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Marital Dissolution and Personal Wealth: Examining Gendered Trends across the Dissolution Process

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NON-TECHNICAL SUMMARY

Ample research has linked marital dissolution to a substantial decline in income for women. Effects for men's income are less substantial with some studies even finding income increases depending on the social context and income measure. Wealth as an additional aspect of economic wellbeing has received less attention in studies on the economic consequences of divorce. An incipient literature however indicates that wealth levels may decline through marital dissolution for both men and women. The division of property at divorce, costs for moving out of the marital home and into a new home, or legal expenses such as court fees and solicitor fees can be expected to drain resources. Costs thereby vary depending on the stage of the marital dissolution process, which sometimes takes several years. Previous research however neglects this idea and focuses on either separation (the split of the marital household into two single households) or divorce (the legal termination of the maritage). It is therefore unclear at what point of the marital dissolution process, men and women lose wealth.

The present study therefore examines personal wealth changes over the dissolution process starting up to three years prior to separation and until 15 years after legal divorce. Using German panel data, we use fixed effects regression to examine personal wealth of men and women that experienced a marital dissolution between 2002 and 2017. We additionally split overall personal wealth into the housing wealth component and more liquid financial wealth.

Our results show that both men and women lose most of their wealth during separation, whereas the legal divorce did not lead to any additional wealth penalties. This separation penalty was mainly driven by declines in housing wealth. Financial wealth - as a smaller, but more liquid aspect of overall wealth - already declined prior to separation. Wealth levels did not improve in the short-term after divorce for either men or women. Overall, we show that both men and women experience critical wealth declines, although men still hold more wealth than women at any time emphasizing the stronger vulnerability of women's economic wellbeing.

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ABSTRACT

This study examined men's and women's personal wealth changes over the marital dissolution process starting up to three years prior to separation and continuing up to 15 years post divorce. Incipient literature showed steep wealth declines for men and women associated with marital dissolution, but most research treated marital dissolution as a single point-in-time event. This may be limiting as legal regulations and divorce-stressadjustment research conceptualize marital dissolution as a process that potentially lasts several years. Using fixed-effects regression models, we analyzed personal net wealth changes as well as changes in personal housing wealth and financial wealth of individuals whose marriages dissolved between 2002 and 2017. Analyses used comprehensive wealth data from the German Socio-Economic Panel study. With 85 and 78 percent reductions in personal wealth of men and women, respectively, separation was the most critical point for wealth depletion, whereas the divorce proceeding did not pose additional wealth penalties. This separation penalty was mainly driven by declines in housing wealth whereas marginal, but lasting, financial wealth losses were found prior to actual separation. Wealth levels did not improve in the years after divorce for either men or women. Overall, gender differences in relative wealth changes over the entire dissolution process were negligible. Results illustrate important variations in personal wealth measures over the marital dissolution process leading to potentially lasting economic disadvantages. Relative personal wealth declines were thereby damaging for both men and women, although men held more absolute wealth than women.

Keywords: divorce; separation; economic wellbeing; wealth; gender; disadvantage

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INTRODUCTION

Since the 1960s, divorce rates have increased in most European and Northern American societies (Eurostat, 2018). This demographic development has prompted ample research on the causes and consequences of marital dissolution. The research indicates that marital dissolution is a major risk factor for the economic wellbeing of both men and women, however women are particularly disadvantaged (e.g., Andreß, Borgloh, Brockel, Giesselmann, & Hummelsheim, 2006; De Vaus, Gray, Qu, & Stanton, 2017). Research has commonly focused on income measures such as family size-adjusted disposable household income (e.g., Bayaz-Ozturk, Burkhauser, Couch, & Hauser, 2018). The consequences of marital dissolution for wealth levels have attracted less attention, although an incipient literature highlights potentially steep wealth declines after marital dissolution (e.g., Zagorsky, 2005; Zissimopoulos, Karney, & Rauer, 2015).

In the current paper we further scrutinize the association between marital dissolution and wealth and add to the incipient wealth literature in two ways. First, previous divorce research has commonly conceptualized marital dissolution as a single point in time event and has therefore either focused on separation (i.e., division of the couple household into two separate households) or divorce (i.e., legal dissolution of a marriage) or simply combined the two events into a single measure (e.g., Zagorsky, 2005). This may be over-simplistic as a large number of European and Northern American countries (e.g. US, Canada, UK, Netherlands, Italy, etc.) including Germany – the country of interest to this study – commonly only permit legal divorce after a substantial separation period. Separation and divorce are therefore two distinct stages. Further, sociological and psychological divorce-stress-adjustment research suggests that marital dissolution should be seen as a process with several stages (e.g., Amato, 2000; Pledge, 1992). Based on this literature and legal regulations, we argue that four broad stages of the marital dissolution process can be identified that are theoretically relevant to financial wellbeing: separation plans during the marriage, the period of separation, the legal

divorce proceeding and post-divorce adjustment. Arguably wealth holdings may vary across each stage in potentially non-linear and gendered ways. Our paper enables greater understanding of these possible variations.

Second, due to a lack of comprehensive personal-level wealth data, previous research examined the association between marital dissolution and *household*-level wealth measures. For comparability reasons, household wealth was commonly divided by two for married couples (i.e., per capita wealth) and compared to single-headed households' wealth levels after divorce (e.g., Zagorsky, 2005). Furthermore, studies commonly investigated the US context, where – depending on the state – marital property regimes favor an equal division of all resources (Voena, 2015). However, in a range of European countries, such as Germany, property division at divorce is more regimented and commonly only considers wealth accumulated *during* the marriage. Pre-marital wealth but also personal inheritances or gifts received during the marriage are thus not equally divided. This is critical as wealth inequalities between German spouses already exists prior to marriage (Sierminska, Frick, & Grabka, 2010). A per-capita approach would therefore be misleading in the German case and distort the analyses of potentially gendered effects. We thus argue that it is particularly informative to analyze *personal-level wealth* measures to examine economic consequences of marital dissolution for men's and women's wealth in Germany. In the current paper we define personal net wealth as the sum of all personally owned assets minus liabilities including a person's share of jointly held assets or liabilities.

We address two research questions: First, do personal wealth levels change over the marital dissolution process, including in years prior to dissolution, during separation or the divorce proceeding, and after legal divorce? Second, do the observed changes vary for men and women? To address these questions, we use longitudinal data from the German Socio-Economic Panel Study (SOEP, 2002 - 2017) and apply fixed effects regression models. The

German SOEP data are especially well suited to this research due to their detailed measures of personal-level wealth over four years within a household panel survey.

