12.70
kernel									
bw 0.01	**-0.384**	1.221	-0.315	2	72	844	2,612	4.481	1.40
bw 0.05	**-0.755**	1.214	-0.622	2	72	838	2,618	4.242	1.60
bw 0.06	-0.714	1.181	-0.605	2	72	838	2,618	5.197	2.10
llr									
bw 0.01	-0.576	55.256	-0.010	5	69	866	2,590	5.444	2.30
bw 0.05	**-0.805**	2.023	-0.398	2	72	839	2,617	2.322	0.70

*** p<0.01, ** p<0.05, * p<0.1

(1 before matching standardised bias = 30.544, (2 before matching pseudo-R2 = 21.29
n(treated)=74, n(untreated)=3,456

Source: SOEP, author's calculations.

Table 21: Results of conditional difference-in-differences matching for women

Model	DD^{PSM}	S. E.	t-stat	# treated off support	# treated on support	# untreated off support	# untreated on support	standardised bias after matching(1	pseudo-R2 after matching(2
10 nearest neighbours									
caliper 0.005	-0.309	1.089	-0.283	9	91	728	2,715	5.247	1.70
caliper 0.05	**-0.184**	0.908	-0.202	5	95	668	2,775	4.358	1.50
caliper 0.01	**-0.006**	1.001	-0.006	6	94	694	2,749	4.715	1.80
caliper 0.05, trim 1%	**-0.470**	0.987	-0.477	19	81	34	3,409	3.128	0.90
caliper 0.05, trim 5%	**-0.657**	1.114	-0.590	24	76	172	3,271	3.708	1.70
caliper 0.01, trim 1%	**-0.337**	1.077	-0.313	20	80	50	3,393	3.388	1.10
caliper 0.01, trim 5%	**-0.650**	1.147	-0.566	33	67	172	3,271	4.165	3.00
5 nearest neighbours									
caliper 0.005	**-0.490**	1.109	-0.442	9	91	728	2,715	4.597	1.80
caliper 0.05	**-0.489**	0.943	-0.519	5	95	668	2,775	4.402	1.90
caliper 0.01	**-0.255**	1.020	-0.250	6	94	694	2,749	4.530	2.10
caliper 0.05, trim 1%	**-0.799**	1.013	-0.788	19	81	34	3,409	3.674	1.40
caliper 0.05, trim 5%	**-0.787**	1.187	-0.663	24	76	172	3,271	4.784	2.40
1 nearest neighbour									
caliper 0.005	-0.005	1.273	-0.004	9	91	728	2,715	8.536	7.40
caliper 0.05	0.205	1.129	0.181	5	95	668	2,775	8.548	8.10
caliper 0.01	0.281	1.191	0.236	6	94	694	2,749	8.967	8.00
caliper 0.05. trim 1%	-0.338	1.218	-0.277	19	81	34	3,409	9.278	7.80
caliper 0.05. trim 5%	-1.376	1.888	-0.728	24	76	172	3,271	14.961	13.20
kernel									
bw 0.01	0.085	1.065	0.080	6	94	694	2,749	6.071	1.90
bw 0.05	-0.224	0.964	-0.233	5	95	668	2,775	5.155	1.40
bw 0.06	-0.258	0.966	-0.267	5	95	668	2,775	5.554	1.70
llr									
bw 0.01	**-0,506**	53,390	-0,009	17	83	730	2,713	2,669	0,70
bw 0.05	**-0,198**	3,775	-0,052	5	95	668	2,775	4,497	1,10

*** p<0.01, ** p<0.05, * p<0.1

(1 before matching standardised bias = 30.501, (2 before matching pseudo-R2 = 24.0
n(treated)=100, n(untreated)=3,443

Source: SOEP, author's calculations.

5 Summary

Wealth is an essential parameter for economic well-being. It provides economic security, generates direct income and constitutes a source of consumption, for instance. Besides, private wealth holdings have become increasingly important with regard to retirement provision. Divorce constitutes a potential shock with respect to wealth. Marital splits can reduce wealth holdings directly via court and lawyer fees. Moreover, divorce is related to wealth indirectly, since family status correlates with the determinants of wealth such as income or consumption. Thus, divorce can be assumed to be one reason for differences in wealth holdings. Analysing the relation between divorce and wealth, the reverse causality between the two factors has to be accounted for – marriage not only benefits the accumulation of wealth, but wealthier individuals are also less likely to divorce. To analyse the relation between divorce and wealth, this study applied data provided by the SOEP. Causal effects are sought to be assessed by means of conditional difference-in-differences matching methods.

Altogether, wealth and divorce are found to be negatively related. However, the analyses cannot provide any evidence that the effects observed are actually causal, i.e. that divorce leads to a reduction of individual wealth holdings. Descriptive results show that divorced individuals hold less wealth than individuals in uninterrupted marriages. This applies for women, in particular. These findings are supported by estimators of OLS regressions, which indicate that being divorced once is related to lower wealth holdings in comparison to being continuously married. In a next step, the change in wealth depending on the change in marital status was examined. Getting a divorce is found to come along with a decrease in wealth. Furthermore, wealth holdings of individuals who got a divorce between 2002 and 2007 are initially lower compared to continuously married individuals. Men of both marital change categories possess more wealth than women in the respective categories. Moreover, the relative difference between wealth holdings of men who got a divorce and men in uninterrupted marriages is found to increase to a higher extent compared to women. In other words, men seem to lose a lower share of their wealth in consequence of divorce than women, but as men who remained married accumulated more wealth

than women who remained married, the difference in wealth between continuously married men and men who got divorced became higher than between women in the respective groups. OLS regressions on the change in wealth support the finding that getting a divorce in comparison to remaining married is negatively related to wealth for men, in particular. Additionally, the wealth holdings of individuals who got a divorce are found to be more likely to decrease and less likely to increase compared to continuously married persons. Finally, the causal impact of divorce on wealth is sought to be assessed by means of conditional difference-in-differences matching. The results indicate that the decrease in wealth for both men and women is not actually a consequence of divorce, but seems to be rather driven by the different distribution of background characteristics of divorced and continuously married individuals or unobserved differences between the groups.

To get a more comprehensive overview of the impact of divorce on economic well-being, it would be conducive, if the measure of wealth was more comprehensive, i.e. if it comprised human capital and social security pensions. Both components are of special importance in the context of family formation and dissolution, mainly due to the simultaneity of marital status and labour supply decisions – and thus the accumulation of human capital and the acquisition of pension entitlements. In this context, analysing income changes in consequence of divorce in addition to changes in wealth could provide supplemental insight into the relation between divorce and economic well-being. Furthermore, it would be advantageous, if by means of the marital history data a distinction between couples who are married and live together and individuals who are married but separated could be drawn. The differentiation could provide more insight into the causal relation between divorce and wealth. As separated individuals are likely to differ from married individuals living together with regard to labour supply or saving decisions, for instance, it could be analysed, to what extent wealth holdings are reduced already during the period of separation and depend on the duration of this period or whether major changes occur only as a result of legal divorce. The long interval between the years in which wealth is surveyed in the SOEP hinders the estimation of the direct effect of divorce on wealth as well. If a couple gets divorced in 2004, for instance, it can hardly be assessed whether the amount of wealth observed in 2007 was reduced directly in consequence of divorce

or in the course of the years subsequent to divorce. Another aspect that may be examined in more detail is the survey of wealth and the potential impact of divorce on the collection of wealth data. Some components such as financial assets are strongly underestimated in the SOEP, which may lead to biased results. As regards the relation between divorce and the measurement of wealth, it may be that individuals on the verge of divorce have an improved overview of their wealth as a result calculations of the equalisation of gains accumulated in the course of marriage ("Zugewinnausgleich"). On the other hand, it should be considered that – for the same reason – divorce-prone individuals may have a motive for concealing their actual level of wealth.

In 2012, wealth data will be collected again in the SOEP. As the number of surveyed individuals who underwent a divorce between 2002 and 2007 is relatively low, the extension of the analyses by these data will be beneficial. Furthermore, major changes in the legal regulation of marriage and divorce in Germany occurred after 2007, which could provide a possibility to analyse the impact of divorce on wealth within a quasi-experimental framework and compare the results to those achieved by means of conditional difference-in-differences matching. Besides assessing average treatment effects, the causal effect of divorce on wealth could be estimated with regard to other moments of the distribution as well.

6 References

Aassve, A., G. Betti, S. Mazzuco and L. Mencarini (2009): Marital Disruption and Economic Well-Being: Poverty, Income and Lifestyle Deprivation. In: H.-J. Andreß and D. Hummelsheim: When Marriage Ends – Economic and Social Consequences of Partnership Dissolution, pp. 330-357. Cheltenham and Northampton: Edward Elgar Publishing.

Abadie, A and G. W. Imbens (2006): Large Sample Properties of Matching Estimators for Average Treatment Effects. Econometrica, (74), pp. 235-267.

Abadie, A and G. W. Imbens (2008): Notes and Comments – On the Failure of the Bootstrap for Matching Estimators. Econometrica, (76), pp. 1537-1557.

Althammer, J. (2000): Ökonomische Theorie der Familienpolitik: theoretische und empirische Befunde zu ausgewählten Problemen staatlicher Familienpolitik. Heidelberg: Physica-Verlag.

Ananat, E. O. and G. Michaels (2008): The Effect of Marital Breakup on the Income Distribution of Women with Children. The Journal of Human Resources, (43), pp. 611-629.

Andersen, H. H., A. Mühlbacher, M. Nübling, J. Schupp and G. C. Wagner (2007): Computation of Standard Values for Physical and Mental Health Scale Scores Using the SOEP Version of SF-12v2. Schmollers Jahrbuch, (127), pp. 171-182.

Andreß, H.-J., B. Borgloh, M. Bröckel, M. Giesselmann and D. Hummelsheim (2006): The Economic Consequences of Partnership Dissolution – A Comparative Analysis of Panel Studies from Belgium, Germany, Great Britain, Italy, and Sweden. European Sociological Review, (22), pp. 533-560.

Andreß, H.-J. and M. Güllner (2001): Scheidung als Armutsrisiko. In: E. Barlösius and W. Ludwig-Mayerhofer (eds.): Armut in der Gesellschaft, pp. 169-197. Opladen: Leske+Budrich.

Andreß, H.-J. and H. Lohmann (2000): Die wirtschaftlichen Folgen von Trennung und Scheidung. Band 180 der Schriftenreihe des Bundesministeriums für Familie, Senioren, Frauen und Jugend. Stuttgart: Kohlhammer.

Angrist, J. D., G. W. Imbens and D. B. Rubin (1996): Identification of Causal Effects Using Instrumental Variables. Journal of the American Statistical Association, (91), pp. 444-455.

Ashenfelter, O. and J. Heckman (1974): The Estimation of Income and Substitution Effects in a Model of Family Labor Supply. Econometrica, (42), pp. 73-85.

Atkinson, A. B. (1971): The Distribution of Wealth and the Individual Life-Cycle. Oxford Economic Papers, (23), pp. 239-254.

Atkinson, A. B. and A. J. Harrison (1978): Distribution of Personal Wealth in Britain. London et al.: Cambridge University Press.

Bajtelsmit, V. L. (2006): Gender, the Family, and Economy. In: G. L. Clark, A. H. Munnell and J. M. Orszag (eds.): The Oxford Handbook of Pensions and Retirement Income, pp. 121-140. New York: Oxford University Press.

Banks, J., R. Blundell and J. P. Smith (2003): Understanding Differences in Household Financial Wealth between the United States and Great Britain. The Journal of Human Resources, (38), pp. 241-279.

Bardasi, E. and M. Taylor (2008): Marriage and Wages: A Test of the Specialization Hypothesis. Economica, (75), pp. 569-591.

Bartel, A. and P. Taubman (1986): Some Economic and Demographic Consequences of Mental Illness. Journal of Labor Economics, (4), pp. 243-256.

Bauer, T. K., D. A. Cobb-Clark, V. Hildebrand and M. Sinning (2011): A Comparative Analysis of the Nativity Wealth Gap. Economic Inquiry. Forthcoming.

Becker, G. S. (1964): Human Capital. New York: Columbia University Press.

Becker, G. S. (1973): A Theory of Marriage: Part I. The Journal of Political Economy, (81), pp. 813-846.

Becker, G. S. (1974a): A Theory of Marriage: Part II. The Journal of Political Economy, (82), pp. 11-26.

Becker, G. S. (1974b): A Theory of Marriage. In: T. W. Schultz (ed.): Economics of the Family: Marriage, Children, and Human Capital, pp. 299-351. Chicago: University of Chicago Press.

Becker, G. S. (1975): Human Capital. New York: Columbia University Press.

Becker, G. S. (1985): Human Capital, Effort, and the Sexual Division of Labor. Journal of Labor Economics, (3), pp. S33-S58.

Becker, G. S. (1991): A Treatise on the Family: Enlarged Edition. Cambridge and London: Harvard University Press.

Becker, G. S., E. Landes and R. T. Michael (1977): An Economic Analysis of Marital Instability. The Journal of Political Economy, (85), pp. 1141-1187.

Becker, S. O. and A. Ichino (2002): Estimation of Average Treatment Effects Based on Propensity Scores. The Stata Journal, (2), pp. 358-377.

Bedard, K. and O. Deschênes (2005): Sex Preferences, Marital Dissolution, and the Economic Status of Women. The Journal of Human Resources, (40), pp. 411-434.

BiB (Bundesinstitut für Bevölkerungsforschung) (2004): Bevölkerung. Fakten – Trends – Ursachen – Erwartungen. Die wichtigsten Fragen. Sonderheft der Schriftenreihe des BiB.

Black, S. E., P. J. Devereux and K. G. Salvanes (2005): Why the Apple Doesn't Fall Far: Understanding the Intergenerational Transmission of Human Capital. American Economic Review, (95), pp. 437-449.

Blau, F. D. and L. M. Kahn (2000): Gender Differences in Pay. Journal of Economic Perspectives, (14), pp. 75-99.

Blundell, R. and M. C. Dias (2009): Alternative Approaches to Evaluation in Empirical Microeconomics. The Journal of Human Resources, (44), pp. 565-640.

BMJ (Bundesministerium für Justiz) (2009): Das Eherecht. Download under: http://www.bmj.bund.de/files/-/3982/Eherecht_online_Dez09.pdf.

Bodenmann, G. (2001): Psychologische Risikofaktoren für Scheidung: Ein Überblick. Psychologische Rundschau, (52), pp. 85-95.

Bogan, V. (2010): Household Investment Decisions and Offspring Gender: Parental Accounting. Unpublished Manuscript.

Bolin, K. and A. Pålsson (2001): Male and Female Wealth: The Importance of the Family Structure. Prepared for the 21st Arne Ryde Symposium on Non-Human Wealth and Capital Accumulation, Department of Economics, Lund University, Lund, Sweden, August 23-25, 2001.

Borghans, L., B. H. H. Golsteyn, J. J. Heckman and H. Meijers (2009): Gender Differences in Risk Aversion and Ambiguity Aversion. IZA Discussion Paper No. 3985.

Bouchard, G., Y. Lussier and S. Sabourin (1999): Personality and Marital Adjustment: Utility of the Five-Factor Model of Personality. Journal of Marriage and the Familiy, (61), pp. 651-660.

Bourguignon, F. and P.-A. Chiappori (1992): Collective Models of Household Behavior – An Introduction. European Economic Review, (36), pp. 355-364.

Böttcher, K. (2006): Scheidung in Ost- und Westdeutschland – Der Einfluss der Frauenerwerbstätigkeit auf die Ehestabilität. Kölner Zeitschrift für Soziologie und Sozialpsychologie, (58), pp. 592-616.

Browning, M. (1992): Children and Household Economic Behavior. Journal of Economic Literature, (30), pp. 1434-1475.

Browning, M. (1995): Saving and the Intra-Household Distribution of Income: An Empirical Investigation. Ricerche Economiche, (48), pp. 277-292.

Browning, M. (2000): The Saving Behaviour of a Two-Person Household. Scandinavian Journal of Economics, (102), pp. 235-251.

Browning, M. and A. Lusardi (1996): Household Saving: Micro Theories and Micro Facts. Journal of Economic Literature, (34), pp. 1797-1855.

Brüderl, J. and H. Engelhardt (1997): Trennung oder Scheidung? Einige Methodologische Überlegungen zur Definition von Eheauflösungen. Soziale Welt, (48), pp. 277-290.

Bryant, W. K. and C. D. Zick (2006): The Economic Organization of the Household – Second Edition. New York: Cambridge University Press.

Burbidge, J. B., L. Magee and A. L. Robb (1988): Alternative Transformations to Handle Extreme Values of the Dependent Variable. Journal of the American Statistical Association, (83), pp. 123-127.

Burkhauser, R. V., G. J. Duncan, R. Hauser and R. Berntsen (1991): Wife or Frau, Women Do Worse: A Comparison of Men and Women in the United States and Germany after Marital Dissolution. Demography, (28), pp. 353-360.

Burkhauser, R. V., J. R. Frick and J. Schwarze (1997): A Comparison of Alternative Measures of Economic Well-Being for Germany and the United States. Review of Income and Wealth, (43), pp. 153-171.

Burkhauser, R. V., P. Giles, D. R. Lillard and J. Schwarze (2005): Until Death Do Us Part: An Analysis of the Economic Well-Being of Widows in Four Countries. Journal of Gerontology: Social Sciences, (60B), pp. 238-246.

Cagetti, M. (2003): Wealth Accumulation over the Life Cycle and Precautionary Savings. Journal of Business & Economic Statistics, (21), pp. 339-353.

Caliendo, M. and R. Hujer (2006): The Microeconometric Estimation of Treatment Effects – An Overview. Allgemeines Statistisches Archiv, (90), pp. 199-215.

Caliendo, M. and S. Kopeinig (2008): Some Practical Guidance for the Implementation of Propensity Score Matching. Journal of Economic Survey, (22), pp. 31-72.

Canberra Group (Expert Group on Household Income Statistics): Final Report and Recommendations. Ottawa (2001) (http://www.lisproject.org/links/canberra/finalreport.pdf)

Cannari, L., G. D. D'Alessio and R. Gambacorta (2008): Capital Gains and Wealth Distribution in Italy. In: Household Wealth in Italy, pp. 293–316. Rome: Banca D'Italia.

Chen, H. and R. P. Volpe (2002): Gender Differences in Financial Literacy among College Students. Financial Services Review, (11), pp.289-307.

Chiappori, P.-A. (1988): Nash-Bargained Household Decisions: A Comment. International Economic Review, (29), pp. 791-786.

Chiappori, P.-A. (1992): Collective Labor Supply and Welfare. The Journal of Political Economy, (100), pp. 437-467.

Chiappori, P.-A., M. Iyigun and Y. Weiss (2009): Investment in Schooling and the Marriage Market. American Economic Review, (99), pp. 1689-1713.

Choi, H.-J., J. M. Joesch and S. Ludberg (2008): Sons, Daughters, Wives, and the Labour Market Outcomes of West German Men. Labour Economics, (15), pp. 795-811.

Claupein, E. (1990): Vermögen und Vermögensbildungsprozesse der privaten Haushalte. Berlin: Duncker & Humblot.

Croson, R. and U. Gneezy (2009): Gender Differences in Preferences. Journal of Economic Literature, (47), pp. 448-474.

Dahl, G. B. And E. Moretti (2008): The Demand for Sons. Review of Economic Studies, (75), pp. 1085-1120.

Daniel, K. (1995): The Marriage Premium. In: M. Tommasi and K. Ierulli (eds.): The New Economics of Human Behavior, pp. 113-125. New York: Cambridge University Press.

Davies, J. B. (2009): Wealth and Economic Inequality. In: W. Salverda, B. Nolan and T. M. Smeeding (eds.): The Oxford Handbook of Economic Inequality, pp. 127-149. New York: Oxford University Press.

Davies, J. B. and A. F. Shorrocks (2000): The Distribution of Wealth. In: A. B. Atkinson und F. Bourguignon (eds.): Handbook of Income Distribution,
Vol. 1, pp. 605-675. Amsterdam: Elsevier.

Dehejia, R. H. and S. Wahba (2002): Propensity Score-Matching Methods for Nonexperimental Causal Studies. The Review of Economics and Statistics, (84), pp. 151-161.

Diekmann, A. and H. Engelhardt (1999): The Social Inheritance of Divorce: Effects of Parent's Family Type in Postwar Germany. American Sociological Review, (64), pp. 783-793.

Diekmann, A. and T. Klein (1993): Bestimmungsgründe des Ehescheidungsrisikos – Eine empirische Untersuchung mit Daten des sozioökonomischen Panels. In: A. Diekmann and S. Weick (eds.): Der Familienzyklus als sozialer Prozeß – Bevölkerungssoziologische Untersuchungen mit den Methoden der Ereignisanalyse, pp. 347-371. Berlin: Duncker & Humblot.

DiPrete, T. A. and M. Gangl (2004): Assessing Bias in the Estimation of Causal Effects: Rosenbaum Bounds on Matching Estimators and Instrumental Variables Estimation with Imperfect Instruments. Sociological Methodology, (34), pp. 271-310.

Donnellan, M. B., R. D. Conger and C. M. Bryant (2004): The Big Five and Enduring Marriages. Journal of Research in Personality, (38), pp. 481-504.

Drobnič, S., H.-P. Blossfeld and G. Rohwer (1999): Dynamics of Women's Employment Patterns Over the Family Life Course: A Comparison of the United States and Germany. Journal of Marriage and Family, (61), pp. 133-146.

Duncan, G. J. and S. D. Hoffman (1985): Economic Consequences of Marital Instability. In: M. David and T. Smeeding (eds.): Horizontal Equity, Uncertainty, and Economic Well-Being, pp. 427-470. Chicago and London: University of Chicago Press.

Dunn, A. T. and D. R. B. Hoffman (1983): Distribution of Wealth in the United Kingdom: Effect of Including Pension Rights, and Analysis by Age-Group. Review of Income and Wealth, (29), pp. 243-282.

Dynan, K. E., J. Skinner and S. P. Zeldes (2004): Do the Rich Save More?. Journal of Political Economy, (112), pp. 379-444.

Engelhardt, H., H. Trappe and J. Dronkers (2002): Differences in Family Policy and the Intergenerational Transmission of Divorce: A Comparison between the former East and West Germany. Demographic Research, (6), pp. 295-324.

Fethke, C. C. (1989): Life-Cycle Models of Saving and the Effect of the Timing of Divorce on Retirement Economic Well-Being. Journal of Gerontology: Social Sciences, (44), pp. 121-128.

Finke, M. S. and N. L. Pierce (2006): Precautionary Savings Behavior of Maritally Stressed Couples. Family and Consumer Sciences Research Journal, (34), pp. 223-240.

Frey, B. S. and A. Stutzer (2002): What Can Economists Learn from Happiness Research?. Journal of Economic Literature, (40), pp. 402-435.

Frick, J. R., J. Goebel, M. M. Grabka, O. Groh-Samberg and G. G. Wagner (2007): Zur Erfassung von Einkommen und Vermögen in Haushaltssurveys: Hocheinkommensstichprobe und Vermögensbilanz im SOEP. SOEPpapers on Multidisciplinary Panel Data Research at DIW Berlin, No. 19. Berlin: DIW Berlin.

Frick, J. R., M. M. Grabka and J. Marcus (2007): Editing and Multiple Imputation of Item-Non-Response in the 2002 Wealth Module of the German Socio-Economic Panel (SOEP). Data Documentation 18. Berlin: DIW Berlin.

Frick, J. R., M. M. Grabka and J. Marcus (2010): Editing und multiple Imputation der Vermögensinformation 2002 und 2007 im SOEP. Data Documentation 51. Berlin: DIW Berlin.

Frick, J. R., M. M. Grabka and E. M. Sierminska (2007): Representative Wealth Data for Germany from the German SOEP: The Impact of Methodological Decisions Around Imputation and the Choice of the Aggregation Unit. SOEP Paper No. 3. Berlin: DIW Berlin.

Frick, J. R. and M. M. Grabka (2009a): Gestiegene Vermögensungleichheit in Deutschland. Wochenbericht des DIW Berlin Nr. 4/2009, pp. 54-67.

Frick, J. R. and M. M. Grabka (2009b): Zur Entwicklung der Vermögensungleichheit in Deutschland. Berliner Journal für Soziologie, (19), pp. 577-600.

Frick, J. R. and M. M. Grabka (2010): Alterssicherungsvermögen dämpft Ungleichheit – aber große Vermögenskonzentration bleibt bestehen. Wochenbericht des DIW Berlin Nr. 3/2010, pp. 2-12.

Friedman, M. (1957): A Theory of the Consumption Function. Princeton: Princeton University Press.

Gangl, M. and T. A. DiPrete (2006): Kausalanalyse durch Matchingverfahren. In: A. Diekmann (ed.): Methoden der Sozialforschung. Kölner Zeitschrift für Soziologie und Sozialpsychologie, Sonderheft, (44), pp. 396-420. Wiesbaden: VS Verlag.

Gautier, P. A., M. Svarer and C. N. Teulings (2009): Sin City? Why is Divorce Rate Higher in Urban Areas?. Scandinavian Journal of Economics, (111), pp. 439-456.

Gensler, S., B. Skiera and M. Böhm (2005): Einsatzmöglichkeiten der Matching Methode zur Berücksichtigung von Selbstselektion. Journal für Betriebswirtschaft, (55), pp. 37-62.

González, L. And B. Özcan (2008): The Risk of Divorce and Household Saving Behaviour. IZA Discussion Paper No. 3726.

González, L. and T. K. Viitanen (2009): The Effect of Divorce Laws on Divorce Rates in Europe. European Economic Review, (53), pp. 127-138.

Grabka, M. M. and J. R. Frick (2007): Vermögen in Deutschland wesentlich ungleicher verteilt als Einkommen. Wochenbericht des DIW Nr. 45, pp. 665-672.

Greenstein, T. N. (1990): Marital Disruption and the Employment of Married Women. Journal of Marriage and the Family, (52), pp. 657-676.

Gude, J. (2008): Ehescheidungen 2006. Wirtschaft und Statistik 4/2008, pp. 287-297.

Guner, N. and J. Knowles (2007): Marital Instability and the Distribution of Wealth. Unpublished Manuscript.

Gustman, A. L., O. S. Mitchell, A. A. Samwick and T. L. Steinmeier (1999): Pension and Security Wealth in the Health and Retirement Survey. In: J. P. Smith and R. J. Willis: Wealth, Work, and Health: Innovations in the Measurement in the Social Sciences: Essays in Honor of F. Thomas Juster.

Haider, S. J., A. Jacknowitz and R. F. Schoeni (2003): The Economic Status of Elderly Women. Michigan Retirement Research Center Working Paper No. WP 2003-046.

Haisken-DeNew, J. P. and Frick, J. R. (eds.) (2005): Desktop Companion to the German Socio-Economic Panel Study, Version 8.0. Berlin: DIW Berlin.

Hank, K. (2003): The Differential Influence of Women's Residential District on the Risk of Entering First Marriage and Motherhood in Western Germany. Population and Environment, (25), pp. 3.-21.

Hao, L. (1996): Family Structure, Private Transfers, and the Economic Well-Being of Families with Children. Social Forces, (75), pp. 269-292.

Heckert, D. A., T.C. Nowak and K. A. Snyder (1998): The Impact of Husbands' and Wives' Relative Earnings on Marital Disruption. Journal of Marriage and Family, (60), pp. 690-703.

Heckman, J. J. (1976): A Life-Cycle Model of Earnings, Learning, and Consumption. The Journal of Political Economy, (84), pp. S11-S44.

Heckman, J. J., H. Ichimura and P. E. Todd (1997): Matching as an Econometric Evaluation Estimator: Evidence from Evaluating a Job Training Programme. The Review of Economic Studies, (64), Special Issue: Evaluation of Training and Other Social Programmes, pp. 605-654.

Heckman, J. J., H. Ichimura, J. Smith and P. Todd (1998): Characterizing Selection Bias Using Experimental Data. Econometrica, (66), pp. 1017-1098.

Heckman, J. and S. Navarro-Lozano (2004): Using Matching, Instrumental Variables, and Control Functions to Estimate Economic Choice Models. The Review of Economics and Statistics, (86), pp. 30-57.

Heineck, G. and S. Anger (2010): The Returns to Cognitive Abilities and Personality Traits in Germany. Labour Economics, (17), pp. 535-546.

Heineck, G. and R. T. Riphahn (2009): Intergenerational Transmission of Educational Attainment in Germany – The Last Five Decades. Jahrbücher für Nationalökonomie und Statistik, (229), pp. 36-60.

Holden, K. C. and P. J. Smock (1991): The Economic Costs of Marital Dissolution: Why Do Women Bear a Disproportionate Cost?. Annual Review of Sociology, (17), pp. 51-78.

Hurd, M. D. and D. A. Wise (1989): The Wealth and Poverty of Widows: Assets Before and After the Husband's Death. In: D. A. Wise (ed.): The Economics of Aging. Chicago: The University of Chicago Press.

Imbens, G. W. (2004): Nonparametric Estimation of the Average Treatment Effects under Exogeneity – A Review. The Review of Economics and Statistics, (86), pp. 4-29.

Imbens, G. W. and J. M. Wooldridge (2009): Recent Developments in the Econometrics of Program Evaluation. Journal of Economic Literature, (47), pp. 5-86.

Jarvis, S. and S. P. Jenkins (1999): Marital Splits and Income Changes: Evidence From the British Household Panel Survey. Population Studies, (53), pp. 237-254.

Jenkins, S. P. (1990): The Distribution of Wealth: Measurement and Models. Journal of Economic Surveys, (4), pp. 329-360.

Jenkins, S. P. (2008): Marital Splits and Income Changes over the Longer Term. ISER Working Paper. Colchester: University of Essex.

Jenkins, S. P. and M. Jäntti (2005): Methods for Summarizing and Comparing Wealth Distributions. ISER Working Paper No. 2005-05. Colchester: University of Essex.

Johnson, W. R. and J. Skinner (1986): Labor Supply and Marital Separation. The American Economic Review, (76), pp. 455-469.

Juster, F. T., J. P. Smith and F. Stafford (1999): The Measurement and Structure of Household Wealth. Labour Economics, (6), pp. 253-275.

Keister, L. A. (2003): Religion and Wealth: The Role of Religious Affiliation and Participation in Early Adult Asset Accumulation. Social Forces, (82), pp. 175-207.

Keister, L. A. (2008): Conservative Protestants and Wealth: How Religion Perpetuates Asset Poverty. American Journal of Sociology, (113), pp. 1237-1271.

Keister, L. A. and S. Moller (2000): Wealth Inequality in the United States. Annual Review of Sociology, (26), pp. 63-81.

Kennickell, A. (1998): Multiple Imputation in the Survey of Consumer Finances. Paper Prepared for the August 1998 Joint Statistical Meetings, Dallas, Texas.

Kennickell, A. (2006): Codebook for 2004 Survey of Consumer Finances. Download under: http://www.federalreserve.gov/pubs/oss/oss2/2004/codebk2004.txt

Klein, T. and D. Fischer-Kerli (2000): Die Zuverlässigkeit retrospektiv erhobener Lebensverlaufsdaten – Analysen zur Partnerschaftsbiografie des Familiensurvey. Zeitschrift für Soziologie, (29), pp. 294-312.

Kneip, T. and G. Bauer (2009): Did Unilateral Divorce Laws Raise the Divorce Rates in Western Europe? Journal of Marriage and the Family, (71), pp. 592-607.

Kohli, M., H. Künemund, A. Schäfer, J. Schupp and C. Vogel (2006): Erbschaften und ihr Einfluss auf die Vermögensverteilung. Vierteljahrshefte zur Wirtschaftsforschung, (75), pp. 58-76.

Korenman, S. and D. Neumark (1991): Does Marriage Really Make Men More Productive? Journal of Human Resources, (26), pp. 282-307.

Kotlikoff, L. J. (1989): What Determines Savings? Cambridge: MIT Press.

Kotlikoff, L. J. and L. H. Summers (1981): The Role of Intergenerational Transfers in Aggregate Capital Accumulation. Journal of Political Economy, (89), pp. 706-732.

Krause, P. and A. Schäfer (2005): Verteilung von Vermögen und Einkommen in Deutschland: Große Unterschiede nach Geschlecht und Alter. Wochenbericht des DIW Nr. 11, pp. 199-207.

Kroh, M. (2010): Documentation of Sample Sizes and Panel Attrition in the German Socio Economic Panel (SOEP) (1984 until 2009). Data Documentation 50. Berlin: DIW Berlin.

Kunze, A. (2008): Gender Wage Gap Studies: Consistency and Decomposition. Empirical Economics, (35), pp. 63-76.

Ladd, H. F. (1998): Evidence on Discrimination in Mortgage Lending. The Journal of Economic Perspectives, (12), pp. 41-62.

Lazear, E. P. and R. T. Michael (1980): Family Size and the Distribution of Real Per Capita Income. The American Economic Review, (70), pp. 91-107.

Lehrer, E. L. (2004a): Religion as a Determinant of Economic and Demographic Behavior in the United States. Population and Development Review, (30), pp. 707-726.

Lehrer, E. L. (2004b): The Role of Religion in Union Formation: An Economic Perspective. Population Research and Policy Review, (23), pp. 161-185.

Lehrer, E. L. (2009): Religion, Economics, and Demography: The Effects of Religion on Education, Work, and the Family. London and New York: Routledge Press.

Lehrer, E. L. and C. U. Chiswick (1993): Religion as a Determinant of Marital Stability. Demography, (30), pp. 385-404.

Leopold, T. and T. Schneider (2010): Schenkungen und Erbschaften im Lebenslauf – Vergleichende Längsschnittanalysen zu intergenerationalen Transfers. Zeitschrift für Soziologie, (39), pp. 258-280.

Lillard, L. A. and C. W. A. Panis (1996): Marital Status and Mortality: The Role of Health. Demography, (33), pp. 313-327.

Lillard, L. A. and L. J. Waite (1993): A Joint Model of Marital Childbearing and Marital Disruption. Demography, (30), pp. 653-681.

Lloyd, K. M. and S. J. South (1996): Contextual Influences on Young Men's Transition to First Marriage. Social Forces, (74), pp. 1097-1119.

Lundberg, S. (2005a): Men and Islands: Dealing with the Family in Empirical Labor Economics. Labor Economics, (12), pp. 591-612.

Lundberg, S. (2005b): Sons, Daughters, and Parental Behaviour. Oxford Review of Economic Policy, (21), pp. 340-356.

Lundberg, S. (2010): Personality and Marital Surplus. SOEPpapers on Multidisciplinary Panel Data Research, No. 307. Berlin: DIW Berlin.

Lundberg, S. and R. A. Pollak (1993): Separate Spheres Bargaining and the Marriage Market. Journal of Political Economy, (101), pp. 988-1010.

Lundberg, S. and R. A. Pollak (1996): Bargaining and Distribution in Marriage. Journal of Economic Perspective, (10), pp. 139-158.

Lupton, J. and J. P. Smith (2003): Marriage, Assets, and Savings. In: S. A. Grossbard-Shechtman (ed.): Marriage and the Economy: Theory and Evidence from Advanced Industrial Societies, pp. 129-152. Cambridge: Cambridge University Press.

Lusardi, A. and O. Mitchell (2008): Planning and Financial Literacy: How Do Women Fare?. American Economic Review, (98), pp. 413-417.

Lyngstad, T. H. (2006): Why do Couples with Highly Educated Parents have Higher Divorce Rates?. In: European Sociological Review, (22), pp. 49-60.

Mahalanobis, P. C. (1936): On the Generalized Distance in Statistics. Proceedings of the National Institute of Science India, (2), pp. 49-55.

Mahoney, A., K. I. Pargament, N. Tarakeshwar and A. B. Swank (2001): Religion in the Home in the 1980s and 1990s: A Meta-Analytic Review and Conceptual Analysis of Links between Religion, Marriage, and Parenting. Journal of Family Psychology, (15), pp. 559-596.

Manser, M. and M. Brown (1980): Marriage and Household Decision-Making: A Bargaining Analysis. International Economic Review, (21), pp. 31-44.

Mazzaferro, C. and S. Toso (2009): The Distribution of Total Wealth in Italy: 1991-2002. Review of Income and Wealth, (55), pp. 779-802.

McElroy, M. R. and M. J. Horney (1981): Nash-Bargained Household Decision: Toward a Generalization of the Theory of Demand. International Economic Review, (22), pp. 333-349.

McKeever, M. and N. H. Wolfinger (2001): Reexamining the Economic Costs of Marital Disruption for Women. Social Science Quaterly, (82), pp. 202-217.

Mc Lanahan, S. S., A. Sørensen and D. Watson (1989): Sex Differences in Poverty, 1950-1980. Signs, (15), pp. 102-122.

McManus, P. A. and T. A. DiPrete (2001): Losers and Winners: The Financial Consequences of Separation and Divorce for Men. American Sociological Review, (66), pp. 246-268.

Meade, J. E. (1964): Efficiency, Equality and the Ownership of Property. London: Allen & Unwin.

Meade, J. E. (1976): The Just Economy. London: Allen & Unwin.

Meer J., D. L. Miller and H. S. Rosen (2003): Exploring the Health-Wealth Nexus. Journal of Health Economics, (22), pp. 713-730.

Meyer, B. D. and J. X. Sullivan (2010): Consumption and Income Inequality in the U.S. since the 1960s. Working Paper, October 18, 2010.

Mincer, J. (1962): Labor Force Participation of Married Women: A Study of Labor Supply. In: H. G. Lewis (ed.): Aspects of Labor Economics, pp. 63-106. Princeton: Princeton University Press.

