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Demanding financial self-sufficiency after divorce: understanding the consequences of the 2008 Alimony Reform

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Abstract

In this paper, we examine whether and to what extent the 2008 Alimony Reform in Germany had an impact on alimony, its likelihood of payment, and cooperation between former spouses. In 2008, financial self-responsibility was imposed on divorcees by limiting post-marital alimony. By estimating panel event models and exploiting the German Tax Payer Panel, we show a significant decline in the likelihood of alimony payment and cooperation for tax purposes after separation. Moreover, the alimony amount was significantly reduced, thus, demonstrating an important redistribution effect of the 2008 Reform. The financially better-off individuals – mainly men – significantly benefited at the expense of their former spouses.

Keywords Divorce · Maintenance Law · Alimony

JEL classification J12 · K36 · J16

1 Introduction

The nearly universal divorce revolution of the 1970s abolished the principle of fault and established the idea of an irretrievable breakdown of a marriage. In most countries, however, the economically weaker spouse remained protected financially by the legal doctrine of long-lasting solidarity after a marriage breakdown.¹ In recent years, there has been a tendency in family law that is increasingly moving away from this principle. In the U.S., for example, Massachusetts started a “reform” movement toward restricting alimony in 2012 (Fernandez-Kranz and Roff 2021a; Verma 2021).

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¹ Unlike the division of marital assets, alimony is not a lump-sum settlement but represents future economic claims on the other. Alimony is paid monthly from one former spouse to the other.

Some states like Florida and Texas were recently in the process of limiting alimony as well (Morgan 2017). In several other states, alimony entitlements have been limited in the case of short marriages (Strasser 2021). Also in England and Wales, various court rulings between 2012 and 2014 strengthened the self-responsibility of the alimony-receiving partner (Dziobon and Stewart 2016). In Italy, a ruling by the highest court in 2017 significantly reduced the amount of maintenance payments (Panforti 2021). In 2004, the Commission of European Family Law even made financial self-sufficiency a key pillar in its *Principles on Divorce and Maintenance Between Former Spouses* (Ribot 2011, Pintens 2012).

Germany limited alimony early on, in 2008. Specifically, before 2008 only shortly married individuals without children were excluded from receiving alimony. Otherwise, alimony was routinely rewarded. Now, only primary carers of children younger than three years old have a solid claim to alimony. Everyone else is responsible for themselves. A claim for post-marital maintenance exists only if one spouse proves financial disadvantages due to the previous marriage and cannot reasonably be expected to earn her/his living. Besides the eligibility, the 2008 Reform restricted alimony payments in time. In our study, we aim to better understand this regime change by investigating the effect on the likelihood to pay any alimony and its amount following a separation. Thus, we identify whether there were beneficiaries and losers of this law change – raising the question of distributional effects. We extend our research question to the effect on spouses' ability to cooperate post-divorce for the purpose of tax reduction.² To our knowledge, this study is the first analysis to directly link the 2008 alimony cuts and its impact on divorcees.

Our findings could, therefore, help policymakers in other countries to better understand the potential consequences of maintenance laws on divorcees. This is particularly important as there are recent reforms restricting alimony, for example in Florida. Due to the lack of empirical research, the public debate is usually guided by anecdotal evidence or shaped by advocacy groups.

In general, establishing a causal effect of alimony reforms on divorcees is difficult. One of the main obstacles is the availability of panel data with a sufficient number of occurred divorces before and after the reform. Here, we benefit from the large sample size of the German Taxpayer Panel to overcome this challenge. Further, we take advantage of the sudden introduction of alimony cuts in 2008. Therefore, depending on the individual's year of separation different alimony regimes apply – thus, creating a control and treatment group. For this reason, we apply the panel event study method to estimate the reform's impact.

Our results suggest that the 2008 law change had a significant impact on the alimony amount paid and the likelihood of paying by former husbands. We observe the smallest reform effect in the year of divorce – a reduction of about 34%, and about 36% respectively. In the year of separation – the year preceding the divorce – the reform effect is at least twice the size. Following the finalized divorce, there is a

² The received alimony is usually not taxable. The paying individual, in contrast, can receive a tax refund for paid alimony. This refund can be increased when the former spouse agrees. As a consequence of this cooperation, the recipient would be obligated to pay taxes on alimony. However, the tax savings of the maintenance payer are greater. This gain could be shared between the former spouses. We consider this cooperation for tax purposes as an outcome variable that could be affected by reforms imposing alimony cuts.

clear pattern of a further reduction in both outcomes over the years. The same holds for the likelihood of cooperation for tax purposes. Overall, our findings suggest that the 2008 reform disadvantaged former wives. Moreover, their loss of alimony is of greater significance than the financial benefit for their ex-husbands. However, not all groups of divorcees were impacted in the same way. East German women, for example, did not suffer a loss, on average. West Germans drive our main results, specifically former spouses with children.

We observe heterogeneous effects depending on the income of former spouses that are sensible. Specifically, women with positive incomes were unaffected by the law change, regardless of their ex-husbands' income. Not-working wives suffered a loss in alimony, which depends on their former husbands' incomes.

The article is structured as follows. In Section 2, we present related literature and possible channels of reform's effects on our outcomes. Section 3 explains the institutional framework of our study. Our empirical strategy is outlined in Section 4. The data is described in Section 5. The results are presented in Section 6. Section 7 concludes.

2 Background

2.1 Related literature

Most of the empirical literature on alimony reforms focuses on the impact on married individuals. In theory, the design of maintenance regulations affects the bargaining power within the marriage. As a result of a regime change, bargaining models predict an adjustment in the time allocation of spouses to maintain their bargaining position. The 2008 Alimony Reform can be interpreted as a policy that benefits the financially stronger spouse at the expense of the secondary earner. Three studies investigate the impact of this law change on the labor supply of married individuals. Schaubert (2023), who considers spouses in longer marriages, finds a reform impact: Wives who were disadvantaged by the law and were not financially protected by marital assets increased their working hours as a response to alimony cuts. In contrast, Bredtmann and Vonnahme (2019) and Herold and Wallossek (2023) find no adjustments in labor supply attributable to the reform. However, they focus on individuals in short marriages. These were legally unaffected by the 2008 alimony cuts (Section 1579 (1) Civil Code, old and new versions).³

Studies on the causality of alimony laws on divorced couples are rare. To our knowledge, our empirical investigation is the first analysis that aims to link the 2008 alimony law change and the actual payments of maintenance based on administrative data. More common are studies of the effect of divorce on labor force participation

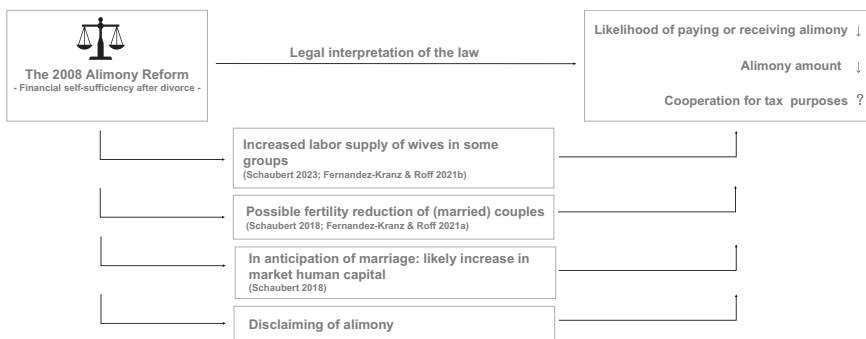
³ Herold and Wallossek (2023) include individuals who have been married for less than three years. In the study by Bredtmann and Vonnahme (2019), women in the treatment group are married for 3.18 years on average. However, even before 2008, alimony was not granted in cases of childless marriages that existed for less than three years (Borth 2011; Federal Supreme Court decision 01.27.1999, XII ZR 89/97; Higher Regional Court Celle decision 08.26.2005, 21 UF 27/05; Higher Regional Court Cologne decision 06.29.2007, 4 WF 105/07 OLGR Köln 2007, 649). This was public knowledge when the 2008 Reform was introduced.