BACKGROUND

Theoretically, marital dissolution may be classified into four distinct stages: (1) Separation plans while still living in the marital household, (2) separation of spouses and the associated dissolution of the marital household into two independent households, (3) the legal divorce proceeding, and (4) post-divorce adjustments. Figure 1 presents a diagram that visually represents these four possible stages of the marital dissolution process in the top row. Additionally, the diagram highlights potential costs and financial strategies that may be associated with marital dissolution. The middle rows show potential changes in financial behavior and some of the costs associated with different stages of the marital dissolution process. The bottom four rows highlight some institutional features that may have gendered consequences for wealth holdings. For example, women typically earn less than men, and in many cases, women remain the main carers of children while men provide maintenance payments to support children. At the same time, both men and women may experience income penalties as single parents with custody of children. Of course, not all marriages dissolve in the same way, and costs and financial coping strategies will vary accordingly. However, the diagram highlights some of the likely mechanisms underlying changes in wealth holdings from marital dissolution, and importantly, draws attention to potential variations in wealth outcomes across stages of the dissolution process.

Separation Plans during the Marriage

The commencement of the marital dissolution process and associated separation plans are typically instigated by high levels of marital dissatisfaction and feelings of estrangement (Amato, 2000; Bernardi & Larenza, 2018; Broman, 2002). During this phase of the marital dissolution process, spouses may experience personal wealth declines as feelings of estrangement may cause spouses to question joint financial investments. This could lead to declining economic cooperation and thus reduced marital wealth premiums (Lersch, 2017). In anticipation of potential future wealth division, some spouses may even start to conceal or over-spend their personal wealth.

Wealth declines may however not only be a result of separation plans, but can also reinforce doubts about the future of the marriage. Previous research illustrated that financial difficulties and particularly increases in consumer debt are linked to a higher likelihood of marital conflict and thus separation (Dew, 2011; Eads & Tach, 2016). Hence, wealth declines can be the cause or consequence of separation plans although the two are likely interconnected.



In contrast to findings about personal wealth declines, some researchers have argued that it may also be plausible to expect precautionary savings (Finke & Pierce, 2006; Pericoli & Ventura, 2012). Individuals are likely to anticipate adverse consequences of marital dissolution such as loss of partner's income, or costs associated with finding and moving to new accommodation, shifting children to a new school, and eventual legal fees for divorce proceedings. To avert associated financial declines, previous US research suggested that equal-earning spouses save in anticipation of marital dissolution whereas economically unequal spouses do the opposite when a dissolution is imminent (Finke & Pierce, 2006). For economically unequal couples the precautionary savings motive is thus overruled by concerns of the higher-earning spouse of future resource redistribution to the lower-earning spouse. This is expected to create a saving disincentive for those couples. As within-couple economic inequality is relatively high in Germany (see section on German context on page 12), we argue that dissaving may be a more likely scenario for our country-case. Thus, we expect to see substantial personal wealth declines immediately prior to separation either due to financial difficulties which are then associated with declining relationship quality, or because couples spend more due to impending marital dissolution (*Pre-Separation Declines Hypothesis*).

The Separation of the Marital Household

In most cases, the decision to leave a marriage requires the formation of two separate households. Although this spatial separation may be a necessary step to gain emotional distance, it is also a legal requirement for divorce in most European and Northern American countries. Relocation and the establishment of a new household require a range of one-off payments (e.g. costs for a moving company, new furniture and appliances, rental bond) that may drain savings. Additional ongoing costs due to lower economies of scale and thus higher per capita expenses (Sørensen, 1994), may lead to persistently increased financial pressure. Whereas separation requires at least one spouse to move out of the family home, these budget constraints often force both spouses to eventually relocate to a more affordable dwelling (Bröckel & Andreß, 2015; Ferrari, Bonnet, & Solaz, 2019; Mulder, 2013).

Particularly for homeowners, who commonly own their home jointly, questions about residency rights become a priority early on during separation. The spouse that remains in the family home often has to financially compensate the non-resident spouse while both spouses

also continue to pay their mortgage instalments. Thus while moving out of the family home is associated with relocation costs, remaining also incurs substantial costs for homeowners that may exceed alternative costs for a relocation (Mulder, 2013).

In addition to residency rights, homeowners also have to decide on how to proceed with the family home. Whereas the family home is commonly owned jointly, it also regularly constitutes the major share of the marital portfolio (Thomas & Mulder, 2016). Thus this wealth component is commonly indivisible as spouses lack sufficient cash collateral to buy out the partner or qualify for a mortgage by themselves (Lersch & Vidal, 2016). Selling the family home may therefore be required in order to divide this asset (Lersch & Vidal, 2014). Whereas the housing sale incurs direct costs such as real estate fees and taxes, it may also be associated with indirect costs of wealth depreciation if the property needs to be sold under time-pressure and in a market unfavorable to the seller (Fethke, 1989). Particularly if a reconciliation of the marriage seems unlikely and if neither spouse can afford to remain in the family home, property might be sold prior to the divorce proceeding.

In line with our theoretical ideas, substantial per-capita wealth declines associated with separation were found in the US context (Zagorsky, 2005). We thus also expect to find a substantial decline in personal net wealth during separation compared to marriage (*Separation Penalty Hypothesis*). Given the relevance of the housing equity in wealth portfolios of many couples and the economic burden it poses for either spouse, we expect substantial housing wealth declines during separation (*Housing Decline Hypothesis*). It is however also possible that some couples only sell their property during the divorce proceeding in an attempt to maintain homeownership and its advantages as long as possible.

Legal Termination of the Marriage

If spouses do not reconcile their marriage, the couple commonly starts the process to legally dissolve their marriage. This process incurs substantial administrative costs such as court fees,

solicitors' fees, counselling or mediation. In the US, these divorce costs can exceed yearly household income of the former couple (Henry, Fieldstone, Thompson, & Treharne, 2011). In Germany, administrative divorce costs (i.e. court fees and solicitor fees) are legally stipulated and can start from under \in 1,000 for childless spouses that mutually agree to the divorce and whose value in dispute is below \in 3,000. Solicitor fees are not capped however and court fees increase with the complexity of the case and the level of financial value of goods and property in dispute. Consequently, administrative divorce costs can be substantial, which may increase the necessity to resort to savings to cover costs. The timing of these costs however varies as first instalments are often required to commence the divorce proceeding at a court. Final installments are then commonly amortized in the months after legal divorce is finalized. Overall, we thus expect that the divorce proceeding is associated with a sizeable additional wealth penalty compared to separation (*Divorce Penalty Hypothesis*).