Mincer, J. (1974): Schooling, Experience and Earnings. New York: Columbia University Press.

Modigliani, F. and R. Brumberg (1954): Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data. In: K. Kurihara (ed.): Post Keynesian Economics, pp. 388-436. New Brunswick, NJ: Rutgers University Press.

Montalto, C. P. and J. L. Gerner (1998): The Effect of Expected Changes in Marital Status on Labor Supply Decisions of Women and Men. Journal of Divorce and Remarriage, (28), pp. 25-51.

Morgan, L. A. (1989): Economic Well-Being Following Marital Termination: A Comparison of Widowed and Divorced Women. Journal of Family Issues, (10), pp. 86- 101.

Mroczek, D. K. and A. Spiro III (2003): Modeling Intraindividual Change in Personality Traits – Findings from the Normative Aging Study. Journal of Gerontology: Psychological Sciences, (58B), pp. P153–P165.

Mueller, G. And E. Plug (2006): Estimating the Effect of Personality on Male and Female Earnings. Industrial and Labor Relations Review, (60), pp. 3-22.

Muravyev, A., O. Talavera and D. Schäfer (2009): Entrepreneurs' Gender and Financial Constraints: Evidence from International Data. Journal of Comparative Economics, (37), pp. 270-286.

Murray, M. P. (2006): Avoiding Invalid Instruments and Coping with Weak Instruments. Journal of Economic Perspectives, (20), pp. 111-132.

Nakosteen, R. A. and M. A. Zimmer (1987): Marital Status and Earnings of Young Men: A Model with Endogenous Selection. Journal of Human Resources, (22), pp. 248-268.

Nyhus, E. K. and P. Webley (2001): The Role of Personality in Household Saving and Borrowing Behaviour. European Journal of Personality, (15), pp. S85-S103.

Ochmann, R. and V. Steiner (2009): Vermögensstrukturen im Lebenszyklus- Immer noch große Unterschiede zwischen Ost- und Westdeutschland. Wochenbericht des DIW Nr. 36, pp. 614-621.

Ongaro, F., S. Mazzuco and S. Meggiolaro (2009): Economic Consequences of Union Dissolution in Italy: Findings from the European Community Household Panel. European Journal of Population, (25), pp. 45-65.

O'Rand, A. (1996): The Precious and the Precocious – Understanding Cumulative Disadvantage and Cumulative Advantage over the Life Course. The Gerontologist, (36), pp. 230-238.

Osberg, L. (2009): Measuring Economic Security in Insecure Times: New Perspectives, New Events, and the Index of Economic Well-Being. CSLS Research Report 2009-12.

Osberg, L. and A. Sharpe (2002): An Index of Economic Well-Being for Selected OECD Countries. Review of Income and Wealth, (48), pp. 291-316.

Ott, N. (1993): Die Rationalität innerfamilialer Entscheidungen als Beitrag zur Diskriminierung weiblicher Arbeit. In: G. Grözinger, R. Schubert and J. Backhaus (eds.): Jenseits von Diskriminierung – Zu den institutionellen Bedingungen weiblicher Arbeit in Beruf und Familie, pp. 113-146. Marburg: Metropolis-Verlag.

Pence, K. M. (2006): The Role of Wealth Transformations: An Application to Estimating the Effect of Tax Incentives on Saving. Contributions to Economic Analysis & Policy, (5), Article 20.

Peters, H. E. (1988): Retrospective Versus Panel Data in Analyzing Lifecycle Events. The Journal of Human Resources, (23), pp. 488-513.

Pischner, R. and O. Groh-Samberg (2008): The Biography of Family Status and the Generated Current Family Status. In: J. R. Frick, O. Groh-Samberg and H. Lohmann (eds.): Biography and Life History Data in the German Socio Economic Panel (Up to Wave X, 2007), pp. 61-70. Berlin: DIW Berlin.

Poortman, A.-R. (2005): Women's Work and Divorce: A Matter of Anticipation? A Research Note. European Sociological Review, (21), pp. 301-309.

Raley, S. and S. Bianchi (2006): Sons, Daughters, and Family Process: Does Gender of Children Matter?. Annual Review of Sociology, (32), pp. 401-421.

Rapp, I. (2008): Wann werden Ehen getrennt? Der Einfluss der Ehedauer auf das Trennungsrisiko. Kölner Zeitschrift für Soziologie und Sozialpsychologie, (60), pp. 500-527.

Ribar, D. C. (2004): What Do Scientists Know About the Benefits of Marriage? A Review of Quantitative Methodologies. IZA Discussion Paper No. 998.

Ring, A. M. (2000): Die Verteilung der Vermögen in der Bundesrepublik Deutschland: Analyse und politische Schlußfolgerungen. Frankfurt/Main et al.: Peter Lang Verlag.

Riphahn, R. T. and O. Serfling (2005): Item Non-Response on Income and Wealth Questions. Empirical Economics, (30), pp. 521-538.

Robinson, D. T. and D. Blanchette (2009): RII – Stata Module to Perform Repeated-Imputation Inference. Download under: http://fmwww.bc.edu/repec/bocode/r/rii.ado

Rosenbaum, P. R. and D. B. Rubin (1983): The Central Role of the Propensity Score in Observational Studies for Causal Effects. Biometrika, (70), pp. 41-55.

Rosenbaum, P. R. And D. B. Rubin (1985): Constructing a Control Group Using Multivariate Matched Sampling Methods That Incorporate the Propensity Score. The American Statistican, (39), pp. 33-38.

Royal Commission on the Distribution of Income and Wealth (1975): Report No. 1 – Initial Report on the Standing Reference, Cmnd. 6171. London: HMSO.

Rubin, D. B. (1974): Estimating Causal Effects to Treatments in Randomised and Nonrandomised Studies. Journal of Educational Psychology, (66), pp. 688-701.

Rubin, D. B. (1980): Comment on "Randomization Analysis of Experimental Data: The Fisher Randomization Test". Journal of the American Statistical Association, (75), pp. 591-593.

Rubin, D. B. (1990): Comment – Neyman (1923) and Causal Inference in Experiment s and Observational Studies. Statistical Science, (5), pp. 472-480.

Samuelson, P. A. (1956): Social Indifference Curves. The Quarterly Journal of Economics, (70), pp. 1-22.

Schäfer, A. and J. Schupp (2006): Zur Erfassung der Vermögensbestände im Sozio-oekonomischen Panel (SOEP) im Jahr 2002. Data Documentation 11. Berlin: DIW Berlin.

Schmidt, L. and P. Sevak (2006): Gender, Marriage, and Asset Accumulation in the United States. Feminist Economics, (12), pp. 139-166.

Schubert, R., M. Brown, M. Gysler and H. W. Brachinger (1999): Financial Decision-Making: Are Women Really More Risk-Averse?. The American Economic Review, (89), pp. 381-385.

Schwarze, J. (2003): Using Panel Data on Income Satisfaction to Estimate Equivalence Scale Elasticity. Review of Income and Wealth, (49), pp. 359-372.

Schwarze, J. and J. Härpfer (2000): Die wirtschaftlichen Folgen von Trennung und Scheidung für Familien: Erwerbstätigkeit, Einkommen und Lebenszufriedenheit. Expertise im Auftrag des Staatsinstituts für Familienforschung an der Universität Bamberg, ifb-Materialien Nr. 4-2000, Bamberg.

Sen, B. (2000): How Important Is Anticipation of Divorce in Married Women's Labor Supply Decisions? An Intercohort Comparison Using NLS Data. Economics Letters, (67), pp. 209-216.

Seitz, S. N. (1999): Labor Supply, Divorce and Remarriage. UWO Department of Economics Working Papers. University of Western Ontario.

Sierminska, E., A. Brandolini and T. M. Smeeding (2006): The Luxembourg Wealth Study – A Cross-Country Comparable Database for Household Wealth Research. Journal of Economic Inequality, (4), pp. 375-383.

Sierminska, E. M., J. R. Frick and M. M. Grabka (2010): Examining the Gender Wealth Gap. Oxford Economic Papers, (4), pp. 669-690.

Smeeding, T. M. and S. Sandstrom (2004): Poverty and Income Maintenance in Old Age: A Cross-National View of Low Income Older Women. Center for Retirement Research Working Papers. Boston College.

Smeeding, T. M. and J. P. Thompson (2010): Recent Trends in the Distribution of Income: Labor, Wealth and More Complete Measures of Well-Being. PERI Workingpaper Series, No. 225. University of Massachusetts Amherst.

Smith, J. A. and P. E. Todd (2005): Does Matching Overcome LaLonde's Critique of Nonexperimental Estimators?. Journal of Econometrics, (125), pp. 305-353.

Smith, J. P. and M. P. Ward (1980): Asset Accumulation and Family Size. Demography, (17), pp. 243-260.

Smith, J. P. (2001): Why is Wealth Inequality Rising? In: F. Welch (ed.): The Causes and Consequences of Increasing Inequality, pp. 83-116. Chicago and London: The University of Chicago Press.

Smock, P. J. (1993): The Economic Costs of Marital Disruption for Young Women over the Past Two Decades. Demography, (30), pp. 353-371.

Smock, P. J., W. D. Manning and S. Gupta (1999): The Effect of Marriage and Divorce on Women's Economic Well-Being. American Sociological Review, (64), pp. 794-812.

South, S. J. (2001): Time-Dependent Effects of Wives' Employment on Marital Disruption. American Sociological Review, (66), pp. 226-245.

Statistisches Bundesamt (2008): Wirschaftsrechnungen – Einkommens- und Verbrauchsstichprobe: Ausstattung privater Haushalte mit ausgewählten Gebrauchsgütern 2008. Fachserie 15, Heft1. Wiesbaden: Statistisches Bundesamt.

Statistisches Bundesamt (2009): https://www-genesis.destatis.de/genesis/online.

Statistisches Bundesamt (2010): Alleinerziehende in Deutschland – Ergebnisse des Mikrozensus 2009. Wiesbaden: Statistisches Bundesamt.

Stein, H. (2004): Anatomie der Vermögensverteilung: Ergebnisse der Einkommens- und Verbrauchsstichproben 1983-1998. Berlin: edition sigma.

Stevenson, B. (2007): The Impact of Divorce Laws on Marriage-Specific Capital. Journal of Labor Economics, (25), pp.75-94.

Stevenson, B. And J. Wolfers (2007): Marriage and Divorce: changes and their Driving Forces. Journal of Economic Perspectives, (21), pp. 27-52.

Szydlik, M. and J. Schupp (2004): Wer erbt mehr? Erbschaften, Sozialstruktur und Alterssicherung. Kölner Zeitschrift für Soziologie und Sozialpsychologie, (56), pp. 609-629.

Thiele, S. (1998): Das Vermögen Privater Haushalte und dessen Einfluß auf die Soziale Lage. Studien zur Haushaltsökonomie, (17). Frankfurt/Main et al.: Peter Lang Verlag.

Vaaler, M. L., C. G. Ellison and D. A. Powers (2009): Religious Influences on the Risk of Marital Dissolution. Journal of Marriage and Family, (71), pp. 917-934.

van der Klaauw, W. (1996): Female Labour Supply and Marital Status Decisions: A Life-Cycle Model. Review of Economic Studies, (63), pp. 199-235.

Venti, S. F. and D. A. Wise (1998): The Cause of Wealth Dispersion at Retirement: Choice or Chance?. The American Economic Review, (88), pp. 185-191.

Vermeulen, F. (2002): Collective Household Models: Principles and Main Results. Journal of Economic Surveys, (16), pp. 533-564.

Voegeli, W. And B. Willenbacher (1992): Property Division and Pension-Spiltting in the FRG. In: L. J. Weitzman and M. Maclean (eds.): The Economic Consequences of Divorce: the International Perspective, pp. 163-183. Oxford: Clarendon Press.

Vollmer, F. (2006): Verfassungsrechtliche Fragen der Ehe- und Familienbesteuerung. In: J. Althammer and U. Klammer (eds.): Ehe und Familie in der Steuerrechts- und Sozialordnung, pp. 73-92. Tübingen: Mohr Siebeck.

Wade, T. J. and D. J. Pevalin (2004): Marital Transitions and Mental Health. Journal of Health and Social Behavior, (45), pp. 155-170.

Waite, L. J. (1995): Does Marriage Matter?. Demography, (32), pp. 483-507.

Waite, L. J. and M. Gallagher (2000): The Case for Marriage: Why Married People Are Happier, Healthier, and Better Off Financially. New York: Broadway Books.

Waite, L. J. and E. L. Lehrer (2003): The Benefits from Marriage and Religion in the Unites States: A Comparative Analysis. Population and Development Review, (29), pp. 255-275.

Wagner, G. G., J. R. Frick and J. Schupp (2007): The German Socio-Economic Panel Study (SOEP) – Evolution, Scope and Enhancements. Schmoller's Jahrbuch – Journal of Applied Social Science Studies, (127), pp. 139-169.

Warren, T., K. Rowlingson and C. Whyley (2001): Female Finances: Gender Wage Gaps and Gender Asset Gaps. Work, Employment & Society, (15), pp. 465- 488.

Wärneryd, K.-E. (1999): The Psychology of Saving: A Study on Economic Psychology. Cheltenham and Northampton: Edward Elgar Publishing.

Weichselbaumer, D. and R. Winter-Ebmer (2005): A Meta-Analysis of the International Gender Wage Gap. Journal of Economic Surveys, (19), pp. 479-511.

Weitzman, L. J. (1992): Marital Property: Its Transformation and Division in the United States. In: L. J. Weitzman and M. Maclean (eds.): The Economic Consequences of Divorce: the International Perspective, pp. 85-142. Oxford: Clarendon Press.

Westerheide, P. (2005): Auswirkungen von Erbschaften und Schenkungen auf die Vermögensbildung privater Personen und Haushalte – Eine Empirische Analyse auf der Basis des Sozio-oekonomischen Panels. Jahrbücher für Nationalökonomie und Statistik, (225), pp. 459-481.

White, L. K. (1990): Determinants of Divorce: A Review of Research in the Eighties. Journal of Marriage and Family, (52), pp.904-912.

Whittington, L. A. and J. Alm (2003): The Effects of Public Policy on Marital Status in the United States. In: S. A. Grossbard-Shechtman (ed.): Marriage and the Economy – Theory and Evidence from Advanced Industrial Countries, pp. 75-101. Cambridge: Cambridge University Press.

Wilmoth, J. and G. Koso (2002): Does Marital History Matter? Marital Status and Wealth Outcomes among Preretirement Adults. Journal of Marriage and the Family, (64), pp. 254-268.

Wolff, E. N. (1996): International Comparisons of Wealth Inequality. Review of Income and Wealth, (42), pp. 433-451.

Wolff, E. N. (1998): Recent Trends in the Size Distribution of Household Wealth. Journal of Economic Perspectives, (12), pp. 131-150.

Wolff, E. N. (2006a): Changes in Household Wealth in the 1980s and 1990s in the United States. In: E. N. Wolff (ed.): International Perspectives on Household Wealth, pp. 107-159. Cheltenham and Northampton: Edward Elgar Publishing.

Wolff, E. N. (ed.) (2006b): International Perspectives on Household Wealth. Cheltenham and Northampton: Edward Elgar Publishing.

Wolff, E. N. and A. Zacharias (2009): Household Wealth and the Measurement of Economic Well-Being in the United States. Journal of Economic Inequality, (7), pp. 83-115.

Wooldridge, J. M. (2002): Econometric Analysis of Cross Section and Panel Data. Cambridge et al.: MIT Press.

Yamokoski, A. and L. A. Keister (2006): The Wealth of Single Women: Marital Status and Parenthood in the Asset Accumulation of Young Baby Boomers in the United States. Feminist Economics, (12), pp. 167-194.

Zagorsky, J. L. (2005): Marriage and Divorce's Impact on Wealth. Journal of Sociology, (41), pp. 406-424.

Zhao, Z. (2004): Using Matching to Estimate Treatment Effects: Data Requirements, Matching Metrics, And Monte Carlo Evidence. The Review of Economics and Statistics, (86), pp. 91-107.

Zick, C. D. and K. Holden (2000): An Assessment of the Wealth Holdings of Recent Widows. Journal of Gerontology: Social Sciences, (55B), pp. 90-97.

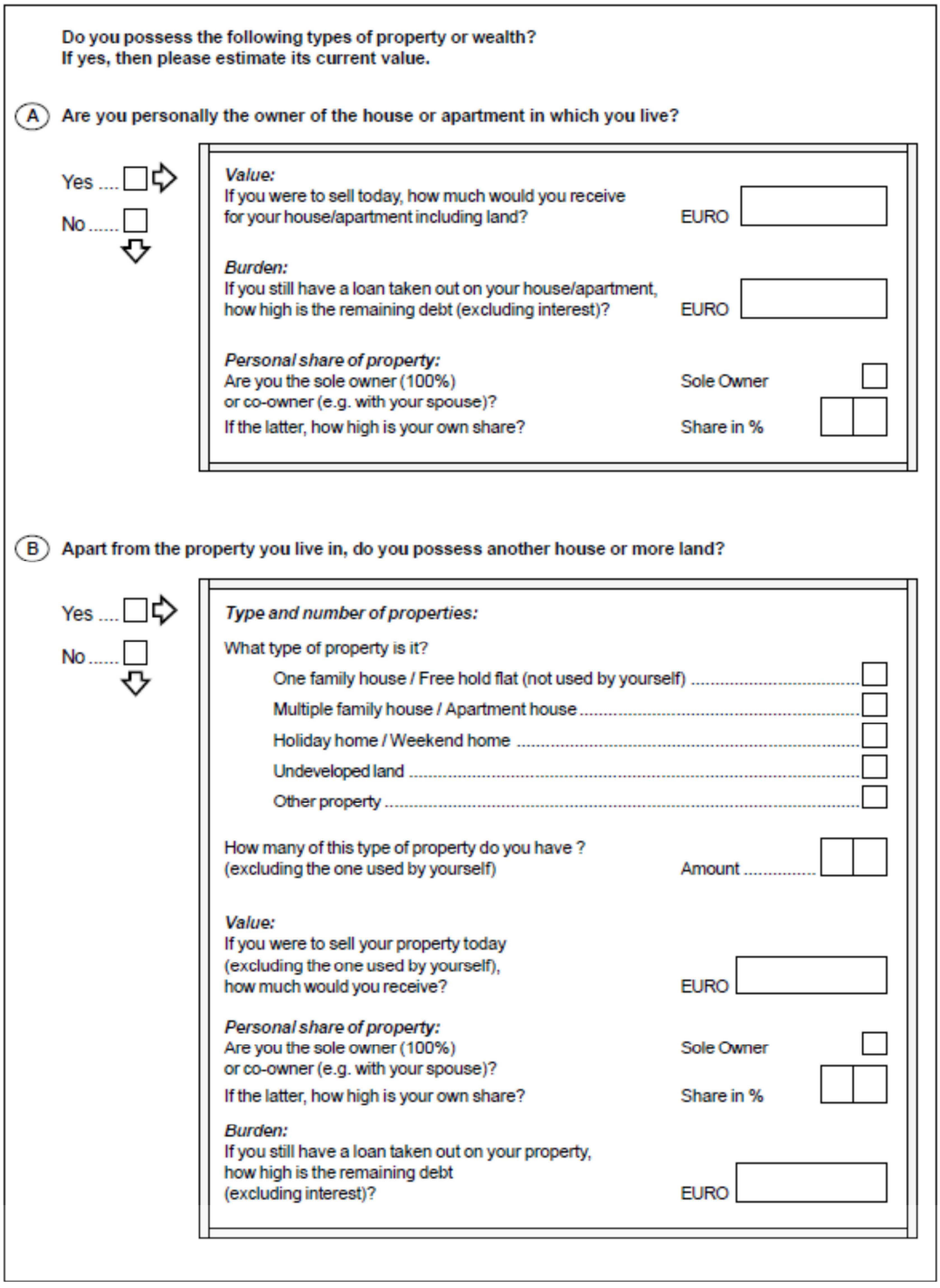
Zissimopoulos, J., B. Karney and A. Rauer (2008): Marital Histories and Economic Well-Being. RAND Working Paper No. WR-645.

Zissimopoulos, J., B. (2009): Gain and Loss: Marriage and Wealth Changes Over Time. Michigan Retirement Research Center Working Paper No. WP 2009-213.

7 Appendix

A Person Questionnaires on Wealth Holdings 2002 and 2007

Figure A 1: SOEP person questionnaire 2002 – balance sheet



Do you possess the following types of property or wealth?
If yes, then please estimate its current value.

(A) Are you personally the owner of the house or apartment in which you live?

Yes .... ☐ ⇨
No ..... ☐ ⇩

Value:
If you were to sell today, how much would you receive for your house/apartment including land? EURO ☐

Burden:
If you still have a loan taken out on your house/apartment, how high is the remaining debt (excluding interest)? EURO ☐

Personal share of property:
Are you the sole owner (100%) or co-owner (e.g. with your spouse)? Sole Owner ☐
If the latter, how high is your own share? Share in % ☐☐

(B) Apart from the property you live in, do you possess another house or more land?

Yes .... ☐ ⇨
No ..... ☐ ⇩

Type and number of properties:

What type of property is it?

- One family house / Free hold flat (not used by yourself) ☐
- Multiple family house / Apartment house ☐
- Holiday home / Weekend home ☐
- Undeveloped land ☐
- Other property ☐

How many of this type of property do you have ? (excluding the one used by yourself) Amount ☐☐

Value:
If you were to sell your property today (excluding the one used by yourself), how much would you receive? EURO ☐

Personal share of property:
Are you the sole owner (100%) or co-owner (e.g. with your spouse)? Sole Owner ☐
If the latter, how high is your own share? Share in % ☐☐

Burden:
If you still have a loan taken out on your property, how high is the remaining debt (excluding interest)? EURO ☐

(C) **Do you possess financial assets over the value of 2500 EURO in the form of a savings balance, savings bonds, bonds, shares or investments?**

Yes .... ☐ ⇨
No ..... ☐ ⇩

Value:
How high do you estimate the value of your financial assets? EURO ☐

Personal share of property:
Are these financial assets in your name or do they stretch over joint accounts, i.e. with your spouse? Sole Owner ☐

If the latter, how high is your share? Share in % ☐☐

(D) **Do you currently possess life insurance or a private pension plan or a buildings savings account?**

Yes .... ☐ ⇨
No ..... ☐ ⇩

Value:
How high do you estimate the cash surrender value of these policies or financial assets to be? EURO ☐

(E) **Are you the owner of a commercial enterprise, i.e. a company, a shop, an office, a practice or an agricultural enterprise, or are you involved in an enterprise such as the above foremetioned?**

Yes .... ☐ ⇨
No ..... ☐ ⇩

Personal share of property:
Are you the sole owner or co-owner of this enterprise, e.g. GBR, GmbH or KG? Sole Owner ☐ Co-owner ☐

Value:
How high do you estimate the current value of your enterprise or of your share to be?
This is the price before tax, which you would receive at the sale of your enterprise or your share, taking into account any remaining financial burdens. EURO ☐

(F) **Do you possess any tangible assets over 2,500 EURO (excluding motor vehicles) in the form of gold, jewellery, coins or valuable collections?**

Yes .... ☐ ⇨
No ..... ☐ ⇩

Value:
If it were possible to estimate the value of these tangible assets: How high would the total value be? EURO ☐

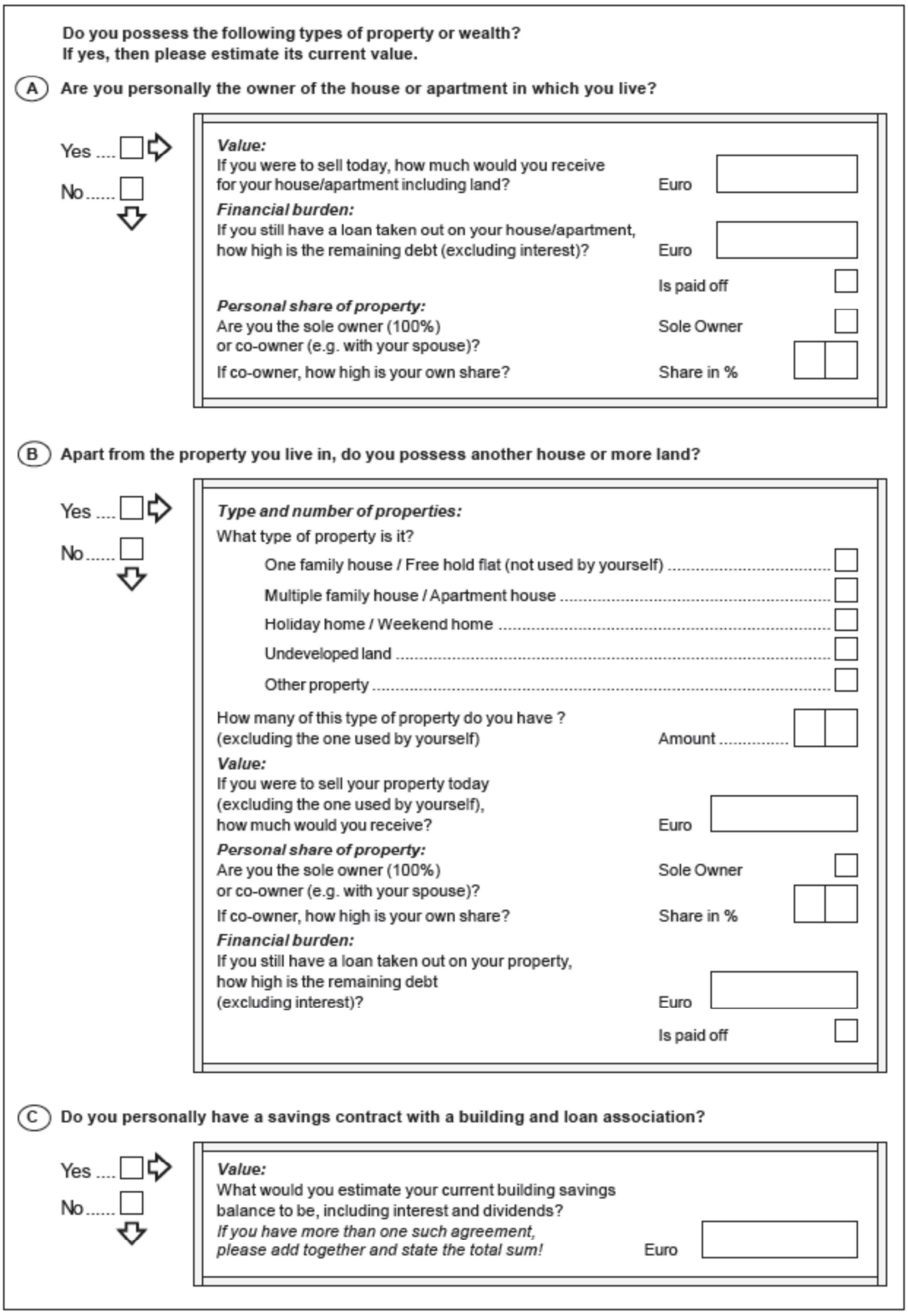
(G) Leaving aside any mortgages on house or property or house-building loan:
Do you at the present time have any debts relating to credit that you as a private individual have taken on at a bank or a similar institution or a another individual, for which you are accountable?
This is limited to debts greater than 2,500 EURO. This does not include mortgages or house-building loans!

Yes .... ☐ ⇨
No ..... ☐ ⇩

Burden:
Current remaining debt (without interest): EURO ☐

Question ***86*** ***next page!***

Figure A 2: SOEP person questionnaire 2007 – balance sheet



Do you possess the following types of property or wealth?
If yes, then please estimate its current value.

(A) Are you personally the owner of the house or apartment in which you live?

Yes .... ☐ ⇨
No ..... ☐ ⇩

Value:
If you were to sell today, how much would you receive for your house/apartment including land? Euro ☐

Financial burden:
If you still have a loan taken out on your house/apartment, how high is the remaining debt (excluding interest)? Euro ☐
Is paid off ☐

Personal share of property:
Are you the sole owner (100%) or co-owner (e.g. with your spouse)? Sole Owner ☐
If co-owner, how high is your own share? Share in % ☐☐

(B) Apart from the property you live in, do you possess another house or more land?

Yes .... ☐ ⇨
No ..... ☐ ⇩

Type and number of properties:
What type of property is it?
One family house / Free hold flat (not used by yourself) ..... ☐
Multiple family house / Apartment house ..... ☐
Holiday home / Weekend home ..... ☐
Undeveloped land ..... ☐
Other property ..... ☐

How many of this type of property do you have ? (excluding the one used by yourself) Amount ..... ☐☐

Value:
If you were to sell your property today (excluding the one used by yourself), how much would you receive? Euro ☐

Personal share of property:
Are you the sole owner (100%) or co-owner (e.g. with your spouse)? Sole Owner ☐
If co-owner, how high is your own share? Share in % ☐☐

Financial burden:
If you still have a loan taken out on your property, how high is the remaining debt (excluding interest)? Euro ☐
Is paid off ☐

(C) Do you personally have a savings contract with a building and loan association?

Yes .... ☐ ⇨
No ..... ☐ ⇩

Value:
What would you estimate your current building savings balance to be, including interest and dividends?
If you have more than one such agreement, please add together and state the total sum! Euro ☐

D **Do you possess financial assets in the form of a savings balance, savings bonds, bonds, shares or investments?**

Yes .... ☐ ⇨
No ..... ☐

Value:
How high do you estimate the value of your financial assets? Euro ☐

Personal share of property:
Are these financial assets in your name or do they stretch over joint accounts, i.e. with your spouse? Sole Owner ☐

If the latter, how high is your share? Share in % ☐☐

E **Do you have a life insurance policy or private retirement insurance policy, purchased either by you or by your employer for you?**

Yes .... ☐ ⇨
No ..... ☐

Value:
How high do you estimate the current cash surrender value of these policies to be? Euro ☐

F **Are you the owner of a commercial enterprise, i.e. a company, a shop, an office, a practice or an agricultural enterprise, or are you involved in an enterprise such as the above foremetioned?**

Yes .... ☐ ⇨
No ..... ☐

Personal share of property:
Are you the sole owner or co-owner of this enterprise, e.g. GBR, GmbH or KG? Sole Owner ☐ Co-owner ☐

Value:
How high do you estimate the current value of your enterprise or of your share to be?
This is the price before tax, which you would receive at the sale of your enterprise or your share, taking into account any remaining financial burdens. Euro ☐

G **Do you possess any tangible assets in the form of gold, jewellery, coins or valuable collections?**

Yes .... ☐ ⇨
No ..... ☐

Value:
If it were possible to estimate the value of these tangible assets: How high would the total value be? Euro ☐

H Leaving aside any mortgages on house or property or house-building loan:
Do you currently still own money on loans that you personally were granted by a bank, other organization, or private individual, and for which you personally are liable?
Not including mortgages or building loans!

Yes .... ☐ ⇨
No ..... ☐

Financial burden:
How high are your outstanding debts? Euro ☐

Question ***127*** ***next page!***

Figure A 3: SOEP person biography – retrospective recording of family status

Question I

Are you currently or were you previously married?
(0) Yes, I am or was married. (0) No. I am single ==> continue with question ...
Since when have you been, respectively from when to when, were you married?
(In the event that you are in your second or further marriage, please answer the question for all of your previous marriages.)

The marriage was completed in	19__	19__	19__
I am still married	(o)	(o)	(o)
The marriage ended in	19__	19__	19__
- through a divorce	(o)	(o)	(o)
- through the death of the partner	(o)	(o)	(o)
- no answer to question I			

Figure A 4: Changes in family situation

Question II

Has something changed in your family situation since the beginning of 19$$?
Please indicate whether one of the following items applies, and when yes, indicate the date.

	19$$ in month	19$$+1 in month
Got married	_____	_____
Moved in with my partner	_____	_____
Got divorced	_____	_____
Separated from my partner	_____	_____
My partner has died	_____	_____
Son / daughter has moved out	_____	_____
Child was born	_____	_____
Other (please enter).....		
No. None of the above.	(o)	

Figure A 5: Current marital status

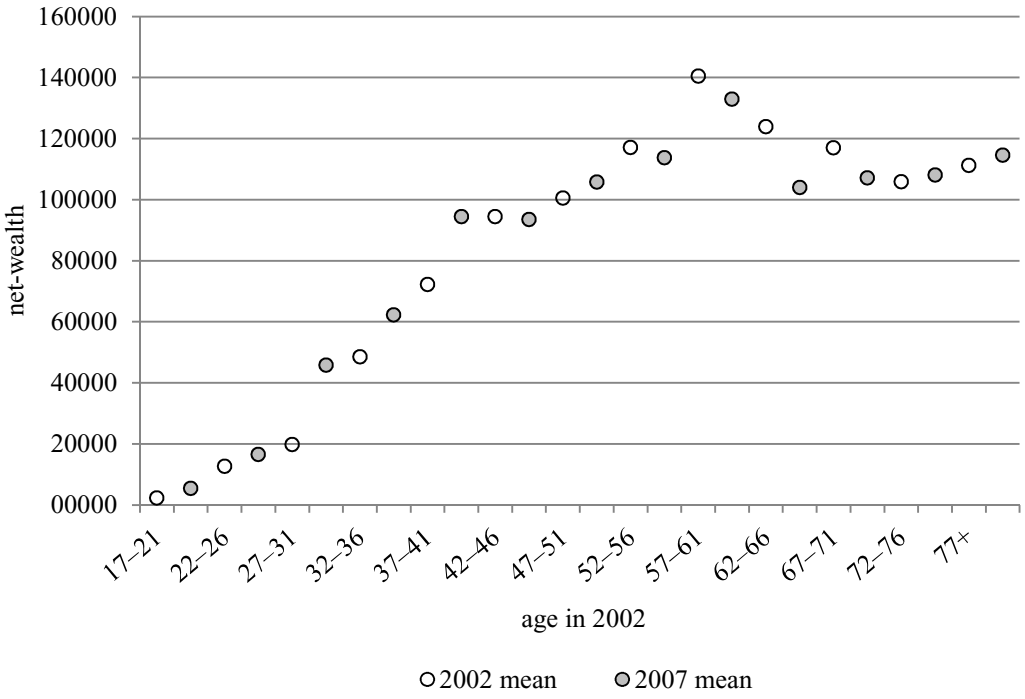
Question III

What is your family status?

Married, live with husband/wife	(o)
Married, living separated	(o)
Single	(o)
Divorced	(o)
Widowed	(o)

B Additional Empirical Results

Figure A 6: Mean of net-wealth 2002 and 2007 by age class[52]



Source: SOEP, author's calculations.

[52] Following Atkinson and Harrison (1978. p. 250 et seqq.) wealth changes between 2002 and 2007 are examined by age group.