(Thielemans and Mortelmans 2019; Brüggmann 2020) and overall income (Bayaz-Ozturk, Burkhauser, Couch and Hauser 2018; Le Bourdais, Jeon, Clark and Lapierre-Adamcyk 2016; see Appendix Table A.1.1). One notable exception is the recent study by Kessler (2020) who investigates the decline of divorcees' alimony payments in the context of alimony law changes in Switzerland. The study shows that this reduction can only in part be explained by reductions in the levels of income inequality in divorcing couples. It is therefore suggested that more restrictive alimony laws are the main driver of the observed decline in alimony.

There are no representative statistics from official sources on alimony in Germany. Andreß, Borgloh, Güllner, and Wilking (2003) carried out a survey on this subject on behalf of the Ministry of Family Affairs. The data, which are based on self-reports, refer to the period 1995 to 2000. The survey suggests that many individuals entitled to maintenance accept incomplete or irregular payments without taking legal action. For e.g., two-thirds of women entitled to payments report receiving no maintenance during the separation period. At the same time, it is reported by former husbands that alimony payments significantly reduce their disposable income. Another survey carried out by Forsa (2003) also shows a discrepancy between the information provided by those entitled to and those who have to pay maintenance. Thus, our study departs from the existing literature on alimony in one significant respect. We use administrative data – a reliable and objective data source – for the amount of maintenance. In addition, we contribute to the scarce research on the impact of alimony reductions by evaluating the 2008 Alimony Reform.

2.2 Expected mechanisms and outcomes

The 2008 Alimony Reform aims to reduce alimony payments for the secondary earner in the marriage. Therefore, there are several channels through which the reform may affect our outcome variables (see Fig. 1): There is a possibility of an increase in wives' labor supply as a protection from a worse financial situation following a divorce (Schaubert 2023). Theoretically, also a fertility reduction can be expected since women might invest more in their labor market-specific capital at the expense of having children and home production (Fernandez-Kranz and Roff



Source: Own figure

Fig. 1 Channels of the 2008 Alimony Reform

(2021a). This behavior is likely reinforced by investments in anticipation of a marriage that now has a decreased value of insurance. As a result of these behavioral adjustments, we expect to observe a reduced likelihood of alimony paid and alimony amount following the 2008 Reform.

There are possibly other reactions to the 2008 Reform that might explain at least in part a reduction in our outcomes. For example, the (perceived) costs that are suddenly necessary to fight for alimony are much higher. Therefore, the 2008 Reform might have a deterrent effect, especially on women, to ask for alimony. Thus, there might be an increase in second-earning spouses to waive their (right to) maintenance.

Regarding the cooperation of former spouses for tax purposes, to our knowledge, there is no theory or empirical literature, allowing us to predict a change. From the perspective of bargaining models, this reform weakened the relative bargaining position of the spouse with comparatively lower income and increased the relative bargaining power of her/his spouse *within* a marriage (Schaubert 2022). Outside the marriage, there is still the option of saving taxes if both decide to do so. The financially weaker spouse is, however, now under pressure to find work as soon as possible and is, in general, disadvantaged post-divorce because of the new alimony regime.

Research on post-marital cooperation is focused on the arrangements concerning common children, i.e., visitation agreements and other aspects of co-parenting (Finzi-Dottan and Cohen 2014, Rossin-Slater and Wüst, 2018). Cooperation in tax matters is, however, not comparable to this literature, as it is purely monetary and not child-related. Thus, we can only speculate whether the 2008 Alimony Reform led to a decline in post-marital cooperation.

3 Institutional environment

3.1 Alimony arrangements

German law distinguishes between alimony during the separation period and after a finalized divorce. The separation period – which is mandatory before a divorce can take place – usually takes one year (see Appendix Fig. A.2.1). Here, we investigate the 2008 Reform targeting alimony after the divorce is finalized. However, as explained in Section 2.2, alimony during the separation period is likely affected as well through different channels.

Alimony is usually a post-divorce-related matter. In general, spouses can make agreements about post-marital spousal support during separation. After the divorce becomes final, however, agreements can be made informally (see Section 1585c Civil Code). I.e., former spouses can find an agreement without the courts' involvement and, thus, only maintenance disputes end up in court (that are given in Family Court Statistics).

In general, child support and alimony do not have to be decided in conjunction. Only in so-called cases of “shortfall”, meaning if the individual liable for maintenance is financially incapable of paying maintenance to all dependants, both – child support and spousal maintenance – are considered. In such cases, the redistribution amount available was shared between children and ex-spouses before 2008. The

amount of payments changed in 2008 i.a. because of a shift in priority ranking in favor of children. I.e., child support is now paid first, if there are resources left, a part of the claimed alimony is covered.⁴

3.2 The 2008 Reform of the German Maintenance Law

Before 2008, the principle of long-lasting post-divorce solidarity was a legal doctrine and broadly interpreted. Thus, alimony was routinely awarded, including the cases where the alimony-demanding spouse was working but had a lower income than the other. Only divorcees in childfree marriages of relatively short duration had no claim to maintenance. The 2008 Reform changed this legal practice by impacting the eligibility to receive alimony in the first place and the duration of payments. For example, maintenance recipients with two children were not expected to work as long as the youngest child was under 14 years of age. Now, as a general rule, maintenance for the care of the child can practically only be demanded for the first three years after the birth (Willenbacher 2010; see Appendix Table A.2.1 for more details).⁵ Except for these parents, everyone else is now expected to be self-sufficient. A claim for post-marital maintenance exists only if one divorcee proves experienced disadvantages because of the marriage and cannot reasonably be expected to earn her/his own living.

Until 2008, the divorced spouse was only expected to enter gainful employment that was appropriate for her/him (Section 1574 (1) Civil Code, old version). Thus, potential employment positions could be dismissed because of a higher educational level. Moreover, it was argued that a (good) marital standard of living makes a divorcee's professional activity inappropriate (Section 1574 (2) Civil Code, old version). As a consequence, these individuals were continuously financially supported by their former spouses. This was changed in 2008 by rejecting "marriage-created needs", introducing the obligation to work, and redefinition of "an appropriate gainful employment". An occupation that is below somebody's educational level can no longer be dismissed as inappropriate.