Financial Adjustment Post-Divorce

Once divorce is settled and final administrative instalments are covered, there may be no further one-off payments associated with marital dissolution and financial gains will no longer have to be shared with the ex-spouse. At this point in the marital dissolution process, we expect divorcees to commence financial recovery aimed at re-establishment of financial security.

Wealth accumulation may occur through two main channels: financial transfers and savings of income. Leopold and Schneider (2011) however showed that although financial transfers from parents to their adult children are likely to take place in the year of divorce, there was now increased likelihood to receive further financial transfers in the years following divorce. For income, however, several studies illustrated rising income levels post-divorce due to labor market adjustments or re-partnering (e.g., Andreß et al., 2006; Bayaz-Ozturk et al., 2018; Jansen, Mortelmans, & Snoeckx, 2009). Income recovery may therefore also

stimulate wealth accumulation leading to increases in personal wealth in the years after divorce (*Post-Divorce Coping Hypothesis*).

Nevertheless, it should be emphasized that wealth is not necessarily a direct outcome of income. Hence, rising income shortly after divorce, may not necessarily lead to parallel trends in wealth accumulation. Due to lower economies of scale and more expensive dwellings than during marriage, per capita expenses may stay elevated after divorce particularly if divorcees stay un-partnered. Thus increased income may partially or fully be used to cover these costs thereby dampening wealth accumulation. Previous research that focused solely on unpartnered divorcees found no substantial effect for time since divorce on household wealth (Zagorsky, 2005). As the likelihood to remarry is the highest within the first five years after separation and 50 percent of divorcees are remarried after 6 years (Jaschinski, 2011; Lankuttis & Blossfeld, 2003), these results may neglect a large proportion of remarried divorcees.

Gender Differences over the Marital Dissolution Process

Evidence clearly shows that married men and women differ in their personal wealth accumulation resulting in a gender wealth gap to the disadvantage of married women (Sierminska et al., 2010). Disparities in income based on the gender wage gap, motherhood penalties or men's higher labor market earnings are commonly quoted as the main driver of these wealth inequalities (Blau & Kahn, 2007; Dotti Sani, 2015; Sierminska et al., 2010; Warren, Rowlingson, & Whyley, 2001).

During marriage such income inequalities are partially compensated through financial transfers between husband and wife (Eickmeyer, Manning, & Brown, 2019). Once spouses separate, formerly voluntary income pooling is often reinforced through mandatory spousal maintenance (*alimony pendente lite*) and child support payments which are meant to preserve marital living standards during separation. Due to women's lower average income and their higher likelihood of residing with children after separation, women are commonly the

beneficiary of support payments. Support payments have however regularly been considered insufficient to cover increased economic needs during separation leading to greater income declines for women than men (Bayaz-Ozturk et al., 2018; Bröckel & Andreß, 2015; Fine & Fine, 1994). In return, this may substantially inhibit separated women's savings potential compared to men. For men, it is however similarly unlikely that they accumulate substantially more wealth than women until divorce is finalized. Any wealth gains until this point are considered in the division of property creating a disincentive for men's wealth accumulation. US research from Zagorsky (2005) and Wilmoth and Koso (2002) supports this theory as they found no substantial gender differences in per capita wealth for separated men and women.

Once divorce is settled, support payments and particularly alimony tend to diminish in the years after legal divorce reducing the equalization of income disparities between ex-spouses (Fine & Fine, 1994). This leads to increasing economic pressure for women. Simultaneously, low current and future financial commitments to the ex-wife may create an incentive for men to pursue their higher wealth accumulation potential. Although re-marriage has been shown to be a viable strategy to increase available income post dissolution (Jansen et al., 2009) and partially recover wealth (Wilmoth & Koso, 2002), evidence shows that men are more likely to re-partner than women particularly if women reside with children (Di Nallo, 2018; Wu & Schimmele, 2005). Thus, while we expect to find only marginal gender differences until divorce is finalized (*Negligible Difference Hypothesis*), we anticipate wealth accumulation and thus wealth levels to be lower for women than men in post-divorce years (*Gendered Recovery Hypothesis*).

Previous US research that focused on per capita wealth, partially supported ideas about growing gender wealth inequalities after divorce. Zagorsky (2005) and Yamokoski and Keister (2006) indicated that economic disadvantage following divorce is slightly larger for women and per capita wealth recovery more fragile for women than for men. Nevertheless, both authors describe gender differences as moderate compared to the overall dramatic

economic effect for both genders. From a longer-term perspective, several studies have shown that divorced older women who did not remarry held substantially less per capita wealth than men with similar marital histories (Ulker, 2008; Wilmoth & Koso, 2002; Zissimopoulos et al., 2015).

The German Context

Given our focus on German data, it is important to understand the specific German contextual situation that may influences personal wealth changes over the marital dissolution process.

Economic gender inequality. Compared to the US, where state policies encourage married women's employment, German policy emphasizes women's role as caregiver and provides incentives for married women to reduce work hours (Aisenbrey & Fasang, 2017). Part-time employment rates are therefore comparatively high amongst German married women, but particularly high for mothers. Only 25 percent of German couples with children are dual earner couples compared to 40 percent in the US (OECD, 2019). Hence, German wives earn less than their husbands (Trappe & Sørensen, 2006), which additionally leads to substantial within-couple wealth gaps recently estimated to be \in 33,000 to the disadvantage of wives (Sierminska et al., 2010). Although the German social security system is more generous than the US, differences in income and labor market patterns make German women's financial situation more volatile immediately after marital dissolution than is the case for US women (Bayaz-Ozturk et al., 2018).

Division of matrimonial property at divorce. After a minimum of one year separation, German couples can legally dissolve their marriage at a family court. This process takes on average less than a year, but can be prolonged in difficult divorce cases. Although property ownership stays untouched during separation, divorce requires an equalization of the accrued gains (*Zugewinnsausgleich*) to be enforced under the default regime of community of accrued gains (*Zugewinngemeinschaft*). This equalization of accrued gains only considers wealth

acquired during marriage. Personal inheritance and gifts are thereby commonly exempt. If the accrued gain of one spouse exceeds those of the other, the wealthier spouse has to make an equalization payment to the less wealthy spouse that amounts to half of the difference in accrued gains. The German regime therefore differs substantially from the US system where future needs of divorcees are considered at divorce and resources – including pre-marital wealth – are often equally divided (Voena, 2015).