Table A 1: Coefficients of OLS regression on IHS-transformed net-wealth 2007 for men

Control variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
marital history (omitted: ever married)						
remarried after one divorce	-1.715***	-1.357***	-1.220***	-1.194***	-1.062***	-0.433
	(0.346)	(0.315)	(0.310)	(0.311)	(0.312)	(0.300)
remarried after more than one divorce	-2.780***	-3.031***	-3.002***	-2.932***	-2.874***	-1.548**
	(0.846)	(0.755)	(0.743)	(0.743)	(0.742)	(0.693)
remarried after widowhood	-0.0684	-0.638	-0.585	-0.561	-0.326	0.177
	(0.830)	(0.743)	(0.730)	(0.730)	(0.732)	(0.685)
never married	-3.085***	0.212	0.187	0.170	0.0751	-0.0744
	(0.229)	(0.308)	(0.303)	(0.303)	(0.303)	(0.280)
divorced once	-2.789***	-1.587***	-1.424***	-1.424***	-1.344***	-0.803**
	(0.378)	(0.367)	(0.361)	(0.361)	(0.362)	(0.343)
divorced more than once	-4.422***	-3.564***	-3.135***	-3.133***	-3.079***	-2.406***
	(0.863)	(0.777)	(0.764)	(0.764)	(0.770)	(0.721)
widowed	-0.229	-0.641	-0.587	-0.583	-0.597	-0.357
	(0.469)	(0.452)	(0.444)	(0.444)	(0.444)	(0.411)
age		0.246***	0.224***	0.225***	0.246***	0.140***
		(0.0527)	(0.0520)	(0.0520)	(0.0525)	(0.0489)
squared age		-0.00142***	-0.00134***	-0.00134***	-0.00156***	-0.000798**
		(0.000420)	(0.000414)	(0.000414)	(0.000418)	(0.000390)
physical health (omitted: good / very good)						
satisfactory		-0.487***	-0.397**	-0.398**	-0.189	-0.237
		(0.175)	(0.172)	(0.172)	(0.177)	(0.165)
not so good / bad		-1.462***	-1.229***	-1.228***	-0.689***	-0.534**
		(0.221)	(0.217)	(0.218)	(0.240)	(0.223)
education (omitted: low)						
middle		0.429*	0.413*	0.411*	0.298	0.0578
		(0.245)	(0.241)	(0.241)	(0.243)	(0.227)
(higher) vocational		0.355	0.164	0.152	0.0397	-0.274
		(0.305)	(0.300)	(0.301)	(0.304)	(0.286)
high		0.885***	0.645**	0.592*	0.449	0.145
		(0.314)	(0.309)	(0.315)	(0.319)	(0.299)
region (omitted: rural)						
town		-0.971***	-0.904***	-0.868***	-0.863***	-0.529***
		(0.202)	(0.199)	(0.200)	(0.200)	(0.187)
city		-1.573***	-1.495***	-1.384***	-1.298***	-0.664***
		(0.220)	(0.216)	(0.230)	(0.232)	(0.221)
East-Germany before 1989 (yes)		-1.317***	-1.392***	-1.401***	-1.026***	-0.774***
		(0.196)	(0.193)	(0.193)	(0.223)	(0.212)

…continued

…continued (OLS regression on IHS-transformed net-wealth 2007 for men)

migration background (yes)		-1.750***	-1.452***	-1.475***	-1.190***	-0.625***
		(0.229)	(0.226)	(0.226)	(0.255)	(0.236)
imputed (yes)		2.328***	2.251***	2.256***	2.210***	1.848***
		(0.162)	(0.160)	(0.160)	(0.160)	(0.150)
number of children		0.493	0.398	0.391	0.273	-0.0807
		(0.427)	(0.423)	(0.422)	(0.423)	(0.400)
squared number of children		-0.0884	-0.0582	-0.0556	-0.0231	0.0298
		(0.105)	(0.104)	(0.104)	(0.104)	(0.100)
child(ren) aged 0-4 (yes)		0.584	0.579	0.579	0.541	0.419
		(0.360)	(0.355)	(0.355)	(0.355)	(0.326)
child(ren) aged 5-17 (yes)		-0.348	-0.236	-0.233	-0.149	-0.117
		(0.364)	(0.359)	(0.359)	(0.361)	(0.332)
child(ren) older than 17 (yes)		-0.0583	0.0885	0.0838	0.102	-0.0508
		(0.187)	(0.184)	(0.184)	(0.184)	(0.176)
permanent HH-income (omitted: 1st quintile)						
2nd quintile		1.085***	0.708***	0.728***	0.661***	0.340
		(0.255)	(0.252)	(0.252)	(0.253)	(0.239)
3rd quintile		2.055***	1.419***	1.439***	1.347***	0.764***
		(0.287)	(0.287)	(0.287)	(0.288)	(0.266)
4th quintile		3.209***	2.340***	2.358***	2.201***	1.308***
		(0.323)	(0.325)	(0.324)	(0.326)	(0.304)
5th quintile		3.524***	2.424***	2.433***	2.226***	1.195***
		(0.398)	(0.401)	(0.400)	(0.403)	(0.378)
log(household size)		-0.795***	-0.505*	-0.504*	-0.456	-0.0123
		(0.296)	(0.293)	(0.292)	(0.294)	(0.275)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		-0.816**	-0.592*	-0.597*	-0.582*	-0.521
		(0.355)	(0.349)	(0.349)	(0.350)	(0.326)
> 5,000 to ≤ 10,000 €		-0.508	-0.142	-0.151	-0.110	0.184
		(0.463)	(0.456)	(0.456)	(0.458)	(0.429)
> 10,000 to ≤ 30,000 €		0.162	0.343	0.354	0.314	0.399
		(0.368)	(0.362)	(0.362)	(0.362)	(0.337)
> 30,000 to ≤ 50,000 €		0.974**	1.033**	1.032**	0.969**	0.907**
		(0.413)	(0.406)	(0.406)	(0.404)	(0.374)
> 50,000 €		1.759***	1.776***	1.785***	1.712***	1.389***
		(0.464)	(0.456)	(0.456)	(0.456)	(0.421)
years full-time employment		0.0164	0.0178	0.0184	0.0143	-0.0102
		(0.0172)	(0.0169)	(0.0169)	(0.0170)	(0.0157)
years part-time employment		0.00881	-0.000498	-0.00134	-0.00229	0.00361
		(0.0406)	(0.0399)	(0.0399)	(0.0399)	(0.0373)
years unemployment		-0.287***	-0.245***	-0.241***	-0.208***	-0.104***
		(0.0424)	(0.0417)	(0.0417)	(0.0420)	(0.0389)
in the labour force (yes)		-0.611**	-0.675**	-0.672**	-0.730**	-0.440
		(0.294)	(0.289)	(0.289)	(0.289)	(0.268)

…continued

…continued (OLS regression on IHS-transformed net-wealth 2007 for men)

self-employed (yes)		0.395	0.803***	0.791***	0.774***	0.572**
		(0.298)	(0.295)	(0.296)	(0.297)	(0.281)
civil servant (yes)		0.118	-0.0524	-0.0650	-0.167	-0.163
		(0.366)	(0.360)	(0.360)	(0.361)	(0.338)
saved the last three years (yes)			1.985***	1.986***	1.827***	1.393***
			(0.159)	(0.159)	(0.160)	(0.149)
inheritance before 1992 (yes)			0.542*	0.529*	0.486	0.0759
			(0.308)	(0.308)	(0.307)	(0.286)
inheritance between 1992 and 2002 (yes)			1.437***	1.408***	1.308***	0.774***
			(0.285)	(0.286)	(0.285)	(0.265)
inheritance between 2002 and 2007 (yes)			0.932***	0.916***	0.917***	0.613***
			(0.235)	(0.235)	(0.231)	(0.214)
father highly educated (yes)				0.0985	0.0935	-0.0200
				(0.286)	(0.287)	(0.266)
mother highly educated (yes)				0.753**	0.717*	0.551
				(0.380)	(0.382)	(0.358)
grew up in rural area (yes)				0.297*	0.288*	0.171
				(0.163)	(0.164)	(0.153)
religion (omitted: catholic)						
evangelical					-0.343*	-0.295*
					(0.190)	(0.176)
other Christian religious organisation					-0.874*	-0.739
					(0.500)	(0.475)
Islamic religious organisation					-1.928***	-1.277***
					(0.495)	(0.460)
other religious organisation					-0.866	-1.855
					(1.911)	(1.771)
non-denominational					-0.629***	-0.411**
					(0.220)	(0.206)
risk					0.0932***	0.0355
					(0.0331)	(0.0309)
life satisfaction					0.243***	0.180***
					(0.0490)	(0.0466)
IHS-transformed net-wealth 2002						0.380***
						(0.0141)
Constant	9.567***	-0.574	-0.789	-1.140	-2.948**	-1.495
	(0.105)	(1.388)	(1.366)	(1.372)	(1.452)	(1.353)
R^2	4.34	25.90	28.59	28.70	29.21	39.30
adj. R^2	4.23	25.38	28.04	28.10	28.52(*	38.70(*
observations	5,693	5,693	5,693	5,693	5,639	5,635

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other adjusted R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 2: Coefficients of OLS regression on IHS-transformed net-wealth 2007 for women

Control variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
marital history (omitted: ever married)						
remarried after one divorce	-1.597***	-1.485***	-1.303***	-1.274***	-1.197***	-0.837***
	(0.329)	(0.300)	(0.294)	(0.294)	(0.297)	(0.281)
remarried after more than one divorce	-2.357***	-1.909**	-1.522**	-1.469*	-1.356*	-0.941
	(0.864)	(0.777)	(0.763)	(0.763)	(0.760)	(0.717)
remarried after widowhood	-0.0649	0.299	0.332	0.342	0.374	0.280
	(1.002)	(0.896)	(0.877)	(0.877)	(0.872)	(0.820)
never married	-2.486***	-0.435	-0.387	-0.371	-0.428	-0.335
	(0.234)	(0.288)	(0.282)	(0.283)	(0.283)	(0.266)
divorced once	-2.431***	-1.464***	-1.272***	-1.237***	-1.178***	-0.619**
	(0.306)	(0.298)	(0.292)	(0.292)	(0.291)	(0.279)
divorced more than once	-5.573***	-4.384***	-4.132***	-4.110***	-4.241***	-2.851***
	(0.682)	(0.627)	(0.615)	(0.615)	(0.619)	(0.582)
widowed	-0.433*	-0.978***	-0.818***	-0.804***	-0.828***	-0.664**
	(0.259)	(0.297)	(0.291)	(0.291)	(0.292)	(0.277)
age		0.310***	0.289***	0.292***	0.301***	0.144***
		(0.0401)	(0.0394)	(0.0394)	(0.0400)	(0.0384)
squared age		-0.00214***	-0.00205***	-0.00207***	-0.00217***	-0.00105***
		(0.000340)	(0.000334)	(0.000334)	(0.000340)	(0.000325)
physical health (omitted: good / very good)						
satisfactory		-0.441***	-0.353**	-0.352**	-0.135	-0.160
		(0.168)	(0.164)	(0.165)	(0.172)	(0.161)
not so good / bad		-0.778***	-0.625***	-0.625***	-0.0752	0.0175
		(0.205)	(0.202)	(0.202)	(0.225)	(0.211)
education (omitted: low)						
middle		1.014***	0.912***	0.935***	0.836***	0.543***
		(0.196)	(0.192)	(0.192)	(0.194)	(0.183)
(higher) vocational		1.385***	1.124***	1.124***	1.019***	0.610**
		(0.267)	(0.262)	(0.264)	(0.266)	(0.254)
high		1.641***	1.405***	1.369***	1.222***	0.848***
		(0.263)	(0.258)	(0.264)	(0.266)	(0.251)
region (omitted: rural)						
town		-0.537***	-0.534***	-0.475**	-0.421**	-0.0505
		(0.190)	(0.186)	(0.187)	(0.187)	(0.175)
city		-1.464***	-1.427***	-1.265***	-1.164***	-0.538**
		(0.208)	(0.204)	(0.214)	(0.217)	(0.209)
East-Germany before 1989 (yes)		-0.537***	-0.534***	-0.475**	-0.421**	-0.0505
		(0.190)	(0.186)	(0.187)	(0.187)	(0.175)

…continued

…continued (OLS regression on IHS-transformed net-wealth 2007 for women)

migration background (yes)		-1.464***	-1.427***	-1.265***	-1.164***	-0.538**
		(0.208)	(0.204)	(0.214)	(0.217)	(0.209)
imputed (yes)		-0.537***	-0.534***	-0.475**	-0.421**	-0.0505
		(0.159)	(0.157)	(0.157)	(0.158)	(0.152)
number of children		0.783*	0.737*	0.711	0.720	0.629
		(0.452)	(0.445)	(0.445)	(0.447)	(0.444)
squared number of children		-0.149	-0.131	-0.127	-0.127	-0.111
		(0.101)	(0.100)	(0.100)	(0.101)	(0.0999)
child(ren) aged 0-4 (yes)		0.382	0.393	0.426	0.208	0.0817
		(0.365)	(0.358)	(0.358)	(0.360)	(0.345)
child(ren) aged 5-17 (yes)		-0.450	-0.386	-0.343	-0.336	-0.402
		(0.420)	(0.413)	(0.413)	(0.415)	(0.400)
child(ren) older than 17 (yes)		-0.261	-0.0335	-0.0400	-0.00489	0.0593
		(0.237)	(0.233)	(0.233)	(0.233)	(0.222)
permanent HH-income (omitted: 1st quintile)						
2nd quintile		1.271***	0.790***	0.799***	0.671***	0.362*
		(0.225)	(0.223)	(0.223)	(0.225)	(0.217)
3rd quintile		2.709***	1.948***	1.969***	1.847***	1.305***
		(0.252)	(0.251)	(0.251)	(0.253)	(0.240)
4th quintile		3.749***	2.722***	2.736***	2.536***	1.626***
		(0.285)	(0.286)	(0.287)	(0.288)	(0.277)
5th quintile		4.874***	3.588***	3.584***	3.345***	2.293***
		(0.329)	(0.332)	(0.333)	(0.336)	(0.330)
log(household size)		-1.976***	-1.581***	-1.576***	-1.519***	-1.047***
		(0.284)	(0.279)	(0.279)	(0.282)	(0.268)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		-1.296***	-1.024***	-1.032***	-1.007***	-1.070***
		(0.282)	(0.278)	(0.278)	(0.280)	(0.262)
> 5,000 to ≤ 10,000 €		-0.690*	-0.449	-0.470	-0.470	-0.407
		(0.375)	(0.369)	(0.369)	(0.372)	(0.356)
> 10,000 to ≤ 30,000 €		-1.053***	-0.795**	-0.802***	-0.787**	-0.694**
		(0.315)	(0.309)	(0.309)	(0.311)	(0.292)
> 30,000 to ≤ 50,000 €		-0.669*	-0.672*	-0.650*	-0.579	-0.560
		(0.393)	(0.385)	(0.385)	(0.385)	(0.361)
> 50,000 €		-0.429	-0.452	-0.432	-0.334	-0.544
		(0.621)	(0.608)	(0.608)	(0.608)	(0.579)
years full-time employment		0.000253	0.00229	0.00298	0.00161	0.00352
		(0.00822)	(0.00805)	(0.00806)	(0.00814)	(0.00765)
years part-time employment		0.0278**	0.0179	0.0180	0.0139	0.00951
		(0.0112)	(0.0110)	(0.0110)	(0.0111)	(0.0104)
years unemployment		-0.198***	-0.169***	-0.170***	-0.157***	-0.104***
		(0.0338)	(0.0332)	(0.0332)	(0.0334)	(0.0314)
in the labour force (yes)		0.369	0.318	0.316	0.254	0.261
		(0.260)	(0.255)	(0.255)	(0.255)	(0.241)

…continued

…continued (OLS regression on IHS-transformed net-wealth 2007 for women)

self-employed (yes)		0.431	0.567	0.553	0.564	0.617*
		(0.388)	(0.381)	(0.383)	(0.384)	(0.361)
civil servant (yes)		0.319	0.182	0.177	0.178	0.0249
		(0.457)	(0.448)	(0.448)	(0.445)	(0.419)
saved the last three years (yes)			2.061***	2.054***	1.883***	1.580***
			(0.147)	(0.147)	(0.148)	(0.140)
inheritance before 1992 (yes)			1.236***	1.228***	1.182***	0.674***
			(0.271)	(0.271)	(0.270)	(0.255)
inheritance between 1992 and 2002 (yes)			1.249***	1.224***	1.161***	0.721**
			(0.296)	(0.296)	(0.296)	(0.281)
inheritance between 2002 and 2007 (yes)			1.115***	1.111***	1.023***	0.791***
			(0.214)	(0.214)	(0.215)	(0.207)
father highly educated (yes)				0.256	0.303	0.312
				(0.261)	(0.262)	(0.249)
mother highly educated (yes)				0.0698	0.00989	-0.138
				(0.366)	(0.366)	(0.345)
grew up in rural area (yes)				0.390***	0.357**	0.222
				(0.151)	(0.153)	(0.145)
religion (omitted: catholic)						
evangelical					-0.453***	-0.454***
					(0.172)	(0.163)
other Christian religious organisation					-0.689	-0.124
					(0.437)	(0.410)
Islamic religious organisation					-1.262**	-0.987**
					(0.497)	(0.476)
other religious organisation					-0.149	-0.734
					(1.785)	(1.677)
non-denominational					-0.799***	-0.715***
					(0.234)	(0.224)
risk					0.172***	0.120***
					(0.0372)	(0.0352)
life satisfaction					0.261***	0.220***
					(0.0448)	(0.0422)
IHS-transformed net-wealth 2002						0.343***
						(0.0135)
Constant	8.853***	-2.008*	-2.391**	-2.859**	-4.716***	-2.005*
	(0.104)	(1.130)	(1.111)	(1.120)	(1.180)	(1.121)
R^2	3.48	24.27	27.46	27.55	28.38	36.88
adj. R^2	3.37	23.79	26.96	27.02	27.76(*	36.32(*
observations	6,386	6,386	6,386	6,386	6,271	6,262

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other adjusted R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 3: Coefficients of OLS regression on the change in IHS-transformed net-wealth between 2002 and 2007 for men

Control variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
marital change (omitted: married once → married once)						
married once → divorced once	-1.432**	-2.437***	-2.368***	-2.354***	-2.349***	-2.319***
	(0.661)	(0.572)	(0.572)	(0.572)	(0.573)	(0.571)
married once → widowed	-0.384	-0.0494	-0.108	-0.106	-0.104	-0.150
	(0.817)	(0.688)	(0.690)	(0.690)	(0.690)	(0.696)
married more than once → married more than once	-0.0961	-0.674***	-0.634**	-0.609**	-0.609**	-0.516**
	(0.291)	(0.247)	(0.248)	(0.247)	(0.248)	(0.248)
never married → never married	0.628***	-0.177	-0.130	-0.0677	-0.0733	-0.168
	(0.197)	(0.281)	(0.283)	(0.286)	(0.286)	(0.289)
never married → married	1.700***	0.325	0.275	0.131	0.128	0.0911
	(0.436)	(0.413)	(0.414)	(0.423)	(0.424)	(0.423)
divorced once → divorced once	0.202	-0.536	-0.503	-0.448	-0.451	-0.406
	(0.403)	(0.363)	(0.365)	(0.365)	(0.365)	(0.367)
divorced once → remarried	1.673**	-0.571	-0.620	-0.639	-0.621	-0.584
	(0.809)	(0.700)	(0.700)	(0.701)	(0.701)	(0.701)
divorced more than once → divorced more than once	-1.714	-2.311**	-2.153**	-2.157**	-2.159**	-2.169**
	(1.209)	(0.986)	(0.987)	(0.986)	(0.985)	(0.989)
widowed → widowed	-0.561	-0.293	-0.255	-0.217	-0.216	-0.250
	(0.511)	(0.444)	(0.443)	(0.443)	(0.443)	(0.444)
age class (omitted: aged 17-25)						
aged 26-30		0.0588	0.0856	0.0268	0.0340	0.0856
		(0.417)	(0.422)	(0.423)	(0.424)	(0.426)
aged 31-35		0.774*	0.809*	0.831*	0.839*	0.917**
		(0.420)	(0.431)	(0.432)	(0.431)	(0.433)
aged 36-40		0.918**	0.972**	1.058**	1.073**	1.149**
		(0.437)	(0.445)	(0.446)	(0.446)	(0.448)
aged 41-45		1.143**	1.178**	1.300***	1.314***	1.328***
		(0.495)	(0.502)	(0.504)	(0.504)	(0.506)
aged 46-50		1.005*	1.034*	1.203**	1.209**	1.212**
		(0.555)	(0.562)	(0.564)	(0.563)	(0.565)
aged 51-55		0.960	1.070*	1.247**	1.252**	1.301**
		(0.608)	(0.613)	(0.614)	(0.614)	(0.617)
aged 56-60		1.465**	1.669**	1.694**	1.691**	1.697**
		(0.689)	(0.692)	(0.697)	(0.697)	(0.699)
aged 61-65		1.796**	1.952***	1.399*	1.397*	1.391*
		(0.751)	(0.752)	(0.817)	(0.817)	(0.818)
older than 65		1.877**	2.012**	2.384***	2.387***	2.285***
		(0.791)	(0.793)	(0.797)	(0.797)	(0.798)

…continued

…continued (OLS regression on the change in IHS-transformed net-wealth for men)

physical health (omitted: good / very good)						
satisfactory		-0.0204	-0.0181	-0.112	-0.110	-0.0987
		(0.157)	(0.157)	(0.160)	(0.160)	(0.165)
not so good / bad		-0.372*	-0.359	-0.578**	-0.576**	-0.518**
		(0.226)	(0.226)	(0.238)	(0.238)	(0.256)
education (omitted: low)						
middle		0.220	0.237	0.217	0.217	0.186
		(0.208)	(0.209)	(0.209)	(0.209)	(0.210)
(higher) vocational		0.152	0.190	0.174	0.174	0.135
		(0.267)	(0.268)	(0.268)	(0.269)	(0.271)
high		0.608**	0.664**	0.608**	0.593**	0.573**
		(0.268)	(0.269)	(0.269)	(0.273)	(0.275)
region (omitted: rural)						
town		-0.405**	-0.384**	-0.382**	-0.372**	-0.377**
		(0.177)	(0.177)	(0.176)	(0.178)	(0.178)
city		-0.688***	-0.664***	-0.668***	-0.633***	-0.578***
		(0.184)	(0.184)	(0.184)	(0.196)	(0.198)
East-Germany before 1989 (yes)		-0.897***	-0.910***	-0.910***	-0.914***	-0.748***
		(0.171)	(0.171)	(0.171)	(0.171)	(0.198)
migration background (yes)		-1.034***	-1.072***	-1.087***	-1.094***	-0.873***
		(0.196)	(0.196)	(0.196)	(0.196)	(0.220)
imputed (omitted: neither in 2002 nor in 2007)						
imputed in 2002 or in 2007		0.872***	0.882***	0.889***	0.892***	0.878***
		(0.143)	(0.143)	(0.143)	(0.143)	(0.144)
imputed in 2002 and in 2007		1.534***	1.549***	1.544***	1.545***	1.529***
		(0.201)	(0.201)	(0.200)	(0.201)	(0.201)
number of children		-0.233	-0.278*	-0.264*	-0.266*	-0.242*
		(0.144)	(0.144)	(0.144)	(0.144)	(0.145)
child(ren) aged 0-4 (yes)		0.721***	0.694***	0.558**	0.560**	0.537*
		(0.262)	(0.262)	(0.275)	(0.275)	(0.275)
child(ren) aged 5-17 (yes)		0.0922	0.0746	0.0959	0.0945	0.0509
		(0.253)	(0.253)	(0.253)	(0.254)	(0.254)
child(ren) older than 17 (yes)		0.218	0.182	0.194	0.193	0.218
		(0.179)	(0.178)	(0.178)	(0.178)	(0.179)
permanent HH-income (omitted: 1st quintile)						
2nd quintile		0.458**	0.412*	0.396*	0.402*	0.384*
		(0.228)	(0.228)	(0.228)	(0.228)	(0.229)
3rd quintile		0.994***	0.937***	0.921***	0.923***	0.899***
		(0.254)	(0.255)	(0.255)	(0.255)	(0.256)

…continued

…continued (OLS regression on the change in IHS-transformed net-wealth for men)

4th quintile		1.456***	1.381***	1.360***	1.364***	1.330***
		(0.276)	(0.278)	(0.278)	(0.278)	(0.280)
5th quintile		1.929***	1.818***	1.784***	1.770***	1.719***
		(0.333)	(0.336)	(0.336)	(0.337)	(0.338)
log(household size)		-0.121	0.0318	0.0525	0.0538	0.0394
		(0.262)	(0.270)	(0.270)	(0.270)	(0.272)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		-0.684**	0.00505	0.0481	0.0398	0.0256
		(0.290)	(0.357)	(0.358)	(0.358)	(0.360)
> 5,000 to ≤ 10,000 €		-0.887**	-0.0641	-0.0299	-0.0213	0.0104
		(0.392)	(0.487)	(0.489)	(0.489)	(0.493)
> 10,000 to ≤ 30,000 €		0.167	1.028**	1.081**	1.081**	1.027**
		(0.409)	(0.489)	(0.491)	(0.492)	(0.494)
> 30,000 to ≤ 50,000 €		0.719	1.515***	1.567***	1.568***	1.512***
		(0.460)	(0.529)	(0.531)	(0.531)	(0.534)
> 50,000 €		0.719	1.503***	1.553***	1.560***	1.516***
		(0.521)	(0.578)	(0.581)	(0.582)	(0.584)
years full-time employment		0.00981	0.0126	0.0107	0.0114	0.0116
		(0.0159)	(0.0160)	(0.0160)	(0.0160)	(0.0160)
years part-time employment		0.0340	0.0418	0.0380	0.0379	0.0433
		(0.0427)	(0.0429)	(0.0429)	(0.0430)	(0.0431)
years unemployment		-0.104**	-0.103**	-0.106**	-0.104**	-0.0935*
		(0.0474)	(0.0474)	(0.0473)	(0.0473)	(0.0477)
in the labour force in 2002(yes)		-0.449	-0.0992	-0.111	-0.109	-0.156
		(0.276)	(0.298)	(0.298)	(0.298)	(0.299)
years in the labour force between 2002 and 2007		0.132*	-0.0379	-0.0247	-0.0238	-0.0223
		(0.0720)	(0.0844)	(0.0843)	(0.0844)	(0.0848)
self-employed (yes)		-0.321	-0.146	-0.119	-0.129	-0.141
		(0.251)	(0.256)	(0.256)	(0.256)	(0.257)
civil servant (yes)		-0.609**	-0.615**	-0.627**	-0.627**	-0.653**
		(0.284)	(0.285)	(0.284)	(0.285)	(0.285)
saved continuously between 2002 and 2007 (yes)		1.212***	1.209***	1.209***	1.212***	1.171***
		(0.141)	(0.141)	(0.141)	(0.141)	(0.142)
paid off loans continuously between 2002 and 2007 (yes)		-2.840***	-2.818***	-2.785***	-2.784***	-2.844***
		(0.323)	(0.323)	(0.321)	(0.321)	(0.323)
worried about health		-0.149	-0.139	-0.0863	-0.0847	-0.0944
		(0.150)	(0.150)	(0.151)	(0.151)	(0.152)
inheritance between 2002 and 2007 (yes)		0.771***	0.769***	0.754***	0.745***	0.722***
		(0.202)	(0.202)	(0.202)	(0.202)	(0.202)
IHS-transformed net-wealth 2002		-0.635***	-0.634***	-0.635***	-0.636***	-0.643***
		(0.0141)	(0.0141)	(0.0142)	(0.0142)	(0.0145)

…continued

…continued (OLS regression on the change in IHS-transformed net-wealth for men)

change in individual earnings (omitted: change up to 5%)					
earnings decreased up to 10%		-0.0379	-0.0530	-0.0522	-0.00629
		(0.328)	(0.328)	(0.328)	(0.328)
earnings decreased up to 25%		0.233	0.230	0.236	0.263
		(0.297)	(0.297)	(0.297)	(0.297)
earnings decreased up to 50%		-0.574*	-0.570*	-0.578*	-0.543
		(0.333)	(0.333)	(0.333)	(0.333)
earnings decreased more than 50%		-0.928***	-0.932***	-0.936***	-0.906***
		(0.302)	(0.302)	(0.302)	(0.303)
earnings increased up to 10%		0.128	0.0958	0.0914	0.0996
		(0.342)	(0.342)	(0.342)	(0.342)
earnings increased up to 25%		-0.0235	-0.0394	-0.0477	-0.0433
		(0.301)	(0.300)	(0.301)	(0.301)
earnings increased up to 50%		0.0146	-0.0136	-0.0221	-0.00232
		(0.325)	(0.325)	(0.325)	(0.325)
earnings increased more than 50%		-0.0285	-0.0683	-0.0732	-0.0407
		(0.286)	(0.287)	(0.287)	(0.287)
change in household income (omitted: change up to 5%)					
household income decreased up to 10%		-0.0453	-0.0739	-0.0713	-0.137
		(0.262)	(0.262)	(0.262)	(0.263)
household income decreased up to 25%		-0.0941	-0.121	-0.117	-0.131
		(0.226)	(0.226)	(0.226)	(0.226)
household income decreased up to 50%		0.257	0.265	0.267	0.212
		(0.240)	(0.239)	(0.239)	(0.240)
household income decreased more than 50%		-0.332	-0.336	-0.339	-0.318
		(0.308)	(0.308)	(0.309)	(0.310)
household income increased up to 10%		0.0767	0.0603	0.0584	0.00448
		(0.288)	(0.288)	(0.288)	(0.288)
household income increased up to 25%		0.227	0.231	0.229	0.241
		(0.234)	(0.234)	(0.234)	(0.235)
household income increased up to 50%		0.499*	0.506**	0.507**	0.507**
		(0.256)	(0.256)	(0.256)	(0.256)
household income increased more than 50%		0.455	0.452	0.454	0.407
		(0.296)	(0.296)	(0.296)	(0.296)
birth (yes)			0.449	0.444	0.403
			(0.295)	(0.296)	(0.296)
retired (yes)			0.899**	0.903**	0.883**
			(0.388)	(0.388)	(0.389)
health worsened (yes)			-0.462***	-0.457***	-0.436***
			(0.155)	(0.155)	(0.156)

…continued

…continued (OLS regression on the change in IHS-transformed net-wealth for men)

father highly educated (yes)					0.0595	0.0348
					(0.227)	(0.228)
mother highly educated (yes)					0.253	0.232
					(0.294)	(0.296)
grew up in rural area (yes)					0.0988	0.0692
					(0.140)	(0.142)
religion (omitted: catholic)						
evangelical						-0.183
						(0.165)
other Christian religious organisation						-0.812*
						(0.456)
Islamic religious organisation						-1.360***
						(0.453)
other religious organisation						-0.200
						(1.500)
non-denominational						-0.441**
						(0.190)
risk						0.0382
						(0.0285)
life satisfaction						0.0154
						(0.0462)
Constant	0.145	3.034***	2.595***	2.531***	2.416***	2.602***
	(0.0971)	(0.565)	(0.594)	(0.598)	(0.608)	(0.714)
R^2	0.65	31.53	31.92	32.11	32.12	32.48
adj. R^2	0.51	30.93	31.16	31.32	31.30	31.58(*
observations	6,419	6,419	6,419	6,419	6,419	6,374

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other adjusted R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 4: Coefficients of OLS regression on the change in IHS-transformed net-wealth between 2002 and 2007 for women

Control variables	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
marital change (omitted: married once → married once)						
married once → divorced once	-0.0314	-0.878*	-0.839*	-0.849*	-0.838*	-0.717
	(0.598)	(0.507)	(0.509)	(0.509)	(0.509)	(0.509)
married once → widowed	0.147	0.822*	0.891**	0.874*	0.875*	0.894**
	(0.526)	(0.445)	(0.451)	(0.451)	(0.451)	(0.456)
married more than once → married more than once	-0.391	-0.592**	-0.578**	-0.572**	-0.571**	-0.527*
	(0.338)	(0.286)	(0.287)	(0.287)	(0.288)	(0.287)
never married → never married	0.951***	-0.429	-0.426	-0.441	-0.445	-0.517*
	(0.223)	(0.279)	(0.279)	(0.277)	(0.277)	(0.278)
never married → married	1.492***	-0.260	-0.268	-0.271	-0.275	-0.325
	(0.402)	(0.442)	(0.444)	(0.458)	(0.458)	(0.461)
divorced once → divorced once	0.133	-0.688**	-0.677**	-0.682**	-0.674**	-0.647**
	(0.345)	(0.302)	(0.302)	(0.302)	(0.302)	(0.303)
divorced once → remarried	0.171	-1.158*	-1.173*	-1.152*	-1.156*	-1.128
	(0.822)	(0.685)	(0.685)	(0.685)	(0.685)	(0.691)
divorced more than once → divorced more than once	-1.020	-2.898***	-2.837***	-2.833***	-2.826***	-2.938***
	(0.770)	(0.651)	(0.653)	(0.653)	(0.653)	(0.656)
widowed → widowed	-0.675**	-0.733***	-0.713**	-0.724**	-0.721**	-0.766***
	(0.277)	(0.279)	(0.282)	(0.282)	(0.282)	(0.283)
age class (omitted: aged 17-25)						
aged 26-30		0.315	0.294	0.306	0.315	0.361
		(0.371)	(0.374)	(0.374)	(0.375)	(0.375)
aged 31-35		0.804**	0.797**	0.809**	0.835**	0.936***
		(0.344)	(0.346)	(0.347)	(0.349)	(0.350)
aged 36-40		0.888**	0.874**	0.893**	0.921**	0.944**
		(0.374)	(0.374)	(0.372)	(0.374)	(0.377)
aged 41-45		1.098***	1.106***	1.134***	1.162***	1.245***
		(0.413)	(0.413)	(0.410)	(0.411)	(0.415)
aged 46-50		1.360***	1.371***	1.416***	1.457***	1.537***
		(0.435)	(0.434)	(0.433)	(0.433)	(0.437)
aged 51-55		1.589***	1.620***	1.667***	1.693***	1.739***
		(0.440)	(0.442)	(0.448)	(0.449)	(0.453)
aged 56-60		1.869***	1.923***	1.828***	1.839***	1.850***
		(0.481)	(0.483)	(0.489)	(0.490)	(0.493)
aged 61-65		2.178***	2.217***	1.758***	1.761***	1.717***
		(0.498)	(0.499)	(0.575)	(0.576)	(0.578)
older than 65		2.288***	2.327***	2.420***	2.439***	2.421***
		(0.497)	(0.498)	(0.502)	(0.502)	(0.505)

…continued

…continued (OLS regression on the change in IHS-transformed net-wealth for women)

physical health (omitted: good / very good)						
satisfactory		-0.275*	-0.263	-0.299*	-0.301*	-0.277
		(0.161)	(0.162)	(0.166)	(0.166)	(0.168)
not so good / bad		-0.562***	-0.559***	-0.658***	-0.654***	-0.552**
		(0.209)	(0.209)	(0.220)	(0.221)	(0.233)
education (omitted: low)						
middle		0.458***	0.461***	0.454***	0.455***	0.390**
		(0.166)	(0.166)	(0.166)	(0.167)	(0.168)
(higher) vocational		0.609***	0.629***	0.621***	0.594**	0.492**
		(0.232)	(0.232)	(0.232)	(0.233)	(0.235)
high		0.802***	0.834***	0.813***	0.757***	0.690***
		(0.233)	(0.233)	(0.234)	(0.238)	(0.239)
region (omitted: rural)						
town		-0.0471	-0.0496	-0.0523	-0.0237	0.0155
		(0.171)	(0.171)	(0.171)	(0.172)	(0.172)
city		-0.535***	-0.530***	-0.535***	-0.465**	-0.401**
		(0.183)	(0.183)	(0.183)	(0.192)	(0.194)
East-Germany before 1989 (yes)		-0.420**	-0.447**	-0.443**	-0.426**	-0.129
		(0.180)	(0.181)	(0.181)	(0.182)	(0.205)
migration background (yes)		-0.755***	-0.757***	-0.755***	-0.747***	-0.668***
		(0.193)	(0.193)	(0.193)	(0.193)	(0.214)
imputed (omitted: neither in 2002 nor in 2007)						
imputed in 2002 or in 2007		0.768***	0.772***	0.773***	0.773***	0.813***
		(0.134)	(0.134)	(0.134)	(0.134)	(0.135)
imputed in 2002 and in 2007		1.940***	1.954***	1.950***	1.957***	1.957***
		(0.187)	(0.187)	(0.188)	(0.187)	(0.190)
number of children		0.182	0.143	0.140	0.137	0.157
		(0.142)	(0.142)	(0.143)	(0.143)	(0.146)
child(ren) aged 0-4 (yes)		-0.143	-0.172	-0.163	-0.156	-0.217
		(0.258)	(0.259)	(0.275)	(0.275)	(0.276)
child(ren) aged 5-17 (yes)		-0.180	-0.197	-0.195	-0.186	-0.210
		(0.267)	(0.267)	(0.268)	(0.268)	(0.269)
child(ren) older than 17 (yes)		-0.297	-0.300	-0.308	-0.310	-0.288
		(0.209)	(0.209)	(0.209)	(0.210)	(0.210)
permanent HH-income (omitted: 1st quintile)						
2nd quintile		0.908***	0.890***	0.896***	0.896***	0.837***
		(0.207)	(0.207)	(0.207)	(0.207)	(0.210)
3rd quintile		1.688***	1.643***	1.641***	1.637***	1.532***
		(0.227)	(0.228)	(0.228)	(0.228)	(0.230)

…continued

…continued (OLS regression on the change in IHS-transformed net-wealth for women)

4th quintile		2.242***	2.177***	2.180***	2.170***	2.058***
		(0.248)	(0.250)	(0.250)	(0.251)	(0.253)
5th quintile		2.864***	2.780***	2.775***	2.738***	2.586***
		(0.276)	(0.280)	(0.280)	(0.282)	(0.285)
log(household size)		-0.990***	-0.855***	-0.861***	-0.855***	-0.807***
		(0.246)	(0.258)	(0.258)	(0.258)	(0.260)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		-0.783***	-0.741**	-0.727**	-0.739**	-0.809**
		(0.246)	(0.331)	(0.332)	(0.332)	(0.334)
> 5,000 to ≤ 10,000 €		-0.358	-0.262	-0.258	-0.276	-0.334
		(0.337)	(0.422)	(0.424)	(0.424)	(0.426)
> 10,000 to ≤ 30,000 €		-0.503	-0.405	-0.397	-0.415	-0.484
		(0.352)	(0.422)	(0.424)	(0.424)	(0.427)
> 30,000 to ≤ 50,000 €		-0.437	-0.341	-0.322	-0.331	-0.353
		(0.416)	(0.461)	(0.462)	(0.463)	(0.466)
> 50,000 €		-0.457	-0.386	-0.363	-0.384	-0.379
		(0.526)	(0.563)	(0.565)	(0.565)	(0.569)
years full-time employment		-0.000328	0.00135	-0.000289	0.000365	0.000362
		(0.00746)	(0.00749)	(0.00757)	(0.00758)	(0.00765)
years part-time employment		0.0115	0.0128	0.0113	0.0113	0.00876
		(0.0106)	(0.0107)	(0.0107)	(0.0107)	(0.0108)
years unemployment		-0.0646*	-0.0663*	-0.0683*	-0.0691*	-0.0654*
		(0.0381)	(0.0381)	(0.0382)	(0.0382)	(0.0382)
in the labour force in 2002(yes)		-0.149	0.0458	0.0262	0.0285	0.0178
		(0.238)	(0.267)	(0.267)	(0.267)	(0.268)
years in the labour force between 2002 and 2007		0.154**	0.0779	0.0843	0.0887	0.0913
		(0.0602)	(0.0730)	(0.0738)	(0.0739)	(0.0748)
self-employed (yes)		-0.371	-0.344	-0.352	-0.372	-0.337
		(0.329)	(0.331)	(0.331)	(0.332)	(0.331)
civil servant (yes)		0.0529	0.0416	0.0446	0.0312	0.0350
		(0.349)	(0.349)	(0.349)	(0.350)	(0.351)
saved continuously between 2002 and 2007 (yes)		1.310***	1.309***	1.302***	1.307***	1.231***
		(0.134)	(0.135)	(0.135)	(0.135)	(0.136)
paid off loans continuously between 2002 and 2007 (yes)		-3.575***	-3.536***	-3.536***	-3.532***	-3.536***
		(0.339)	(0.338)	(0.338)	(0.338)	(0.334)
worried about health		-0.251	-0.259*	-0.244	-0.241	-0.257*
		(0.153)	(0.153)	(0.154)	(0.154)	(0.154)
inheritance between 2002 and 2007 (yes)		1.013***	1.003***	1.004***	0.992***	0.947***
		(0.181)	(0.181)	(0.181)	(0.181)	(0.181)
IHS-transformed net-wealth 2002		-0.662***	-0.661***	-0.661***	-0.661***	-0.671***
		(0.0121)	(0.0121)	(0.0121)	(0.0121)	(0.0122)