The 2008 Reform can be understood as a package of different measures to strengthen each spouse's personal responsibility to earn her/his own living after the finalization of divorce (Federal Constitutional Court 2011; Borth 2011). As a part of it, Section 1609 of the Civil Code changed the ranking of multiple potential maintenance recipients in the event of the obligor's financial inability to pay all. Until

⁴ There are several significant differences between the two types of maintenance: The child participates in the rising standard of living of the parent responsible for payments of child support post-separation. Conversely, the child participates in income deterioration. Alimony, on the other hand, can be considered almost time-invariant because it is determined by so-called "marital living conditions" that are shaped before separation (Borth 2011). Furthermore, child support payments for children under the age of 25 unlike alimony are not tax-deductible (Krause 2008).

⁵ Section 1570 of the Civil Code (old version) Maintenance to care for a child: A divorced spouse may demand maintenance from the other, as long as she/he cannot be expected to work because of the care for or upbringing of a child of the spouses. Section 1570 of the Civil Code (new version) Maintenance to care for a child: (1) A divorced spouse may demand maintenance from the other, for the care for or upbringing of a child of the spouses, or at least three years after the birth. The duration of the claim to maintenance is extended as long as and to the extent that is equitable. Here, the concerns of the child and the existing possibilities of childcare are to be taken into account.

2008 the spouse had the same priority as minor children. Now, former spouses have lower priority.

Regardless of why alimony might be granted,⁶ the newly created Section 1578b of the Civil Code provides a tool to set a time limitation on payments by the courts. With this provision, lifelong alimony can be prevented.

The Act for the Reform of the Maintenance Law came unexpectedly into force on 1 January 2008.⁷ The final draft of the reform was presented in November 2007 and, shortly thereafter, passed by the national parliament (German Bundestag 2007a, German Bundestag 2007b). Although there was already a first draft law in June 2006 (German Bundestag, 2006), public interest in this topic was low for a long time. When the media reported on the legislative process in May 2007, it was still completely unclear to the public what the final version would look like and when it would be implemented. These aspects are reflected by public interest in web searches for “alimony law” on Google: The highest interest was in November 2007, followed by January 2008 (see Appendix Fig. A.2.2). Divorce rates also do not display a significant change around 2008 (see Appendix Fig. A.2.3). I.e., there is no indication of selection into divorce because of the 2008 Reform or an anticipation effect.

All marriages divorced before and after 2008 were subject to the new regulation. I.e., couples who divorced before the regime change could seek a change in alimony immediately in 2008. Transitional arrangements were, thus, also not created. Four years later another reform was passed with the objective of reversing the negative effects for the disadvantaged spouses in long marriages (German Bundestag 2012).

3.3 Amount of alimony payments – “difference method”

The calculation of alimony was not changed by the 2008 Reform. It is based on the income of the two spouses in the 12 months before separation.⁸ In principle, alimony is determined by “marital living conditions” that are shaped before the divorce. This principle is not contradicted by post-marital income developments. Only if the circumstances change significantly post-divorce, the spouse who is liable to pay alimony can seek a reduction in alimony appealing to the family court (Krause 2008).

Note that relevant income is not limited to net labor income, but includes all kinds of incomes, for example, pensions, unemployment benefits, etc. The so-called difference method is applied to determine the alimony amount. If the liable partner is employed, the dependent partner gets 3/7 of the difference between the allowable labor income (and 1/2 of other earnings). If the dependent partner has no income, she/he receives 3/7 of partner’s allowable labor income and, again, the half of other earnings.⁹ If the liable

⁶ The relevant provisions in the Civil Code are: Section 1570 Maintenance to care for a child, Section 1571 Maintenance by reason of old age, Section 1572 Maintenance for illness or infirmity, Section 1573 Maintenance for unemployment and topping-up maintenance, Section 1575 Training, further training or retraining, and Section 1576 Maintenance for reasons of equity.

⁷ See Schaubert 2017 for a detailed description of the introduction process of the 2008 reform.

⁸ For self-employed the relevant income for alimony is based on the previous three years before separation.

⁹ If the dependent partner is employed without the obligation to secure income, Section 1577 (2) of the Civil Code applies.

partner is unemployed, the distribution ratio is always 50:50. The monthly indicative rates for couples with children entitled to maintenance is subject to the so-called difference method as well, except for additional deduction of child support.

It is important to point out that the German maintenance law protects a part of the income of the first-earning divorcee. It is called the self-support reserve (SSR) – the money a former spouse has the right to keep. The SSR is only relevant for low-income individuals since you are not liable to pay alimony if your net income is below the SSR. It was, e.g., between 2007–2010 €1000 per month.

4 Identification strategy

The 2008 Alimony Reform resembles a quasi-experiment in which the primary earners in marriage benefited from alimony limitation depending on the timing of the divorce. Since we observe marital separations over time, the panel event study methodological approach by Clarke and Tapia-Schyte (2021) and Kleven, Landais and Søgaaard (2019) is applied. Following this strategy, we conduct three steps: First, we divide the dataset into two groups – those separated before and after the 2008 Reform. Second, we estimate a panel event study model with marital separation as our event of interest separately for the two groups. Third, we calculate the reform effect by looking at the differences in the estimated effects between these groups.

Importantly, the group affiliation of a given individual does not change over time. As described in Section 3.2, the 2008 Reform affected all, irrespective of the year of (a previous) divorce. Transitional regulations did not exist. Thus, individuals in our control group separate between 2002–2006 and are observed between 2001–2007. Individuals in the treatment group separate between 2008–2011, and are observed between 2007–2012. Note that alimony before a marital separation is zero.

Running fixed-effects (FE) regressions, we cluster all standard errors at individual level i to account for the presence of correlation within individuals over time t (Angrist and Pischke 2015). The resulting specification is estimated separately for control and treatment group ($g = 0, 1$):

$$Y_{it}^g = \eta_i^g + \epsilon_{st}^g + u_{it}^g + \sum_{l=1}^L \gamma_{+l}^g \cdot Sep_{+l} + \beta_0^g \cdot Sep_0 + \theta^g \cdot X_{it} \quad (1)$$

where Y is the outcome variable,¹⁰ η_i represents time-invariant factors at individual level, and ϵ_{st} stands for state-year FE (Greene 2012). Idiosyncratic disturbances were denoted as u_{it} (Wooldridge 2002). We define $t = 0$, the year of the event, as the year of marital separation. It is the year preceding the divorce. We index all other years relative to the event by allowing for L leads. Since the dummy at time $t = -1$ is omitted, the coefficients measure the impact of a separation relative to the year before the separation. Here, alimony payments before a marital separation do not exist, and are, thus, equal zero.

¹⁰ Since we are interested in measuring a causal effect, we consider alimony including zeros. The amount of alimony conditional on paying alimony at all has no causal interpretation (see Angrist and Pischke 2009 for conditional-on-positive effects).

X_{it} is a vector of time-varying characteristics at individual level. In the main specification, we include the age as a second-order polynomial. Additionally, we include an individual's income from employment and self-employment (in year 2009 real €) and the number of children in different age groups (0-5, 6-11, 12-17, 18-20, 21-24 years old). These age groups reflect regulations and definitions of child support amounts (Schaubert 2018). Also, we control for spouse's income during the separation period (in year 2009 real €). By including the income of both ex-spouses and children after separation, we control for the main factors that might potentially influence post-marital maintenance.¹¹ However, these are potentially endogenous control variables. As previously discussed in Section 2.2, the 2008 Alimony Reform may have had an impact on investments in labor-market-specific human capital, labor supply, and fertility.