Financial support and obligations after separation and divorce. To compensate per-capita income declines of lower earning spouses throughout separation and divorce, the higher earning spouse – typically the man – is obliged to support their former partner through separation alimony and post-divorce alimony. Separation alimony is commonly granted to ensure the preservation of marital living standards. The payee is hence not obligated to establish financial independence (e.g. increase working hours). This differs from post-divorce alimony as the legal framework emphasizes the principle of financial self-sufficiency after divorce. Post-divorce alimony is therefore only granted if specific circumstances are given, the most important being child care responsibilities. In January 2008, regulations for post-divorce alimony were further tightened and an even stronger emphasis was put on the obligation to work. Whereas the duration of payments was less regulated prior to 2008, the duration of post-divorce alimony remains temporary and is commonly restricted to three years after childbirth unless an extension is granted (Bröckel & Andreß, 2015). Non-payment or underpayment of alimony continue to be commonplace (Hartmann, 2014).

If children were present during the marriage, monetary child support has to be paid by the non-residential parent. Nevertheless, only a minority of residential parents have been found to receive child support from their ex-partner and only half of all payments can be considered sufficient making non- and under-payment a substantial issue (Bröckel & Andreß, 2015; Hartmann, 2014). Single parenthood and non-compliance with child support payments

disproportionally affects women's financial circumstances as children commonly reside with mothers after separation and divorce (Statistisches Bundesamt, 2018).

DATA AND METHOD

Data

To examine the associations between the marital dissolution process and measures of personal wealth, we used longitudinal, individual-level data from the German Socio-Economic Panel Study (SOEP) (doi:10.5684/soep.v34). The SOEP survey is a large, annual, multipurpose panel survey that is representative of Germany's resident population.

The SOEP survey was particularly well suited for our purposes as it (a) includes detailed information on respondent's marital pathways to allow examination of the marital dissolution process; (b) enables the analysis of marital dissolution outcomes due to a sufficiently large subsample of respondents who experience this event; and most importantly (c) is internationally unique in providing comprehensive longitudinal information on net wealth at the individual and household level over four survey years (2002, 2007, 2012 and 2017).

Analytical Sample

The analytical sample was restricted to respondents aged 18 years and over that either stayed continuously first-time married between 2002 and 2017, or experienced a marital dissolution from their first marriage during this time. The focus on years 2002 to 2017 was necessary as it corresponds with the first and last available measurement of personal wealth. We focused on first marriages to avoid potential bias in results from multiple marriage dissolutions.

Respondents that experienced a marital dissolution were considered part of the sample if they experienced the entire dissolution process (i.e. from married to separated to divorced) or only stages of it (i.e. married to separated, or separated to divorced) as some stages of the dissolution process may have occurred before 2002 or after 2017.

Due to analytical requirements, respondents were only included in the sample if they were successfully interviewed in at least two of the possible four wealth waves. Analyses are therefore based on an unbalanced panel with a minimum of two (41 percent of the sample) and maximum of four (38 percent) observations per respondent. Further, separated and divorced respondents may be living alone or with a new partner after marital dissolution. As common in income research (e.g., Avellar & Smock, 2005), we decided to include both groups of individuals to minimize distortion of results due to selection bias (Di Nallo, 2018; Jansen et al., 2009).

We applied a final restriction to the sample by excluding 77 sample respondents (33 men and 44 women) who lived with their (ex)spouse in the same household for at least two years or more at any time after their initial separation, potentially indicating a reconciliation of the marriage.

In total, the analytical sample comprised 7,575 women with 20,333 individual-year observations and 7,179 men with 19,472 individual year observations. We observed 228 separations for women and 181 separations for men. Additionally, we observed 443 transitions into divorce for women and 334 for men. Considering sample respondents for whom divorce was observed between 2002 and 2017, we found respondents were separated on average for 2.2 years before their divorce proceeding. On average, sample respondents were married for 16 years before they separated (see table A.1. in online appendix for descriptive overview).

Measurements

Outcome variables. Our main outcome measure *personal net wealth* is defined as the sum of all personally owned assets minus personally owned liabilities. It therefore also includes the personal share of assets and liabilities that are owned jointly. We adjust this measure for inflation and top- and bottom-code it at the 0.1% level. Following these adjustments, we

additionally disaggregate the overall personal net wealth measure into personal housing wealth and personal financial wealth. Whereas *personal housing wealth* refers to the primary property including potential mortgage debt, *personal financial wealth* refers to more liquid resources (Spilerman, 2000). To maintain negative wealth values while adjusting for the right-skewness of the data, we deploy an inverse hyperbolic sine (IHS) transformation to all three measures (Friedline, Masa, & Chowa, 2015).

Main explanatory variable. The main explanatory variable is a categorical indicator of the marital dissolution process in five stages: married and at least four years prior to separation (reference), one to three years prior to separation, separated and one year prior to the date of legal divorce, up to one year prior to and one year post the legal divorce date, and one to 15 years after legal divorce. We decided to focus on up to three years prior to separation as descriptive results from Zagorsky (2005) provide some indication that per capita wealth starts to decline up to three year prior to potential separation and it additionally aligned with previous research reporting a decline in marital satisfaction prior to separation (Chiriboga, 1982). As the majority of separations proceed to divorce within a relatively short timeframe, we capture years of separation with a single category. The first divorce category captures economic effects of the legal divorce proceeding. In line with previous research (Symoens, Bastaits, Mortelmans, & Bracke, 2013), we decided to focus on one year prior to the legal divorce date as German divorce proceedings commonly takes up to one year. As any outstanding solicitor or court fees need to be settled shortly after the divorce date, we additionally cover one year after this divorce date. Due to declining sample sizes in the years following divorce, our last category measures a rather large recovery window of up to 15 years after divorce.

Control variables. We estimated fixed effects regression models with a set of time-variant control variables. We added respondents' age and age as a quadratic term to capture maturation effects. We also included year dummies for the survey years 2002 and 2007 to

account for potential under-reporting of personal wealth in the first wealth waves as was previously shown for income measures within panel surveys (Fisher, 2019). Next, we added a continuous measure for marital duration to capture time-dependent marriage wealth premiums. The duration measure was mean-centered and set to 0 for observational years in which respondents were separated or divorced. Finally, we included a dummy to flag imputed wealth data.

As we assume that the association between the marital dissolution process and personal wealth works partially through indicators that capture re-partnering, living arrangements (e.g. living with family or friends, children in household) or family support as well as employment and associated income adjustments, we decided against adding variables that capture these mechanisms.