…continued

…continued (OLS regression on the change in IHS-transformed net-wealth for women)

change in individual earnings (omitted: change up to 5%)					
earnings decreased up to 10%		0.666	0.666	0.662	0.617
		(0.417)	(0.417)	(0.417)	(0.419)
earnings decreased up to 25%		0.205	0.203	0.196	0.155
		(0.327)	(0.327)	(0.327)	(0.327)
earnings decreased up to 50%		0.0936	0.102	0.105	0.0429
		(0.357)	(0.357)	(0.357)	(0.357)
earnings decreased more than 50%		-0.115	-0.119	-0.113	-0.106
		(0.301)	(0.301)	(0.300)	(0.302)
earnings increased up to 10%		0.480	0.469	0.467	0.460
		(0.408)	(0.408)	(0.408)	(0.407)
earnings increased up to 25%		0.176	0.178	0.166	0.111
		(0.348)	(0.349)	(0.349)	(0.349)
earnings increased up to 50%		-0.00832	-0.0104	-0.0123	-0.0531
		(0.383)	(0.383)	(0.383)	(0.383)
earnings increased more than 50%		0.249	0.233	0.226	0.194
		(0.271)	(0.275)	(0.275)	(0.275)
change in household income (omitted: change up to 5%)					
household income decreased up to 10%		-0.144	-0.153	-0.161	-0.218
		(0.272)	(0.272)	(0.272)	(0.274)
household income decreased up to 25%		0.0425	0.0455	0.0469	0.0665
		(0.218)	(0.218)	(0.218)	(0.218)
household income decreased up to 50%		-0.0593	-0.0555	-0.0601	-0.0788
		(0.233)	(0.232)	(0.232)	(0.230)
household income decreased more than 50%		-0.259	-0.252	-0.267	-0.202
		(0.273)	(0.272)	(0.272)	(0.274)
household income increased up to 10%		-0.0769	-0.0761	-0.0688	-0.0941
		(0.283)	(0.283)	(0.283)	(0.282)
household income increased up to 25%		0.0741	0.0697	0.0711	0.0645
		(0.243)	(0.244)	(0.243)	(0.244)
household income increased up to 50%		0.489*	0.485*	0.480*	0.458*
		(0.264)	(0.264)	(0.264)	(0.263)
household income increased more than 50%		0.288	0.287	0.280	0.236
		(0.261)	(0.262)	(0.262)	(0.264)
birth (yes)			-0.0174	-0.0144	-0.0482
			(0.304)	(0.304)	(0.305)
retired (yes)			0.593*	0.606*	0.647*
			(0.360)	(0.360)	(0.364)
health worsened (yes)			-0.184	-0.180	-0.164
			(0.150)	(0.150)	(0.149)

…continued

…continued (OLS regression on the change in IHS-transformed net-wealth for women)

father highly educated (yes)					0.354*	0.376*
					(0.213)	(0.214)
mother highly educated (yes)					-0.0620	-0.122
					(0.296)	(0.296)
grew up in rural area (yes)					0.184	0.128
					(0.134)	(0.134)
religion (omitted: catholic)						
evangelical						-0.347**
						(0.154)
other Christian religious organisation						-0.209
						(0.406)
Islamic religious organisation						-1.214***
						(0.461)
other religious organisation						0.357
						(1.579)
non-denominational						-0.737***
						(0.201)
risk						0.128***
						(0.0329)
life satisfaction						0.0591
						(0.0413)
Constant	0.129	3.321***	3.163***	3.220***	3.015***	2.852***
	(0.0995)	(0.498)	(0.522)	(0.527)	(0.540)	(0.641)
R^2	0.71	33.40	33.57	33.61	33.66	34.23
adj. R^2	0.59	32.88	32.90	32.91	32.93	33.43(*
observations	7,077	7,077	7,077	7,077	7,077	6,981

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other adjusted R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 5: Coefficients of probit regression on whether net-wealth increased by more than 5% between 2002 and 2007 for men

Control variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
marital change (omitted: married once → married once)						
married once → divorced once	-0.353**	-0.501***	-0.451***	-0.448***	-0.450***	-0.444***
	(0.137)	(0.147)	(0.149)	(0.150)	(0.150)	(0.151)
married once → widowed	0.150	0.413**	0.433**	0.433**	0.433**	0.411**
	(0.192)	(0.203)	(0.203)	(0.203)	(0.204)	(0.205)
married more than once → married more than once	-0.0256	-0.0170	-0.00501	0.000190	-0.00226	0.0120
	(0.0621)	(0.0663)	(0.0667)	(0.0670)	(0.0672)	(0.0679)
never married → never married	0.0170	0.00333	0.0227	0.0316	0.0286	0.0130
	(0.0466)	(0.0753)	(0.0759)	(0.0765)	(0.0766)	(0.0770)
never married → married	0.387***	0.151	0.124	0.102	0.101	0.0928
	(0.102)	(0.119)	(0.119)	(0.125)	(0.125)	(0.125)
divorced once → divorced once	-0.0635	-0.0353	-0.0208	-0.0105	-0.0104	-0.000409
	(0.0932)	(0.105)	(0.106)	(0.107)	(0.107)	(0.107)
divorced once → remarried	0.196	0.0140	0.00160	0.00237	0.00224	0.00563
	(0.173)	(0.189)	(0.191)	(0.192)	(0.192)	(0.193)
divorced more than once → divorced more than once	-0.603**	-0.443*	-0.380	-0.381	-0.387	-0.389
	(0.257)	(0.258)	(0.261)	(0.262)	(0.261)	(0.262)
widowed → widowed	-0.320**	-0.0893	-0.0808	-0.0730	-0.0708	-0.0720
	(0.128)	(0.130)	(0.131)	(0.130)	(0.131)	(0.130)
age class (omitted: aged 17-25)						
aged 26-30		0.198*	0.230*	0.221*	0.223*	0.227*
		(0.119)	(0.123)	(0.124)	(0.124)	(0.124)
aged 31-35		0.318**	0.350***	0.358***	0.359***	0.373***
		(0.125)	(0.131)	(0.132)	(0.132)	(0.133)
aged 36-40		0.309**	0.346**	0.363**	0.363**	0.371***
		(0.135)	(0.143)	(0.142)	(0.142)	(0.143)
aged 41-45		0.331**	0.361**	0.385**	0.384**	0.375**
		(0.148)	(0.154)	(0.154)	(0.153)	(0.154)
aged 46-50		0.263	0.289*	0.323*	0.322*	0.307*
		(0.160)	(0.166)	(0.166)	(0.166)	(0.168)
aged 51-55		0.307*	0.362**	0.397**	0.394**	0.391**
		(0.177)	(0.183)	(0.183)	(0.183)	(0.184)
aged 56-60		0.329	0.407*	0.416*	0.408*	0.396*
		(0.207)	(0.214)	(0.215)	(0.215)	(0.217)
aged 61-65		0.331	0.394	0.303	0.294	0.284
		(0.234)	(0.240)	(0.256)	(0.256)	(0.257)
older than 65		0.492**	0.552**	0.623**	0.618**	0.588**
		(0.237)	(0.243)	(0.244)	(0.244)	(0.246)

…continued

…continued (probit regression on an increase in wealth higher than 5% for men)

physical health (omitted: good / very good)						
satisfactory		-0.0307	-0.0308	-0.0529	-0.0507	-0.0512
		(0.0546)	(0.0551)	(0.0576)	(0.0574)	(0.0604)
not so good / bad		-0.0654	-0.0603	-0.112	-0.108	-0.0923
		(0.0690)	(0.0696)	(0.0728)	(0.0727)	(0.0773)
education (omitted: low)						
middle		0.0911	0.103	0.0992	0.0980	0.0870
		(0.0668)	(0.0671)	(0.0671)	(0.0673)	(0.0678)
(higher) vocational		0.0909	0.115	0.113	0.109	0.0938
		(0.0711)	(0.0716)	(0.0714)	(0.0718)	(0.0724)
high		0.136	0.158*	0.147*	0.135	0.126
		(0.0893)	(0.0895)	(0.0894)	(0.0899)	(0.0910)
region (omitted: rural)						
town		-0.00108	0.00331	0.00368	0.00556	0.00774
		(0.0480)	(0.0482)	(0.0482)	(0.0485)	(0.0487)
city		-0.0637	-0.0580	-0.0592	-0.0538	-0.0423
		(0.0492)	(0.0494)	(0.0494)	(0.0522)	(0.0528)
East-Germany before 1989 (yes)		-0.105**	-0.111**	-0.111**	-0.110**	-0.0827
		(0.0452)	(0.0455)	(0.0456)	(0.0457)	(0.0534)
migration background (yes)		-0.196***	-0.210***	-0.213***	-0.213***	-0.164***
		(0.0557)	(0.0562)	(0.0563)	(0.0564)	(0.0616)
imputed (omitted: neither in 2002 nor in 2007)						
imputed in 2002 or in 2007		0.231***	0.233***	0.235***	0.235***	0.235***
		(0.0389)	(0.0391)	(0.0391)	(0.0390)	(0.0391)
imputed in 2002 and in 2007		0.304***	0.311***	0.311***	0.312***	0.311***
		(0.0546)	(0.0557)	(0.0555)	(0.0556)	(0.0556)
number of children		-0.0607	-0.0851**	-0.0832**	-0.0848**	-0.0809**
		(0.0378)	(0.0381)	(0.0380)	(0.0380)	(0.0386)
child(ren) aged 0-4 (yes)		0.130*	0.125*	0.105	0.106	0.100
		(0.0721)	(0.0735)	(0.0757)	(0.0757)	(0.0763)
child(ren) aged 5-17 (yes)		0.0429	0.0322	0.0351	0.0369	0.0309
		(0.0701)	(0.0708)	(0.0707)	(0.0710)	(0.0714)
child(ren) older than 17 (yes)		-0.0306	-0.0394	-0.0373	-0.0391	-0.0349
		(0.0535)	(0.0533)	(0.0535)	(0.0537)	(0.0535)
permanent HH-income (omitted: 1st quintile)						
2nd quintile		0.138**	0.130**	0.128**	0.129**	0.123**
		(0.0612)	(0.0615)	(0.0615)	(0.0615)	(0.0616)
3rd quintile		0.253***	0.235***	0.232***	0.232***	0.226***
		(0.0711)	(0.0718)	(0.0718)	(0.0716)	(0.0716)

…continued

…continued (probit regression on an increase in wealth higher than 5% for men)

4th quintile		0.346***	0.311***	0.308***	0.306***	0.297***
		(0.0780)	(0.0792)	(0.0793)	(0.0791)	(0.0789)
5th quintile		0.488***	0.444***	0.437***	0.426***	0.415***
		(0.0947)	(0.0955)	(0.0958)	(0.0960)	(0.0960)
log(household size)		-0.0456	0.0247	0.0284	0.0308	0.0328
		(0.0735)	(0.0762)	(0.0768)	(0.0767)	(0.0785)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		-0.0658	0.0704	0.0758	0.0742	0.0616
		(0.0812)	(0.0984)	(0.0987)	(0.0987)	(0.0993)
> 5,000 to ≤ 10,000 €		-0.108	0.0462	0.0500	0.0482	0.0475
		(0.103)	(0.126)	(0.128)	(0.128)	(0.130)
> 10,000 to ≤ 30,000 €		0.00638	0.186	0.193	0.190	0.181
		(0.107)	(0.128)	(0.130)	(0.130)	(0.131)
> 30,000 to ≤ 50,000 €		0.117	0.287**	0.294**	0.291**	0.281*
		(0.124)	(0.142)	(0.146)	(0.146)	(0.147)
> 50,000 €		0.118	0.286*	0.292*	0.290*	0.282*
		(0.132)	(0.148)	(0.152)	(0.152)	(0.154)
years full-time employment		-0.00712	-0.00577	-0.00613	-0.00569	-0.00559
		(0.00478)	(0.00479)	(0.00481)	(0.00484)	(0.00494)
years part-time employment		0.00785	0.0104	0.00976	0.00929	0.0104
		(0.0111)	(0.0111)	(0.0111)	(0.0111)	(0.0113)
years unemployment		-0.0245*	-0.0244*	-0.0251*	-0.0243*	-0.0210
		(0.0134)	(0.0135)	(0.0136)	(0.0136)	(0.0137)
in the labour force in 2002(yes)		-0.0769	0.0391	0.0377	0.0395	0.0328
		(0.0773)	(0.0841)	(0.0837)	(0.0837)	(0.0840)
years in the labour force between 2002 and 2007		0.0608***	0.0127	0.0151	0.0160	0.0154
		(0.0187)	(0.0223)	(0.0221)	(0.0222)	(0.0223)
self-employed (yes)		-0.295***	-0.260***	-0.255***	-0.258***	-0.259***
		(0.0856)	(0.0872)	(0.0876)	(0.0878)	(0.0877)
civil servant (yes)		-0.168**	-0.158**	-0.160**	-0.157**	-0.165**
		(0.0758)	(0.0758)	(0.0757)	(0.0756)	(0.0757)
saved continuously between 2002 and 2007 (yes)		0.224***	0.218***	0.217***	0.219***	0.211***
		(0.0399)	(0.0405)	(0.0404)	(0.0404)	(0.0410)
paid off loans continuously between 2002 and 2007 (yes)		-0.320***	-0.309***	-0.302***	-0.304***	-0.313***
		(0.0849)	(0.0850)	(0.0852)	(0.0855)	(0.0871)
worried about health		0.0574	0.0600	0.0723*	0.0728*	0.0740*
		(0.0425)	(0.0427)	(0.0427)	(0.0428)	(0.0429)
inheritance between 2002 and 2007 (yes)		0.157***	0.163***	0.160***	0.156***	0.155***
		(0.0522)	(0.0526)	(0.0526)	(0.0526)	(0.0526)
IHS-transformed net-wealth 2002		-0.0480***	-0.0478***	-0.0482***	-0.0484***	-0.0497***
		(0.00389)	(0.00392)	(0.00392)	(0.00391)	(0.00395)

…continued

…continued (probit regression on an increase in wealth higher than 5% for men)

change in individual earnings (omitted: change up to 5%)					
earnings decreased up to 10%		0.135	0.131	0.131	0.139
		(0.0896)	(0.0897)	(0.0896)	(0.0907)
earnings decreased up to 25%		0.0228	0.0224	0.0248	0.0285
		(0.0829)	(0.0830)	(0.0830)	(0.0822)
earnings decreased up to 50%		-0.0595	-0.0581	-0.0605	-0.0575
		(0.105)	(0.105)	(0.105)	(0.105)
earnings decreased more than 50%		-0.180**	-0.179**	-0.180**	-0.169**
		(0.0775)	(0.0784)	(0.0784)	(0.0786)
earnings increased up to 10%		0.00218	-0.00315	-0.00427	-0.00357
		(0.102)	(0.103)	(0.103)	(0.102)
earnings increased up to 25%		0.0438	0.0409	0.0400	0.0446
		(0.0761)	(0.0761)	(0.0762)	(0.0765)
earnings increased up to 50%		0.122	0.118	0.116	0.122
		(0.0893)	(0.0895)	(0.0896)	(0.0897)
earnings increased more than 50%		0.101	0.0940	0.0936	0.0940
		(0.0799)	(0.0795)	(0.0796)	(0.0792)
change in household income (omitted: change up to 5%)					
household income decreased up to 10%		-0.0865	-0.0930	-0.0923	-0.103
		(0.0742)	(0.0742)	(0.0743)	(0.0751)
household income decreased up to 25%		-0.0626	-0.0675	-0.0660	-0.0697
		(0.0620)	(0.0622)	(0.0622)	(0.0626)
household income decreased up to 50%		-0.0382	-0.0368	-0.0362	-0.0512
		(0.0683)	(0.0681)	(0.0681)	(0.0682)
household income decreased more than 50%		-0.112	-0.114	-0.115	-0.115
		(0.0816)	(0.0816)	(0.0817)	(0.0822)
household income increased up to 10%		0.169**	0.165**	0.167**	0.152**
		(0.0770)	(0.0772)	(0.0774)	(0.0776)
household income increased up to 25%		0.0768	0.0773	0.0782	0.0739
		(0.0634)	(0.0634)	(0.0635)	(0.0639)
household income increased up to 50%		0.202***	0.203***	0.204***	0.202***
		(0.0706)	(0.0706)	(0.0706)	(0.0707)
household income increased more than 50%		0.160**	0.159**	0.158**	0.148*
		(0.0783)	(0.0782)	(0.0781)	(0.0783)
birth (yes)			0.0652	0.0646	0.0564
			(0.0836)	(0.0837)	(0.0834)
retired (yes)			0.155	0.157	0.154
			(0.125)	(0.125)	(0.126)
health worsened (yes)			-0.109**	-0.106**	-0.104**
			(0.0440)	(0.0439)	(0.0448)

…continued

…continued (probit regression on an increase in wealth higher than 5% for men)

father highly educated (yes)					0.0917	0.0904
					(0.0626)	(0.0630)
mother highly educated (yes)					0.00699	0.00751
					(0.0849)	(0.0858)
grew up in rural area (yes)					0.0180	0.0123
					(0.0378)	(0.0383)
religion (omitted: catholic)						
evangelical						-0.0579
						(0.0464)
other Christian religious organisation						-0.138
						(0.131)
Islamic religious organisation						-0.351***
						(0.116)
other religious organisation						0.119
						(0.428)
non-denominational						-0.0818
						(0.0525)
risk						0.00544
						(0.00839)
life satisfaction						0.00570
						(0.0128)
Constant	0.0941***	-0.232	-0.409**	-0.411**	-0.440**	-0.400*
	(0.0212)	(0.159)	(0.169)	(0.173)	(0.175)	(0.206)
Pseudo-R^2	0.52	7.58	8.39	8.51	8.54	8.65(*
observations	6,415	6,415	6,415	6,415	6,415	6,371

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other pseudo-R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 6: Coefficients of probit regression on whether net-wealth increased by more than 5% between 2002 and 2007 for women

Control variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
marital change (omitted: married once → married once)						
married once → divorced once	-0.141	-0.127	-0.110	-0.109	-0.111	-0.103
	(0.126)	(0.133)	(0.134)	(0.134)	(0.134)	(0.136)
married once → widowed	0.0565	0.339***	0.379***	0.376***	0.376***	0.376***
	(0.112)	(0.120)	(0.123)	(0.122)	(0.122)	(0.124)
married more than once → married more than once	-0.0242	0.000672	0.00831	0.00864	0.00767	0.0159
	(0.0707)	(0.0718)	(0.0727)	(0.0727)	(0.0730)	(0.0731)
never married → never married	0.0832*	-0.00362	0.00602	0.0154	0.0143	0.00566
	(0.0467)	(0.0823)	(0.0834)	(0.0837)	(0.0839)	(0.0854)
never married → married	0.358***	0.114	0.109	0.0785	0.0789	0.0816
	(0.0911)	(0.125)	(0.125)	(0.130)	(0.129)	(0.131)
divorced once → divorced once	-0.0719	0.00504	0.0177	0.0180	0.0173	0.0360
	(0.0728)	(0.0823)	(0.0821)	(0.0822)	(0.0825)	(0.0829)
divorced once → remarried	-0.0978	-0.290	-0.300	-0.305	-0.305	-0.276
	(0.194)	(0.212)	(0.216)	(0.215)	(0.215)	(0.218)
divorced more than once → divorced more than once	-0.415**	-0.399**	-0.371**	-0.371**	-0.371**	-0.359*
	(0.172)	(0.182)	(0.184)	(0.184)	(0.183)	(0.185)
widowed → widowed	-0.252***	0.00100	0.0147	0.0147	0.0136	0.0195
	(0.0590)	(0.0767)	(0.0774)	(0.0775)	(0.0775)	(0.0774)
age class (omitted: aged 17-25)						
aged 26-30		0.0904	0.0782	0.0747	0.0763	0.0744
		(0.104)	(0.105)	(0.105)	(0.105)	(0.106)
aged 31-35		0.101	0.0997	0.108	0.113	0.134
		(0.0940)	(0.0942)	(0.0941)	(0.0948)	(0.0956)
aged 36-40		0.0290	0.0213	0.0394	0.0447	0.0415
		(0.104)	(0.104)	(0.104)	(0.105)	(0.106)
aged 41-45		0.0180	0.0170	0.0404	0.0447	0.0485
		(0.118)	(0.118)	(0.117)	(0.119)	(0.119)
aged 46-50		0.0382	0.0424	0.0694	0.0732	0.0749
		(0.136)	(0.135)	(0.133)	(0.135)	(0.136)
aged 51-55		-0.0110	0.00907	0.0394	0.0441	0.0349
		(0.127)	(0.126)	(0.126)	(0.127)	(0.128)
aged 56-60		-0.0744	-0.0412	-0.0187	-0.0143	-0.0247
		(0.158)	(0.157)	(0.158)	(0.159)	(0.161)
aged 61-65		0.00708	0.0324	0.0242	0.0286	0.0176
		(0.151)	(0.151)	(0.175)	(0.176)	(0.178)
older than 65		0.0694	0.0926	0.129	0.134	0.108
		(0.137)	(0.137)	(0.137)	(0.138)	(0.139)

…continued

…continued (probit regression on an increase in wealth higher than 5% for women)

physical health (omitted: good / very good)						
satisfactory		-0.0276	-0.0198	-0.0243	-0.0236	-0.0148
		(0.0427)	(0.0428)	(0.0439)	(0.0439)	(0.0455)
not so good / bad		-0.0837	-0.0812	-0.0929*	-0.0920*	-0.0774
		(0.0518)	(0.0519)	(0.0551)	(0.0551)	(0.0592)
education (omitted: low)						
middle		0.162***	0.164***	0.162***	0.162***	0.146***
		(0.0454)	(0.0454)	(0.0455)	(0.0458)	(0.0465)
(higher) vocational		0.114*	0.122**	0.118*	0.117*	0.100
		(0.0616)	(0.0619)	(0.0619)	(0.0627)	(0.0633)
high		0.162***	0.164***	0.162***	0.162***	0.146***
		(0.0454)	(0.0454)	(0.0455)	(0.0458)	(0.0465)
region (omitted: rural)						
town		0.0106	0.00912	0.00827	0.00661	0.0145
		(0.0453)	(0.0454)	(0.0453)	(0.0458)	(0.0463)
city		-0.0106	-0.0102	-0.0105	-0.0141	-0.000373
		(0.0483)	(0.0483)	(0.0483)	(0.0506)	(0.0506)
East-Germany before 1989 (yes)		-0.0984**	-0.109**	-0.111**	-0.112**	-0.0740
		(0.0470)	(0.0472)	(0.0474)	(0.0474)	(0.0544)
migration background (yes)		-0.201***	-0.203***	-0.204***	-0.206***	-0.179***
		(0.0512)	(0.0515)	(0.0515)	(0.0519)	(0.0580)
imputed (omitted: neither in 2002 nor in 2007)						
imputed in 2002 or in 2007		0.223***	0.224***	0.224***	0.223***	0.229***
		(0.0366)	(0.0369)	(0.0369)	(0.0369)	(0.0377)
imputed in 2002 and in 2007		0.371***	0.379***	0.379***	0.378***	0.379***
		(0.0483)	(0.0484)	(0.0484)	(0.0483)	(0.0492)
number of children		-0.0155	-0.0360	-0.0344	-0.0355	-0.0366
		(0.0355)	(0.0357)	(0.0357)	(0.0358)	(0.0370)
child(ren) aged 0-4 (yes)		0.121*	0.113	0.0903	0.0921	0.0876
		(0.0691)	(0.0697)	(0.0724)	(0.0726)	(0.0737)
child(ren) aged 5-17 (yes)		-0.00757	-0.0198	-0.0163	-0.0147	-0.0171
		(0.0678)	(0.0690)	(0.0692)	(0.0696)	(0.0707)
child(ren) older than 17 (yes)		-0.0555	-0.0644	-0.0625	-0.0616	-0.0623
		(0.0652)	(0.0657)	(0.0660)	(0.0659)	(0.0657)
permanent HH-income (omitted: 1st quintile)						
2nd quintile		0.210***	0.203***	0.202***	0.202***	0.192***
		(0.0556)	(0.0559)	(0.0559)	(0.0562)	(0.0575)
3rd quintile		0.354***	0.335***	0.335***	0.334***	0.321***
		(0.0620)	(0.0627)	(0.0627)	(0.0630)	(0.0632)

…continued

…continued (probit regression on an increase in wealth higher than 5% for women)

4th quintile		0.444***	0.414***	0.414***	0.413***	0.397***
		(0.0681)	(0.0686)	(0.0686)	(0.0688)	(0.0712)
5th quintile		0.458***	0.422***	0.421***	0.418***	0.390***
		(0.0725)	(0.0734)	(0.0734)	(0.0745)	(0.0762)
log(household size)		-0.0820	-0.000734	0.000248	0.000976	0.0242
		(0.0666)	(0.0701)	(0.0701)	(0.0704)	(0.0709)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		-0.125*	-0.0766	-0.0812	-0.0844	-0.111
		(0.0752)	(0.0990)	(0.0989)	(0.0995)	(0.101)
> 5,000 to ≤ 10,000 €		0.00346	0.0828	0.0746	0.0724	0.0474
		(0.0979)	(0.124)	(0.124)	(0.124)	(0.126)
> 10,000 to ≤ 30,000 €		-0.0606	0.0119	0.00306	-0.000390	-0.0254
		(0.0970)	(0.120)	(0.119)	(0.120)	(0.121)
> 30,000 to ≤ 50,000 €		-0.00326	0.0599	0.0545	0.0516	0.0329
		(0.114)	(0.131)	(0.131)	(0.131)	(0.133)
> 50,000 €		0.0611	0.112	0.105	0.102	0.0910
		(0.142)	(0.157)	(0.157)	(0.157)	(0.158)
years full-time employment		0.00198	0.00266	0.00261	0.00264	0.00283
		(0.00202)	(0.00203)	(0.00204)	(0.00205)	(0.00207)
years part-time employment		0.00505*	0.00531*	0.00521*	0.00520*	0.00488*
		(0.00276)	(0.00277)	(0.00277)	(0.00277)	(0.00281)
years unemployment		-0.00824	-0.00976	-0.00954	-0.00951	-0.00764
		(0.0103)	(0.0104)	(0.0104)	(0.0104)	(0.0105)
in the labour force in 2002(yes)		-0.104	-0.0330	-0.0408	-0.0420	-0.0260
		(0.0689)	(0.0765)	(0.0763)	(0.0766)	(0.0772)
years in the labour force between 2002 and 2007		0.0557***	0.0232	0.0269	0.0276	0.0240
		(0.0164)	(0.0202)	(0.0203)	(0.0204)	(0.0210)
self-employed (yes)		-0.221**	-0.200**	-0.201**	-0.205**	-0.201**
		(0.0942)	(0.0965)	(0.0964)	(0.0970)	(0.0965)
civil servant (yes)		0.146	0.147	0.145	0.144	0.153
		(0.104)	(0.104)	(0.105)	(0.104)	(0.105)
saved continuously between 2002 and 2007 (yes)		0.287***	0.284***	0.284***	0.285***	0.265***
		(0.0350)	(0.0353)	(0.0353)	(0.0354)	(0.0359)
paid off loans continuously between 2002 and 2007 (yes)		-0.403***	-0.402***	-0.399***	-0.399***	-0.401***
		(0.0856)	(0.0853)	(0.0852)	(0.0854)	(0.0861)
worried about health		-0.0158	-0.0188	-0.0165	-0.0171	-0.0274
		(0.0418)	(0.0423)	(0.0428)	(0.0427)	(0.0429)
inheritance between 2002 and 2007 (yes)		0.235***	0.231***	0.231***	0.231***	0.226***
		(0.0518)	(0.0520)	(0.0520)	(0.0521)	(0.0526)
IHS-transformed net-wealth 2002		-0.0488***	-0.0488***	-0.0488***	-0.0489***	-0.0503***
		(0.00351)	(0.00351)	(0.00351)	(0.00351)	(0.00354)

…continued

…continued (probit regression on an increase in wealth higher than 5% for women)

change in individual earnings (omitted: change up to 5%)					
earnings decreased up to 10%		0.119	0.119	0.121	0.131
		(0.123)	(0.123)	(0.123)	(0.121)
earnings decreased up to 25%		0.0565	0.0557	0.0562	0.0516
		(0.0907)	(0.0908)	(0.0908)	(0.0913)
earnings decreased up to 50%		0.0714	0.0695	0.0715	0.0676
		(0.110)	(0.111)	(0.111)	(0.111)
earnings decreased more than 50%		-0.0657	-0.0700	-0.0687	-0.0623
		(0.0854)	(0.0858)	(0.0861)	(0.0872)
earnings increased up to 10%		0.138	0.139	0.141	0.141
		(0.115)	(0.115)	(0.114)	(0.117)
earnings increased up to 25%		0.143	0.148	0.148	0.145
		(0.0979)	(0.0976)	(0.0975)	(0.0997)
earnings increased up to 50%		0.105	0.108	0.109	0.103
		(0.0990)	(0.0989)	(0.0990)	(0.0996)
earnings increased more than 50%		0.0519	0.0585	0.0584	0.0541
		(0.0766)	(0.0766)	(0.0766)	(0.0765)
change in household income (omitted: change up to 5%)					
household income decreased up to 10%		-0.0608	-0.0618	-0.0619	-0.0801
		(0.0760)	(0.0760)	(0.0759)	(0.0752)
household income decreased up to 25%		-0.0240	-0.0228	-0.0226	-0.0227
		(0.0588)	(0.0589)	(0.0589)	(0.0594)
household income decreased up to 50%		-0.0493	-0.0476	-0.0474	-0.0542
		(0.0632)	(0.0632)	(0.0632)	(0.0627)
household income decreased more than 50%		-0.187***	-0.183***	-0.184***	-0.194***
		(0.0711)	(0.0712)	(0.0712)	(0.0719)
household income increased up to 10%		0.0165	0.0172	0.0165	0.00797
		(0.0758)	(0.0758)	(0.0758)	(0.0770)
household income increased up to 25%		-0.00718	-0.00768	-0.00703	-0.0147
		(0.0602)	(0.0602)	(0.0601)	(0.0606)
household income increased up to 50%		0.133*	0.131*	0.131*	0.129*
		(0.0738)	(0.0738)	(0.0736)	(0.0756)
household income increased more than 50%		0.150**	0.147**	0.147**	0.143**
		(0.0721)	(0.0724)	(0.0723)	(0.0725)
birth (yes)			0.0968	0.0969	0.0788
			(0.0791)	(0.0792)	(0.0804)
retired (yes)			0.0486	0.0490	0.0551
			(0.1000	(0.0999)	(0.100)
health worsened (yes)			-0.0256	-0.0248	-0.0243
			(0.0397)	(0.0398)	(0.0405)

…continued

…continued (probit regression on an increase in wealth higher than 5% for women)

father highly educated (yes)					-0.0160	-0.0115
					(0.0603)	(0.0611)
mother highly educated (yes)					0.0682	0.0479
					(0.0830)	(0.0836)
grew up in rural area (yes)					-0.00272	-0.0111
					(0.0375)	(0.0374)
religion (omitted: catholic)						
evangelical						-0.0835*
						(0.0426)
other Christian religious organisation						-0.116
						(0.110)
Islamic religious organisation						-0.334***
						(0.124)
other religious organisation						0.722
						(0.485)
non-denominational						-0.118**
						(0.0569)
risk						0.0227**
						(0.00913)
life satisfaction						0.00838
						(0.0115)
Constant	0.0544**	-0.180	-0.243	-0.265*	-0.266*	-0.256
	(0.0216)	(0.142)	(0.149)	(0.150)	(0.159)	(0.182)
Pseudo-R^2	5.90	7.56	7.98	8.01	8.02	8.26(*
observations	7,075	7,075	7,075	7,075	7,075	6,979

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other pseudo-R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 7: Coefficients of probit regression on whether net-wealth decreased by more than 5% between 2002 and 2007 for men

Control variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
marital change (omitted: married once → married once)						
married once → divorced once	0.359***	0.565***	0.517***	0.513***	0.517***	0.516***
	(0.136)	(0.150)	(0.151)	(0.151)	(0.152)	(0.152)
married once → widowed	-0.301	-0.449**	-0.463**	-0.464**	-0.462**	-0.457**
	(0.193)	(0.204)	(0.204)	(0.204)	(0.204)	(0.206)
married more than once → married more than once	0.00955	0.0460	0.0361	0.0339	0.0367	0.0250
	(0.0629)	(0.0666)	(0.0671)	(0.0674)	(0.0675)	(0.0677)
never married → never married	-0.293***	-0.124	-0.148*	-0.160**	-0.158*	-0.149*
	(0.0513)	(0.0793)	(0.0798)	(0.0805)	(0.0806)	(0.0809)
never married → married	-0.367***	-0.139	-0.119	-0.0866	-0.0862	-0.0759
	(0.111)	(0.128)	(0.129)	(0.135)	(0.135)	(0.135)
divorced once → divorced once	0.00983	0.0371	0.0192	0.0126	0.0119	-0.00224
	(0.0910)	(0.103)	(0.104)	(0.105)	(0.105)	(0.105)
divorced once → remarried	-0.261	-0.0129	-0.00449	-0.00581	-0.000598	0.00941
	(0.181)	(0.197)	(0.199)	(0.200)	(0.200)	(0.201)
divorced more than once → divorced more than once	0.432*	0.482*	0.423	0.427	0.432*	0.437*
	(0.247)	(0.256)	(0.260)	(0.260)	(0.259)	(0.260)
widowed → widowed	0.281**	0.107	0.0920	0.0863	0.0840	0.0874
	(0.124)	(0.129)	(0.130)	(0.130)	(0.130)	(0.130)
age class (omitted: aged 17-25)						
aged 26-30		-0.215*	-0.237*	-0.224*	-0.225*	-0.227*
		(0.129)	(0.132)	(0.132)	(0.132)	(0.132)
aged 31-35		-0.343***	-0.361***	-0.368***	-0.368***	-0.384***
		(0.128)	(0.134)	(0.134)	(0.134)	(0.135)
aged 36-40		-0.344**	-0.368***	-0.385***	-0.383***	-0.397***
		(0.136)	(0.143)	(0.143)	(0.143)	(0.144)
aged 41-45		-0.376**	-0.392***	-0.416***	-0.414***	-0.419***
		(0.147)	(0.152)	(0.152)	(0.152)	(0.153)
aged 46-50		-0.361**	-0.373**	-0.406**	-0.405**	-0.411**
		(0.164)	(0.169)	(0.169)	(0.169)	(0.171)
aged 51-55		-0.362**	-0.401**	-0.436**	-0.433**	-0.443**
		(0.176)	(0.181)	(0.182)	(0.182)	(0.183)
aged 56-60		-0.347*	-0.407*	-0.441**	-0.435**	-0.438**
		(0.208)	(0.215)	(0.215)	(0.215)	(0.217)
aged 61-65		-0.353	-0.398*	-0.422*	-0.415*	-0.413*
		(0.231)	(0.237)	(0.247)	(0.247)	(0.248)
older than 65		-0.429*	-0.472**	-0.517**	-0.511**	-0.508**
		(0.235)	(0.240)	(0.243)	(0.243)	(0.245)