There are two main threats to our identification strategy. First, if reform targets couples with lower growth in alimony, it would constitute the problem of "selection on trend". To address this issue, we introduce a pseudo-law change during the pre-treatment period, in 2005. This approach helps us to understand whether there was a trend before the 2008 Reform. The second threat would be a significant deviation, i.e. a spike in alimony just before the reform that would disappear on its own and is unrelated to the reform, e.g., a sudden increase in the gap in incomes. To address both concerns, we additionally control for incomes in a robustness check as alimony is determined by the difference between spousal incomes. Also, the female employment rate might be a good proxy for economic development at the state level, although potentially endogenous.¹² More importantly, all specifications include state-year FE, thus, the influence of aggregate trends at the state level is captured.

Although Family court statistics are not representative of all divorcees, there seems to be a tendency towards rewarding alimony to men. It is suggested that women generally pay less than men (Willenbacher 2010). For this reason, we estimate Eq. (1) separately for men and women who were first earners in their marriages.

In addition to various robustness checks, we specifically investigate the impact on groups that were likely affected by the reform in a different way. In particular, we look at West versus East Germans, childless couples versus couples with children, and at couples in different income groups. Finally, we specifically look at spouses who divorced just before and after the 2008 Reform.

¹¹ In theory, however, all changes in incomes post-divorce should be related to the marriage, otherwise they are considered irrelevant to the established alimony. In the case of the first earner, we do not know whether his/her income development after the divorce is related to the previous marriage. Thus, including annual incomes in additional regressions might be irrelevant.

¹² This variable captures the employment rate of all women. Thus, if single women, women in intact marriages, and divorcees increase their labor supply as a reaction to the 2008 Reform, this control becomes endogenous. As a consequence, our results might be biased. We do it anyway as an additional exercise to test whether the found reform effect disappears. Specifically, there are two main reasons for additionally including the female employment rate at the state level in our specification. First, courts might rule differently depending on the labor market situation although it is not the law (Willenbacher 2010). Second, wives might forfeit alimony claims in case of a good employment opportunity.

5 Data

5.1 Data source and restrictions

Our analysis is based on the German Taxpayer Panel 2001–2018 (Federal Office of Statistics 2022c), which is a 5% stratified random sample of individual tax returns. The majority of married couples are obligated to file an income tax return. It is, therefore, safe to assume that the population of divorced individuals is largely captured. We identify divorcees as they change tax assessment type in the event of divorce (from joint to individual assessment). In addition to tax-relevant characteristics, there are also socio-economic characteristics like age, number and age of children, and state of residence.

We restrict our sample in several ways. Since the 2008 Reform was modified in 2013, we include only the years 2001–2012. Additionally, we exclude individuals who divorced more than once or were separated for longer than one year.¹³ Since child support for older children could bias our outcome variable, we exclude individuals with children older than 25 years of age.¹⁴

The use of administrative tax data contrasts with most empirical research about alimony law which uses survey data. Our dataset has several advantages. First, we have high-quality data on the amount of maintenance. Several studies have shown self-reporting biases of maintenance payments in survey data (e.g., Schaubert 2018; Bröckel and Andreß 2015). Apart from these issues, there could also be a representative bias in studies using survey data (Stykes, Manning and Brown 2013; Bryson and McKay 2018; Schaubert and Hänisch 2020).¹⁵ Additionally, some surveys might suffer from attrition bias, especially when divorce triggers temporary or permanent drop-out from a survey (e.g., Müller and Castiglioni 2015). Here, nonresponse or attrition bias is not present since an obligation to declare taxes exists.

Even though information on common children is given in the data, the children's place of residence after the divorce is not explicitly reported. In the case of child benefit (Kindergeld), the residence is known, in the case of child allowance (Kinderfreibetrag), the residence is, however, unknown. In the latter, we assume that children stay with the ex-spouse who receives alimony payments.¹⁶

¹³ Couples with more years of separation are systematically different as one spouse does not give consent to divorce. Note, divorces after one year of separation represent more than 80% of divorces (see Appendix Fig. A.2.1).

¹⁴ Child support to children older than 24 years of age is tax-deductible. In our data, we cannot distinguish between alimony paid to a former spouse and child support once a child turns 25 years of age. Thus, we include man-year observations when all children are younger than 25 years of age.

¹⁵ Since there are no official statistics on alimony, the representative bias can not be quantified. Therefore, the external validity of these studies can be questioned.

¹⁶ This assumption seems to be plausible because in most cases when one former spouse owes alimony and another child support, the two amounts would be neutralized. I.e., we would probably observe no alimony payments in the data.

5.2 Dependent variables

Our data contains information on annual maintenance payments reported to fiscal authorities.¹⁷ Individuals paying alimony have two options for deducting these payments from the tax:

- as a special expense (so-called tax splitting; Section 10 (1) No. 1 of Income Tax Law), and
- as an extraordinary burden¹⁸ (Section 33a (1) of Income Tax Law).

While applying “tax splitting”, the ex-spouse who receives the maintenance must agree every year. Therefore, when divorced spouses are at odds, the individual receiving the payment can refuse consent. The choice of the option “tax splitting” is, therefore, a good proxy for *cooperation* between the ex-spouses, and is one of our outcome variables. For deduction as an extraordinary burden, in contrast, no approval or agreement between the former spouses is required. However, its maximum amount of tax deduction is lower.¹⁹ Thus, “tax splitting” is economically the better option.

Based on the reported information in an individual’s tax declaration we consider the following outcome variables:

- the likelihood of paying any alimony (dummy variable),
- yearly maintenance payments (in year 2009 real €),
- the likelihood of *cooperation* (dummy variable).

6 Results

6.1 Descriptive results

Even before 2008, the likelihood of wives paying alimony was extremely low, ranging between around 1.1% and 1.5% during/following a marital separation.²⁰ It remains this low after the law change. The same holds for the amount of alimony and the likelihood of cooperation. For women, we find no impact of the alimony reform (see Appendix A.3.1 for all results concerning women). Therefore, in the remainder of our paper, we only present results for former husbands.

Based on 278,226 man-year observations, we observe statistically significant differences for men who separated before and after 2008, on average (see Table 1):

¹⁷ Note, that we observe actual payments that are not limited to the maximum permitted tax-deductible amount.

¹⁸ In theory it is also possible to deduct child support payments here. However, this is only possible for adult children over the age of 25. Under certain circumstances, maintenance payments for close relatives in need of care can also partly be deducted. However, before and after 2008 child support and alimony were of higher priority than support for parents or other relatives.

¹⁹ The person liable for maintenance can deduct up to 13,805 euros per year in maintenance costs as special expenses (Section 10), tax-deduction of extraordinary burden is lower (Section 33a).

²⁰ In comparison, in the survey conducted by Andreß et al. (2003) covering the years 1984–2000, 1.8% of men report receiving alimony (fully or in part) during the separation period.