Analytical Strategy

To provide a first indication of the development of personal wealth throughout the marital dissolution process, we present mean and median personal wealth levels at different stages of the marital dissolution process separately for men and women in Table 1.

We next proceeded to our multivariate regression analyses. In preparation for this step, we addressed missing values in the data. We built on wealth data that was edited and imputed by the SOEP survey team (see Grabka & Westermeier, 2015 for detailed descriptions of the imputation process) and additionally imputed missing data with chained equations for all analytical variables using Stata's mi procedure (version 15.1). To enhance the quality of our imputations, we included the following auxiliary variables: migration background, cohort, SOEP sample, number of siblings, federal state, living area, lived in East Germany in 1989, respondent's and parental education, full-time labor market experience, and log-transformed income. Multiple imputed estimates from the proceeding steps of our analyses were combined using Rubin's rules (Rubin, 1987).

Using the imputed data, we estimated multivariate fixed effects regressions. To ease readability of our results, we plot results and present the results in graphic form (coefficients from the regression models are presented in Table A.2. in the online appendix). Fixed effects regression models leverage the panel data and regress deviations from individuals' personmeans in the dependent variable on deviations from their person-means in the independent variables (Allison, 2009). Hence this approach makes exclusive use of the within-individual variation in the explanatory and outcome variables over time and more appropriately addresses selection effects (e.g., individuals that experienced a parental divorce are more likely to separate or divorce (Amato & DeBoer, 2001)). Thus, time-invariant observed or unobserved factors (e.g. family background, parental education or ethnicity) do not bias fixed effects analyses, thereby reducing omitted variable bias.

As time-constant variables of interest, such as gender, drop out of the fixed effects model, we interacted a dummy indicator of gender with the categorical marital dissolution measure. This allowed us to assess potentially gendered effects in a straight forward manner. Until divorce is finalized, we expected to find only marginal differences between men's and women's personal wealth changes. A lack of statistical significance of gender interactions however can not be interpreted as a negligible effect or even the absence of an effect (Rainey, 2014). To further scrutinize the difference between men and women, we followed statistical recommendations and conducted an equivalence test. We therefore assessed whether percentage differences between men and women that we found up until the post-divorce phase were at least 16 percent to the disadvantage of women. Thus, gender differences that were significantly below our 16 percent threshold were deemed negligible. To define this threshold, we relied on recent evidence from Bayaz-Ozturk et al. (2018) who found larger disposable income decline for German separating women than men of nine and 25 percent respectively. Although income only partially reflects personal wealth levels, we relied on income studies as

there is little other research that could assist in the definition of meaningful thresholds for the analyses.

For all regression models, standard errors were corrected for clustering of observations within individuals. We further used a Wald test (test command in Stata) to establish whether potential differences between marital dissolution stages were statistically significant.

RESULTS

Bivariate Results

Table 1 provides weighted descriptive evidence on the relationship between marital dissolution and imputed personal wealth for men and women. For ease of readability, we provide both untransformed and IHS-transformed mean personal wealth levels. Additionally, we show median personal wealth levels of untransformed wealth as wealth data is highly skewed, which may influence untransformed means.

With some exemptions, descriptive results illustrated a step-wise decline of personal wealth over the dissolution process at least until the divorce processing for both men and women. The lowest mean and median wealth was thereby found during the divorce proceeding and surprisingly in years after divorce. Between one and 15 years after legal divorce, women's mean and median personal wealth was higher than during the divorce proceeding. For men, this was only the case for untransformed mean wealth, whereas IHS-transformed mean wealth and median wealth were lowest at this stage of the marital dissolution process. Such differences between untransformed and IHS-transformed wealth were based on the fact that similar absolute growth in untransformed wealth led to decreasing relative growth in IHS-transformed wealth.

In line with previous research (Sierminska et al., 2010), women held substantially less personal wealth during marriage than men. While similarly substantial gender differences were found over the marital dissolution process, the gender gap was the lowest during

separation for untransformed mean wealth and one to 15 years after legal divorce for IHStransformed wealth and median wealth. Thus descriptive results indicated that both men and women experience sizable wealth declines over the marital dissolution process with women owning less overall than men.

across the marital dissolution process.								
		Women			Men			
	Me	an	Median	Mea	Median			
	Raw	IHS	Raw	Raw	IHS	Raw		
Married, >3 years prior separation	98'097	8.46	44'260	129'840	9.22	64'480		
Married, 1-3 years prior separation	65'232	5.48	4'846	107'872	7.94	32'511		
Separated, 1 year prior legal divorce	79'084	5.01	3'443	101'206	6.11	15'860		
Divorce proceeding	21'413	3.01	0	66'090	6.43	13'673		
Divorced, >1 year	60'029	4.91	3'924	91'838	5.00	7'503		

Table 1. Mean (raw and IHS-transformed) and median personal net wealth levels for men and women

Note: Imputed and weighted data. Data are from the Socio-Economic Panel Survey v34 (2002, 2007, 2012, and 2017).

Multivariate results

Due to possible observed and unobserved compositional differences between respondents who experience a marital dissolution as well as other idiosyncratic changes that may occur across time, we proceeded to formal tests of our specific hypotheses about changes of personal wealth over the marital dissolution process highlighting the different stages of this process (i.e., one to three years pre-separation, separated and one year prior to the date of legal divorce, divorce proceeding, and at least one year after legal divorce). Regression results for personal net wealth changes are depicted in Figure 2 (full model results are reported in Table A.2 in the online appendix). We further report results by type of wealth, namely personal housing wealth and financial wealth, in Figure 3 (see also Table A.2 in the online appendix). Due to the skewness of wealth data, all regression analyses used IHS-transformed wealth measures. IHS-transformed coefficients can be further transformed to indicate percentage changes, which was done for Figures 2 and 3.

Separation plans – one to three years prior to actual separation. First, we hypothesized that individuals would decrease their personal wealth prior to separation as a cause or consequence of separation plans (*Pre-Separation Declines Hypothesis*). For both men and women our results indicated moderate, but statistically non-significant personal net wealth declines of 55 and 45 percent respectively. Aggregating wealth into housing wealth and financial wealth, it becomes evident that these declines were almost exclusively driven by declines in financial wealth.



FIGURE 2. FIXED EFFECTS REGRESSION FOR PERSONAL WEALTH (IHS-TRANSFORMED).