…continued

…continued (probit regression on a decrease in wealth higher than 5% for men)

physical health (omitted: good / very good)						
satisfactory		0.0217	0.0224	0.0442	0.0425	0.0457
		(0.0527)	(0.0528)	(0.0549)	(0.0547)	(0.0570)
not so good / bad		0.0340	0.0290	0.0784	0.0753	0.0771
		(0.0693)	(0.0697)	(0.0726)	(0.0724)	(0.0762)
education (omitted: low)						
middle		0.0379	0.0299	0.0312	0.0327	0.0328
		(0.0673)	(0.0677)	(0.0677)	(0.0678)	(0.0684)
(higher) vocational		0.0451	0.0260	0.0239	0.0277	0.0323
		(0.0725)	(0.0728)	(0.0727)	(0.0731)	(0.0733)
high		-0.0176	-0.0361	-0.0305	-0.0218	-0.0214
		(0.0853)	(0.0858)	(0.0858)	(0.0856)	(0.0868)
region (omitted: rural)						
town		-0.0266	-0.0311	-0.0320	-0.0300	-0.0334
		(0.0521)	(0.0525)	(0.0525)	(0.0528)	(0.0530)
city		0.0212	0.0168	0.0183	0.0245	0.0169
		(0.0525)	(0.0527)	(0.0527)	(0.0555)	(0.0559)
East-Germany before 1989 (yes)		0.130***	0.135***	0.137***	0.136***	0.110**
		(0.0461)	(0.0464)	(0.0465)	(0.0464)	(0.0553)
migration background (yes)		-0.00272	0.00961	0.0114	0.0106	-0.0136
		(0.0574)	(0.0577)	(0.0578)	(0.0580)	(0.0629)
imputed (omitted: neither in 2002 nor in 2007)						
imputed in 2002 or in 2007		-0.0269	-0.0281	-0.0307	-0.0301	-0.0348
		(0.0432)	(0.0434)	(0.0435)	(0.0434)	(0.0434)
imputed in 2002 and in 2007		-0.120**	-0.124**	-0.125**	-0.126**	-0.128**
		(0.0572)	(0.0587)	(0.0586)	(0.0587)	(0.0591)
number of children		0.0518	0.0735*	0.0701*	0.0712*	0.0707*
		(0.0385)	(0.0390)	(0.0390)	(0.0390)	(0.0396)
child(ren) aged 0-4 (yes)		-0.123	-0.120	-0.0920	-0.0926	-0.0897
		(0.0751)	(0.0763)	(0.0777)	(0.0778)	(0.0781)
child(ren) aged 5-17 (yes)		-0.0184	-0.00573	-0.00786	-0.00925	-0.00798
		(0.0703)	(0.0709)	(0.0709)	(0.0711)	(0.0716)
child(ren) older than 17 (yes)		0.0103	0.0186	0.0173	0.0186	0.0201
		(0.0528)	(0.0528)	(0.0530)	(0.0533)	(0.0531)
permanent HH-income (omitted: 1st quintile)						
2nd quintile		-0.00269	0.00465	0.00557	0.00577	0.00807
		(0.0630)	(0.0631)	(0.0631)	(0.0631)	(0.0635)
3rd quintile		-0.122*	-0.107	-0.105	-0.104	-0.110
		(0.0734)	(0.0738)	(0.0738)	(0.0737)	(0.0733)

…continued

…continued (probit regression on a decrease in wealth higher than 5% for men)

4th quintile		-0.216***	-0.189**	-0.187**	-0.184**	-0.190**
		(0.0792)	(0.0797)	(0.0799)	(0.0795)	(0.0797)
5th quintile		-0.353***	-0.317***	-0.314***	-0.306***	-0.320***
		(0.0961)	(0.0964)	(0.0967)	(0.0969)	(0.0967)
log(household size)		-0.0655	-0.133*	-0.135*	-0.137*	-0.126
		(0.0757)	(0.0783)	(0.0787)	(0.0787)	(0.0815)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		0.0343	-0.130	-0.126	-0.126	-0.116
		(0.0868)	(0.105)	(0.106)	(0.106)	(0.106)
> 5,000 to ≤ 10,000 €		0.361***	0.172	0.180	0.183	0.165
		(0.108)	(0.136)	(0.138)	(0.138)	(0.140)
> 10,000 to ≤ 30,000 €		0.252**	0.0452	0.0506	0.0536	0.0618
		(0.113)	(0.138)	(0.140)	(0.140)	(0.140)
> 30,000 to ≤ 50,000 €		0.116	-0.0828	-0.0749	-0.0726	-0.0596
		(0.125)	(0.147)	(0.149)	(0.149)	(0.150)
> 50,000 €		0.0369	-0.161	-0.148	-0.146	-0.138
		(0.138)	(0.157)	(0.160)	(0.160)	(0.161)
years full-time employment		0.00816*	0.00696	0.00690	0.00662	0.00705
		(0.00460)	(0.00461)	(0.00465)	(0.00468)	(0.00479)
years part-time employment		0.00278	0.000279	0.000505	0.000782	-0.00138
		(0.0116)	(0.0117)	(0.0117)	(0.0117)	(0.0119)
years unemployment		-0.00587	-0.00542	-0.00505	-0.00549	-0.00448
		(0.0141)	(0.0141)	(0.0141)	(0.0141)	(0.0142)
in the labour force in 2002(yes)		-0.0123	-0.119	-0.121	-0.123	-0.112
		(0.0822)	(0.0883)	(0.0881)	(0.0881)	(0.0886)
years in the labour force between 2002 and 2007		-0.0330*	0.0134	0.0127	0.0122	0.00967
		(0.0193)	(0.0231)	(0.0230)	(0.0231)	(0.0232)
self-employed (yes)		0.239***	0.199**	0.198**	0.199**	0.204**
		(0.0778)	(0.0794)	(0.0797)	(0.0799)	(0.0799)
civil servant (yes)		0.169**	0.166**	0.165**	0.163**	0.169**
		(0.0787)	(0.0784)	(0.0785)	(0.0784)	(0.0788)
saved continuously between 2002 and 2007 (yes)		-0.217***	-0.210***	-0.210***	-0.210***	-0.209***
		(0.0393)	(0.0397)	(0.0398)	(0.0398)	(0.0402)
paid off loans continuously between 2002 and 2007 (yes)		0.628***	0.626***	0.618***	0.620***	0.624***
		(0.0871)	(0.0871)	(0.0873)	(0.0875)	(0.0884)
worried about health		-0.0147	-0.0164	-0.0291	-0.0290	-0.0286
		(0.0427)	(0.0430)	(0.0433)	(0.0433)	(0.0436)
inheritance between 2002 and 2007 (yes)		-0.0897*	-0.0915*	-0.0888	-0.0875	-0.0898*
		(0.0536)	(0.0541)	(0.0542)	(0.0542)	(0.0542)
IHS-transformed net-wealth 2002		0.0829***	0.0828***	0.0832***	0.0833***	0.0835***
		(0.00454)	(0.00455)	(0.00454)	(0.00453)	(0.00456)

…continued

…continued (probit regression on a decrease in wealth higher than 5% for men)

change in individual earnings (omitted: change up to 5%)					
earnings decreased up to 10%		-0.0940	-0.0917	-0.0907	-0.0908
		(0.0969)	(0.0971)	(0.0970)	(0.0986)
earnings decreased up to 25%		-0.00426	-0.00257	-0.00293	-0.00310
		(0.0838)	(0.0840)	(0.0840)	(0.0835)
earnings decreased up to 50%		0.116	0.114	0.115	0.108
		(0.105)	(0.105)	(0.105)	(0.105)
earnings decreased more than 50%		0.201**	0.196**	0.197**	0.189**
		(0.0843)	(0.0852)	(0.0851)	(0.0849)
earnings increased up to 10%		0.0107	0.0164	0.0170	0.0163
		(0.103)	(0.103)	(0.103)	(0.103)
earnings increased up to 25%		0.0257	0.0290	0.0278	0.0276
		(0.0788)	(0.0787)	(0.0789)	(0.0785)
earnings increased up to 50%		-0.0867	-0.0821	-0.0823	-0.0814
		(0.0910)	(0.0911)	(0.0913)	(0.0912)
earnings increased more than 50%		-0.0510	-0.0469	-0.0469	-0.0457
		(0.0839)	(0.0839)	(0.0840)	(0.0836)
change in household income (omitted: change up to 5%)					
household income decreased up to 10%		0.0864	0.0930	0.0929	0.0981
		(0.0758)	(0.0759)	(0.0759)	(0.0769)
household income decreased up to 25%		0.0568	0.0604	0.0601	0.0604
		(0.0650)	(0.0653)	(0.0653)	(0.0656)
household income decreased up to 50%		0.0252	0.0259	0.0254	0.0381
		(0.0704)	(0.0703)	(0.0703)	(0.0708)
household income decreased more than 50%		0.170**	0.171**	0.172**	0.169**
		(0.0833)	(0.0833)	(0.0834)	(0.0842)
household income increased up to 10%		-0.134	-0.131	-0.133	-0.123
		(0.0844)	(0.0847)	(0.0847)	(0.0850)
household income increased up to 25%		-0.0462	-0.0467	-0.0483	-0.0493
		(0.0655)	(0.0655)	(0.0656)	(0.0659)
household income increased up to 50%		-0.159**	-0.160**	-0.161**	-0.162**
		(0.0735)	(0.0735)	(0.0735)	(0.0735)
household income increased more than 50%		-0.144*	-0.142*	-0.141*	-0.136*
		(0.0814)	(0.0813)	(0.0812)	(0.0817)
birth (yes)			-0.0991	-0.0992	-0.0943
			(0.0855)	(0.0855)	(0.0849)
retired (yes)			-0.0121	-0.0136	-0.0233
			(0.116)	(0.116)	(0.117)
health worsened (yes)			0.104**	0.102**	0.0999**
			(0.0452)	(0.0452)	(0.0460)

…continued

…continued (probit regression on a decrease in wealth higher than 5% for men)

father highly educated (yes)					-0.0680	-0.0642
					(0.0650)	(0.0655)
mother highly educated (yes)					0.0341	0.0284
					(0.0931)	(0.0937)
grew up in rural area (yes)					0.0118	0.0200
					(0.0392)	(0.0397)
religion (omitted: catholic)						
evangelical						0.0333
						(0.0479)
other Christian religious organisation						0.0652
						(0.136)
Islamic religious organisation						0.168
						(0.123)
other religious organisation						-0.265
						(0.469)
non-denominational						0.0730
						(0.0568)
risk						0.00578
						(0.00836)
life satisfaction						0.00374
						(0.0129)
Constant	-0.274***	-0.715***	-0.577***	-0.581***	-0.584***	-0.682***
	(0.0218)	(0.165)	(0.175)	(0.181)	(0.184)	(0.213)
Pseudo-R^2	1.04	10.09	10.77	10.86	10.88	10.90(*
observations	6,415	6,415	6,415	6,415	6,415	6,371

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other pseudo-R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 8: Coefficients of probit regression on whether net-wealth decreased by more than 5% between 2002 and 2007 for women

Control variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
marital change (omitted: married once → married once)						
married once → divorced once	0.0258	0.150	0.121	0.127	0.126	0.125
	(0.127)	(0.141)	(0.142)	(0.142)	(0.142)	(0.145)
married once → widowed	-0.0317	-0.205*	-0.247*	-0.244*	-0.244*	-0.251**
	(0.113)	(0.124)	(0.127)	(0.127)	(0.127)	(0.127)
married more than once → married more than once	0.0290	0.0442	0.0398	0.0379	0.0374	0.0264
	(0.0757)	(0.0797)	(0.0808)	(0.0809)	(0.0810)	(0.0809)
never married → never married	-0.269***	-0.0186	-0.0399	-0.0450	-0.0457	-0.0445
	(0.0483)	(0.0880)	(0.0896)	(0.0889)	(0.0890)	(0.0920)
never married → married	-0.367***	-0.0450	-0.0417	-0.0212	-0.0209	-0.0214
	(0.0963)	(0.139)	(0.140)	(0.146)	(0.146)	(0.148)
divorced once → divorced once	-0.101	-0.0627	-0.0806	-0.0812	-0.0818	-0.0876
	(0.0749)	(0.0872)	(0.0871)	(0.0873)	(0.0876)	(0.0872)
divorced once → remarried	0.0959	0.333	0.338	0.333	0.332	0.298
	(0.200)	(0.235)	(0.239)	(0.239)	(0.239)	(0.243)
divorced more than once → divorced more than once	0.114	0.412**	0.374**	0.377**	0.376**	0.367*
	(0.168)	(0.186)	(0.188)	(0.188)	(0.188)	(0.190)
widowed → widowed	0.109*	-0.0294	-0.0431	-0.0425	-0.0421	-0.0442
	(0.0592)	(0.0775)	(0.0786)	(0.0786)	(0.0786)	(0.0782)
age class (omitted: aged 17-25)						
aged 26-30		-0.120	-0.104	-0.104	-0.103	-0.0963
		(0.118)	(0.118)	(0.118)	(0.119)	(0.120)
aged 31-35		-0.136	-0.128	-0.136	-0.136	-0.149
		(0.103)	(0.103)	(0.103)	(0.104)	(0.104)
aged 36-40		-0.0947	-0.0813	-0.0962	-0.0973	-0.0958
		(0.117)	(0.117)	(0.115)	(0.117)	(0.118)
aged 41-45		-0.162	-0.149	-0.167	-0.167	-0.176
		(0.133)	(0.133)	(0.130)	(0.131)	(0.132)
aged 46-50		-0.225	-0.223	-0.247	-0.248	-0.248
		(0.156)	(0.155)	(0.150)	(0.152)	(0.155)
aged 51-55		-0.170	-0.183	-0.208	-0.209	-0.204
		(0.137)	(0.137)	(0.134)	(0.136)	(0.136)
aged 56-60		-0.108	-0.134	-0.161	-0.162	-0.161
		(0.173)	(0.173)	(0.171)	(0.173)	(0.177)
aged 61-65		-0.133	-0.146	-0.179	-0.180	-0.191
		(0.165)	(0.166)	(0.192)	(0.193)	(0.196)
older than 65		-0.190	-0.203	-0.230	-0.231	-0.244
		(0.155)	(0.156)	(0.153)	(0.154)	(0.156)

…continued

…continued (probit regression on a decrease in wealth higher than 5% for women)

physical health (omitted: good / very good)						
satisfactory		(0.0485)	(0.0485)	(0.0490)	(0.0491)	(0.0507)
		0.0743	0.0730	0.107*	0.107*	0.0828
not so good / bad		(0.0559)	(0.0560)	(0.0601)	(0.0602)	(0.0666)
		(0.0485)	(0.0485)	(0.0490)	(0.0491)	(0.0507)
education (omitted: low)						
middle		0.000134	-0.00267	0.000202	-0.000583	-0.00391
		(0.0499)	(0.0499)	(0.0502)	(0.0503)	(0.0506)
(higher) vocational		0.0462	0.0386	0.0419	0.0404	0.0366
		(0.0654)	(0.0659)	(0.0660)	(0.0665)	(0.0674)
high		-0.0911	-0.103	-0.0958	-0.0965	-0.0980
		(0.0701)	(0.0705)	(0.0707)	(0.0721)	(0.0727)
region (omitted: rural)						
town		-0.00152	0.000717	0.00226	0.00126	-0.00156
		(0.0482)	(0.0484)	(0.0484)	(0.0490)	(0.0497)
city		0.00672	0.00889	0.0104	0.00645	0.00778
		(0.0487)	(0.0488)	(0.0489)	(0.0522)	(0.0525)
East-Germany before 1989 (yes)		0.120**	0.133***	0.135***	0.136***	0.116**
		(0.0478)	(0.0481)	(0.0483)	(0.0483)	(0.0556)
migration background (yes)		-0.0211	-0.0209	-0.0196	-0.0184	0.0382
		(0.0554)	(0.0557)	(0.0558)	(0.0561)	(0.0629)
imputed (omitted: neither in 2002 nor in 2007)						
imputed in 2002 or in 2007		0.0860**	0.0864**	0.0859**	0.0860**	0.0727*
		(0.0380)	(0.0382)	(0.0383)	(0.0383)	(0.0392)
imputed in 2002 and in 2007		-0.129**	-0.136**	-0.137**	-0.137**	-0.146***
		(0.0538)	(0.0537)	(0.0539)	(0.0539)	(0.0547)
number of children		0.0112	0.0321	0.0313	0.0318	0.0385
		(0.0396)	(0.0400)	(0.0401)	(0.0403)	(0.0410)
child(ren) aged 0-4 (yes)		0.0264	0.0356	0.0474	0.0468	0.0464
		(0.0752)	(0.0761)	(0.0803)	(0.0808)	(0.0826)
child(ren) aged 5-17 (yes)		0.0229	0.0365	0.0333	0.0316	0.0229
		(0.0709)	(0.0721)	(0.0723)	(0.0727)	(0.0735)
child(ren) older than 17 (yes)		0.104	0.114*	0.113	0.112	0.110
		(0.0681)	(0.0687)	(0.0689)	(0.0687)	(0.0683)
permanent HH-income (omitted: 1st quintile)						
2nd quintile		-0.118**	-0.113*	-0.112*	-0.113*	-0.105*
		(0.0603)	(0.0602)	(0.0604)	(0.0605)	(0.0634)
3rd quintile		-0.262***	-0.244***	-0.242***	-0.243***	-0.229***
		(0.0636)	(0.0640)	(0.0641)	(0.0643)	(0.0658)

…continued

…continued (probit regression on a decrease in wealth higher than 5% for women)

4th quintile		-0.377***	-0.345***	-0.344***	-0.345***	-0.325***
		(0.0756)	(0.0756)	(0.0757)	(0.0756)	(0.0802)
5th quintile		-0.425***	-0.390***	-0.386***	-0.387***	-0.357***
		(0.0760)	(0.0764)	(0.0765)	(0.0769)	(0.0802)
log(household size)		0.0276	-0.0564	-0.0545	-0.0535	-0.0734
		(0.0699)	(0.0732)	(0.0732)	(0.0733)	(0.0735)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		0.158**	0.111	0.118	0.119	0.126
		(0.0787)	(0.101)	(0.100)	(0.101)	(0.102)
> 5,000 to ≤ 10,000 €		0.0589	-0.0171	-0.00898	-0.00805	-0.0138
		(0.109)	(0.133)	(0.132)	(0.133)	(0.134)
> 10,000 to ≤ 30,000 €		0.209*	0.145	0.154	0.156	0.152
		(0.107)	(0.126)	(0.125)	(0.126)	(0.127)
> 30,000 to ≤ 50,000 €		0.151	0.0968	0.103	0.104	0.0990
		(0.126)	(0.142)	(0.141)	(0.142)	(0.143)
> 50,000 €		0.0728	0.0345	0.0411	0.0427	0.0251
		(0.156)	(0.171)	(0.171)	(0.171)	(0.173)
years full-time employment		-0.00137	-0.00191	-0.00202	-0.00203	-0.00228
		(0.00207)	(0.00209)	(0.00210)	(0.00211)	(0.00214)
years part-time employment		-0.00476*	-0.00496*	-0.00494*	-0.00494*	-0.00485*
		(0.00287)	(0.00288)	(0.00287)	(0.00287)	(0.00292)
years unemployment		0.00494	0.00604	0.00574	0.00578	0.00353
		(0.0115)	(0.0115)	(0.0115)	(0.0115)	(0.0117)
in the labour force in 2002(yes)		0.0894	0.0405	0.0455	0.0461	0.0463
		(0.0728)	(0.0808)	(0.0798)	(0.0801)	(0.0802)
years in the labour force between 2002 and 2007		-0.0432**	-0.0174	-0.0191	-0.0192	-0.0205
		(0.0179)	(0.0217)	(0.0217)	(0.0218)	(0.0223)
self-employed (yes)		0.166*	0.144	0.148	0.149	0.153
		(0.0955)	(0.0967)	(0.0966)	(0.0974)	(0.0972)
civil servant (yes)		-0.200*	-0.196*	-0.198*	-0.199*	-0.205*
		(0.109)	(0.110)	(0.110)	(0.110)	(0.109)
saved continuously between 2002 and 2007 (yes)		-0.262***	-0.256***	-0.255***	-0.255***	-0.245***
		(0.0369)	(0.0374)	(0.0374)	(0.0374)	(0.0380)
paid off loans continuously between 2002 and 2007 (yes)		0.715***	0.717***	0.715***	0.714***	0.717***
		(0.0928)	(0.0926)	(0.0923)	(0.0926)	(0.0934)
worried about health		0.0545	0.0578	0.0505	0.0508	0.0539
		(0.0418)	(0.0421)	(0.0424)	(0.0423)	(0.0427)
inheritance between 2002 and 2007 (yes)		-0.231***	-0.227***	-0.227***	-0.227***	-0.232***
		(0.0551)	(0.0554)	(0.0554)	(0.0555)	(0.0555)
IHS-transformed net-wealth 2002		0.107***	0.107***	0.107***	0.107***	0.108***
		(0.00452)	(0.00454)	(0.00453)	(0.00454)	(0.00452)

…continued

…continued (probit regression on a decrease in wealth higher than 5% for women)

change in individual earnings (omitted: change up to 5%)					
earnings decreased up to 10%		-0.103	-0.104	-0.104	-0.101
		(0.123)	(0.123)	(0.123)	(0.123)
earnings decreased up to 25%		-0.0919	-0.0914	-0.0916	-0.0806
		(0.0940)	(0.0940)	(0.0940)	(0.0942)
earnings decreased up to 50%		-0.00511	-0.00665	-0.00749	0.00118
		(0.111)	(0.112)	(0.112)	(0.113)
earnings decreased more than 50%		0.0426	0.0408	0.0406	0.0376
		(0.0892)	(0.0894)	(0.0896)	(0.0905)
earnings increased up to 10%		-0.118	-0.121	-0.122	-0.108
		(0.127)	(0.127)	(0.127)	(0.129)
earnings increased up to 25%		-0.0989	-0.105	-0.105	-0.0905
		(0.103)	(0.103)	(0.103)	(0.105)
earnings increased up to 50%		-0.126	-0.129	-0.129	-0.120
		(0.104)	(0.104)	(0.104)	(0.105)
earnings increased more than 50%		-0.0126	-0.0163	-0.0161	-0.0139
		(0.0774)	(0.0778)	(0.0780)	(0.0775)
change in household income (omitted: change up to 5%)					
household income decreased up to 10%		0.129	0.132	0.133	0.136*
		(0.0814)	(0.0814)	(0.0812)	(0.0804)
household income decreased up to 25%		0.0702	0.0697	0.0702	0.0670
		(0.0594)	(0.0594)	(0.0595)	(0.0599)
household income decreased up to 50%		0.0548	0.0530	0.0529	0.0538
		(0.0628)	(0.0628)	(0.0628)	(0.0625)
household income decreased more than 50%		0.259***	0.254***	0.255***	0.247***
		(0.0750)	(0.0750)	(0.0748)	(0.0755)
household income increased up to 10%		-0.0345	-0.0352	-0.0348	-0.0358
		(0.0791)	(0.0791)	(0.0792)	(0.0798)
household income increased up to 25%		0.0405	0.0423	0.0423	0.0363
		(0.0663)	(0.0663)	(0.0663)	(0.0666)
household income increased up to 50%		-0.138	-0.136	-0.137	-0.135
		(0.0838)	(0.0839)	(0.0837)	(0.0853)
household income increased more than 50%		-0.0750	-0.0737	-0.0736	-0.0838
		(0.0770)	(0.0774)	(0.0772)	(0.0772)
birth (yes)			-0.0569	-0.0573	-0.0497
			(0.0850)	(0.0851)	(0.0863)
retired (yes)			0.0116	0.0116	0.00348
			(0.111)	(0.110)	(0.110)
health worsened (yes)			0.0755*	0.0754*	0.0711*
			(0.0424)	(0.0426)	(0.0428)

…continued

…continued (probit regression on a decrease in wealth higher than 5% for women)

father highly educated (yes)					0.0182	0.00256
					(0.0639)	(0.0650)
mother highly educated (yes)					-0.0377	-0.0286
					(0.0919)	(0.0925)
grew up in rural area (yes)					-0.0103	-0.00642
					(0.0405)	(0.0408)
religion (omitted: catholic)						
evangelical						0.0790*
						(0.0445)
other Christian religious organisation						-0.0929
						(0.129)
Islamic religious organisation						-0.233
						(0.147)
other religious organisation						-0.356
						(0.497)
non-denominational						0.0737
						(0.0580)
risk						-0.0139
						(0.0100)
life satisfaction						-0.0116
						(0.0124)
Constant	-0.279***	-0.978***	-0.959***	-0.969***	-0.961***	-0.880***
	(0.0229)	(0.156)	(0.166)	(0.166)	(0.175)	(0.188)
Pseudo-R^2	0.68	12.71	13.18	13.22	13.23	13.30(*
observations	7,075	7,075	7,075	7,075	7,075	6,979

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other pseudo-R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 9: Coefficients of probit regression on whether the change in net-wealth between 2002 and 2007 did not exceed a 5% decrease or increase for men

Control variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
marital change (omitted: married once → married once)						
married once → divorced once	-0.0178	-0.211	-0.235	-0.222	-0.233	-0.248
	(0.208)	(0.269)	(0.268)	(0.268)	(0.270)	(0.271)
married once → widowed	0.300	0.0815	0.0489	0.0550	0.0474	0.0762
	(0.232)	(0.257)	(0.262)	(0.263)	(0.263)	(0.266)
married more than once → married more than once	0.0459	-0.0710	-0.0772	-0.0829	-0.0830	-0.0960
	(0.0976)	(0.127)	(0.129)	(0.129)	(0.129)	(0.133)
never married → never married	0.520***	0.249**	0.254**	0.270**	0.273**	0.293**
	(0.0535)	(0.116)	(0.117)	(0.118)	(0.118)	(0.120)
never married → married	-0.134	-0.0961	-0.0830	-0.143	-0.140	-0.145
	(0.157)	(0.220)	(0.225)	(0.242)	(0.242)	(0.245)
divorced once → divorced once	0.143	0.00747	0.0191	0.0149	0.0156	0.0128
	(0.118)	(0.156)	(0.156)	(0.156)	(0.156)	(0.161)
divorced once → remarried	0.128	-0.00402	-0.0115	-0.0203	-0.0209	-0.0399
	(0.238)	(0.283)	(0.284)	(0.284)	(0.286)	(0.288)
divorced more than once → divorced more than once	0.351	0.0132	0.0111	0.0204	0.0277	0.0149
	(0.291)	(0.349)	(0.348)	(0.347)	(0.348)	(0.348)
widowed → widowed	0.109	-0.0714	-0.0548	-0.0587	-0.0633	-0.0623
	(0.152)	(0.183)	(0.184)	(0.184)	(0.184)	(0.185)
age class (omitted: aged 17-25)						
aged 26-30		0.0196	0.0132	0.00298	-0.000920	0.00155
		(0.166)	(0.166)	(0.166)	(0.167)	(0.167)
aged 31-35		-0.0231	-0.0341	-0.0434	-0.0436	-0.0332
		(0.190)	(0.194)	(0.197)	(0.198)	(0.196)
aged 36-40		-0.000239	-0.0158	-0.0162	-0.0165	-0.0159
		(0.184)	(0.187)	(0.190)	(0.191)	(0.191)
aged 41-45		0.00519	-0.0209	-0.0114	-0.0128	0.0195
		(0.212)	(0.217)	(0.222)	(0.221)	(0.221)
aged 46-50		0.197	0.173	0.177	0.174	0.215
		(0.225)	(0.227)	(0.235)	(0.236)	(0.234)
aged 51-55		0.0504	0.0218	0.0284	0.0244	0.0454
		(0.254)	(0.258)	(0.264)	(0.265)	(0.264)
aged 56-60		-0.0512	-0.0896	-0.0323	-0.0315	-0.00641
		(0.285)	(0.292)	(0.308)	(0.309)	(0.307)
aged 61-65		0.0735	0.0408	0.257	0.255	0.264
		(0.300)	(0.306)	(0.383)	(0.384)	(0.384)
older than 65		-0.0488	-0.0829	-0.118	-0.124	-0.0732
		(0.312)	(0.317)	(0.322)	(0.323)	(0.324)

…continued

…continued (probit regression on a change in wealth not exceeding 5% for men)

physical health (omitted: good / very good)						
satisfactory		0.0415	0.0429	0.0505	0.0492	0.0438
		(0.0795)	(0.0803)	(0.0830)	(0.0833)	(0.0860)
not so good / bad		0.0637	0.0638	0.0876	0.0847	0.0455
		(0.0964)	(0.0956)	(0.108)	(0.108)	(0.123)
education (omitted: low)						
middle		-0.194**	-0.199**	-0.197**	-0.197**	-0.182**
		(0.0794)	(0.0797)	(0.0802)	(0.0803)	(0.0813)
(higher) vocational		-0.242**	-0.249**	-0.248**	-0.244**	-0.229*
		(0.118)	(0.118)	(0.118)	(0.119)	(0.120)
high		-0.215*	-0.222*	-0.216*	-0.204*	-0.195
		(0.116)	(0.116)	(0.116)	(0.119)	(0.122)
region (omitted: rural)						
town		0.0999	0.102	0.0986	0.0892	0.0918
		(0.0840)	(0.0852)	(0.0853)	(0.0858)	(0.0862)
city		0.132	0.132	0.131	0.103	0.0994
		(0.0853)	(0.0854)	(0.0855)	(0.0906)	(0.0901)
East-Germany before 1989 (yes)		0.00308	0.00555	0.00238	0.000194	-0.0135
		(0.0745)	(0.0757)	(0.0760)	(0.0766)	(0.103)
migration background (yes)		0.353***	0.359***	0.362***	0.363***	0.347***
		(0.0732)	(0.0739)	(0.0741)	(0.0740)	(0.0855)
imputed (omitted: neither in 2002 nor in 2007)						
imputed in 2002 or in 2007		-0.589***	-0.590***	-0.590***	-0.588***	-0.587***
		(0.0795)	(0.0806)	(0.0804)	(0.0803)	(0.0832)
imputed in 2002 and in 2007		-0.592***	-0.602***	-0.600***	-0.600***	-0.596***
		(0.136)	(0.136)	(0.136)	(0.137)	(0.137)
number of children		-0.00177	0.00307	0.00585	0.00693	-0.00125
		(0.0535)	(0.0539)	(0.0535)	(0.0535)	(0.0539)
child(ren) aged 0-4 (yes)		-0.0517	-0.0537	-0.0984	-0.0984	-0.0846
		(0.134)	(0.136)	(0.151)	(0.151)	(0.151)
child(ren) aged 5-17 (yes)		-0.00311	-0.00129	-0.000701	-0.00492	0.00654
		(0.115)	(0.115)	(0.115)	(0.115)	(0.115)
child(ren) older than 17 (yes)		0.0363	0.0425	0.0420	0.0446	0.0322
		(0.0773)	(0.0776)	(0.0777)	(0.0776)	(0.0794)
permanent HH-income (omitted: 1st quintile)						
2nd quintile		-0.238***	-0.243***	-0.241***	-0.243***	-0.237**
		(0.0906)	(0.0908)	(0.0911)	(0.0914)	(0.0921)
3rd quintile		-0.260***	-0.264***	-0.262***	-0.262***	-0.232**
		(0.0985)	(0.0998)	(0.0998)	(0.100)	(0.101)

…continued

…continued (probit regression on a change in wealth not exceeding 5% for men)

4th quintile		-0.325***	-0.318***	-0.313***	-0.308***	-0.281**
		(0.109)	(0.111)	(0.110)	(0.111)	(0.112)
5th quintile		-0.392***	-0.384***	-0.376***	-0.350**	-0.299**
		(0.135)	(0.137)	(0.138)	(0.140)	(0.145)
log(household size)		0.231**	0.227**	0.229**	0.225**	0.212*
		(0.102)	(0.107)	(0.107)	(0.108)	(0.109)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		-0.0155	0.0232	0.0113	0.0173	0.0377
		(0.108)	(0.131)	(0.131)	(0.131)	(0.133)
> 5,000 to ≤ 10,000 €		-0.366**	-0.319*	-0.334*	-0.331*	-0.282
		(0.153)	(0.181)	(0.179)	(0.180)	(0.182)
> 10,000 to ≤ 30,000 €		-0.512***	-0.468**	-0.490**	-0.479**	-0.465**
		(0.182)	(0.201)	(0.204)	(0.203)	(0.206)
> 30,000 to ≤ 50,000 €		-0.531**	-0.485**	-0.502**	-0.491**	-0.484**
		(0.231)	(0.236)	(0.241)	(0.241)	(0.246)
> 50,000 €		-0.272	-0.221	-0.249	-0.244	-0.221
		(0.235)	(0.243)	(0.250)	(0.250)	(0.255)
years full-time employment		-0.00122	-0.00151	-0.000764	-0.000993	-0.00202
		(0.00665)	(0.00672)	(0.00673)	(0.00669)	(0.00665)
years part-time employment		-0.0231	-0.0225	-0.0221	-0.0208	-0.0193
		(0.0164)	(0.0165)	(0.0165)	(0.0166)	(0.0167)
years unemployment		0.0381**	0.0375**	0.0377**	0.0372**	0.0312*
		(0.0160)	(0.0159)	(0.0159)	(0.0159)	(0.0162)
in the labour force in 2002(yes)		0.115	0.0930	0.0953	0.0965	0.0860
		(0.107)	(0.118)	(0.118)	(0.118)	(0.119)
years in the labour force between 2002 and 2007		-0.0393	-0.0295	-0.0317	-0.0353	-0.0297
		(0.0294)	(0.0336)	(0.0337)	(0.0335)	(0.0337)
self-employed (yes)		0.0411	0.0439	0.0349	0.0387	0.0441
		(0.184)	(0.190)	(0.192)	(0.191)	(0.190)
civil servant (yes)		0.00503	-0.0144	-0.0147	-0.0118	-0.0143
		(0.156)	(0.159)	(0.159)	(0.159)	(0.160)
saved continuously between 2002 and 2007 (yes)		-0.0448	-0.0443	-0.0389	-0.0402	-0.0175
		(0.0762)	(0.0760)	(0.0758)	(0.0760)	(0.0772)
paid off loans continuously between 2002 and 2007 (yes)		-0.673***	-0.691***	-0.694***	-0.697***	-0.680***
		(0.180)	(0.179)	(0.178)	(0.178)	(0.180)
worried about health		-0.101	-0.103	-0.106	-0.107	-0.110
		(0.0713)	(0.0725)	(0.0734)	(0.0734)	(0.0734)
inheritance between 2002 and 2007 (yes)		-0.266***	-0.270***	-0.273***	-0.265**	-0.257**
		(0.101)	(0.103)	(0.104)	(0.105)	(0.106)
IHS-transformed net-wealth 2002		-0.0434***	-0.0436***	-0.0435***	-0.0433***	-0.0412***
		(0.00471)	(0.00469)	(0.00471)	(0.00473)	(0.00477)

…continued

…continued (probit regression on a change in wealth not exceeding 5% for men)

change in individual earnings (omitted: change up to 5%)					
earnings decreased up to 10%		-0.112	-0.106	-0.105	-0.136
		(0.179)	(0.178)	(0.178)	(0.180)
earnings decreased up to 25%		-0.0765	-0.0793	-0.0855	-0.0938
		(0.171)	(0.171)	(0.171)	(0.171)
earnings decreased up to 50%		-0.137	-0.139	-0.142	-0.132
		(0.168)	(0.168)	(0.170)	(0.168)
earnings decreased more than 50%		-0.0402	-0.0403	-0.0420	-0.0583
		(0.117)	(0.117)	(0.117)	(0.118)
earnings increased up to 10%		0.0143	0.00918	0.0111	0.00374
		(0.225)	(0.223)	(0.222)	(0.225)
earnings increased up to 25%		-0.194	-0.195	-0.190	-0.201
		(0.157)	(0.157)	(0.157)	(0.158)
earnings increased up to 50%		-0.202	-0.206	-0.202	-0.221
		(0.178)	(0.178)	(0.178)	(0.179)
earnings increased more than 50%		-0.0972	-0.0934	-0.0961	-0.110
		(0.118)	(0.118)	(0.118)	(0.119)
change in household income (omitted: change up to 5%)					
household income decreased up to 10%		0.0230	0.0239	0.0195	0.0408
		(0.112)	(0.112)	(0.112)	(0.113)
household income decreased up to 25%		0.0495	0.0497	0.0467	0.0574
		(0.0937)	(0.0940)	(0.0940)	(0.0950)
household income decreased up to 50%		0.0398	0.0349	0.0347	0.0441
		(0.0971)	(0.0974)	(0.0975)	(0.0989)
household income decreased more than 50%		-0.107	-0.104	-0.101	-0.102
		(0.125)	(0.126)	(0.126)	(0.128)
household income increased up to 10%		-0.102	-0.101	-0.101	-0.0892
		(0.135)	(0.136)	(0.136)	(0.135)
household income increased up to 25%		-0.0632	-0.0609	-0.0603	-0.0438
		(0.101)	(0.101)	(0.101)	(0.102)
household income increased up to 50%		-0.168	-0.167	-0.171	-0.167
		(0.119)	(0.119)	(0.119)	(0.121)
household income increased more than 50%		-0.0340	-0.0388	-0.0354	-0.0255
		(0.123)	(0.123)	(0.123)	(0.125)
birth (yes)			0.159	0.161	0.169
			(0.140)	(0.140)	(0.141)
retired (yes)			-0.249	-0.251	-0.221
			(0.209)	(0.210)	(0.213)
health worsened (yes)			0.0516	0.0450	0.0450
			(0.0763)	(0.0758)	(0.0785)

…continued

…continued (probit regression on a change in wealth not exceeding 5% for men)

father highly educated (yes)					-0.155	-0.164
					(0.109)	(0.111)
mother highly educated (yes)					-0.000278	0.00458
					(0.127)	(0.128)
grew up in rural area (yes)					-0.0653	-0.0698
					(0.0596)	(0.0612)
religion (omitted: catholic)						
evangelical						0.0736
						(0.0835)
other Christian religious organisation						0.110
						(0.172)
Islamic religious organisation						0.220
						(0.138)
other religious organisation						0.0703
						(0.532)
non-denominational						0.0494
						(0.108)
risk						-0.0289**
						(0.0129)
life satisfaction						-0.0203
						(0.0210)
Constant	-1.473***	-0.436**	-0.375	-0.397*	-0.322	-0.211
	(0.0314)	(0.222)	(0.235)	(0.238)	(0.240)	(0.297)
Pseudo-R^2	2.62	24.52	24.91	25.04	25.14	25.15(*
observations	6,415	6,415	6,415	6,415	6,415	6,371

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other pseudo-R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 10: Coefficients of probit regression on whether the change in net-wealth between 2002 and 2007 did not exceed a 5% decrease or increase for women