Table 1 Mean and standard deviations

Variable	Separated after 2008	Separated before 2008	Difference
Year	2,010.08 (1.48)	2,004.32 (1.74)	
Age (in years)	47.02 (10.30)	46.64 (10.97)	0.38***
No. of children (0-5 yrs old)	0.34 (1.63)	0.31 (1.47)	0.03***
No. of children (6-11 yrs old)	0.59 (2.04)	0.54 (1.85)	0.05***
No. of children (12-17 yrs old)	0.62 (1.88)	0.52 (1.62)	0.10***
No. of children (18-20 yrs old)	0.24 (1.05)	0.20 (0.82)	0.04***
No. of children (21-24 yrs old)	0.20 (0.95)	0.15 (0.73)	0.04***
East Germany	0.16 (0.37)	0.14 (0.35)	0.02***
Income	129,331.24 (584,578.92)	110,631.94 (1290,633.50)	18,699.30***
Income at separation, ex-wives	9,764.63 (58,418.66)	10,158.18 (201,399.30)	-393.55
Alimony	856.08 (3,148.40)	997.23 (3,375.47)	-141.15***
Likelihood of paying	0.0811 (0.2730)	0.0993 (0.2991)	-0.0183***
Likelihood of cooperation	0.0746 (0.2627)	0.0899 (0.2860)	-0.0153***
No. of observations	83,042	195,184	

All sums of money are in year 2009 real €. Unpaired t-tests are conducted to estimate the significance of differences. Data: TPP 2001-2012

Significance levels: * 10%; ** 5%; *** 1%

The latter are older and have fewer children. Their income is higher. Their ex-wives' income at separation is not statistically different.

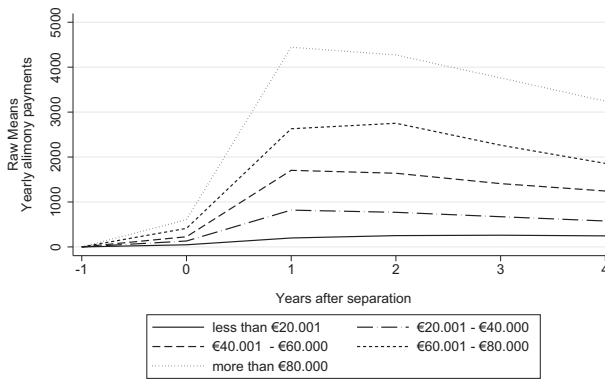
The sample of men divorced before 2008 is 46.64 years old, on average. About 14% live in East Germany. The average income is about €110,632, while it is about €10,158 per year for the ex-wife at separation. The average reporting year is 2004. The likelihood of paying alimony ranges between 13.9% and 16.6% in the first four years following a marital separation.^{21,22} The average alimony is about €145.24 at separation, and between €1,372.30-€1,696.06 in the following years. A closer look at different income groups reveals that, indeed, the difference in incomes of (former) spouses is the determining factor for the alimony amount. This “difference method” is best illustrated in couples in which the wife had no income (see Fig. 2). The average alimony is larger across all years when the husband belongs to a higher income bracket.

The sample of men divorced after 2008 is, on average, 47.02 years old, and about 16% East German. The average income is about €129,331 per year. Former wife's income at separation is about €9,765, on average. The average reporting year is 2010. The likelihood of paying alimony ranges between 8.9% and 15.6% in the first four years following a marital separation.²³ The average amount is €160.12 at separation, and €920.80-€1,680.40 in the following years. The likelihood of cooperation is before and after 2008 just slightly smaller than the likelihood of paying alimony.

²¹ It is about 2.0% during the separation year. In comparison, Andreß et al. (2003) report about 4.8%.

²² Note that we report raw means throughout our paper. We do not compute adjusted means using the traditional ordinary least-squares approach.

²³ The likelihood of paying alimony is about 1.9% during the separation year.



Notes: All sums of money are in year 2009 real €. Data: TPP 2001-2012

Fig. 2 Average alimony payments by income groups of single-earning husbands, before 2008

6.2 Effect of the 2008 Alimony Reform

6.2.1 Main results

For separations before the 2008 Reform, the coefficients for our outcomes become successively larger following the year before separation ($t = -1$). The specific pattern can be explained by the German alimony arrangements: Marital separation takes place at some point during the calendar year preceding the year of divorce. Therefore, alimony during the separation period ($t = 0$) has to be smaller since it is not paid for a full year. After the separation period, a former wife can ask for post-divorce alimony at any time. However, she has to do it and there is no obligation to pay retrospectively. Thus, some women might start to demand alimony in the years after divorce, leading to larger coefficients (see Fig. 3).

At the year of separation, husbands are 71.6% (3.85 pp) less likely to pay alimony after the reform. The reform effect is smaller in the year of the finalized divorce, a decrease of 36.0% (8.24 pp), but increases in the following three years up to -75.4% (23.56 pp; see Fig. 4). Including the income of both ex-spouses and the number of children in different age groups results in a statistically insignificant coefficient at 0.05 level at separation after 2008. In the year of divorce, however, the decrease in likelihood is very similar, about 36.7%. In the following three years, the reform effect becomes stronger, up to -80.7% (see Appendix A.3.2 for all corresponding results). Thus, our findings cannot be explained by the husband's income development, the wife's income at separation, or children. The results for the likelihood of paying alimony are mainly driven by the likelihood of cooperating for tax purposes (see Appendix Fig. A.3.5).

The coefficient of the alimony amount at the year of marital separation is not statistically significant at 0.05 level anymore when divorcees after 2008 are considered. In the year of divorce, the amount of alimony paid is reduced by about 33.9% (€746.00). In the years following, there is a further reduction in the maintenance paid: -53.3% (€1,343.08), -71.1% (€1,881.34), and -83.1% (€2,281.11) in

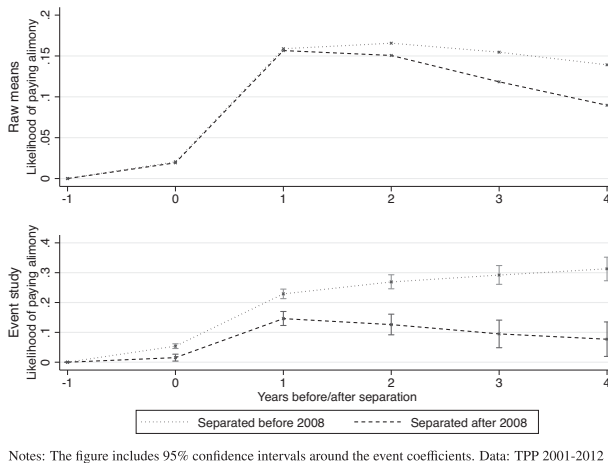


Fig. 3 Likelihood of alimony payments

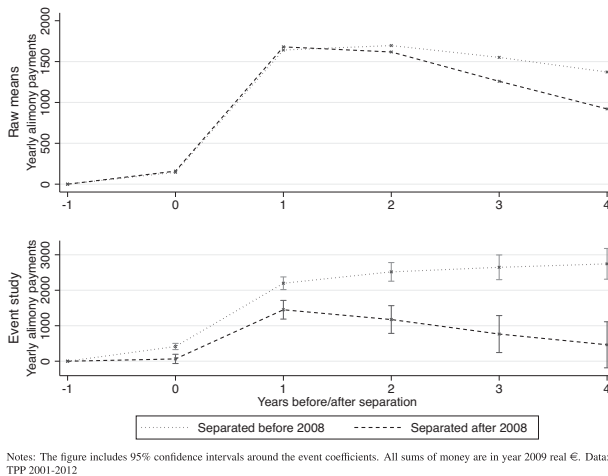


Fig. 4 Average alimony amount

the third year after the divorce. Again, these findings cannot be explained by additional controls.