Note: Whiskers indicate 95% confidence intervals. Percentages indicate retransformed coefficients (= $100 \times$ [exp(b) – 1]). Data are from the Socio-Economic Panel Survey v34 (2002, 2007, 2012, 2017; unweighted; multiply imputed). Full model results in Table A.2. in the appendix.

Separation of the couple household into two households. Second, we expected substantial separation penalties for overall personal net wealth due to relocation costs, higher per capita expenses, or potential unfavorable liquidation of assets (*Separation Penalty Hypothesis*). For both men and women, regression results illustrated substantial and statistically significant separation penalties of 85 and 78 percent respectively compared to personal wealth during marriage and at least four years prior to separation. In line with our theoretical considerations, the gender differences could be considered only marginal. This was further confirmed by statistically non-significant interaction effects and a significant equivalence test, which indicated that our gender differences were significantly below the previously defined threshold of 16 percent to the disadvantage of women.



FIGURE 3. FIXED EFFECTS REGRESSION FOR PERSONAL HOUSING WEALTH AND FINANCIAL ASSETS (IHS-

Note: Whiskers indicate 95% confidence intervals. Percentages indicate retransformed coefficients (= $100 \times$ [exp(b) – 1]). Data are from the Socio-Economic Panel Survey v34 (2002, 2007, 2012, 2017; unweighted; multiply imputed). Full model results in Table A.2. in the appendix.

We additionally examined the association between separation and housing wealth, as housing property is likely to be jointly accumulated during marriage and often constitutes the main wealth component (Thomas & Mulder, 2016). Financial constrains may force separated individuals to sell their property (Lersch & Vidal, 2014) leading to substantial declines in personal housing wealth during separation (*Housing Decline Hypothesis*). As depicted in Figure 3, our results confirmed major penalties for housing wealth of 85 percent for both men and women. Simultaneously, financial wealth levels stayed at comparative levels found during the pre-separation phase.

Legal divorce proceeding. Third, we expected to find a sizable additional decline of personal wealth during the divorce proceeding due to administrative costs (*Divorce Penalty Hypothesis*). As illustrated in Figure 2, men and women held 83 and 86 percent less personal wealth, respectively, during the divorce proceeding compared to during marriage and at least four years prior to separation. Hence, comparing between separation and the divorce proceeding, men's and women's personal wealth only declines by an additional three and eight percent, respectively. A Wald test confirmed that these differences were statistically non-significant. In line with our expectations, we found only a marginal gender difference in wealth declines during the divorce proceeding, which was statistically non-significant as evidenced by gender interactions and significantly below our previously defined threshold.

Economic coping after legal divorce – one to 15 Years after legal divorce. Finally, we anticipated personal wealth to increase after divorce once divorce costs were largely settled (*Post-Divorce Coping Hypothesis*), with men expected to experience steeper post-divorce wealth accumulation compared to women (*Gendered Recovery Hypothesis*). Contrary to our expectations, our regression results did not highlight substantial wealth increases for either men or women one to 15 years after divorce. Rather personal wealth stayed at levels found during the divorce proceeding and thus substantially and significantly below those found during marriage and at least four years prior to separation. As a result, we also did not find substantial gender differences in relative personal wealth changes during this post-divorce phase.

Supplementary Analyses

We ran a range of additional analyses to assess the robustness of our results and present these in the online appendix. First, we validated whether time spent in separation biases our results. Longer separations may enable time for wealth accumulation to a greater extent than those who proceed quickly from separation to divorce. Alternatively, long separations may signal particularly complex wealth portfolios or custody battles, and therefore place greater strains on financial resources. We therefore re-ran our fixed effects regression analyses excluding respondents that were separated for more than five years (Figure A.1. to A.2.). Although sample sizes are markedly reduced, results are largely in line with main results.

Second, we examined whether the imputation of SOEP data or our own imputations of additional analytical variables impacted our results. Thus, we first re-ran our analyses without SOEP imputed wealth data and in a second step, we used listwise deletion to maintain only non-imputed values for all analytical variables (Figure A.3. to A.6.). Although, these analyses used substantially smaller samples, which reduced the power of our analyses, results reflect main models.

Finally, we examined potential issues associated with attrition as previous research found that separated and divorced respondents are more likely to attrite than married respondents (e.g., Watson, 2003). We therefore examined whether there is evidence for informative censoring in our data by predicting attrition using wealth and a dummy for marital dissolution. We found that less wealthy men and women that experienced a marital dissolution were both more likely to attrite. Thus, overall, our analyses may underestimate wealth penalties. As higher attrition is likely for both men and women in this groups, we do not expect attrition to bias gender differences.

DISCUSSION AND CONCLUSION

How wealth is associated with marital dissolution has been a central question within family research in light of historically high separation and divorce rates and simultaneously growing wealth inequalities. The current paper adds to our knowledge on this question and extends prior research by acknowledging that marital dissolution is not a single point-in-time event, but rather involves a number of stages both prior to and after the decision to separate. Our hypotheses acknowledge that the implications of each stage on overall wealth, as well as specific wealth components, may vary. Importantly, we examine variations by gender at each stage because we know that marital dissolution, and specifically post-divorce economic recovery, is experienced differently by men and women with potential life-long consequences for financial security. Our analyses focus on Germany, a country that encourages a traditional division of care work, which potentially disadvantages women's wealth accumulation during marriage with important consequences for women's wealth if the marriage dissolves. To test our hypotheses, we deployed fixed-effects regression models using German SOEP data.

We found that personal wealth of men and women started to decline prior to actual separation. While this decline was only moderate and statistically non-significant, it was almost exclusively driven by a depreciation in financial wealth. As discussed in our theoretical framework, this wealth decline may be a cause or consequence of separation plans. On one hand previous research showed that increasing consumer debt, which we covered within financial wealth, increases marital dissatisfaction and the likelihood of marital dissolution (Eads & Tach, 2016). On the other hand financial cooperation and more efficient joint investments may decline as a result of growing marital dissatisfaction and estrangement.

Housing wealth levels during the first phase of the dissolution process did not differ to levels found during marriage and at least three years prior to separation. This may predominantly be due to the fact that housing property provides secure living conditions for all household members (Mulder, 2013). This makes it highly worthwhile to maintain this type of asset for as long as possible. It is thus not surprising that housing wealth is not impacted by

separation plans particularly as divorce may not be certain at this point of the dissolution process.