Control variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
marital change (omitted: married once → married once)						
married once → divorced once	0.246	0.0229	0.0266	0.0162	0.0195	-0.00112
	(0.157)	(0.197)	(0.202)	(0.203)	(0.203)	(0.211)
married once → widowed	-0.0680	-0.292	-0.281	-0.282	-0.283	-0.273
	(0.162)	(0.191)	(0.194)	(0.194)	(0.194)	(0.197)
married more than once → married more than once	-0.0101	-0.0945	-0.0936	-0.0912	-0.0900	-0.0869
	(0.0888)	(0.116)	(0.117)	(0.117)	(0.117)	(0.117)
never married → never married	0.329***	0.0981	0.124	0.120	0.122	0.130
	(0.0571)	(0.122)	(0.122)	(0.123)	(0.123)	(0.124)
never married → married	-0.0495	-0.140	-0.103	-0.0699	-0.0704	-0.0804
	(0.119)	(0.174)	(0.177)	(0.180)	(0.180)	(0.183)
divorced once → divorced once	0.336***	0.139	0.150	0.154	0.155	0.136
	(0.0846)	(0.112)	(0.115)	(0.115)	(0.115)	(0.117)
divorced once → remarried	0.00748	0.0409	0.0540	0.0684	0.0670	0.0794
	(0.239)	(0.305)	(0.303)	(0.303)	(0.304)	(0.302)
divorced more than once → divorced more than once	0.532***	0.147	0.181	0.173	0.173	0.160
	(0.181)	(0.219)	(0.221)	(0.221)	(0.221)	(0.222)
widowed → widowed	0.298***	0.0544	0.0504	0.0523	0.0532	0.0484
	(0.0735)	(0.109)	(0.110)	(0.110)	(0.110)	(0.113)
age class (omitted: aged 17-25)						
aged 26-30		-0.0294	-0.0315	-0.0159	-0.0158	-0.0395
		(0.152)	(0.151)	(0.152)	(0.152)	(0.155)
aged 31-35		-0.159	-0.170	-0.170	-0.172	-0.218
		(0.152)	(0.151)	(0.152)	(0.152)	(0.155)
aged 36-40		-0.0718	-0.0760	-0.0750	-0.0783	-0.102
		(0.160)	(0.161)	(0.160)	(0.160)	(0.165)
aged 41-45		0.127	0.0962	0.0997	0.0972	0.0745
		(0.167)	(0.168)	(0.168)	(0.167)	(0.171)
aged 46-50		0.283*	0.267	0.269	0.267	0.224
		(0.169)	(0.172)	(0.172)	(0.173)	(0.177)
aged 51-55		0.265	0.246	0.247	0.244	0.211
		(0.183)	(0.181)	(0.184)	(0.184)	(0.191)
aged 56-60		0.268	0.240	0.261	0.257	0.236
		(0.202)	(0.200)	(0.210)	(0.211)	(0.214)
aged 61-65		0.194	0.160	0.243	0.239	0.243
		(0.191)	(0.192)	(0.243)	(0.245)	(0.250)
older than 65		0.148	0.112	0.105	0.102	0.134
		(0.199)	(0.201)	(0.200)	(0.201)	(0.205)

…continued

…continued (probit regression on a change in wealth not exceeding 5% for women)

physical health (omitted: good / very good)						
satisfactory		-0.00763	-0.0103	-0.0308	-0.0314	-0.0348
		(0.0680)	(0.0689)	(0.0694)	(0.0692)	(0.0747)
not so good / bad		0.0534	0.0469	-0.000180	-0.000756	0.00188
		(0.0891)	(0.0900)	(0.0926)	(0.0930)	(0.102)
education (omitted: low)						
middle		-0.269***	-0.270***	-0.273***	-0.272***	-0.246***
		(0.0618)	(0.0624)	(0.0627)	(0.0628)	(0.0635)
(higher) vocational		-0.249**	-0.248**	-0.249**	-0.250**	-0.215**
		(0.105)	(0.105)	(0.104)	(0.103)	(0.106)
high		-0.204*	-0.198*	-0.201*	-0.200*	-0.178*
		(0.108)	(0.107)	(0.106)	(0.106)	(0.107)
region (omitted: rural)						
town		0.0308	0.0298	0.0300	0.0324	0.0225
		(0.0738)	(0.0744)	(0.0745)	(0.0747)	(0.0747)
city		0.0737	0.0669	0.0659	0.0707	0.0431
		(0.0771)	(0.0776)	(0.0777)	(0.0801)	(0.0813)
East-Germany before 1989 (yes)		-0.00278	-0.00747	-0.00510	-0.00463	-0.0682
		(0.0738)	(0.0748)	(0.0751)	(0.0753)	(0.0862)
migration background (yes)		0.379***	0.380***	0.378***	0.379***	0.276***
		(0.0682)	(0.0689)	(0.0691)	(0.0691)	(0.0816)
imputed (omitted: neither in 2002 nor in 2007)						
imputed in 2002 or in 2007		-0.825***	-0.827***	-0.828***	-0.828***	-0.818***
		(0.0630)	(0.0633)	(0.0636)	(0.0636)	(0.0643)
imputed in 2002 and in 2007		-0.752***	-0.753***	-0.751***	-0.750***	-0.735***
		(0.155)	(0.159)	(0.159)	(0.159)	(0.166)
number of children		0.0155	0.0148	0.0140	0.0149	-0.000814
		(0.0484)	(0.0489)	(0.0490)	(0.0492)	(0.0520)
child(ren) aged 0-4 (yes)		-0.388***	-0.389***	-0.370***	-0.371***	-0.380***
		(0.115)	(0.118)	(0.122)	(0.122)	(0.125)
child(ren) aged 5-17 (yes)		0.0429	0.0428	0.0359	0.0343	0.0647
		(0.103)	(0.105)	(0.105)	(0.105)	(0.109)
child(ren) older than 17 (yes)		-0.0927	-0.0836	-0.0887	-0.0890	-0.0792
		(0.100)	(0.102)	(0.102)	(0.102)	(0.103)
permanent HH-income (omitted: 1st quintile)						
2nd quintile		-0.151*	-0.149*	-0.150*	-0.150*	-0.150*
		(0.0802)	(0.0823)	(0.0822)	(0.0822)	(0.0840)
3rd quintile		-0.259***	-0.266***	-0.270***	-0.270***	-0.274***
		(0.0962)	(0.0981)	(0.0980)	(0.0976)	(0.101)

…continued

…continued (probit regression on a change in wealth not exceeding 5% for women)

4th quintile		-0.253**	-0.260**	-0.266**	-0.266**	-0.266**
		(0.110)	(0.112)	(0.112)	(0.112)	(0.118)
5th quintile		-0.222**	-0.228**	-0.242**	-0.240**	-0.238*
		(0.112)	(0.115)	(0.116)	(0.119)	(0.121)
log(household size)		0.100	0.0944	0.0953	0.0950	0.0890
		(0.0964)	(0.106)	(0.106)	(0.107)	(0.109)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		-0.0522	-0.0319	-0.0324	-0.0286	0.00810
		(0.0937)	(0.130)	(0.130)	(0.131)	(0.134)
> 5,000 to ≤ 10,000 €		-0.139	-0.138	-0.133	-0.130	-0.0710
		(0.137)	(0.164)	(0.165)	(0.165)	(0.169)
> 10,000 to ≤ 30,000 €		-0.351**	-0.372**	-0.367**	-0.363**	-0.318*
		(0.151)	(0.173)	(0.173)	(0.174)	(0.177)
> 30,000 to ≤ 50,000 €		-0.440**	-0.449**	-0.450**	-0.445**	-0.427**
		(0.199)	(0.209)	(0.209)	(0.209)	(0.204)
> 50,000 €		-0.357	-0.391	-0.384	-0.382	-0.361
		(0.296)	(0.297)	(0.297)	(0.298)	(0.302)
years full-time employment		-0.00168	-0.00184	-0.00165	-0.00164	-0.00119
		(0.00302)	(0.00301)	(0.00298)	(0.00297)	(0.00305)
years part-time employment		0.000895	0.00102	0.00110	0.00110	0.00179
		(0.00418)	(0.00424)	(0.00422)	(0.00422)	(0.00430)
years unemployment		0.00169	0.00314	0.00288	0.00279	0.00234
		(0.0130)	(0.0130)	(0.0130)	(0.0131)	(0.0133)
in the labour force in 2002(yes)		0.0405	-0.0131	-0.00667	-0.00492	-0.0333
		(0.0961)	(0.111)	(0.111)	(0.111)	(0.111)
years in the labour force between 2002 and 2007		-0.0313	-0.00435	-0.00796	-0.00863	0.00190
		(0.0251)	(0.0279)	(0.0281)	(0.0283)	(0.0287)
self-employed (yes)		0.0898	0.0942	0.0940	0.0942	0.0931
		(0.170)	(0.171)	(0.171)	(0.171)	(0.169)
civil servant (yes)		0.139	0.144	0.152	0.149	0.152
		(0.191)	(0.189)	(0.189)	(0.189)	(0.194)
saved continuously between 2002 and 2007 (yes)		-0.115*	-0.126**	-0.128**	-0.128**	-0.103
		(0.0614)	(0.0618)	(0.0618)	(0.0621)	(0.0640)
paid off loans continuously between 2002 and 2007 (yes)		-0.539***	-0.554***	-0.556***	-0.557***	-0.577***
		(0.142)	(0.144)	(0.145)	(0.144)	(0.147)
worried about health		-0.119*	-0.114*	-0.103	-0.102	-0.0950
		(0.0686)	(0.0691)	(0.0708)	(0.0707)	(0.0720)
inheritance between 2002 and 2007 (yes)		-0.110	-0.109	-0.110	-0.109	-0.0837
		(0.0970)	(0.0979)	(0.0979)	(0.0976)	(0.0964)
IHS-transformed net-wealth 2002		-0.0652***	-0.0653***	-0.0655***	-0.0655***	-0.0644***
		(0.00406)	(0.00410)	(0.00410)	(0.00410)	(0.00428)

…continued

…continued (probit regression on a change in wealth not exceeding 5% for women)

change in individual earnings (omitted: change up to 5%)					
earnings decreased up to 10%		-0.192	-0.192	-0.193	-0.238
		(0.273)	(0.270)	(0.269)	(0.271)
earnings decreased up to 25%		0.0718	0.0667	0.0654	0.0463
		(0.145)	(0.145)	(0.145)	(0.147)
earnings decreased up to 50%		-0.374*	-0.370*	-0.371*	-0.377*
		(0.193)	(0.193)	(0.194)	(0.194)
earnings decreased more than 50%		0.00689	0.0163	0.0144	0.00961
		(0.119)	(0.120)	(0.120)	(0.120)
earnings increased up to 10%		-0.165	-0.166	-0.168	-0.179
		(0.216)	(0.215)	(0.215)	(0.215)
earnings increased up to 25%		-0.369	-0.371	-0.371	-0.417*
		(0.230)	(0.231)	(0.232)	(0.242)
earnings increased up to 50%		0.00266	-0.00346	-0.00504	-0.0140
		(0.183)	(0.182)	(0.182)	(0.184)
earnings increased more than 50%		-0.116	-0.126	-0.127	-0.128
		(0.115)	(0.115)	(0.115)	(0.117)
change in household income (omitted: change up to 5%)					
household income decreased up to 10%		-0.130	-0.136	-0.135	-0.104
		(0.111)	(0.111)	(0.111)	(0.112)
household income decreased up to 25%		-0.126	-0.128	-0.129	-0.121
		(0.0939)	(0.0937)	(0.0937)	(0.0953)
household income decreased up to 50%		-0.00526	-0.00616	-0.00618	0.00569
		(0.0971)	(0.0972)	(0.0975)	(0.0982)
household income decreased more than 50%		-0.169	-0.169	-0.170	-0.144
		(0.112)	(0.112)	(0.112)	(0.113)
household income increased up to 10%		0.0330	0.0337	0.0355	0.0518
		(0.112)	(0.112)	(0.112)	(0.114)
household income increased up to 25%		-0.0530	-0.0549	-0.0551	-0.0267
		(0.103)	(0.104)	(0.104)	(0.105)
household income increased up to 50%		-0.0725	-0.0740	-0.0744	-0.0729
		(0.116)	(0.116)	(0.116)	(0.119)
household income increased more than 50%		-0.178	-0.172	-0.172	-0.152
		(0.109)	(0.110)	(0.110)	(0.111)
birth (yes)			-0.0893	-0.0905	-0.0670
			(0.118)	(0.118)	(0.120)
retired (yes)			-0.107	-0.107	-0.0992
			(0.161)	(0.161)	(0.167)
health worsened (yes)			-0.104	-0.105	-0.104
			(0.0742)	(0.0737)	(0.0746)

…continued

…continued (probit regression on a change in wealth not exceeding 5% for women)

father highly educated (yes)					0.0276	0.0402
					(0.0951)	(0.0958)
mother highly educated (yes)					-0.0626	-0.0518
					(0.129)	(0.130)
grew up in rural area (yes)					0.00768	0.0152
					(0.0599)	(0.0619)
religion (omitted: catholic)						
evangelical						0.00815
						(0.0738)
other Christian religious organisation						0.198
						(0.142)
Islamic religious organisation						0.570***
						(0.145)
other religious organisation						0.122
						(0.0850)
non-denominational						-0.0261*
						(0.0150)
risk						-0.00243
						(0.0217)
life satisfaction						0.00815
						(0.0738)
Constant	-1.351***	-0.133	-0.0358	0.0183	0.0128	-0.0349
	(0.0289)	(0.206)	(0.220)	(0.223)	(0.231)	(0.254)
Pseudo-R^2	1.35	27.54	28.05	28.15	28.16	28.49(*
observations	7,075	7,075	7,075	7,075	7,075	6,979

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other pseudo-R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 11: Coefficients of ordered probit regression on the change in net-wealth between 2002 and 2007 for men

Control variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
marital change (omitted: married once → married once)						
married once → divorced once	-0.358***	-0.547***	-0.498***	-0.495***	-0.499***	-0.494***
	(0.118)	(0.124)	(0.125)	(0.126)	(0.126)	(0.126)
married once → widowed	0.273*	0.457***	0.473***	0.475***	0.473***	0.456***
	(0.165)	(0.170)	(0.170)	(0.170)	(0.171)	(0.172)
married more than once → married more than once	-0.0119	-0.0262	-0.0125	-0.00845	-0.0115	0.000686
	(0.0539)	(0.0554)	(0.0558)	(0.0559)	(0.0560)	(0.0564)
never married → never married	0.158***	0.0298	0.0482	0.0607	0.0577	0.0444
	(0.0393)	(0.0644)	(0.0646)	(0.0653)	(0.0653)	(0.0656)
never married → married	0.379***	0.0938	0.0687	0.0366	0.0361	0.0304
	(0.0957)	(0.109)	(0.109)	(0.118)	(0.118)	(0.118)
divorced once → divorced once	-0.0559	-0.0768	-0.0631	-0.0539	-0.0541	-0.0422
	(0.0795)	(0.0914)	(0.0920)	(0.0926)	(0.0926)	(0.0929)
divorced once → remarried	0.167	-0.0709	-0.0868	-0.0865	-0.0904	-0.0868
	(0.153)	(0.165)	(0.165)	(0.166)	(0.166)	(0.167)
divorced more than once → divorced more than once	-0.513**	-0.472**	-0.423*	-0.422*	-0.429*	-0.430*
	(0.227)	(0.230)	(0.234)	(0.234)	(0.234)	(0.235)
widowed → widowed	-0.204**	-0.0157	-0.00701	-0.00118	0.00119	-0.00242
	(0.0975)	(0.103)	(0.103)	(0.103)	(0.103)	(0.103)
age class (omitted: aged 17-25)						
aged 26-30		0.137	0.164	0.151	0.154	0.159
		(0.105)	(0.107)	(0.107)	(0.107)	(0.108)
aged 31-35		0.286***	0.314***	0.318***	0.319***	0.335***
		(0.102)	(0.106)	(0.106)	(0.106)	(0.108)
aged 36-40		0.248**	0.282**	0.299***	0.299***	0.310***
		(0.111)	(0.116)	(0.116)	(0.116)	(0.116)
aged 41-45		0.231*	0.260**	0.285**	0.285**	0.283**
		(0.118)	(0.121)	(0.122)	(0.122)	(0.122)
aged 46-50		0.186	0.210	0.243*	0.244*	0.239
		(0.142)	(0.145)	(0.145)	(0.145)	(0.147)
aged 51-55		0.164	0.212	0.247	0.246	0.248
		(0.152)	(0.155)	(0.155)	(0.155)	(0.157)
aged 56-60		0.204	0.271	0.286	0.280	0.274
		(0.175)	(0.177)	(0.177)	(0.177)	(0.179)
aged 61-65		0.218	0.271	0.209	0.203	0.198
		(0.191)	(0.192)	(0.199)	(0.199)	(0.200)
older than 65		0.275	0.324	0.388*	0.384*	0.363*
		(0.196)	(0.198)	(0.201)	(0.201)	(0.203)

…continued

…continued (ordered probit regression on a change in wealth for men)

physical health (omitted: good / very good)						
satisfactory		-0.0220	-0.0226	-0.0402	-0.0382	-0.0376
		(0.0399)	(0.0404)	(0.0418)	(0.0417)	(0.0433)
not so good / bad		-0.0854*	-0.0808	-0.121**	-0.118**	-0.104*
		(0.0519)	(0.0519)	(0.0550)	(0.0551)	(0.0584)
education (omitted: low)						
middle		0.0744	0.0828*	0.0791	0.0775	0.0719
		(0.0500)	(0.0502)	(0.0502)	(0.0504)	(0.0509)
(higher) vocational		0.0738	0.0921	0.0896	0.0856	0.0777
		(0.0584)	(0.0588)	(0.0588)	(0.0589)	(0.0596)
high		0.144**	0.164**	0.153**	0.142**	0.138**
		(0.0649)	(0.0654)	(0.0655)	(0.0663)	(0.0676)
region (omitted: rural)						
town		-0.0141	-0.00960	-0.00933	-0.0107	-0.00997
		(0.0403)	(0.0405)	(0.0405)	(0.0409)	(0.0412)
city		-0.0494	-0.0447	-0.0457	-0.0496	-0.0421
		(0.0436)	(0.0440)	(0.0440)	(0.0467)	(0.0469)
East-Germany before 1989 (yes)		-0.122***	-0.126***	-0.126***	-0.125***	-0.107**
		(0.0388)	(0.0389)	(0.0389)	(0.0390)	(0.0441)
migration background (yes)		-0.126***	-0.138***	-0.141***	-0.140***	-0.0973*
		(0.0476)	(0.0479)	(0.0481)	(0.0482)	(0.0525)
imputed (omitted: neither in 2002 nor in 2007)						
imputed in 2002 or in 2007		0.153***	0.155***	0.157***	0.157***	0.158***
		(0.0354)	(0.0355)	(0.0357)	(0.0356)	(0.0352)
imputed in 2002 and in 2007		0.270***	0.275***	0.275***	0.276***	0.277***
		(0.0467)	(0.0473)	(0.0473)	(0.0474)	(0.0480)
number of children		-0.0644*	-0.0862**	-0.0838**	-0.0852**	-0.0835**
		(0.0337)	(0.0343)	(0.0340)	(0.0339)	(0.0341)
child(ren) aged 0-4 (yes)		0.118*	0.115*	0.0871	0.0878	0.0822
		(0.0635)	(0.0637)	(0.0678)	(0.0678)	(0.0680)
child(ren) aged 5-17 (yes)		0.0181	0.00726	0.0112	0.0124	0.00814
		(0.0586)	(0.0589)	(0.0593)	(0.0594)	(0.0597)
child(ren) older than 17 (yes)		-0.0277	-0.0381	-0.0362	-0.0376	-0.0365
		-0.0644*	-0.0862**	-0.0838**	-0.0852**	-0.0835**
permanent HH-income (omitted: 1st quintile)						
2nd quintile		0.0739	0.0661	0.0648	0.0649	0.0590
		(0.0524)	(0.0525)	(0.0525)	(0.0525)	(0.0524)
3rd quintile		0.190***	0.174***	0.172***	0.171***	0.165***
		(0.0598)	(0.0602)	(0.0601)	(0.0602)	(0.0600)

…continued

…continued (ordered probit regression on a change in wealth for men)

4th quintile		0.279***	0.251***	0.249***	0.245***	0.240***
		(0.0628)	(0.0636)	(0.0636)	(0.0636)	(0.0638)
5th quintile		0.394***	0.355***	0.350***	0.340***	0.333***
		(0.0771)	(0.0776)	(0.0779)	(0.0788)	(0.0786)
log(household size)		0.00594	0.0712	0.0750	0.0777	0.0780
		(0.0616)	(0.0643)	(0.0649)	(0.0648)	(0.0660)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		-0.0971	0.0338	0.0384	0.0372	0.0290
		(0.0651)	(0.0799)	(0.0806)	(0.0805)	(0.0807)
> 5,000 to ≤ 10,000 €		-0.271***	-0.122	-0.120	-0.123	-0.113
		(0.0875)	(0.111)	(0.112)	(0.112)	(0.113)
> 10,000 to ≤ 30,000 €		-0.0793	0.0916	0.0967	0.0927	0.0847
		(0.0933)	(0.111)	(0.112)	(0.112)	(0.112)
> 30,000 to ≤ 50,000 €		0.0486	0.213*	0.217*	0.214*	0.203*
		(0.104)	(0.121)	(0.122)	(0.122)	(0.122)
> 50,000 €		0.0751	0.235*	0.239*	0.235*	0.226*
		(0.115)	(0.130)	(0.131)	(0.131)	(0.131)
years full-time employment		-0.00350	-0.00224	-0.00252	-0.00216	-0.00214
		(0.00395)	(0.00396)	(0.00399)	(0.00401)	(0.00412)
years part-time employment		0.00274	0.00480	0.00420	0.00383	0.00542
		(0.0103)	(0.0104)	(0.0104)	(0.0104)	(0.0106)
years unemployment		-0.0116	-0.0113	-0.0118	-0.0113	-0.00993
		(0.0108)	(0.0108)	(0.0109)	(0.0109)	(0.0110)
in the labour force in 2002(yes)		-0.0641	0.0474	0.0461	0.0485	0.0405
		(0.0665)	(0.0718)	(0.0715)	(0.0714)	(0.0718)
years in the labour force between 2002 and 2007		0.0477***	0.00205	0.00415	0.00494	0.00554
		(0.0157)	(0.0189)	(0.0189)	(0.0189)	(0.0190)
self-employed (yes)		-0.261***	-0.226***	-0.222***	-0.224***	-0.230***
		(0.0633)	(0.0639)	(0.0640)	(0.0639)	(0.0639)
civil servant (yes)		-0.200***	-0.192***	-0.193***	-0.191***	-0.195***
		(0.0633)	(0.0635)	(0.0634)	(0.0633)	(0.0638)
saved continuously between 2002 and 2007 (yes)		0.191***	0.188***	0.189***	0.189***	0.182***
		(0.0320)	(0.0325)	(0.0325)	(0.0324)	(0.0329)
paid off loans continuously between 2002 and 2007 (yes)		-0.490***	-0.481***	-0.475***	-0.477***	-0.486***
		(0.0737)	(0.0737)	(0.0737)	(0.0738)	(0.0747)
worried about health		0.0270	0.0306	0.0409	0.0410	0.0421
		(0.0364)	(0.0366)	(0.0366)	(0.0367)	(0.0369)
inheritance between 2002 and 2007 (yes)		0.161***	0.164***	0.162***	0.159***	0.157***
		(0.0454)	(0.0454)	(0.0455)	(0.0454)	(0.0455)
IHS-transformed net-wealth 2002		-0.0723***	-0.0722***	-0.0726***	-0.0727***	-0.0738***
		(0.00346)	(0.00348)	(0.00349)	(0.00348)	(0.00351)

…continued

…continued (ordered probit regression on a change in wealth for men)

change in individual earnings (omitted: change up to 5%)					
earnings decreased up to 10%		0.0909	0.0874	0.0866	0.0929
		(0.0788)	(0.0788)	(0.0788)	(0.0801)
earnings decreased up to 25%		0.0648	0.0639	0.0652	0.0689
		(0.0668)	(0.0669)	(0.0670)	(0.0675)
earnings decreased up to 50%		-0.0740	-0.0728	-0.0749	-0.0691
		(0.0826)	(0.0825)	(0.0826)	(0.0825)
earnings decreased more than 50%		-0.177**	-0.177**	-0.178**	-0.169**
		(0.0691)	(0.0697)	(0.0697)	(0.0698)
earnings increased up to 10%		-0.0319	-0.0389	-0.0400	-0.0402
		(0.0866)	(0.0875)	(0.0873)	(0.0868)
earnings increased up to 25%		0.0403	0.0373	0.0378	0.0379
		(0.0673)	(0.0674)	(0.0675)	(0.0673)
earnings increased up to 50%		0.0700	0.0649	0.0649	0.0671
		(0.0751)	(0.0753)	(0.0754)	(0.0752)
earnings increased more than 50%		0.0851	0.0782	0.0780	0.0792
		0.0909	0.0874	0.0866	0.0929
change in household income (omitted: change up to 5%)					
household income decreased up to 10%		-0.0382	-0.0438	-0.0431	-0.0526
		(0.0643)	(0.0643)	(0.0643)	(0.0646)
household income decreased up to 25%		-0.0602	-0.0649	-0.0640	-0.0661
		(0.0505)	(0.0506)	(0.0506)	(0.0507)
household income decreased up to 50%		-0.00976	-0.00915	-0.00852	-0.0209
		(0.0562)	(0.0562)	(0.0562)	(0.0566)
household income decreased more than 50%		-0.110	-0.112	-0.113*	-0.112
		(0.0686)	(0.0686)	(0.0686)	(0.0691)
household income increased up to 10%		0.0914	0.0888	0.0906	0.0799
		(0.0654)	(0.0654)	(0.0655)	(0.0658)
household income increased up to 25%		0.0699	0.0702	0.0716	0.0726
		(0.0553)	(0.0554)	(0.0553)	(0.0559)
household income increased up to 50%		0.178***	0.179***	0.181***	0.181***
		(0.0614)	(0.0614)	(0.0613)	(0.0614)
household income increased more than 50%		0.176***	0.176***	0.175**	0.168**
		(0.0680)	(0.0682)	(0.0681)	(0.0688)
birth (yes)			0.0999	0.0994	0.0906
			(0.0822)	(0.0824)	(0.0811)
retired (yes)			0.121	0.123	0.121
			(0.0915)	(0.0914)	(0.0925)
health worsened (yes)			-0.0858**	-0.0834**	-0.0793**
			(0.0365)	(0.0364)	(0.0370)

…continued

…continued (ordered probit regression on a change in wealth for men)

father highly educated (yes)					0.0798	0.0749
					(0.0531)	(0.0534)
mother highly educated (yes)					-0.00840	-0.00649
					(0.0746)	(0.0755)
grew up in rural area (yes)					-0.00351	-0.00956
					(0.0317)	(0.0321)
religion (omitted: catholic)						
evangelical						-0.0144
						(0.0411)
other Christian religious organisation						-0.124
						(0.103)
Islamic religious organisation						-0.233**
						(0.102)
other religious organisation						0.101
						(0.353)
non-denominational						-0.0485
						(0.0454)
risk						0.00376
						(0.00675)
life satisfaction						0.00398
						(0.0104)
Constant (cut 1)	-0.806***	-0.992***	-0.837***	-0.828***	-0.820***	-0.838***
	(0.0239)	(0.137)	(0.145)	(0.151)	(0.153)	(0.179)
Constant (cut 2)	-0.532***	-0.701***	-0.544***	-0.534***	-0.526***	-0.544***
	(0.0203)	(0.138)	(0.146)	(0.153)	(0.155)	(0.181)
Constant (cut 3)	-0.356***	-0.511***	-0.352**	-0.342**	-0.334**	-0.351*
	(0.0198)	(0.138)	(0.147)	(0.153)	(0.155)	(0.181)
Constant (cut 4)	-0.300***	-0.449***	-0.290**	-0.281*	-0.272*	-0.289
	(0.0197)	(0.138)	(0.147)	(0.153)	(0.155)	(0.182)
Constant (cut 5)	-0.0650***	-0.196	-0.0348	-0.0250	-0.0168	-0.0363
	(0.0195)	(0.139)	(0.148)	(0.154)	(0.156)	(0.183)
Constant (cut 6)	0.351***	0.257*	0.421***	0.432***	0.440***	0.424**
	(0.0205)	(0.138)	(0.148)	(0.154)	(0.156)	(0.182)
Pseudo-R^2	0.32	4.45	4.79	4.84	4.86	4.91(*
observations	6,415	6,415	6,415	6,415	6,415	6,371

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other pseudo-R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 12: Coefficients of ordered probit regression on the change in net-wealth between 2002 and 2007 for women

Control variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
marital change (omitted: married once → married once)						
married once → divorced once	-0.0825	-0.155	-0.138	-0.139	-0.139	-0.133
	(0.110)	(0.115)	(0.116)	(0.116)	(0.116)	(0.117)
married once → widowed	0.0676	0.265**	0.301***	0.298***	0.298***	0.303***
	(0.106)	(0.112)	(0.114)	(0.114)	(0.114)	(0.114)
married more than once → married more than once	-0.0325	-0.0358	-0.0296	-0.0284	-0.0285	-0.0179
	(0.0627)	(0.0633)	(0.0638)	(0.0639)	(0.0642)	(0.0640)
never married → never married	0.216***	0.0231	0.0357	0.0450	0.0447	0.0371
	(0.0397)	(0.0657)	(0.0668)	(0.0667)	(0.0669)	(0.0690)
never married → married	0.391***	0.0868	0.0839	0.0544	0.0543	0.0559
	(0.0811)	(0.113)	(0.112)	(0.116)	(0.116)	(0.120)
divorced once → divorced once	0.0152	0.00980	0.0261	0.0269	0.0272	0.0398
	(0.0650)	(0.0730)	(0.0728)	(0.0729)	(0.0730)	(0.0730)
divorced once → remarried	-0.0362	-0.244	-0.254	-0.256	-0.256	-0.230
	(0.179)	(0.198)	(0.201)	(0.200)	(0.200)	(0.207)
divorced more than once → divorced more than once	-0.242*	-0.378**	-0.342**	-0.344**	-0.343**	-0.351**
	(0.144)	(0.153)	(0.154)	(0.154)	(0.154)	(0.156)
widowed → widowed	-0.170***	-0.0262	-0.0159	-0.0161	-0.0165	-0.0124
	(0.0505)	(0.0629)	(0.0636)	(0.0636)	(0.0636)	(0.0638)
age class (omitted: aged 17-25)						
aged 26-30		0.111	0.0967	0.0942	0.0950	0.0918
		(0.0913)	(0.0920)	(0.0920)	(0.0921)	(0.0934)
aged 31-35		0.140*	0.139*	0.149*	0.152*	0.172**
		(0.0813)	(0.0816)	(0.0816)	(0.0820)	(0.0828)
aged 36-40		0.0602	0.0537	0.0730	0.0766	0.0727
		(0.0912)	(0.0909)	(0.0903)	(0.0911)	(0.0929)
aged 41-45		0.115	0.113	0.138	0.141	0.149
		(0.101)	(0.101)	(0.101)	(0.101)	(0.102)
aged 46-50		0.128	0.133	0.162	0.165	0.168
		(0.110)	(0.109)	(0.108)	(0.109)	(0.112)
aged 51-55		0.0983	0.119	0.151	0.154	0.149
		(0.112)	(0.111)	(0.112)	(0.112)	(0.114)
aged 56-60		0.114	0.142	0.173	0.175	0.169
		(0.120)	(0.119)	(0.119)	(0.120)	(0.122)
aged 61-65		0.152	0.173	0.195	0.197	0.198
		(0.125)	(0.124)	(0.139)	(0.140)	(0.142)
older than 65		0.209*	0.230*	0.266**	0.269**	0.261**
		(0.119)	(0.120)	(0.120)	(0.120)	(0.122)

…continued

…continued (ordered probit regression on a change in wealth for women)

physical health (omitted: good / very good)						
satisfactory		-0.0202	-0.0120	-0.0215	-0.0213	-0.0102
		(0.0385)	(0.0388)	(0.0401)	(0.0402)	(0.0418)
not so good / bad		-0.0892*	-0.0885*	-0.111**	-0.111**	-0.0849
		(0.0456)	(0.0457)	(0.0496)	(0.0497)	(0.0547)
education (omitted: low)						
middle		0.0964**	0.0986***	0.0955**	0.0956**	0.0882**
		(0.0378)	(0.0379)	(0.0379)	(0.0380)	(0.0383)
(higher) vocational		0.0679	0.0763	0.0726	0.0716	0.0636
		(0.0536)	(0.0539)	(0.0539)	(0.0543)	(0.0549)
high		0.184***	0.194***	0.186***	0.182***	0.179***
		(0.0541)	(0.0545)	(0.0547)	(0.0560)	(0.0569)
region (omitted: rural)						
town		0.0158	0.0165	0.0152	0.0161	0.0208
		(0.0374)	(0.0374)	(0.0374)	(0.0377)	(0.0380)
city		-0.0155	-0.0137	-0.0145	-0.0118	-0.00630
		(0.0396)	(0.0396)	(0.0396)	(0.0422)	(0.0427)
East-Germany before 1989 (yes)		-0.0878**	-0.0970**	-0.0993**	-0.0989**	-0.0744
		(0.0401)	(0.0403)	(0.0404)	(0.0402)	(0.0452)
migration background (yes)		-0.115***	-0.117***	-0.118***	-0.119***	-0.117**
		(0.0433)	(0.0435)	(0.0435)	(0.0436)	(0.0484)
imputed (omitted: neither in 2002 nor in 2007)						
imputed in 2002 or in 2007		0.116***	0.115***	0.115***	0.115***	0.127***
		(0.0339)	(0.0340)	(0.0341)	(0.0341)	(0.0350)
imputed in 2002 and in 2007		0.335***	0.339***	0.340***	0.340***	0.345***
		(0.0401)	(0.0402)	(0.0402)	(0.0402)	(0.0410)
number of children		-0.00830	-0.0276	-0.0266	-0.0272	-0.0302
		(0.0319)	(0.0319)	(0.0319)	(0.0320)	(0.0331)
child(ren) aged 0-4 (yes)		0.0605	0.0497	0.0289	0.0301	0.0235
		(0.0605)	(0.0612)	(0.0643)	(0.0645)	(0.0660)
child(ren) aged 5-17 (yes)		-0.0337	-0.0455	-0.0415	-0.0400	-0.0370
		(0.0585)	(0.0592)	(0.0594)	(0.0596)	(0.0605)
child(ren) older than 17 (yes)		-0.0830*	-0.0896*	-0.0879*	-0.0876*	-0.0857*
		(0.0491)	(0.0493)	(0.0494)	(0.0494)	(0.0495)
permanent HH-income (omitted: 1st quintile)						
2nd quintile		0.162***	0.157***	0.155***	0.156***	0.141***
		(0.0454)	(0.0455)	(0.0455)	(0.0456)	(0.0466)
3rd quintile		0.312***	0.293***	0.292***	0.292***	0.273***
		(0.0526)	(0.0530)	(0.0530)	(0.0531)	(0.0531)

…continued

…continued (ordered probit regression on a change in wealth for women)

4th quintile		0.406***	0.375***	0.374***	0.374***	0.351***
		(0.0588)	(0.0586)	(0.0587)	(0.0588)	(0.0607)
5th quintile		0.427***	0.389***	0.386***	0.385***	0.351***
		(0.0622)	(0.0625)	(0.0627)	(0.0634)	(0.0641)
log(household size)		-0.0782	-0.000906	-0.000734	-0.000541	0.0225
		(0.0584)	(0.0603)	(0.0603)	(0.0604)	(0.0607)
permanent earnings (omitted: zero)						
> 0 to ≤ 5,000 €		-0.144**	-0.139*	-0.146*	-0.148**	-0.164**
		(0.0576)	(0.0750)	(0.0750)	(0.0751)	(0.0758)
> 5,000 to ≤ 10,000 €		-0.0164	0.0117	0.00286	0.000782	-0.00925
		(0.0772)	(0.0966)	(0.0966)	(0.0967)	(0.0973)
> 10,000 to ≤ 30,000 €		-0.114	-0.0889	-0.0991	-0.102	-0.114
		(0.0817)	(0.0959)	(0.0962)	(0.0963)	(0.0974)
> 30,000 to ≤ 50,000 €		-0.0495	-0.0272	-0.0342	-0.0363	-0.0466
		(0.0930)	(0.104)	(0.104)	(0.104)	(0.106)
> 50,000 €		0.000195	0.00724	-0.000365	-0.00345	-0.00897
		(0.122)	(0.133)	(0.133)	(0.133)	(0.134)
years full-time employment		0.000783	0.00148	0.00154	0.00158	0.00178
		(0.00177)	(0.00179)	(0.00181)	(0.00182)	(0.00183)
years part-time employment		0.00361	0.00392*	0.00389*	0.00388*	0.00361
		(0.00232)	(0.00232)	(0.00233)	(0.00233)	(0.00236)
years unemployment		-0.00714	-0.00842	-0.00815	-0.00820	-0.00693
		(0.00865)	(0.00866)	(0.00865)	(0.00863)	(0.00876)
in the labour force in 2002(yes)		-0.0715	-0.0130	-0.0198	-0.0207	-0.0140
		(0.0595)	(0.0660)	(0.0657)	(0.0659)	(0.0663)
years in the labour force between 2002 and 2007		0.0473***	0.0212	0.0242	0.0248	0.0233
		(0.0141)	(0.0173)	(0.0173)	(0.0175)	(0.0179)
self-employed (yes)		-0.206***	-0.193***	-0.195***	-0.198***	-0.197***
		(0.0740)	(0.0747)	(0.0746)	(0.0750)	(0.0751)
civil servant (yes)		0.119	0.118	0.117	0.117	0.125
		(0.0803)	(0.0802)	(0.0804)	(0.0805)	(0.0810)
saved continuously between 2002 and 2007 (yes)		0.253***	0.251***	0.251***	0.252***	0.236***
		(0.0323)	(0.0325)	(0.0325)	(0.0324)	(0.0327)
paid off loans continuously between 2002 and 2007 (yes)		-0.561***	-0.555***	-0.552***	-0.551***	-0.554***
		(0.0765)	(0.0759)	(0.0757)	(0.0759)	(0.0764)
worried about health		-0.0296	-0.0325	-0.0274	-0.0276	-0.0353
		(0.0368)	(0.0373)	(0.0377)	(0.0377)	(0.0374)
inheritance between 2002 and 2007 (yes)		0.305***	0.301***	0.301***	0.301***	0.299***
		(0.0432)	(0.0433)	(0.0433)	(0.0434)	(0.0436)
IHS-transformed net-wealth 2002		-0.0812***	-0.0811***	-0.0812***	-0.0813***	-0.0830***
		(0.00321)	(0.00321)	(0.00321)	(0.00321)	(0.00323)