Since we do not have information on the income development of wives post-separation, we can only relate the reduction in alimony to the average yearly income of wives given at the year of separation.²⁴ As explained, in the year of separation, alimony is not paid for the whole year. Therefore, the reduction due to the 2008 Reform is, as expected, low at separation year – just 3.4% of the wives' average income. Assuming the average income of wives stays the same post-separation

²⁴ Unfortunately, we also do not have information on living arrangements when a couple separates.

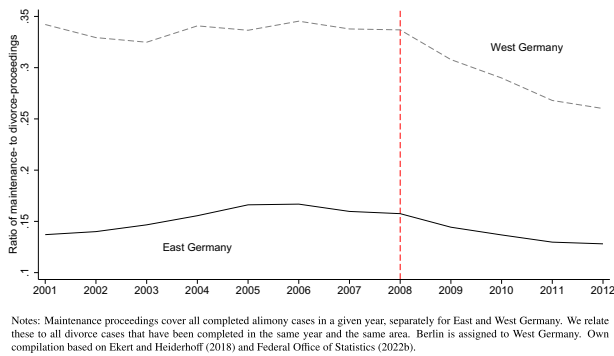


Fig. 5 The ratio of maintenance- to divorce proceedings in West and East Germany

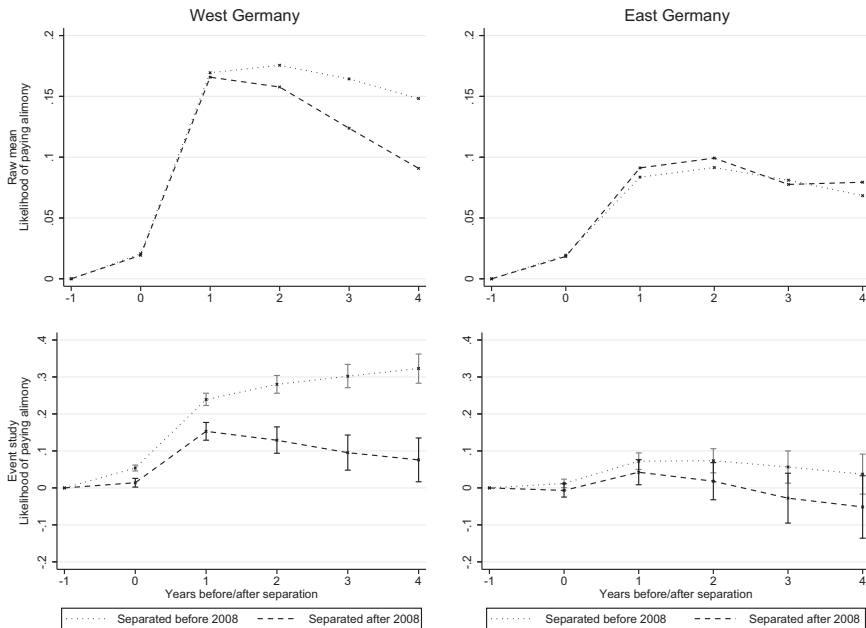
(except for adjustment for inflation), the reduction is about 7.4% at divorce ($t = 1$), 13.2% at $t = 2$, 18.5% at $t = 3$, and 22.5% at $t = 4$. For former husbands, in contrast, these reductions in alimony are of minor benefit. Relating to their average income at separation, reform's impact at separation is 0.3%, 0.7% at divorce ($t = 1$), 1.3% at $t = 2$, 1.8% at $t = 3$, and 2.2% at $t = 4$. Results are similar when their average incomes post-separation are considered: 0.7% at $t = 1$, 1.2% at $t = 2$, 1.6% at $t = 3$, and 1.5% at $t = 4$.

In sum, results presented here suggest a significant reduction in alimony that can be a substantial loss in disposable income of former wives if they do not compensate by increasing their labor supply or by social benefits. In contrast, the 2008 Reform seems to benefit former husbands to a lesser extent as their average incomes are substantially higher than reductions in alimony amounts.

6.2.2 Subgroup analysis

West versus East Germany There are many reasons to expect different outcomes for East and West Germany. For example, in the former German Democratic Republic (GDR), alimony was granted during the separation period of up to 2 years – thus, for a very short period of time. West German family policy, in contrast, was based on the male breadwinner model and, thus, on the legal doctrine of long-lasting solidarity between the former spouses after a marriage breakdown (Mätzke and Ostner 2010). Although Family court statistics are not representative of all divorcees, these nevertheless underline the persistent regional differences in the relevance of alimony nowadays (see Fig. 5). The ratio of maintenance cases following divorce proceedings in a given year indicates significantly lower importance in East Germany in comparison to the West. Furthermore, the web search interest for the term “new alimony regulations” on Google in 2007 and 2008 reflects this East-West divide when it comes to alimony (see Appendix A.3.3).

Besides two very different “alimony traditions”, regional differences exist in female labor supply elasticities, egalitarian gender roles, availability of public



Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012

Fig. 6 Likelihood of paying alimony in East and West Germany

childcare, and the division of labor within the household (see, e.g., Campa and Serafinelli 2019, Lippmann, Georgieff and Senik 2020, Bauernschuster and Rainer 2012).

For separations before the 2008 Reform, the coefficients for the likelihood of payments are, e.g., 3.3 to 8.7 times larger for West Germany in comparison to East Germany. For East Germany, the coefficients are statistically significant at 0.05 level at the separation year and the following three years and range between 0.0121 (robust se = 0.0059) and 0.0723 (0.0114). For separations after 2008, the coefficients become even smaller and lose their statistical significance except for the year of divorce (0.0424 (0.0173)). More importantly, the differences are not statistically significant at 0.05 level. Thus, as expected, East Germans were, indeed, on average, unaffected by alimony cuts in 2008.²⁵ West Germans drive our main results (see Fig. 6). Therefore, the effect size is very similar to our main results when we consider, e.g., the likelihood of paying alimony: In the year of divorce, there is a 36.1% (8.64 pp) lower likelihood of paying alimony after 2008. This increases up to -76.5% (24.69 pp) in the fourth year after separation. The same holds for the other two outcome variables. All corresponding results are in Appendix A.3.3.

²⁵ In order to compare our results with Family court statistics Berlin is assumed to belong to West Germany. However, as a robustness check, Berlin is shifted to East Germany.

Couples with versus without children There is one main reason why we expect childless couples to be less affected by alimony reforms than couples with children. There is usually an intrahousehold specialization following childbirth that leads to a larger difference in marital incomes and, thus, to alimony claims or higher alimony amounts. This might be especially significant for West Germans as new mothers living there experience a larger decline in earnings in comparison to mothers with higher childcare provisions in East Germany (see, e.g., Chhaochharia, Ghosh, Niessen-Ruenzi and Schneider 2022). Childless individuals never drop out or opt out of having a career because of children, preserving their uninterrupted income development without child penalty. Thus, while children likely lead to higher spousal income differences, the 2008 Reform specifically targets parents who primarily took care of children, as described in Section 3.2.²⁶

For fathers in comparison to childless men who all separated before 2008, the coefficients across all years are three times larger for the likelihood of paying alimony. The coefficients are more than three times larger for the likelihood of cooperation, and the alimony amount. These differences are statistically significant at 0.05 level, except for the year of separation.