Consistent with income studies (Andreß & Güllner, 2001), we found the largest wealth depletion to occur during the separation phase. Disaggregating personal net wealth, it became evident that housing sales were the main driver of the separation-related wealth depreciation whereas other costs such as increased per capita expenses or relocation costs may only play a tangential role. In line with previous research on declining homeownership rates through marital dissolution (Lersch & Vidal, 2014), we find that both men and women forfeit 85 percent of their housing wealth during separation. As we additionally scrutinized parallel changes in financial wealth, we found that individuals do not seem to gain financial profits from housing sales as financial wealth stays at lower levels. We thus speculate that profits from property sales are used to pay off any remaining mortgage debts. Residual profits, if any at all, may be consumed by separation costs.

Compared to the detrimental wealth declines during separation, the divorce proceeding and associated costs added only marginal additional penalties. Nevertheless, divorce costs can be expected to be substantial. Compared to separation-related relocation costs or other one-off payments, court and solicitor fees can largely be acquitted in several instalments. Divorcing individuals may thus be able to cover these smaller installments out of surplus monthly income instead of drawing on additional savings. It is also likely that men and women consciously reduce their consumption and plan their monthly finances to pay divorce proceeding instalments and protect their already critically reduced personal wealth pool. Additionally, legal aid for poor households can be accessed in Germany and other countries to cover some of the court fees.

Contrary to our expectations about post-divorce financial recovery, we found no evidence of wealth improvements shortly after divorce for either men or women. This contrasts to previous income research that illustrated substantial income recovery in the years following

divorce (e.g., Andreß et al., 2006; Bayaz-Ozturk et al., 2018). This disparity in empirical evidence may be explained by fundamental differences between the two measures of economic wellbeing. Income estimates the current money flow. This flow can easily be disrupted or enhanced through increases in working hours, job promotions, or the loss of employment. Wealth, as a stock measure, is less responsive to such adjustments and not a direct function of income as aspects such as consumption or financial transfers additionally influence wealth accumulation. Wealth related coping post-divorce may thus require more than income increases. Additionally, substantial wealth increases may only be visible after considerable time as wealth can exponentially increase due to wealth appreciation and capital gains. Our observational window of one to 15 years after legal divorce may therefore only reflect a rather short-term wealth accumulation timeframe. This may particularly be the case as our sample size was reduced in later years after divorce emphasizing wealth levels shortly after divorce. To fully understand wealth accumulation in the post-divorce, future research should therefore consider wealth levels at various time points from short-term to long-term changes.

In addition to already mentioned potential biases caused by attrition, our study may be limited in several ways. First, we relied on respondent's judgment about their share of jointly owned assets. It is however unclear whether perceived and legal ownership overlap and which aspect drives responses (Ambler, Doss, Kieran, & Passarelli, 2019). If respondents' reports are inaccurate or biased, we may be over- or under-estimating the wealth consequences of marital dissolution for men and women. Moreover, reporting differences may vary by gender. For example, women may be less involved in managing finances and less aware of wealth assets while married, thus further biasing the estimation of gender differences.

Finally, due to the nature of the German public pension system, public retirement entitlements are not covered by the SOEP. As for other marital wealth, pension entitlements that were accumulated during the marriage are split at divorce. As men commonly have a

more stable employment career and higher paying jobs than women (Aisenbrey & Fasang, 2017), it is likely that men lose pension entitlements at divorce in favor of their ex-wives (Möhring & Weiland, 2018). Sierminska et al. (2010) however highlight that pension entitlements in Germany differ from other wealth components that can be liquidized, transferred or used as collateral. As pension entitlements can only be accessed during retirement as a form of income, we therefore argue that they should not be included in the current analysis but may be crucial to consider in studies that focus on the economic effect of marital dissolution at retirement age.

Despite these limitations, overall our study confirms substantial marital dissolution wealth penalties, but additionally provides important insight into the consequences at different stages of the dissolution process. We show that the most critical point for wealth depletion is during separation, rather than following divorce as assumed in previous studies that focus on divorce (e.g., Zagorsky, 2005). Disaggregating net wealth into housing wealth and financial wealth, we find that this separation penalty is predominantly driven by depreciations of housing wealth, which is commonly the main share of married couples' wealth portfolios. The more liquid share of this portfolio, financial wealth, already declines moderately prior to actual separation. Importantly, neither men nor women experience a further depreciation or recuperation of the two wealth measures after these initial declines. We thus report few relative gender differences in the consequences of marital dissolution on personal wealth, again in contrast to widely held assumptions derived from income studies. Thus, policies designed to support men and women during a marriage breakdown should recognize that the effects of marital dissolution on wealth levels will have important consequences for both men and women, and by implication, their children. Nevertheless, it should be kept in mind that in absolute terms women likely hold less personal wealth than men at any point of the dissolution process and are thus likely to be more economically vulnerable than men.

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Appendix

	Non-imputed data				Imputed data			
	Continuously married subsample		Marital dissolution subsample		Continuously married subsample		Marital dissolution subsample	
	Men mean/(SE)	Women mean/(SE)	Men mean/(SE)	Women mean/(SE)	Men mean/(SE)	Women mean/(SE)	Men mean/(SE)	Women mean/(SE)
Personal	160.47	108.92	90.25	51.64	153.65	113.76	104.15	65.90
wealth (in 1'000 EUR)	(346.39)	(210.86)	(209.48)	(129.02)	(327.60)	(232.17)	(292.11)	(208.56)
Personal	75.58	63.83	39.48	28.74	77.60	67.00	46.42	33.21
housing wealth (in 1'000 EUR)	(109.43)	(97.01)	(91.55)	(77.52)	(111.56)	(99.79)	(108.37)	(87.80)
Personal	84.89	45.10	50.77	22.90	76.06	46.76	57.73	32.70
financial wealth (in 1'000 EUR)	(292.54)	(158.62)	(154.66)	(80.64)	(287.70)	(199.23)	(256.23)	(181.06)
Married Cont. marital duration in years	1.00 28.82 (15.64)	1.00 28.61 (15.73)	0.24	0.30	1.00 27.99 (15.62)	1.00 27.66 (15.55)	0.34	0.34
Separated			0.13	0.12			0.20	0.19
Divorced			0.62	0.58			0.47	0.47
Separation			25.70	23.42			27.69	25.44
length of first separation in month			(22.06)	(20.27)			(24.25)	(22.65)
Marital			14.09	13.88			16.14	15.41
duration of previous first marriage in years			(7.93)	(8.21)			(11.18)	(10.22)