…continued

…continued (ordered probit regression on a change in wealth for women)

change in individual earnings (omitted: change up to 5%)					
earnings decreased up to 10%		0.156	0.156	0.157	0.160
		(0.104)	(0.104)	(0.103)	(0.104)
earnings decreased up to 25%		0.110	0.110	0.109	0.1000
		(0.0767)	(0.0768)	(0.0768)	(0.0773)
earnings decreased up to 50%		0.0514	0.0508	0.0521	0.0422
		(0.0853)	(0.0855)	(0.0855)	(0.0858)
earnings decreased more than 50%		-0.00820	-0.00968	-0.00874	-0.00681
		(0.0700)	(0.0702)	(0.0702)	(0.0713)
earnings increased up to 10%		0.114	0.116	0.117	0.108
		(0.100)	(0.0999)	(0.0999)	(0.101)
earnings increased up to 25%		0.144*	0.150*	0.150*	0.138
		(0.0842)	(0.0842)	(0.0841)	(0.0862)
earnings increased up to 50%		0.125	0.129	0.129	0.119
		(0.0834)	(0.0835)	(0.0835)	(0.0838)
earnings increased more than 50%		0.0779	0.0843	0.0839	0.0770
		0.156	0.156	0.157	0.160
change in household income (omitted: change up to 5%)					
household income decreased up to 10%		(0.0681)	(0.0690)	(0.0691)	(0.0688)
		-0.0943	-0.0973	-0.0979	-0.108*
household income decreased up to 25%		(0.0627)	(0.0626)	(0.0625)	(0.0621)
		-0.0248	-0.0243	-0.0242	-0.0249
household income decreased up to 50%		(0.0489)	(0.0489)	(0.0489)	(0.0491)
		-0.0444	-0.0433	-0.0432	-0.0475
household income decreased more than 50%		(0.0522)	(0.0521)	(0.0521)	(0.0522)
		-0.183***	-0.179***	-0.179***	-0.180***
household income increased up to 10%		(0.0610)	(0.0609)	(0.0607)	(0.0613)
		0.0253	0.0257	0.0256	0.0222
household income increased up to 25%		(0.0629)	(0.0629)	(0.0629)	(0.0634)
		0.0218	0.0208	0.0211	0.0204
household income increased up to 50%		(0.0519)	(0.0518)	(0.0518)	(0.0524)
		0.136**	0.133**	0.133**	0.135**
household income increased more than 50%		(0.0605)	(0.0606)	(0.0605)	(0.0617)
		0.140**	0.137**	0.137**	0.136**
birth (yes)			0.0931	0.0936	0.0785
			(0.0694)	(0.0693)	(0.0707)
retired (yes)			0.0121	0.0129	0.0136
			(0.0804)	(0.0803)	(0.0809)
health worsened (yes)			-0.0507	-0.0502	-0.0460
			(0.0357)	(0.0357)	(0.0367)

…continued

…continued (ordered probit regression on a change in wealth for women)

father highly educated (yes)					0.00127	0.00701
					(0.0507)	(0.0516)
mother highly educated (yes)					0.0376	0.0210
					(0.0666)	(0.0670)
grew up in rural area (yes)					0.00970	0.00534
					(0.0336)	(0.0334)
religion (omitted: catholic)						
evangelical						-0.0742**
						(0.0343)
other Christian religious organisation						-0.0637
						(0.0950)
Islamic religious organisation						-0.122
						(0.101)
other religious organisation						0.575
						(0.415)
non-denominational						-0.0891*
						(0.0462)
risk						0.0242***
						(0.00814)
life satisfaction						0.0125
						(0.0102)
Constant (cut 1)	-0.763***	-1.015***	-0.956***	-0.945***	-0.934***	-0.882***
	(0.0203)	(0.114)	(0.119)	(0.120)	(0.126)	(0.150)
Constant (cut 2)	-0.507***	-0.737***	-0.677***	-0.666***	-0.654***	-0.600***
	(0.0206)	(0.114)	(0.120)	(0.120)	(0.126)	(0.151)
Constant (cut 3)	-0.345***	-0.557***	-0.496***	-0.485***	-0.473***	-0.418***
	(0.0210)	(0.114)	(0.120)	(0.120)	(0.126)	(0.150)
Constant (cut 4)	-0.299***	-0.505***	-0.443***	-0.432***	-0.421***	-0.365**
	(0.0209)	(0.114)	(0.120)	(0.120)	(0.126)	(0.150)
Constant (cut 5)	-0.0227	-0.205*	-0.141	-0.130	-0.119	-0.0652
	(0.0204)	(0.114)	(0.120)	(0.120)	(0.127)	(0.150)
Constant (cut 6)	0.360***	0.212*	0.277**	0.288**	0.299**	0.357**
	(0.0196)	(0.114)	(0.120)	(0.120)	(0.126)	(0.150)
Pseudo-R^2	0.36	5.05	5.28	5.29	5.30	5.41(*
observations	7,075	7,075	7,075	7,075	7,075	6,979

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

(*not comparable to other pseudo-R^2 because of different sample size
Source: SOEP, author's calculations.

Table A 13: Distribution of control variables for the OLS regression on IHS-transformed net-wealth in 2007

	MEN				WOMEN			
control variables	**mean**	**std. dev.**	**min**	**max**	**mean**	**std. dev.**	**min**	**max**
model (1) to model (4)								
marital history								
ever married	0.647	0.478	0	1	0.589	0.492	0	1
remarried after one divorce	0.067	0.250	0	1	0.065	0.247	0	1
remarried after more than one divorce	0.010	0.100	0	1	0.008	0.092	0	1
remarried after widowhood	0.010	0.100	0	1	0.006	0.077	0	1
never married	0.170	0.376	0	1	0.139	0.346	0	1
divorced once	0.053	0.224	0	1	0.074	0.261	0	1
divorced more than once	0.010	0.098	0	1	0.013	0.115	0	1
widowed	0.033	0.178	0	1	0.106	0.307	0	1
age	52.916	15.633	23	97	52.963	16.312	23	98
squared age	3,044.398	1,693.133	529	9,409	3,071.133	1,789.802	529	9,604
physical health								
good / very good	0.446	0.497	0	1	0.427	0.495	0	1
satisfactory	0.361	0.480	0	1	0.361	0.480	0	1
not so good / bad	0.192	0.394	0	1	0.212	0.409	0	1
education								
low	0.119	0.324	0	1	0.197	0.398	0	1
middle	0.514	0.500	0	1	0.508	0.500	0	1
(higher) vocational	0.146	0.353	0	1	0.126	0.332	0	1
high	0.222	0.415	0	1	0.168	0.374	0	1
region								
rural	0.237	0.425	0	1	0.238	0.426	0	1

…continued

… continued (distribution of control variables for OLS regression on IHS-transformed net-wealth 2007)

town	0.479	0.500	0	1	0.473	0.499	0	1
city	0.284	0.451			0.289	0.454		
East-Germany before 1989	0.285	0.451	0	1	0.293	0.455	0	1
migration background	0.148	0.355	0	1	0.142	0.349	0	1
imputed	0.317	0.466	0	1	0.326	0.469	0	1
number of children	0.441	0.846	0	8	0.453	0.845	0	8
squared number of children	0.909	2.538	0	64	0.919	2.515	0	64
child(ren) aged 0-4	0.067	0.250	0	1	0.070	0.255	0	1
child(ren) aged 5-17	0.234	0.423	0	1	0.236	0.425	0	1
child(ren) older than 17	0.400	0.490	0	1	0.616	0.486	0	1
permanent HH-income								
1st quintile	0.181	0.385	0	1	0.251	0.433	0	1
2nd quintile	0.220	0.414	0	1	0.221	0.415	0	1
3rd quintile	0.225	0.418	0	1	0.205	0.404	0	1
4th quintile	0.216	0.411	0	1	0.190	0.392	0	1
5th quintile	0.158	0.365	0	1	0.133	0.339	0	1
log(household size)	0.861	0.472	0	2.565	0.809	0.493	0	2.565
permanent earnings								
0	0.281	0.449	0	1	0.386	0.487	0	1
> 0 to ≤ 5,000 €	0.079	0.270	0	1	0.158	0.365	0	1
> 5,000 to ≤ 10,000 €	0.040	0.196	0	1	0.071	0.256	0	1
> 10,000 to ≤ 30,000 €	0.226	0.418	0	1	0.269	0.443	0	1
> 30,000 to ≤ 50,000 €	0.235	0.424	0	1	0.098	0.297	0	1
> 50,000 €	0.139	0.346	0	1	0.018	0.134	0	1
years full-time employment	26.091	12.990	0	59.3	14.352	12.416	0	57
years part-time employment	0.688	2.069	0	41	5.475	7.635	0	45.8

…continued

… continued (distribution of control variables for OLS regression on IHS-transformed net-wealth 2007)

years unemployment	0.973	2.172	27	0	0.996	2.263	0	38
in the labour force	0.620	0.486	0	1	0.507	0.500	0	1
self-employed	0.079	0.269	0	1	0.036	0.186	0	1
civil servant	0.050	0.218	0	1	0.027	0.161	0	1
saved the last three years	0.494	0.500	0	1	0.476	0.499	0	1
inheritance before 1992	0.07	0.26	0	1	0.057	0.231	0	1
inheritance between 1992 and 2002	0.063	0.243	0	1	0.068	0.253	0	1
inheritance between 2002 and 2007	0.125	0.330	0	1	0.125	0.331	0	1
father highly educated	0.093	0.290	0	1	0.099	0.298	0	1
mother highly educated	0.046	0.210	0	1	0.045	0.208	0	1
grew up in rural area	0.610	0.488	0	1	0.611	0.487	0	1
observations	5,693				6,386			
model (5)(*								
religion								
catholic	0.277	0.447	0	1	0.288	0.453	0	1
evangelical	0.320	0.467	0	1	0.377	0.485	0	1
other Christian religious organisation	0.025	0.156	0	1	0.027	0.163	0	1
Islamic religious organisation	0.033	0.178	0	1	0.025	0.157	0	1
other religious organisation	0.001	0.037	0	1	0.001	0.038	0	1
non-denominational	0.344	0.475	0	1	0.280	0.449	0	1
observations	5,685				6,371			
model (6)(*								
risk	2.741	2.304	0	10	1.893	1.917	0	10
life satisfaction	6.758	1.782	0	10	6.779	1.783	0	10
IHS-transformed net-wealth 2002	8.445	6.253	-13.190	16.044	7.867	6.092	-13.162	16.044
observations	5,635				6,262			

(* As the distribution of the previous control variables does not differ to a great extent between the models, they are not listed again.

Source: SOEP 2007.

Table A 14: Distribution of control variables for the OLS regression on the change in IHS-transformed net-wealth between 2002 and 2007

	MEN				WOMEN			
control variables	**mean**	**std. dev.**	**min**	**max**	**mean**	**std. dev.**	**min**	**max**
model (1) to model (5)								
marital change								
married once → married once	0.613	0.487	0	1	0.565	0.496	0	1
married once → divorced once	0.014	0.118	0	1	0.015	0.122	0	1
married once → widowed	0.008	0.090	0	1	0.019	0.137	0	1
married more than once → married more	0.074	0.262	0	1	0.067	0.250	0	1
never married → never married	0.184	0.387	0	1	0.147	0.355	0	1
never married → married	0.032	0.175	0	1	0.036	0.186	0	1
divorced once → divorced once	0.038	0.192	0	1	0.055	0.227	0	1
divorced once → remarried	0.009	0.093	0	1	0.008	0.090	0	1
divorced more than once → divorced	0.005	0.070	0	1	0.009	0.095	0	1
widowed → widowed	0.023	0.149	0	1	0.079	0.269	0	1
age class								
aged 17-25	0.111	0.314	0	1	0.109	0.312	0	1
aged 26-30	0.042	0.201	0	1	0.051	0.221	0	1
aged 31-35	0.082	0.275	0	1	0.086	0.280	0	1
aged 36-40	0.119	0.324	0	1	0.118	0.322	0	1
aged 41-45	0.112	0.316	0	1	0.114	0.318	0	1
aged 46-50	0.099	0.299	0	1	0.100	0.300	0	1
aged 51-56	0.097	0.296	0	1	0.093	0.290	0	1

… continued

… continued (distribution of control variables for OLS regression on the change in IHS-transformed net-wealth)

aged 57-60	0.087	0.281	0	1	0.076	0.266	0	1
aged 61-65	0.103	0.304	0	1	0.097	0.297	0	1
older than 65	0.147	0.354	0	1	0.155	0.362	0	1
physical health								
good / very good	0.534	0.499	0	1	0.498	0.500	0	1
satisfactory	0.333	0.471	0	1	0.343	0.475	0	1
not so good / bad	0.133	0.339	0	1	0.159	0.366	0	1
education								
low	0.156	0.363	0	1	0.225	0.417	0	1
middle	0.468	0.499	0	1	0.481	0.500	0	1
(higher) vocational	0.132	0.338	0	1	0.122	0.327	0	1
high	0.245	0.430	0	1	0.172	0.378	0	1
region								
rural	0.238	0.426	0	1	0.237	0.425	0	1
town	0.459	0.498	0	1	0.458	0.498	0	1
city	0.303	0.460	0	1	0.305	0.461	0	1
East-Germany before 1989	0.268	0.443	0	1	0.277	0.447	0	1
migration background	0.143	0.350	0	1	0.137	0.344	0	1
imputed or edited								
not	0.502	0.500	0	1	0.487	0.500	0	1
imputed in 2002 or 2007	0.345	0.475	0	1	0.352	0.478	0	1
imputed in 2002 and 2007	0.153	0.360	0	1	0.162	0.368	0	1
number of children	0.589	0.936	0	8	0.593	0.939	0	8
child(ren) aged 0-4	0.096	0.295	0	1	0.098	0.298	0	1
child(ren) aged 5-17	0.260	0.438	0	1	0.269	0.444	0	1
child(ren) older than 17	0.329	0.470	0	1	0.523	0.500	0	1

… continued

… continued (distribution of control variables for OLS regression on the change in IHS-transformed net-wealth)

permanent HH-income								
1st quintile	0.169	0.375	0	1	0.230	0.421	0	1
2nd quintile	0.197	0.398	0	1	0.201	0.400	0	1
3rd quintile	0.205	0.404	0	1	0.189	0.392	0	1
4th quintile	0.210	0.407	0	1	0.186	0.389	0	1
5th quintile	0.219	0.414	0	1	0.194	0.396	0	1
log(household size)	0.943	0.467	0	2.485	0.907	0.485	0	2.485
permanent earnings								
0	0.205	0.404	0	1	0.313	0.464	0	1
> 0 to ≤ 5,000 €	0.105	0.306	0	1	0.190	0.392	0	1
> 5,000 to ≤ 10,000 €	0.056	0.230	0	1	0.088	0.283	0	1
> 10,000 to ≤ 30,000 €	0.230	0.421	0	1	0.274	0.446	0	1
> 30,000 to ≤ 50,000 €	0.227	0.419	0	1	0.107	0.309	0	1
> 50,000 €	0.177	0.381	0	1	0.029	0.169	0	1
years full-time employment	22.787	13.801	0	56	12.922	12.052	0	52
years part-time employment	0.432	1.685	0	38	4.159	6.962	0	42
years unemployment	0.557	1.521	0	22	0.635	1.694	0	38
in the labour force in 2002	0.661	0.473	0	1	0.520	0.500	0	1
years in the labour force between 2002 and	3.831	2.558	0	6	3.119	2.645	0	6
self-employed	0.080	0.271	0	1	0.038	0.190	0	1
civil servant	0.062	0.241	0	1	0.037	0.190	0	1
saved continuously between 2002 and 2007	0.402	0.490	0	1	0.379	0.485	0	1
paid off loans continuously between 2002	0.053	0.223	0	1	0.044	0.206	0	1
worried about health	0.632	0.482	0	1	0.673	0.469	0	1
inheritance between 2002 and 2007	0.138	0.344	0	1	0.136	0.343	0	1
IHS-transformed net-wealth 2002	8.609	6.209	-13.785	15.873	8.111	6.031	-13.953	15.873

… continued

… continued (distribution of control variables for OLS regression on the change in IHS-transformed net-wealth)

change in individual earnings								
change up to 5%	0.327	0.469	0	1	0.400	0.490	0	1
earnings decreased up to 10%	0.052	0.222	0	1	0.032	0.177	0	1
earnings decreased up to 25%	0.074	0.262	0	1	0.058	0.234	0	1
earnings decreased up to 50%	0.056	0.229	0	1	0.049	0.215	0	1
earnings decreased more than 50%	0.160	0.366	0	1	0.152	0.359	0	1
earnings increased up to 10%	0.046	0.210	0	1	0.031	0.172	0	1
earnings increased up to 25%	0.088	0.283	0	1	0.058	0.234	0	1
earnings increased up to 50%	0.064	0.245	0	1	0.041	0.199	0	1
earnings increased more than 50%	0.134	0.340	0	1	0.179	0.383	0	1
change in household income								
change up to 5%	0.171	0.377	0	1	0.166	0.372	0	1
household income decreased up to 10%	0.082	0.275	0	1	0.074	0.263	0	1
household income decreased up to 25%	0.150	0.358	0	1	0.148	0.355	0	1
household income decreased up to 50%	0.139	0.346	0	1	0.139	0.346	0	1
household income decreased more than	0.069	0.254	0	1	0.088	0.284	0	1
household income increased up to 10%	0.070	0.255	0	1	0.067	0.250	0	1
household income increased up to 25%	0.136	0.342	0	1	0.127	0.333	0	1
household income increased up to 50%	0.100	0.300	0	1	0.097	0.296	0	1
household income increased more than	0.083	0.276	0	1	0.093	0.290	0	1
birth	0.076	0.265	0	1	0.083	0.276	0	1
retired	0.127	0.333	0	1	0.114	0.318	0	1
health worsened	0.240	0.427	0	1	0.240	0.427	0	1
father highly educated	0.116	0.321	0	1	0.121	0.326	0	1
mother highly educated	0.059	0.236	0	1	0.058	0.234	0	1
grew up in rural area	0.597	0.491	0	1	0.603	0.489	0	1

… continued

… continued (distribution of control variables for OLS regression on the change in IHS-transformed net-wealth)

observations	6,419				7,077			
model (6)(*								
religion	0.280	0.449	0	1	0.292	0.455	0	1
catholic	0.324	0.468	0	1	0.378	0.485	0	1
evangelical	0.022	0.148	0	1	0.025	0.157	0	1
other Christian religious organisation	0.030	0.171	0	1	0.023	0.149	0	1
Islamic religious organisation	0.002	0.042	0	1	0.001	0.038	0	1
other religious organisation	0.343	0.475	0	1	0.280	0.449	0	1
non-denominational	2.855	2.338	0	10	1.950	1.937	0	10
risk	7.126	1.647	0	10	7.115	1.689	0	10
life satisfaction	0.280	0.449	0	1	0.292	0.455	0	1
observations	6,374				6,981			

(* As the distribution of the previous control variables does not differ to a great extent between the models, they are not listed again.

Source: SOEP 2007.

Table A 15: Calculation of the propensity scores

Control variables	MEN	WOMEN
age in 2002	-0.0729*** (0.0261)	-0.0721*** (0.0187)
log (permanent household income)	-0.302 (0.189)	-1.111*** (0.160)
log (permanent individual earnings)	0.0307 (0.0376)	0.0655*** (0.0235)
educational attainment 2002	0.0418 (0.0780)	0.0102 (0.0669)
log (length of marriage)	0.109 (0.184)	0.338* (0.191)
log (age at marriage)	0.982* (0.541)	1.180** (0.510)
region (omitted: rural)		
town	0.00585 (0.155)	0.132 (0.138)
city	0.105 (0.170)	-0.0313 (0.167)
East-Germany before 1989 (yes)	-0.0540 (0.169)	-0.183 (0.175)
migration background (yes)	-0.303 (0.216)	-0.636*** (0.205)
physical health (omitted: good / very good)		
satisfactory	-0.247* (0.135)	0.00215 (0.120)
not so good / bad	-0.180 (0.192)	-0.0262 (0.180)
mental health	-0.0145** (0.00648)	-0.0157*** (0.00551)
number of children	-0.403*** (0.108)	0.203** (0.0878)
child(ren) aged 0-4 (yes)	-0.0949 (0.183)	-0.00877 (0.164)
child(ren) aged 5-17 (yes)	0.440** (0.187)	-0.159 (0.176)
child(ren) older than 17 (yes)	-0.199 (0.164)	0.327* (0.181)
years of working experience 2002	0.0238 (0.0212)	0.00548 (0.0139)
years unemployment	0.0446 (0.0413)	0.0295 (0.0315)
share of years worked during marriage	-0.295 (0.651)	0.0703 (0.326)
religion (omitted: catholic)		
evangelical	-0.0288 (0.160)	0.267* (0.144)
other Christian religious organisation(*		-0.158 (0.454)
other religious organisation	0.0810 (0.341)	0.769*** (0.280)
non-denominational	0.205 (0.167)	0.367** (0.182)
life satisfaction 2002	-0.138*** (0.0403)	-0.0760** (0.0349)

… continued

… continued (calculation of the propensity scores)

inheritance during marriage (yes)	0.114 (0.173)	-0.0305 (0.162)
father highly educated (yes)	0.0936 (0.217)	0.0970 (0.192)
mother highly educated (yes)	0.00352 (0.285)	0.446* (0.237)
grew up in rural area (yes)	-0.241* (0.124)	-0.115 (0.116)
partner age 2002		
partner education 2002		
partner physical health 2002		
constant	2.292 (2.529)	8.220*** (2.128)
pseudo R^2	21.29	23.97
observations	3,530	3,543

Standard errors in parentheses
*** p<0.01. ** p<0.05. * p<0.1

Source: SOEP, author's calculations.

Table A 16: Balancing tests for 10 nearest neighbours within a 0.05 caliper for men

Control variables	sample	Mean treated	Mean control	% reduction bias %bias	% reduction bias |bias|	t-test t	t-test p>|t|
age in 2002	Unmatched	40.743	51.802	-100.7		-7.11	0.000
	Matched	40.736	40.788	-0.5	99.5	-0.04	0.971
log (permanent household income)	Unmatched	10.317	10.405	-18.7		-1.72	0.086
	Matched	10.34	10.371	-6.6	64.6	-0.44	0.659
log (permanent individual earnings)	Unmatched	9.7129	7.8767	53.8		3.64	0.000
	Matched	9.7477	9.8384	-2.7	95.1	-0.27	0.785
educational attainment 2002	Unmatched	1.3919	1.498	-11.4		-0.93	0.353
	Matched	1.4028	1.487	-9.0	20.6	-0.56	0.577
log (length of marriage)	Unmatched	2.3241	3.002	-84.6		-7.25	0.000
	Matched	2.3119	2.3092	0.3	99.6	0.02	0.984
log (age at marriage)	Unmatched	3.2892	3.2549	16.7		1.61	0.108
	Matched	3.2913	3.2983	-3.4	79.5	-0.20	0.841
region (omitted: rural)							
town	Unmatched	.39189	0.48409	-18.6		-1.57	0.116
	Matched	.38889	0.37247	3.3	82.2	0.20	0.841
city	Unmatched	.33784	0.2581	17.4		1.55	0.122
	Matched	.34722	0.35665	-2.1	88.2	-0.12	0.907
East-Germany before 1989 (yes)	Unmatched	37838	.26389	24.6		2.21	.027
	Matched	.36111	0.37832	-3.7	85.0	-0.21	0.832
migration background (yes)	Unmatched	.10811	0.15885	-14.9		-1.18	0.236
	Matched	.11111	0.1	3.3	78.1	0.22	0.830
physical health (omitted: good / very good)							
satisfactory	Unmatched	.27027	0.37674	-22.8		-1.87	0.061
	Matched	.27778	0.26404	2.9	87.1	0.18	0.854
not so good / bad	Unmatched	.16216	0.15451	2.1		0.18	0.857
	Matched	.15278	0.15407	-0.4	83.1	-0.02	0.983
mental health	Unmatched	45.832	51.465	-55.3		-5.13	0.000
	Matched	46.514	45.886	6.2	88.9	0.37	0.714
number of children	Unmatched	.77027	0.73785	3.3		0.27	0.787
	Matched	.79167	0.9004	-11.1	35.3	-0.73	0.465
child(ren) aged 0-4 (yes)	Unmatched	.16216	0.12326	11.1		1.00	0.315
	Matched	.16667	0.15729	2.7	75.9	0.15	0.880
child(ren) aged 5-17 (yes)	Unmatched	.52703	0.35966	34.1		2.96	0.003
	Matched	.52778	0.57912	-10.4	69.3	-0.62	0.539
child(ren) older than 17 (yes)	Unmatched	.17568	0.39844	-50.7		-3.89	0.000
	Matched	.18056	0.17951	0.2	99.5	0.02	0.987

… continued

… continued (balancing test for 10 nearest neighbours within a 0.05 caliper for men)

years of working experience 2002	Unmatched	18.481	27.296	-87.8		-6.51	0.000
	Matched	18.625	18.372	2.5	97.1	0.17	0.862
years unemployment	Unmatched	0.75	0.56351	12.8		1.06	0.287
	Matched	0.6375	0.5532	5.8	54.8	0.38	0.708
share of years worked during marriage	Unmatched	0.94359	0.90448	30.0		2.28	0.023
	Matched	0.95123	0.95099	0.2	99.4	0.01	0.990
religion (omitted: catholic)							
evangelical	Unmatched	0.21622	0.33304	-26.3		-2.11	0.035
	Matched	0.22222	0.22768	-1.2	95.3	-0.08	0.938
other religious organisation	Unmatched	0.04054	0.04398	-1.7		-0.14	0.886
	Matched	0.04167	0.04028	0.7	59.6	0.04	0.967
non-denominational	Unmatched	0.48649	0.29861	39.1		3.49	0.000
	Matched	0.48611	0.52242	-7.5	80.7	-0.43	0.666
life satisfaction 2002	Unmatched	6.0811	7.0911	-56.3		-5.40	0.000
	Matched	6.1806	6.1877	-0.4	99.3	-0.02	0.981
inheritance during marriage (yes)	Unmatched	0.12162	0.16956	-13.6		-1.09	0.276
	Matched	0.125	0.11205	3.7	73.0	0.24	0.812
father highly educated (yes)	Unmatched	0.09459	0.07813	5.8		0.52	0.602
	Matched	0.09722	0.12525	-9.9	-70.2	-0.53	0.596
mother highly educated (yes)	Unmatched	0.05405	0.03038	11.7		1.16	0.244
	Matched	0.05556	0.06414	-4.3	63.7	-0.22	0.830
grew up in rural area (yes)	Unmatched	0.5	0.64352	-29.2		-2.55	0.011
	Matched	0.5	0.48001	4.1	86.1	0.24	0.812

Source: SOEP, author's calculations.

Table A 17: Balancing test for 10 nearest neighbours within a 0.05 caliper for women

Control variables	sample	Mean treated	Mean control	% reduction bias %bias	% reduction bias |bias|	t-test t	t-test p>|t|
age in 2002	Unmatched	37.95	49.231	-101.7		-8.48	0.000
	Matched	37.8	38.37	-5.1	94.9	-0.45	0.652
log (permanent household income)	Unmatched	10.185	10.41	-50.4		-5.07	0.000
	Matched	10.218	10.219	-0.3	99.4	-0.02	0.981
log (permanent individual earnings)	Unmatched	7.9218	5.9756	51.3		4.36	0.000
	Matched	7.8966	7.9443	-1.3	97.5	-0.11	0.914
educational attainment 2002	Unmatched	1.31	1.2451	7.0		0.68	0.498
	Matched	1.2842	1.3018	-1.9	72.9	-0.13	0.894
log (length of marriage)	Unmatched	2.3981	3.0026	-77.1		-7.40	0.000
	Matched	2.3812	2.3895	-1.1	98.6	-0.07	0.941
log (age at marriage)	Unmatched	3.1601	3.15	5.3		0.54	0.586
	Matched	3.1573	3.1741	-8.8	-66.4	-0.60	0.549
region (omitted: rural)							
town	Unmatched	0.52	0.47575	8.8		0.87	0.383
	Matched	0.50526	0.52991	-4.9	44.3	-0.34	0.736
city	Unmatched	0.2	0.26111	-14.5		-1.37	0.169
	Matched	0.2	0.21219	-2.9	80.0	-0.21	0.836
East-Germany before 1989 (yes)	Unmatched	0.39	0.27563	24.4		2.52	0.012
	Matched	0.37895	0.40497	-5.5	77.2	-0.37	0.715
migration background (yes)	Unmatched	0.11	0.16817	-16.8		-1.54	0.124
	Matched	0.11579	0.12526	-2.7	83.7	-0.20	0.842
physical health (omitted: good / very good)							
satisfactory	Unmatched	0.36	0.3677	-1.6		-0.16	0.875
	Matched	0.34737	0.33891	1.8	-9.8	0.12	0.903
not so good / bad	Unmatched	0.13	0.16091	-8.8		-0.83	0.406
	Matched	0.11579	0.10773	2.3	73.9	0.18	0.861
mental health	Unmatched	43.587	49.524	-50.7		-5.95	0.000
	Matched	44.927	44.261	5.7	88.8	0.39	0.694
number of children	Unmatched	1.32	0.7296	58.6		5.76	0.000
	Matched	1.3053	1.2413	6.3	89.2	0.43	0.666
child(ren) aged 0-4 (yes)	Unmatched	0.27	0.12373	37.3		4.33	0.000
	Matched	0.28421	0.28071	0.9	97.6	0.05	0.958
child(ren) aged 5-17 (yes)	Unmatched	0.6	0.35928	49.5		4.94	0.000
	Matched	0.57895	0.56593	2.7	94.6	0.18	0.857

… continued

… continued (balancing test for 10 nearest neighbours within a 0.05 caliper for women)

child(ren) older than 17 (yes)	Unmatched	0.28	0.58902	-65.5		-6.20	0.000
	Matched	0.27368	0.28985	-3.4	94.8	-0.25	0.806
years of working experience 2002	Unmatched	12.466	17.979	-54.4		-4.64	0.000
	Matched	12.34	13.136	-7.9	85.6	-0.65	0.515
years unemployment	Unmatched	1.019	0.69297	19.2		1.90	0.057
	Matched	0.96316	1.154	-11.3	41.5	-0.68	0.497
share of years worked during marriage	Unmatched	0.69629	0.62551	22.9		2.12	0.034
	Matched	0.69572	0.71153	-5.1	77.7	-0.38	0.705
religion (omitted: catholic)							
evangelical	Unmatched	0.36	0.37293	-2.7		-0.26	0.792
	Matched	0.36842	0.33466	7.0	-161.1	0.49	0.628
other Christian religious organisation	Unmatched	0.01	0.02759	-13.0		-1.07	0.286
	Matched	0.01053	0.01053	0.0	100.0	0.00	1.000
other religious organisation	Unmatched	0.06	0.04182	8.3		0.89	0.374
	Matched	0.06316	0.07895	-7.2	13.1	-0.42	0.674
non-denominational	Unmatched	0.39	0.2463	31.1		3.27	0.001
	Matched	0.37895	0.39797	-4.1	86.8	-8.48	0.789
life satisfaction 2002	Unmatched	6.09	7.088	-53.6		-0.45	0.000
	Matched	6.3053	6.3661	-3.3	93.9	-5.07	0.824
inheritance during marriage (yes)	Unmatched	0.12	0.16149	-11.9		-0.02	0.265
	Matched	0.10526	0.0986	1.9	83.9	4.36	0.880
father highly educated (yes)	Unmatched	0.1	0.08132	6.5		-0.11	0.502
	Matched	0.09474	0.12108	-9.2	-41.0	0.68	0.561
mother highly educated (yes)	Unmatched	0.08	0.03427	19.7		-0.13	0.015
	Matched	0.08421	0.0716	5.4	72.4	-7.40	0.747
grew up in rural area (yes)	Unmatched	0.59	0.64798	-11.9		-0.07	0.232
	Matched	0.6	0.56847	6.5	45.6	0.54	0.661

Source: SOEP, author's calculations.

Table A 18: Balancing tests for 5 nearest neighbours within a 0.05 caliper for men

Control variables	sample	mean treated	mean control	% reduction bias %bias	% reduction bias |bias|	t-test t	t-test p>|t|
age in 2002	Unmatched	40.743	51.802	-100.7		-7.11	0.000
	Matched	40.736	40.819	-0.8	99.2	-0.06	0.953
log (permanent household income)	Unmatched	10.317	10.405	-18.7		-1.72	0.086
	Matched	10.34	10.36	-4.1	77.9	-0.27	0.784
log (permanent individual earnings)	Unmatched	9.7129	7.8767	53.8		3.64	0.000
	Matched	9.7477	9.7448	0.1	99.8	0.01	0.993
educational attainment 2002	Unmatched	1.3919	1.498	-11.4		-0.93	0.353
	Matched	1.4028	1.4861	-8.9	21.4	-0.54	0.591
log (length of marriage)	Unmatched	2.3241	3.002	-84.6		-7.25	0.000
	Matched	2.3119	2.3015	1.3	98.5	0.08	0.938
log (age at marriage)	Unmatched	3.2892	3.2549	16.7		1.61	0.108
	Matched	3.2913	3.3045	-6.4	61.5	-0.37	0.709
region (omitted: rural)							
town	Unmatched	.39189	0.48409	-18.6		-1.57	0.116
	Matched	.38889	0.39444	-1.1	94.0	-0.07	0.946
city	Unmatched	.33784	0.2581	17.4		1.55	0.122
	Matched	.34722	0.34444	0.6	96.5	0.03	0.972
East-Germany before 1989 (yes)	Unmatched	.37838	0.26389	24.6		2.21	0.027
	Matched	.36111	0.39722	-7.8	68.5	-0.44	0.658
migration background (yes)	Unmatched	.10811	0.15885	-14.9		-1.18	0.236
	Matched	.11111	0.09444	4.9	67.2	0.33	0.744
physical health (omitted: good / very good)							
satisfactory	Unmatched	.27027	0.37674	-22.8		-1.87	0.061
	Matched	.27778	0.275	0.6	97.4	0.04	0.971
not so good / bad	Unmatched	.16216	0.15451	2.1		0.18	0.857
	Matched	.15278	0.15278	0.0	100.0	0.00	1.000
mental health	Unmatched	45.832	51.465	-55.3		-5.13	0.000
	Matched	46.514	46.285	2.2	95.9	0.14	0.893
number of children	Unmatched	.77027	0.73785	3.3		0.27	0.787
	Matched	.79167	0.92222	-13.4	302.7	-0.87	0.386
child(ren) aged 0-4 (yes)	Unmatched	.16216	0.12326	11.1		1.00	0.315
	Matched	.16667	0.15556	3.2	71.4	0.18	0.857
child(ren) aged 5-17 (yes)	Unmatched	.52703	0.35966	34.1		2.96	0.003
	Matched	.52778	0.6	-14.7	56.8	-0.87	0.386
child(ren) older than 17 (yes)	Unmatched	.17568	0.39844	-50.7		-3.89	0.000
	Matched	.18056	0.17778	0.6	98.8	0.04	0.966

… continued

… continued (balancing test for 5 nearest neighbours within a 0.05 caliper for men)

years of working experience 2002	Unmatched	18.481	27.296	-87.8		-6.51	0.000
	Matched	18.625	18.235	3.9	95.6	0.27	0.786
years unemployment	Unmatched	0.75	0.56351	12.8		1.06	0.287
	Matched	0.6375	0.6025	2.4	81.2	0.16	0.871
share of years worked during marriage	Unmatched	.94359	0.90448	30.0		2.28	0.023
	Matched	.95123	0.94754	2.8	90.6	0.19	0.849
religion (omitted: catholic)							
evangelical	Unmatched	.21622	0.33304	-26.3		-2.11	0.035
	Matched	.22222	0.20278	4.4	83.4	0.28	0.777
other religious organisation	Unmatched	.04054	0.04398	-1.7		-0.14	0.886
	Matched	.04167	0.03611	2.8	-61.5	0.17	0.864
non-denominational	Unmatched	.48649	0.29861	39.1		3.49	0.000
	Matched	.48611	0.53611	-10.4	73.4	-0.60	0.552
life satisfaction 2002	Unmatched	6.0811	7.0911	-56.3		-5.40	0.000
	Matched	6.1806	6.1778	0.2	99.7	0.01	0.993
inheritance during marriage (yes)	Unmatched	.12162	0.16956	-13.6		-1.09	0.276
	Matched	0.125	0.09722	7.9	42.1	0.53	0.599
father highly educated (yes)	Unmatched	.09459	0.07813	5.8		0.52	0.602
	Matched	.09722	0.125	-9.9	-68.7	-0.53	0.599
mother highly educated (yes)	Unmatched	.05405	0.03038	11.7		1.16	0.244
	Matched	.05556	0.06944	-6.9	41.3	-0.34	0.733
grew up in rural area (yes)	Unmatched	0.5	0.64352	-29.2		-2.55	0.011
	Matched	0.5	0.46389	7.3	74.8	0.43	0.667

Source: SOEP, author's calculations.