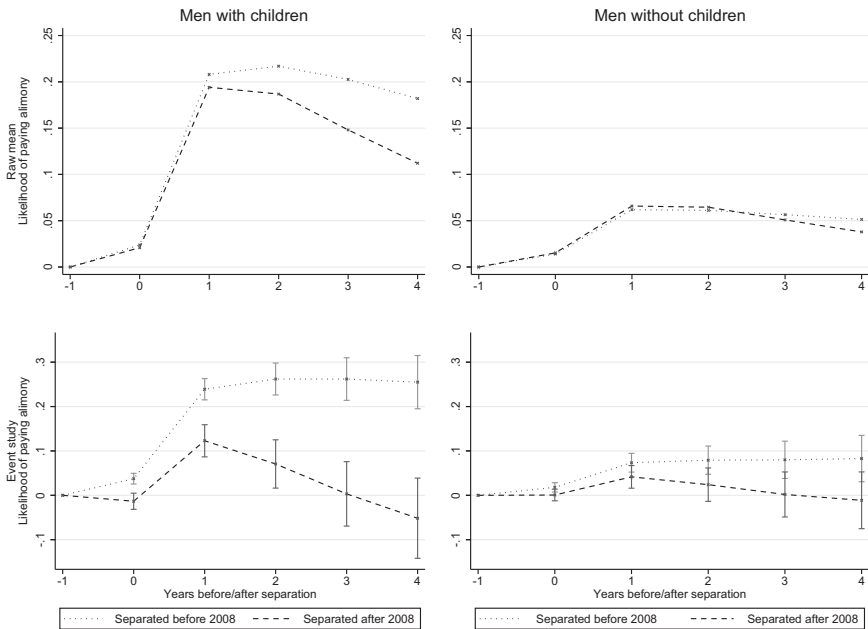
We observe no reform effect for childless couples. In contrast, for fathers, we estimate a significant decline in the likelihood of paying alimony starting in the year of divorce (−48.6% or −11.61 pp). The impact increases over the years following the marital separation (see Fig. 7). The same holds for the amount and likelihood of cooperation.

Comparing fathers versus childless men separately for East and West Germany reveals some interesting findings for the likelihood of paying alimony. First, considering separations before 2008, differences in coefficients are statistically insignificant at 0.05 level between childless men in East and West Germany and East German fathers. Second, for West German fathers the coefficients range between 0.253 and 0.261 for the years following a separation, about three times larger than those for childless West German men. These differences are also statistically significant at 0.05 level.

For West German fathers we observe a significant decline in the likelihood of paying alimony attributable to the 2008 Reform: −48.22% (−0.12 pp) at divorce year, −73.48% (−0.20 pp) in the consecutive year, and a complete elimination in the following two years. We do not find a reform impact for the remaining three groups – childless West Germans, East Germans with and without children. The same applies to the other two outcome variables.

Income groups To better understand the reform's impact on different households, we slice our sample into 15 groups reflecting different combinations of husbands' and wives' incomes from employment and self-employment at separation. Following the analysis by Drechsel-Grau et al. (2022), we use €20,000 steps to categorize men's

²⁶ As described in Section 3.2, also spouses with children under the age of three years old had a solid claim to alimony even after the 2008 Alimony Reform. Therefore, we create a subgroup of divorcees with children in this age group. Unfortunately, the sample size for every year before/after the marital separation is too small to have statistical power and produce reliable results. The issue of the small number of observations for this group of divorcees is consistent with the existing literature on divorce probability and the age of children (Breitenbach 2010).



Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001–2012.

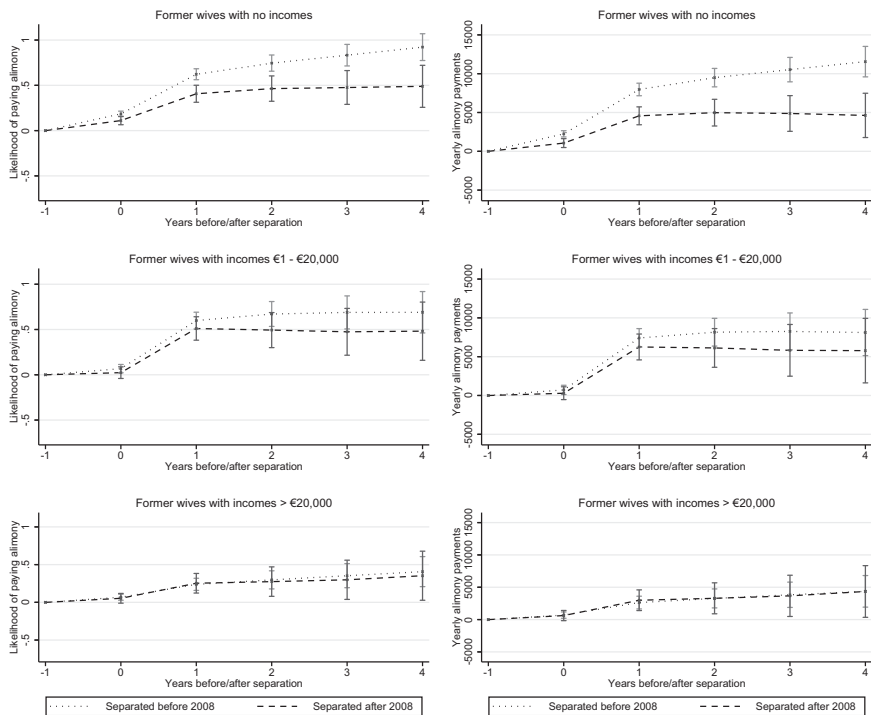
Fig. 7 Reform effect for men with and without children

incomes into five groups, and we create three groups for women – no income, €1–€20,000, and more than €20,000.²⁷ It is important to point out that these 15 groups reflect not only different marital living conditions but also past life decisions – such as investments in education, spouse selection, having children, etc.²⁸

Although our data is insufficient to calculate alimony-relevant incomes (see Subsection 3.3), our results seem to be nevertheless sensible. For example, we observe very small and statistically insignificant coefficients for all three outcomes for separations before 2008 for women with incomes above €20,000 whose former husbands had incomes between €20,001–€40,000 or €40,001–€60,000. In contrast, when their husbands' incomes are between €60,001–€80,000, there is, e.g., a statistically significant coefficient at 0.05 level of 0.251 at the year of divorce for the likelihood of paying alimony. When husbands' incomes are above €80,000, the coefficients range between 0.068 and 0.407 and are statistically significant for all years including the year of separation. Overall, a comparison between groups suggests that intramarital income differences matter in determining alimony,

²⁷ In the case of self-employment, income can become negative. For this reason, about 2% of man-year observations are dropped for this subgroup analysis, resulting in 190,672 observations before and 81,043 observations after 2008.