Table A.1. Descriptive statistics

Age in years	55.39	52.51	46.28	42.29	54.68	51.70	46.92	43.41
	(14.05)	(14.18)	(9.15)	(9.28)	(14.03)	(13.91)	(10.89)	(10.36)
HH members	0.72	0.74	0.53	1.06	0.77	0.80	0.63	1.05
age 0-17	(1.08)	(1.09)	(0.91)	(1.10)	(1.10)	(1.11)	(0.97)	(1.12)
Migration	0.16	0.18	0.10	0.14	0.15	0.16	0.10	0.15
background								
Currently in	0.24	0.24	0.24	0.26	0.24	0.23	0.24	0.23
eastern								
Germany								
In East	0.24	0.24	0.26	0.29	0.23	0.24	0.26	0.26
Germany in								
1989								
Educational								
level (based								
on ISCED97)								
low	0.06	0.13	0.06	0.11	0.06	0.12	0.05	0.11
intermediate	0.50	0.57	0.53	0.56	0.51	0.58	0.54	0.59
high	0.44	0.29	0.41	0.32	0.43	0.30	0.41	0.30
Full-time	28.10	12.94	21.71	9.93	27.78	12.77	22.13	10.27
labor market	(11.43)	(11.79)	(9.61)	(8.71)	(11.40)	(11.51)	(10.18)	(8.85)
experience								
Number of	2.15	2.12	1.87	1.79	2.10	2.06	1.84	1.93
siblings	(1.92)	(1.81)	(1.46)	(1.68)	(1.87)	(1.76)	(1.55)	(1.73)
Parents'								
educational								
level (based								
on ISCED97)								
low	0.18	0.17	0.11	0.13	0.22	0.20	0.16	0.17
intermediate	0.64	0.64	0.67	0.64	0.67	0.68	0.70	0.67
high	0.12	0.12	0.12	0.15	0.12	0.13	0.14	0.15
Cohort								
-1945	0.32	0.25	0.01	0.00	0.30	0.23	0.06	0.03

1946-1955	0.20	0.20	0.17	0.10	0.20	0.20	0.15	0.10
1956-1961	0.14	0.13	0.24	0.15	0.14	0.13	0.20	0.15
1962-1975	0.28	0.30	0.52	0.56	0.30	0.32	0.52	0.54
born after	0.06	0.11	0.06	0.19	0.06	0.12	0.07	0.18
1975								
Observations	11837	11787	646	843	17771	18140	1701	2193
Individuals	5601	5713	272	388	6599	6775	580	800
N / D / C	· - · -	10 24	(2002 2007 20	10 0017	• 1 (1)			

Note: Data: Socio-Economic Panel Survey v34 (2002, 2007, 2012, 2017; unweighted)

	Personal wealth B/(SE)	Housing wealth B/(SE)	Financial wealth B/(SE)
Marital dissolution process (ref.: married,	· · · ·		· · · ·
>3 years prior separation)			
Married, 1-3 years prior separation	-0.80	-0.43	-0.31
	(0.55)	(0.43)	(0.36)
Separated, 1 year prior divorce	-1.89**	-1.87***	-0.58
	(0.59)	(0.37)	(0.36)
Divorce proceeding	-1.74*	-2.79***	-0.40
	(0.74)	(0.47)	(0.52)
Divorced, >1 year	-2.17***	-2.37***	-0.42
	(0.53)	(0.38)	(0.36)
Interactions: marital dissolution process X female			× ,
Married, 1-3 years prior separation X	0.20	0.64	0.84
female	(0.78)	(0.59)	(0.48)
Separated, 1 year prior divorce X female	0.36	-0.04	0.04
	(0.66)	(0.50)	(0.48)
Divorce proceeding X female	-0.23	0.04	0.60
1 0	(1.13)	(0.67)	(0.61)
Divorced, >1 years X female	0.14	-0.34	0.55
	(0.68)	(0.54)	(0.46)
Age	0.36***	0.59***	0.02
C	(0.03)	(0.03)	(0.03)
Age squared	-0.00***	-0.00***	0.00
	(0.00)	(0.00)	(0.00)
Marital duration (mean centered)	-0.01	0.03	-0.02
	(0.02)	(0.01)	(0.02)
Year 2002	0.41*	0.75***	-0.08
	(0.18)	(0.13)	(0.14)
Year 2007	0.14	0.33***	0.06
	(0.11)	(0.07)	(0.08)
Wealth flag	-0.13		
C	(0.08)		
Housing wealth flag	` '	-0.33**	
		(0.10)	
Financial wealth flag		. /	-0.17*
C			(0.07)
N Observations	39805	39805	39805
N Individuals	14754	14754	14754

 Table A.2. Fixed-effects models of personal wealth including models for personal financial wealth and housing wealth (IHS transformed)

Note: * p<.05, ** p<.01, *** p<.001





Note: Whiskers indicate 95% confidence intervals. Percentages indicate retransformed coefficients (= $100 \times [exp(b) - 1]$). Data are from the Socio-Economic Panel Survey v34 (2002, 2007, 2012, 2017; unweighted; multiply imputed).









FIGURE A.3. FIXED EFFECTS REGRESSION FOR PERSONAL NET WEALTH (IHS-TRANSFORMED) EXCLUDING IMPUTED WEALTH DATA.

Note: Whiskers indicate 95% confidence intervals. Percentages indicate retransformed coefficients (= $100 \times [exp(b) - 1]$). Data are from the Socio-Economic Panel Survey v34 (2002, 2007, 2012, 2017; unweighted).



FIGURE A.4. FIXED EFFECTS REGRESSION FOR PERSONAL HOUSING WEALTH AND FINANCIAL ASSET (IHS-TRANSFORMED) EXCLUDING IMPUTED WEALTH DATA.

Note: Whiskers indicate 95% confidence intervals. Percentages indicate retransformed coefficients (= $100 \times [exp(b) - 1]$). Data are from the Socio-Economic Panel Survey v34 (2002, 2007, 2012, 2017; unweighted).





Note: Whiskers indicate 95% confidence intervals. Percentages indicate retransformed coefficients (= $100 \times [exp(b) - 1]$). Data are from the Socio-Economic Panel Survey v34 (2002, 2007, 2012, 2017; unweighted).



FIGURE A.6. FIXED EFFECTS REGRESSION FOR PERSONAL HOUSING WEALTH AND FINANCIAL ASSET (IHS-TRANSFORMED) ADDRESSING MISSING VALUES THROUGH LISTWISE DELETION.

Note: Whiskers indicate 95% confidence intervals. Percentages indicate retransformed coefficients (= $100 \times [exp(b) - 1]$). Data are from the Socio-Economic Panel Survey v34 (2002, 2007, 2012, 2017; unweighted).