Table A 19: Balancing test for 5 nearest neighbours within a 0.05 caliper for women

Control variables	sample	mean treated	mean control	% reduction bias %bias	% reduction bias |bias|	t-test t	t-test p>|t|
age in 2002	Unmatched	37.95	49.231	-101.7		-8.48	0.000
	Matched	37.8	38.251	-4.1	96.0	-0.36	0.719
log (permanent household income)	Unmatched	10.185	10.41	-50.4		-5.07	0.000
	Matched	10.218	10.218	-0.0	100.0	-0.00	1.000
log (permanent individual earnings)	Unmatched	7.9218	5.9756	51.3		4.36	0.000
	Matched	7.8966	8.0319	-3.6	93.0	-0.31	0.756
educational attainment 2002	Unmatched	1.31	1.2451	7.0		0.68	0.498
	Matched	1.2842	1.2653	2.0	70.8	0.14	0.886
log (length of marriage)	Unmatched	2.3981	3.0026	-77.1		-7.40	0.000
	Matched	2.3812	2.382	-0.1	99.9	-0.01	0.994
log (age at marriage)	Unmatched	3.1601	3.15	5.3		0.54	0.586
	Matched	3.1573	3.1742	-8.9	-67.8	-0.60	0.547
region (omitted: rural)							
town	Unmatched	0.52	0.47575	8.8		0.87	0.383
	Matched	0.50526	0.52421	-3.8	57.2	-0.26	0.795
city	Unmatched	0.2	0.26111	-14.5		-1.37	0.169
	Matched	0.2	0.21684	-4.0	72.4	-0.28	0.776
East-Germany before 1989 (yes)	Unmatched	0.39	0.27563	24.4		2.52	0.012
	Matched	0.37895	0.39368	-3.1	87.1	-0.21	0.836
migration background (yes)	Unmatched	0.11	0.16817	-16.8		-1.54	0.124
	Matched	0.11579	0.13053	-4.3	74.7	-0.31	0.759
physical health (omitted: good / very good)							
satisfactory	Unmatched	0.36	0.3677	-1.6		-0.16	0.875
	Matched	0.34737	0.33895	1.7	-9.3	0.12	0.903
not so good / bad	Unmatched	0.13	0.16091	-8.8		-0.83	0.406
	Matched	0.11579	0.09895	4.8	45.5	0.37	0.709
mental health	Unmatched	43.587	49.524	-50.7		-5.95	0.000
	Matched	44.927	44.394	4.6	91.0	0.32	0.752
number of children	Unmatched	1.32	0.7296	58.6		5.76	0.000
	Matched	1.3053	1.2379	6.7	88.6	0.46	0.647
child(ren) aged 0-4 (yes)	Unmatched	0.27	0.12373	37.3		4.33	0.000
	Matched	0.28421	0.27158	3.2	91.4	0.19	0.847
child(ren) aged 5-17 (yes)	Unmatched	0.6	0.35928	49.5		4.94	0.000
	Matched	0.57895	0.55789	4.3	91.3	0.29	0.771

… continued

… continued (balancing test for 5 nearest neighbours within a 0.05 caliper for women)

child(ren) older than 17 (yes)	Unmatched	0.28	0.58902	-65.5		-6.20	0.000
	Matched	0.27368	0.29474	-4.5	93.2	-0.32	0.749
years of working experience 2002	Unmatched	12.466	17.979	-54.4		-4.64	0.000
	Matched	12.34	12.989	-6.4	88.2	-0.54	0.588
years unemployment	Unmatched	1.019	0.69297	19.2		1.90	0.057
	Matched	0.96316	1.1539	-11.3	41.5	-0.69	0.491
share of years worked during marriage	Unmatched	0.69629	0.62551	22.9		2.12	0.034
	Matched	0.69572	0.69767	-0.6	97.3	-0.05	0.963
religion (omitted: catholic)							
evangelical	Unmatched	0.36	0.37293	-2.7		-0.26	0.792
	Matched	0.36842	0.33474	7.0	-160.5	0.48	0.629
other Christian religious organisation	Unmatched	0.01	0.02759	-13.0		-1.07	0.286
	Matched	0.01053	0.01263	-1.6	88.0	-0.13	0.893
other religious organisation	Unmatched	0.06	0.04182	8.3		0.89	0.374
	Matched	0.06316	0.08	-7.6	7.3	-0.45	0.655
non-denominational	Unmatched	0.39	0.2463	31.1		3.27	0.001
	Matched	0.37895	0.39579	-3.6	88.3	-0.24	0.813
life satisfaction 2002	Unmatched	6.09	7.088	-53.6		-6.01	0.000
	Matched	6.3053	6.4232	-6.3	88.2	-0.43	0.669
inheritance during marriage (yes)	Unmatched	0.12	0.16149	-11.9		-1.11	0.265
	Matched	0.10526	0.10105	1.2	89.9	0.09	0.924
father highly educated (yes)	Unmatched	0.1	0.08132	6.5		0.67	0.502
	Matched	0.09474	0.10947	-5.1	21.1	-0.33	0.739
mother highly educated (yes)	Unmatched	0.08	0.03427	19.7		2.44	0.015
	Matched	0.08421	0.06737	7.3	63.2	0.44	0.663
grew up in rural area (yes)	Unmatched	0.59	0.64798	-11.9		-1.20	0.232
	Matched	0.6	0.57053	6.1	49.2	0.41	0.682

Source: SOEP, author's calculations.

Table A 20: Balancing tests for 1 nearest neighbour within a 0.05 caliper for men

Control variables	sample	mean treated	mean control	% reduction bias %bias	% reduction bias |bias|	t-test t	t-test p>|t|
age in 2002	Unmatched	40.743	51.802	-100.7		-7.11	0.000
	Matched	40.736	40.264	4.3	95.7	0.36	0.717
log (permanent household income)	Unmatched	10.317	10.405	-18.7		-1.72	0.086
	Matched	10.34	10.36	-4.3	77.2	-0.29	0.773
log (permanent individual earnings)	Unmatched	9.7129	7.8767	53.8		3.64	0.000
	Matched	9.7477	10.002	-7.5	86.2	-0.84	0.401
educational attainment 2002	Unmatched	1.3919	1.498	-11.4		-0.93	0.353
	Matched	1.4028	1.4861	-8.9	21.4	-0.54	0.592
log (length of marriage)	Unmatched	2.3241	3.002	-84.6		-7.25	0.000
	Matched	2.3119	2.3452	-4.2	95.1	-0.25	0.801
log (age at marriage)	Unmatched	3.2892	3.2549	16.7		1.61	0.108
	Matched	3.2913	3.279	6.0	64.3	0.35	0.730
region (omitted: rural)							
town	Unmatched	0.39189	0.48409	-18.6		-1.57	0.116
	Matched	0.38889	0.33333	11.2	39.7	0.69	0.491
city	Unmatched	0.33784	0.2581	17.4		1.55	0.122
	Matched	0.34722	0.375	-6.1	65.2	-0.34	0.731
East-Germany before 1989 (yes)	Unmatched	0.37838	0.26389	24.6		2.21	0.027
	Matched	0.36111	0.40278	-9.0	63.6	-0.51	0.610
migration background (yes)	Unmatched	0.10811	0.15885	-14.9		-1.18	0.236
	Matched	0.11111	0.15278	-12.2	17.9	-0.73	0.464
physical health (omitted: good / very good)							
satisfactory	Unmatched	0.27027	0.37674	-22.8		-1.87	0.061
	Matched	0.27778	0.26389	3.0	87.0	0.19	0.853
not so good / bad	Unmatched	0.16216	0.15451	2.1		0.18	0.857
	Matched	0.15278	0.08333	19.0	-808.0	1.29	0.199
mental health	Unmatched	45.832	51.465	-55.3		-5.13	0.000
	Matched	46.514	45.954	5.5	90.1	0.34	0.736
number of children	Unmatched	0.77027	0.73785	3.3		0.27	0.787
	Matched	0.79167	1.0139	-22.7	-585.4	-1.57	0.119
child(ren) aged 0-4 (yes)	Unmatched	0.16216	0.12326	11.1		1.00	0.315
	Matched	0.16667	0.16667	0.0	100.0	0.00	1.000
child(ren) aged 5-17 (yes)	Unmatched	0.52703	0.35966	34.1		2.96	0.003
	Matched	0.52778	0.68056	-31.1	8.7	-1.88	0.062
child(ren) older than 17 (yes)	Unmatched	0.17568	0.39844	-50.7		-3.89	0.000
	Matched	0.18056	0.20833	-6.3	87.5	-0.42	0.676

… continued

… continued (balancing test for 1 nearest neighbour within a 0.05 caliper for men)

years of working experience 2002	Unmatched	18.481	27.296	-87.8		-6.51	0.000
	Matched	18.625	17.714	9.1	89.7	0.69	0.490
years unemployment	Unmatched	0.75	0.56351	12.8		1.06	0.287
	Matched	0.6375	0.46389	12.0	6.9	1.02	0.310
share of years worked during marriage	Unmatched	0.94359	0.90448	30.0		2.28	0.023
	Matched	0.95123	0.95042	0.6	97.9	0.05	0.961
religion (omitted: catholic)							
evangelical	Unmatched	0.21622	0.33304	-26.3		-2.11	0.035
	Matched	0.22222	0.18056	9.4	64.3	0.62	0.536
other religious organisation	Unmatched	0.04054	0.04398	-1.7		-0.14	0.886
	Matched	0.04167	0.08333	-20.6 -	1110.9	-1.03	0.305
non-denominational	Unmatched	0.48649	0.29861	39.1		3.49	0.000
	Matched	0.48611	0.52778	-8.7	77.8	-0.50	0.620
life satisfaction 2002	Unmatched	6.0811	7.0911	-56.3		-5.40	0.000
	Matched	6.1806	6.2083	-1.5	97.2	-0.09	0.929
inheritance during marriage (yes)	Unmatched	0.12162	0.16956	-13.6		-1.09	0.276
	Matched	0.125	0.09722	7.9	42.1	0.53	0.599
father highly educated (yes)	Unmatched	0.09459	0.07813	5.8		0.52	0.602
	Matched	0.09722	0.08333	4.9	15.7	0.29	0.773
mother highly educated (yes)	Unmatched	0.05405	0.03038	11.7		1.16	0.244
	Matched	0.05556	0.04167	6.9	41.3	0.39	0.701
grew up in rural area (yes)	Unmatched	0.5	0.64352	-29.2		-2.55	0.011
	Matched	0.5	0.45833	8.5	71.0	0.50	0.620

Source: SOEP, author's calculations.

Table A 21: Balancing test for 1 nearest neighbour within a 0.05 caliper for women

Control variables	sample	mean treated	mean control	% reduction bias %bias	% reduction bias |bias|	t-test t	t-test p>|t|
age in 2002	Unmatched	37.95	49.231	-101.7		-8.48	0.000
	Matched	37.8	39.042	-11.2	89.0	-0.97	0.335
log (permanent household income)	Unmatched	10.185	10.41	-50.4		-5.07	0.000
	Matched	10.218	10.211	1.5	97.0	0.10	0.917
log (permanent individual earnings)	Unmatched	7.9218	5.9756	51.3		4.36	0.000
	Matched	7.8966	7.4839	10.9	78.8	0.87	0.387
educational attainment 2002	Unmatched	1.31	1.2451	7.0		0.68	0.498
	Matched	1.2842	1.2105	7.9	-13.6	0.58	0.561
log (length of marriage)	Unmatched	2.3981	3.0026	-77.1		-7.40	0.000
	Matched	2.3812	2.4231	-5.3	93.1	-0.39	0.699
log (age at marriage)	Unmatched	3.1601	3.15	5.3		0.54	0.586
	Matched	3.1573	3.1929	-18.7	-254.0	-1.29	0.199
region (omitted: rural)							
town	Unmatched	0.52	0.47575	8.8		0.87	0.383
	Matched	0.50526	0.43158	14.7	-66.5	1.02	0.311
city	Unmatched	0.2	0.26111	-14.5		-1.37	0.169
	Matched	0.2	0.27368	-17.5	-20.6	-1.19	0.234
East-Germany before 1989 (yes)	Unmatched	0.39	0.27563	24.4		2.52	0.012
	Matched	0.37895	0.35789	4.5	81.6	0.30	0.765
migration background (yes)	Unmatched	0.11	0.16817	-16.8		-1.54	0.124
	Matched	0.11579	0.08421	9.1	45.7	0.72	0.471
physical health (omitted: good / very good)							
satisfactory	Unmatched	0.36	0.3677	-1.6		-0.16	0.875
	Matched	0.34737	0.33684	2.2	-36.7	0.15	0.879
not so good / bad	Unmatched	0.13	0.16091	-8.8		-0.83	0.406
	Matched	0.11579	0.06316	14.9	-70.3	1.27	0.206
mental health	Unmatched	43.587	49.524	-50.7		-5.95	0.000
	Matched	44.927	43.982	8.1	84.1	0.58	0.565
number of children	Unmatched	1.32	0.7296	58.6		5.76	0.000
	Matched	1.3053	1.3053	0.0	100.0	-0.00	1.000
child(ren) aged 0-4 (yes)	Unmatched	0.27	0.12373	37.3		4.33	0.000
	Matched	0.28421	0.27368	2.7	92.8	0.16	0.872
child(ren) aged 5-17 (yes)	Unmatched	0.6	0.35928	49.5		4.94	0.000
	Matched	0.57895	0.57895	0.0	100.0	0.00	1.000

… continued

… continued (balancing test for 1 nearest neighbour within a 0.05 caliper for women)

child(ren) older than 17 (yes)	Unmatched	0.28	0.58902	-65.5		-6.20	0.000
	Matched	0.27368	0.25263	4.5	93.2	0.33	0.743
years of working experience 2002	Unmatched	12.466	17.979	-54.4		-4.64	0.000
	Matched	12.34	12.175	1.6	97.0	0.14	0.888
years unemployment	Unmatched	1.019	0.69297	19.2		1.90	0.057
	Matched	0.96316	1.1821	-12.9	32.8	-0.81	0.421
share of years worked during marriage	Unmatched	0.69629	0.62551	22.9		2.12	0.034
	Matched	0.69572	0.66979	8.4	63.4	0.60	0.552
religion (omitted: catholic)							
evangelical	Unmatched	0.36	0.37293	-2.7		-0.26	0.792
	Matched	0.36842	0.36842	0.0	100.0	0.00	1.000
other Christian religious organisation	Unmatched	0.01	0.02759	-13.0		-1.07	0.286
	Matched	0.01053	0	7.8	40.2	1.00	0.319
other religious organisation	Unmatched	0.06	0.04182	8.3		0.89	0.374
	Matched	0.06316	0.09474	-14.3	-73.7	-0.80	0.422
non-denominational	Unmatched	0.39	0.2463	31.1		3.27	0.001
	Matched	0.37895	0.41053	-6.8	78.0	-0.44	0.658
life satisfaction 2002	Unmatched	6.09	7.088	-53.6		-6.01	0.000
	Matched	6.3053	6.6632	-19.2	64.1	-1.40	0.164
inheritance during marriage (yes)	Unmatched	0.12	0.16149	-11.9		-1.11	0.265
	Matched	0.10526	0.10526	0.0	100.0	-0.00	1.000
father highly educated (yes)	Unmatched	0.1	0.08132	6.5		0.67	0.502
	Matched	0.09474	0.16842	-25.6	-294.5	-1.50	0.134
mother highly educated (yes)	Unmatched	0.08	0.03427	19.7		2.44	0.015
	Matched	0.08421	0.09474	-4.5	77.0	-0.25	0.801
grew up in rural area (yes)	Unmatched	0.59	0.64798	-11.9		-1.20	0.232
	Matched	0.6	0.53684	13.0	-8.9	0.88	0.382

Source: SOEP, author's calculations.

Table A 22: Balancing test for kernel matching (bandwidth 0.01) for men

Control variables	sample	mean treated	mean control	% reduction bias %bias	% reduction bias |bias|	t-test t	t-test p>|t|
age in 2002	Unmatched	40.743	51.802	-100.7		-7.11	0.000
	Matched	40.736	41.173	-4.0	96.0	-0.32	0.752
log (permanent household income)	Unmatched	10.317	10.405	-18.7		-1.72	0.086
	Matched	10.34	10.35	-2.0	89.1	-0.14	0.892
log (permanent individual earnings)	Unmatched	9.7129	7.8767	53.8		3.64	0.000
	Matched	9.7477	9.7848	-1.1	98.0	-0.11	0.914
educational attainment 2002	Unmatched	1.3919	1.498	-11.4		-0.93	0.353
	Matched	1.4028	1.3963	0.7	93.9	0.04	0.965
log (length of marriage)	Unmatched	2.3241	3.002	-84.6		-7.25	0.000
	Matched	2.3119	2.3752	-7.9	90.7	-0.47	0.638
log (age at marriage)	Unmatched	3.2892	3.2549	16.7		1.61	0.108
	Matched	3.2913	3.2895	0.8	95.0	0.05	0.961
region (omitted: rural)							
town	Unmatched	0.39189	0.48409	-18.6		-1.57	0.116
	Matched	0.38889	0.37778	2.2	87.9	0.14	0.892
city	Unmatched	0.33784	0.2581	17.4		1.55	0.122
	Matched	0.34722	0.31241	7.6	56.3	0.44	0.661
East-Germany before 1989 (yes)	Unmatched	0.37838	0.26389	24.6		2.21	0.027
	Matched	0.36111	0.39504	-7.3	70.4	-0.42	0.678
migration background (yes)	Unmatched	0.10811	0.15885	-14.9		-1.18	0.236
	Matched	0.11111	0.11115	-0.0	99.9	-0.00	0.999
physical health (omitted: good / very good)							
satisfactory	Unmatched	0.27027	0.37674	-22.8		-1.87	0.061
	Matched	0.27778	0.24761	6.5	71.7	0.41	0.684
not so good / bad	Unmatched	0.16216	0.15451	2.1		0.18	0.857
	Matched	0.15278	0.14614	1.8	13.2	0.11	0.912
mental health	Unmatched	45.832	51.465	-55.3		-5.13	0.000
	Matched	46.514	45.828	6.7	87.8	0.40	0.690
number of children	Unmatched	0.77027	0.73785	3.3		0.27	0.787
	Matched	0.79167	0.89241	-10.3	10.7	-0.68	0.495
child(ren) aged 0-4 (yes)	Unmatched	0.16216	0.12326	11.1		1.00	0.315
	Matched	0.16667	0.15156	4.3	61.2	0.25	0.807
child(ren) aged 5-17 (yes)	Unmatched	0.52703	0.35966	34.1		2.96	0.003
	Matched	0.52778	0.57603	-9.8	71.2	-0.58	0.565
child(ren) older than 17 (yes)	Unmatched	0.17568	0.39844	-50.7		-3.89	0.000
	Matched	0.18056	0.20974	-6.6	86.9	-0.44	0.662

… continued

… continued (balancing test for 10 nearest neighbours within a 0.05 caliper for men)

years of working experience 2002	Unmatched	18.481	27.296	-87.8		-6.51	0.000
	Matched	18.625	19.028	-4.0	95.4	-0.29	0.776
years unemployment	Unmatched	0.75	0.56351	12.8		1.06	0.287
	Matched	0.6375	0.60234	2.4	81.1	0.15	0.878
share of years worked during marriage	Unmatched	0.94359	0.90448	30.0		2.28	0.023
	Matched	0.95123	0.95318	-1.5	95.0	-0.10	0.917
religion (omitted: catholic)							
evangelical	Unmatched	0.21622	0.33304	-26.3		-2.11	0.035
	Matched	0.22222	0.19989	5.0	80.9	0.33	0.746
other religious organisation	Unmatched	.04054	0.04398	-1.7		-0.14	0.886
	Matched	0.04167	0.04807	-3.2	-86.2	-0.18	0.854
non-denominational	Unmatched	0.48649	0.29861	39.1		3.49	0.000
	Matched	0.48611	0.5287	-8.9	77.3	-0.51	0.613
life satisfaction 2002	Unmatched	6.0811	7.0911	-56.3		-5.40	0.000
	Matched	6.1806	6.0992	4.5	91.9	0.26	0.796
inheritance during marriage (yes)	Unmatched	0.12162	0.16956	-13.6		-1.09	0.276
	Matched	0.125	0.1056	5.5	59.5	0.36	0.719
father highly educated (yes)	Unmatched	0.09459	0.07813	5.8		0.52	0.602
	Matched	0.09722	0.09424	1.1	81.9	0.06	0.952
mother highly educated (yes)	Unmatched	0.05405	0.03038	11.7		1.16	0.244
	Matched	0.05556	0.04666	4.4	62.4	0.24	0.811
grew up in rural area (yes)	Unmatched	0.5	0.64352	-29.2		-2.55	0.011
	Matched	0.5	0.47451	5.2	82.2	0.30	0.762

Source: SOEP, author's calculations.

Table A 23: Balancing test for kernel matching (bandwidth 0.01) for women

Control variables	sample	mean treated	mean control	% reduction bias %bias	% reduction bias |bias|	t-test t	t-test p>|t|
age in 2002	Unmatched	37.95	49.231	-101.7		-8.48	0.000
	Matched	37.798	38.715	-8.3	91.9	-0.73	0.468
log (permanent household income)	Unmatched	10.185	10.41	-50.4		-5.07	0.000
	Matched	10.224	10.215	2.0	96.0	0.15	0.881
log (permanent individual earnings)	Unmatched	7.9218	5.9756	51.3		4.36	0.000
	Matched	7.8912	7.5599	8.7	83.0	0.71	0.479
educational attainment 2002	Unmatched	1.31	1.2451	7.0		0.68	0.498
	Matched	1.2766	1.2866	-1.1	84.6	-0.08	0.939
log (length of marriage)	Unmatched	2.3981	3.0026	-77.1		-7.40	0.000
	Matched	2.3778	2.4556	-9.9	87.1	-0.69	0.488
log (age at marriage)	Unmatched	3.1601	3.15	5.3		0.54	0.586
	Matched	3.1576	3.1607	-1.6	68.8	-0.11	0.909
region (omitted: rural)							
town	Unmatched	0.52	0.47575	8.8		0.87	0.383
	Matched	0.5	0.47371	5.2	40.6	0.36	0.720
city	Unmatched	0.2	0.26111	-14.5		-1.37	0.169
	Matched	0.20213	0.23743	-8.4	42.2	-0.58	0.561
East-Germany before 1989 (yes)	Unmatched	0.39	0.27563	24.4		2.52	0.012
	Matched	0.37234	0.41919	-10.0	59.0	-0.65	0.514
migration background (yes)	Unmatched	0.11	0.16817	-16.8		-1.54	0.124
	Matched	0.11702	0.11048	1.9	88.8	0.14	0.888
physical health (omitted: good / very good)							
satisfactory	Unmatched	0.36	0.3677	-1.6		-0.16	0.875
	Matched	0.35106	0.34126	2.0	-27.3	0.14	0.888
not so good / bad	Unmatched	0.13	0.16091	-8.8		-0.83	0.406
	Matched	0.11702	0.1283	-3.2	63.5	-0.23	0.815
mental health	Unmatched	43.587	49.524	-50.7		-5.95	0.000
	Matched	44.831	43.721	9.5	81.3	0.65	0.519
number of children	Unmatched	1.32	0.7296	58.6		5.76	0.000
	Matched	1.2979	1.2568	4.1	93.1	0.27	0.786
child(ren) aged 0-4 (yes)	Unmatched	0.27	0.12373	37.3		4.33	0.000
	Matched	0.28723	0.25292	8.8	76.5	0.53	0.599
child(ren) aged 5-17 (yes)	Unmatched	0.6	0.35928	49.5		4.94	0.000
	Matched	0.57447	0.57944	-1.0	97.9	-0.07	0.945

… continued

… continued (balancing test for 10 nearest neighbours within a 0.05 caliper for women)

child(ren) older than 17 (yes)	Unmatched	0.28	.58902	-65.5		-6.20	0.000
	Matched	0.2766	.27239	0.9	98.6	0.06	0.949
years of working experience 2002	Unmatched	12.466	17.979	-54.4		-4.64	0.000
	Matched	12.34	12.824	-4.8	91.2	-0.40	0.693
years unemployment	Unmatched	1.019	0.69297	19.2		1.90	0.057
	Matched	0.96383	1.3035	-20.0	-4.2	-1.18	0.238
share of years worked during marriage	Unmatched	0.69629	0.62551	22.9		2.12	0.034
	Matched	0.69647	0.6865	3.2	85.9	0.23	0.816
religion (omitted: catholic)							
evangelical	Unmatched	0.36	0.37293	-2.7		-0.26	0.792
	Matched	0.37234	0.30824	13.3	395.7	0.92	0.356
other Christian religious organisation	Unmatched	0.01	0.02759	-13.0		-1.07	0.286
	Matched	0.01064	0.01065	-0.0	99.9	-0.00	0.999
other religious organisation	Unmatched	0.0	0.0418	8.3		0.89	0.374
	Matched	0.06383	.09418	-13.8	-67.0	-0.77	0.443
non-denominational	Unmatched	0.39	0.2463	31.1		3.27	0.001
	Matched	0.37234	0.42111	-10.6	66.1	-0.68	0.497
life satisfaction 2002	Unmatched	6.09	7.088	-53.6		-6.01	0.000
	Matched	6.3511	6.367	-0.9	98.4	-0.06	0.952
inheritance during marriage (yes)	Unmatched	0.12	0.16149	-11.9		-1.11	0.265
	Matched	0.10638	0.10068	1.6	86.3	0.13	0.899
father highly educated (yes)	Unmatched	0.1	0.08132	6.5		0.67	0.502
	Matched	0.09574	0.11995	-8.4	-29.6	-0.53	0.595
mother highly educated (yes)	Unmatched	0.08	0.03427	19.7		2.44	0.015
	Matched	0.08511	0.08276	1.0	94.9	0.06	0.954
grew up in rural area (yes)	Unmatched	0.59	0.64798	-11.9		-1.20	0.232
	Matched	0.60638	0.54878	11.9	0.6	0.80	0.427

Source: SOEP, author's calculations.

Table A 24: Balancing test for local linear matching (bandwidth 0.01) for men

Control variables	sample	mean treated	mean control	% reduction bias %bias	% reduction bias |bias|	t-test t	t-test p>|t|
age in 2002	Unmatched	40.743	51.802	-100.7		-7.11	0.000
	Matched	40.594	40.99	-3.6	96.4	-0.28	0.783
log (permanent household income)	Unmatched	10.317	10.405	-18.7		-1.72	0.086
	Matched	10.353	10.359	-1.3	93.1	-0.08	0.933
log (permanent individual earnings)	Unmatched	9.7129	7.8767	53.8		3.64	0.000
	Matched	9.758	9.7802	-0.7	98.8	-0.06	0.950
educational attainment 2002	Unmatched	1.3919	1.498	-11.4		-0.93	0.353
	Matched	1.4058	1.3622	4.7	58.9	0.28	0.782
log (length of marriage)	Unmatched	2.3241	3.002	-84.6		-7.25	0.000
	Matched	2.3161	2.3735	-7.2	91.5	-0.42	0.678
log (age at marriage)	Unmatched	3.2892	3.2549	16.7		1.61	0.108
	Matched	3.2848	3.2815	1.6	90.2	0.10	0.924
region (omitted: rural)							
town	Unmatched	0.39189	0.48409	-18.6		-1.57	0.116
	Matched	0.4058	0.35806	9.6	48.2	0.57	0.569
city	Unmatched	0.33784	0.2581	17.4		1.55	0.122
	Matched	0.34783	0.29827	10.8	37.9	0.62	0.539
East-Germany before 1989 (yes)	Unmatched	0.37838	0.26389	24.6		2.21	0.027
	Matched	0.36232	0.4208	-12.6	48.9	-0.70	0.487
migration background (yes)	Unmatched	0.10811	0.15885	-14.9		-1.18	0.236
	Matched	0.10145	0.10209	-0.2	98.7	-0.01	0.990
physical health (omitted: good / very good)							
satisfactory	Unmatched	0.27027	0.37674	-22.8		-1.87	0.061
	Matched	0.27536	0.25524	4.3	81.1	0.26	0.792
not so good / bad	Unmatched	0.16216	0.15451	2.1		0.18	0.857
	Matched	0.15942	0.16849	-2.5	-18.6	-0.14	0.887
mental health	Unmatched	45.832	51.465	-55.3		-5.13	0.000
	Matched	46.738	46.793	-0.5	99.0	-0.03	0.975
number of children	Unmatched	0.77027	0.73785	3.3		0.27	0.787
	Matched	0.82609	0.93468	-11.1	-234.9	-0.72	0.470
child(ren) aged 0-4 (yes)	Unmatched	0.16216	0.12326	11.1		1.00	0.315
	Matched	0.15942	0.15372	1.6	85.4	0.09	0.928
child(ren) aged 5-17 (yes)	Unmatched	0.52703	0.35966	34.1		2.96	0.003
	Matched	0.52174	0.60634	-17.2	49.5	-0.99	0.322
child(ren) older than 17 (yes)	Unmatched	0.17568	0.39844	-50.7		-3.89	0.000
	Matched	0.18841	0.22881	-9.2	81.9	-0.58	0.564

… continued

… continued (balancing test for 10 nearest neighbours within a 0.05 caliper for men)

years of working experience 2002	Unmatched	18.481	27.296	-87.8		-6.51	0.000
	Matched	18.325	18.928	-6.0	93.2	-0.42	0.677
years unemployment	Unmatched	0.75	0.56351	12.8		1.06	0.287
	Matched	0.61594	0.62212	-0.4	96.7	-0.03	0.980
share of years worked during marriage	Unmatched	0.94359	0.90448	30.0		2.28	0.023
	Matched	0.95082	0.95629	-4.2	86.0	-0.29	0.776
religion (omitted: catholic)							
evangelical	Unmatched	0.21622	0.33304	-26.3		-2.11	0.035
	Matched	0.23188	0.20144	6.9	73.9	0.43	0.668
other religious organisation	Unmatched	0.04054	0.04398	-1.7		-0.14	0.886
	Matched	0.04348	0.03935	2.0	-20.0	0.12	0.904
non-denominational	Unmatched	0.48649	0.29861	39.1		3.49	0.000
	Matched	0.47826	0.52949	-10.7	72.7	-0.60	0.552
life satisfaction 2002	Unmatched	6.0811	7.0911	-56.3		-5.40	0.000
	Matched	6.2754	6.1213	8.6	84.7	0.48	0.634
inheritance during marriage (yes)	Unmatched	0.12162	0.16956	-13.6		-1.09	0.276
	Matched	0.13043	0.10775	6.4	52.7	0.41	0.685
father highly educated (yes)	Unmatched	0.09459	0.07813	5.8		0.52	0.602
	Matched	0.08696	0.09699	-3.6	39.1	-0.20	0.840
mother highly educated (yes)	Unmatched	0.05405	0.03038	11.7		1.16	0.244
	Matched	0.05797	0.05076	3.6	69.5	0.18	0.854
grew up in rural area (yes)	Unmatched	0.5	0.64352	-29.2		-2.55	0.011
	Matched	0.50725	0.50044	1.4	95.3	0.08	0.937

Source: SOEP, author's calculations.

Table A 25: Balancing test for local linear matching (bandwidth 0.01) for women

Control variables	sample	mean treated	mean control	% reduction bias %bias	% reduction bias |bias|	t-test t	t-test p>|t|
age in 2002	Unmatched	37.95	49.231	-101.7		-8.48	0.000
	Matched	38.41	38.713	-2.7	97.3	-0.22	0.825
log (permanent household income)	Unmatched	10.185	10.41	-50.4		-5.07	0.000
	Matched	10.268	10.284	-3.7	92.7	-0.27	0.786
log (permanent individual earnings)	Unmatched	7.9218	5.9756	51.3		4.36	0.000
	Matched	7.8949	7.7902	2.8	94.6	0.21	0.833
educational attainment 2002	Unmatched	1.31	1.2451	7.0		0.68	0.498
	Matched	1.3012	1.3148	-1.5	79.0	-0.10	0.924
log (length of marriage)	Unmatched	2.3981	3.0026	-77.1		-7.40	0.000
	Matched	2.4285	2.4331	-0.6	99.2	-0.04	0.969
log (age at marriage)	Unmatched	3.1601	3.15	5.3		0.54	0.586
	Matched	3.1607	3.1653	-2.4	54.7	-0.15	0.880
region (omitted: rural)							
town	Unmatched	0.52	0.47575	8.8		0.87	0.383
	Matched	0.49398	0.46246	6.3	28.8	0.40	0.689
city	Unmatched	0.2	0.26111	-14.5		-1.37	0.169
	Matched	0.22892	0.2339	-1.2	91.8	-0.07	0.940
East-Germany before 1989 (yes)	Unmatched	0.39	0.27563	24.4		2.52	0.012
	Matched	0.36145	0.39637	-7.4	69.5	-0.46	0.648
migration background (yes)	Unmatched	0.11	0.16817	-16.8		-1.54	0.124
	Matched	0.13253	0.12681	1.7	90.2	0.11	0.914
physical health (omitted: good / very good)							
satisfactory	Unmatched	0.36	0.3677	-1.6		-0.16	0.875
	Matched	0.3494	0.33984	2.0	-24.1	0.13	0.899
not so good / bad	Unmatched	0.13	0.16091	-8.8		-0.83	0.406
	Matched	0.10843	0.11447	-1.7	80.5	-0.12	0.903
mental health	Unmatched	43.587	49.524	-50.7		-5.95	0.000
	Matched	46.056	45.477	4.9	90.2	0.33	0.740
number of children	Unmatched	1.32	0.7296	58.6		5.76	0.000
	Matched	1.2289	1.2349	-0.6	99.0	-0.04	0.970
child(ren) aged 0-4 (yes)	Unmatched	0.27	0.12373	37.3		4.33	0.000
	Matched	0.27711	0.26677	2.6	92.9	0.15	0.883
child(ren) aged 5-17 (yes)	Unmatched	0.6	0.35928	49.5		4.94	0.000
	Matched	0.57831	0.57395	0.9	98.2	0.06	0.955

… continued

… continued (balancing test for 10 nearest neighbours within a 0.05 caliper for women)

child(ren) older than 17 (yes)	Unmatched	0.28	0.58902	-65.5		-6.20	0.000
	Matched	0.3012	0.30505	-0.8	98.8	-0.05	0.958
years of working experience 2002	Unmatched	12.466	17.979	-54.4		-4.64	0.000
	Matched	12.966	13.291	-3.2	94.1	-0.25	0.807
years unemployment	Unmatched	1.019	0.69297	19.2		1.90	0.057
	Matched	0.93976	1.0223	-4.9	74.7	-0.28	0.781
share of years worked during marriage	Unmatched	0.69629	0.62551	22.9		2.12	0.034
	Matched	0.70635	0.71224	-1.9	91.7	-0.13	0.896
religion (omitted: catholic)							
evangelical	Unmatched	0.36	0.37293	-2.7		-0.26	0.792
	Matched	0.37349	0.34611	5.7	-111.8	0.36	0.718
other Christian religious organisation	Unmatched	0.01	0.02759	-13.0		-1.07	0.286
	Matched	0.01205	0.01216	-0.1	99.3	-0.01	0.995
Ot2her religious organisation	Unmatched	0.06	0.04182	8.3		0.89	0.374
	Matched	0.07229	0.07157	0.3	96.0	0.02	0.986
non-denominational	Unmatched	0.39	0.2463	31.1		3.27	0.001
	Matched	0.36145	0.38172	-4.4	85.9	-0.27	0.790
life satisfaction 2002	Unmatched	6.09	7.088	-53.6		-6.01	0.000
	Matched	6.5301	6.5251	0.3	99.5	0.02	0.985
inheritance during marriage (yes)	Unmatched	0.12	0.16149	-11.9		-1.11	0.265
	Matched	0.12048	0.10364	4.8	59.4	0.34	0.735
father highly educated (yes)	Unmatched	0.1	0.08132	6.5		0.67	0.502
	Matched	0.10843	0.10439	1.4	78.4	0.08	0.934
mother highly educated (yes)	Unmatched	0.08	0.03427	19.7		2.44	0.015
	Matched	0.06024	0.06286	-1.1	94.3	-0.07	0.945
grew up in rural area (yes)	Unmatched	0.59	0.64798	-11.9		-1.20	0.232
	Matched	0.60241	0.57551	5.5	53.6	0.35	0.729

Source: SOEP, author's calculations.