²⁸ Unfortunately, we do not observe the highest educational attainment of spouses that might explain marriage patterns. Thus, we also do not observe earning potential – mainly of women – which is likely an important factor for alimony. However, assortative mating based on education is shown in other studies (see, e.g., Grave and Schmidt 2012).



Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012.

Fig. 8 Reform effect for men with incomes above €80,000 p.a.

although here we consider incomes from employment and self-employment that are just a part of alimony-relevant incomes (see, e.g., Fig. 8). The largest coefficients across all groups in the sample are in the group with the largest intramarital income gap, i.e., when former husbands earn more than €80,000 and their wives had no income at separation.

Regardless of former husbands' income, women with positive incomes – thus, who participate in the labor market – seem to be unaffected by the reform, on average. However, wives without income were disadvantaged by the 2008 Reform in terms of the likelihood of receiving alimony, the likelihood of cooperation, and the alimony amount. The new obligation to enter gainful employment after a finalized divorce (Section 1574 (1) Civil Code) might, at least in part, explain these findings.

Their loss in percentages is larger when married to men with incomes below €60,000. One possible explanation for this finding is a lack of willingness or resources to fight for alimony that is, on average, lower in comparison to women who were married to men with higher incomes. There might be a trade-off of costs involved in receiving alimony after 2008 and the money at stake.

By placing wives without incomes in a worse position, the 2008 reform had an equalizing effect between the three groups of wives who were married to men with

incomes above €80,000. Further, for wives without incomes, the average outcome variables were not significantly different anymore whether their husbands' income was between €60,000–€80,000 or above. Thus, the alimony reform might influence marriage markets or intramarital decisions regarding investments in the labor market or home production.

In line with previous subgroup analyses, West Germans drive our results. We refer to Appendix A.3.5 for a detailed description of our results.

6.2.3 Additional robustness checks

To assess the validity of the key identifying assumption, we introduced a pseudo-law change in 2005. More precisely, we use 2001–2004 as the pre-placebo-treatment period and 2005–2007 as the post-placebo-treatment period. Our pseudo-reform estimates turn out to be statistically insignificant, positive, and small (see Appendix Fig. A.3.19). This means we do not observe any placebo reform effects, indicating that there might be no underlying trends leading to biased results. There is also no trend in the duration-specific divorce rates over the observation period 2001–2012 (Grünheid 2013, Pintens 2012) that might bias our results.

One limitation of our data is the missing information on marriage duration. An increase in divorces of short marriages over the years would potentially distort our results since shortly married cannot claim alimony. However, Grünheid 2013 show there is no such trend between 2001–2012.

As explained in Section 4, we additionally control for the female employment rate at state level. Although potentially endogenous, this variable might reflect different labor market opportunities for women at the state level in a given year. Similar to our main results, a further reduction in all outcome variables is observed in the years following the divorce. The coefficients of interest are still statistically significant, although potentially biased (see Appendix Fig. A.3.17). While the coefficient for female employment rate is negative and statistically significant before 2008, it is no longer significant at the 5% level after the reform.²⁹

Further, we estimate FE models with two divorce cohorts that were divorced shortly before and after the reform and are, therefore, probably unaffected by some (unobservable) trends (see Appendix Fig. A.3.18). By design, we observe only two years after the separation. The coefficients for all outcome variables are statistically significant before and after 2008 and are, in general, larger in comparison to our main specifications. For the likelihood of alimony and cooperation, we find statistically significant reform effects at the year of divorce, while for the amount of alimony, there are only effects at the 10% significance level. The effect size is larger in comparison to our main results: 46.8% versus 36.2% for the likelihood of payments, 44% versus 34.0% for the amount, and 46.1% versus 35.4% for the likelihood of cooperation. Thus, we argue that some unobservable trends over the years do not explain our main results.

²⁹ Note, the female employment rate describes the employment rate of all women, not just divorcees. It is a potentially endogenous variable, as some groups of women in intact marriages have increased their labor supply as a consequence of this reform (Schaubert, 2023).

7 Summary and conclusions

In this paper, we study the effects of the 2008 Alimony Reform that limited post-marital alimony payments. There are various channels through which this law change might have affected divorcees – e.g., through higher investments in labor-specific human capital in anticipation of divorce or court rulings restricting alimony. Our results capture all direct and indirect impacts without exploring the specific mechanisms. To our knowledge, this is the first study to quantify a causal effect of a specific alimony reform on the likelihood of alimony payments, alimony amount, and the likelihood of cooperation for tax purposes.

We exploit the German Tax Payer Panel and use the event study methodological approach to estimate the average treatment effect on the affected divorcees. Our results suggest that men benefitted from the 2008 law change at the expense of their former wives. The likelihood of payments and cooperation declined significantly. However, alimony reductions, in particular, had a tiny effect on men's income, whereas women suffered a relevant loss in income. Thus, the reform had an important differential impact based on gender. However, heterogeneous results for different subgroups indicate that not all were affected in the same way. For East Germans, – childless or not, regardless of income – this reform did not matter, on average. Even before 2008, the prevalence of alimony was low. In contrast, West German mothers experienced a stark decline in all three outcomes across all years following marital separation. Childless women suffered a reduction of likelihood and amount of alimony at divorce. Our findings for West German mothers are particularly interesting as one of the reform's objectives was to strengthen children's interests.³⁰ Our results seem to undermine this declared objective, as single mothers and their children probably share household income and resources, and child support was not increased nor designed to compensate for a potential loss in post-marital alimony.

Also, our heterogeneity analysis regarding income differences of the former spouses in combination with men's income brackets produces sensible results. For separations before 2008, we generally observe larger coefficients for our outcomes when the income gap widens, given women had sufficiently low incomes. This seems to hold also for reform's impact. Women with positive incomes were, on average, unaffected, regardless of their former husbands' incomes. Former wives who had no income at the time of separation experienced a negative heterogeneous reform effect depending on the men's income category. Again, these results are driven by West Germans.

Unfortunately, our data does not contain information on the highest educational attainment that could reflect the potential to earn a living after divorce. This would help understand the interaction between alimony at stake, the increase in costs to reach alimony payments, and women's earning capacity. Another related issue is the voluntary disclaiming of alimony which is probably reinforced by hurdles imposed in 2008.

³⁰ In so-called cases of shortfall, meaning if the individual liable for maintenance is financially incapable of paying maintenance to all dependants, former spouses were removed from the first place of the priority ranking after 2008. Children remained at the top. This aspect was promoted as an improvement in the financial situation of children.

Future research should also focus on how the affected groups of women, especially single mothers, compensated for the loss in alimony income. There are possible constraints to reentering the labor market due to previous investments in home production relative to the labor market. This is particularly important from a welfare economics perspective since fewer private transfers can lead to higher take-up of social assistance (Kessler, Potarca and Bernardi 2022). Divorce is one of the main life events that have long-term negative economic consequences (Bröckel and Andreß 2015, Hogendoorn, Leopold and Bol 2020, Mortelmans 2020). The question remains whether the 2008 Alimony Reform worsened the situation for women.

Data availability We use the German Tax Payer Panel (EVAS 73111) 2001–2012 which is described here: <https://www.forschungsdatenzentrum.de/de/steuern/tpp#>. The Research Data Centre of the Federal Statistical Office gives access to the German Tax Payer Panel. This data is not publicly available.

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Compliance with ethical standards

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