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.

JEL classification: J12; K36; J16

Key words: Divorce; Maintenance Law; Alimony

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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). 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.

[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.

[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.

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 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 (§1579 (1) Civil Code, old and new versions).[3]

Studies on 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 (Thielemans and Mortelmans 2019; Brüggmann 2020) and overall income (Bayaz-Ozturk et al. 2018; Le Bourdais et al. 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.

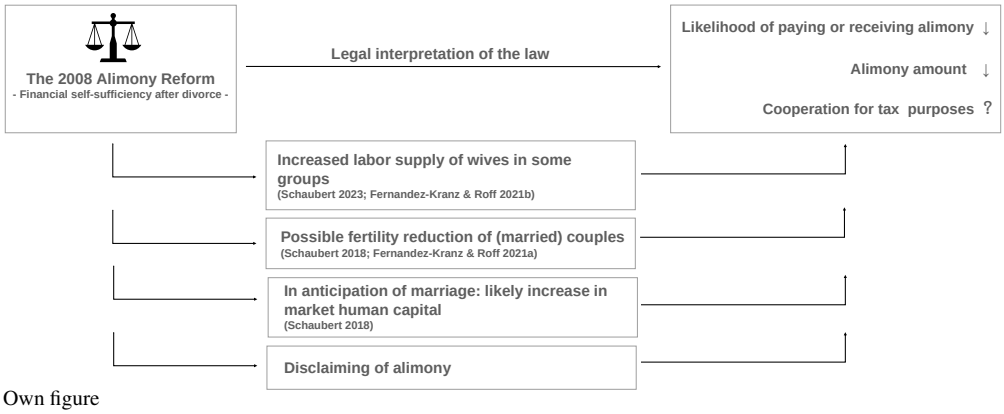
There are no representative statistics from official sources on alimony in Germany. Andreß et al. (2003) carried out a survey on this subject on behalf of the Ministry of Family Affairs. The data, which are based on self-reports, refer to the period 1995 to 2000. The survey suggests that many individuals entitled to maintenance accept incomplete or irregular payments without taking legal action. 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 Figure 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 (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.

[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.

Figure 1: Channels of the 2008 Alimony Reform



Source: Own figure

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., visitaton 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 leads 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 Figure 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 §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 (§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 (§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

[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] §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. §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.

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, §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 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 §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 Figure A.2.2). Divorce rates also do not display a significant change around 2008 (see Appendix Figure 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

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

amount. If the liable partner is employed, the dependent partner gets 3/7 of the difference between the allowable labour 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 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 €1,000 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-Schythe (2021) and Kleven et al. (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 Subsection 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 ($g = 0, 1$):

$$Y_{it}^{g} = \eta_{i}^{g} + \epsilon_{st}^{g} + u_{it}^{g} + \sum_{l=1}^{L} \gamma_{+l}^{g} \cdot Sep_{+l} + \beta_{0}^{g} \cdot Sep_{0} + \theta^{g} \cdot X_{it} \tag{1}$$

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

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

[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).

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.

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 et al. 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]

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; §10 (1) No. 1 of Income Tax Law), and

[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 Figure 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.

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

- as an extraordinary burden[18] (§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): 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,

[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 (§10), tax-deduction of extraordinary burden is lower (§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.

[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.

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 Figure 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.

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	

Notes: 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%

6.2. Effect of the 2008 Alimony Reform

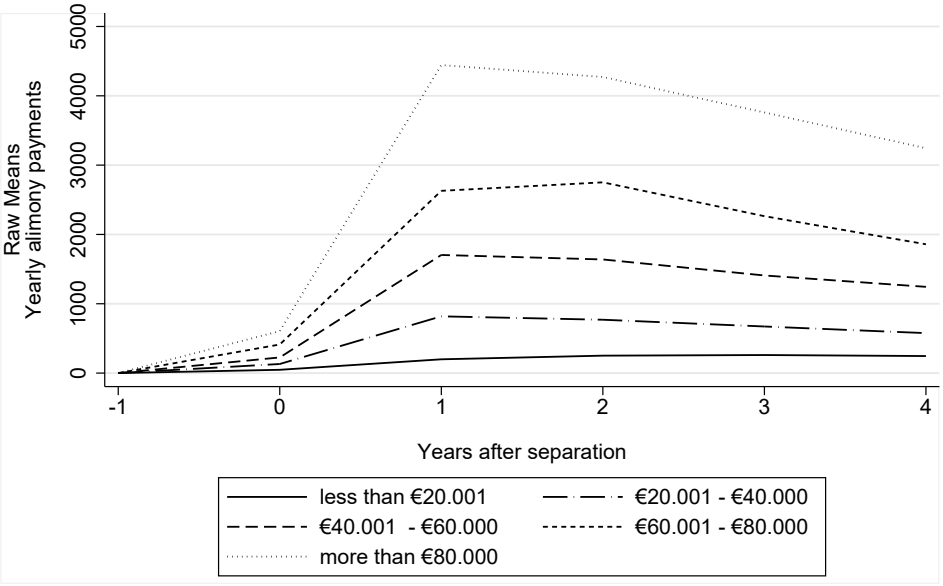
6.2.1. Main results

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 Figure 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

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

Figure 2: Average alimony payments by income groups of single-earning husbands, before 2008



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

the following three years up to -75.4% (23.56 pp; see Figure 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 Figure 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 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 (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,

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

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% $t = 4$.

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

6.2.3. West versus East Germany

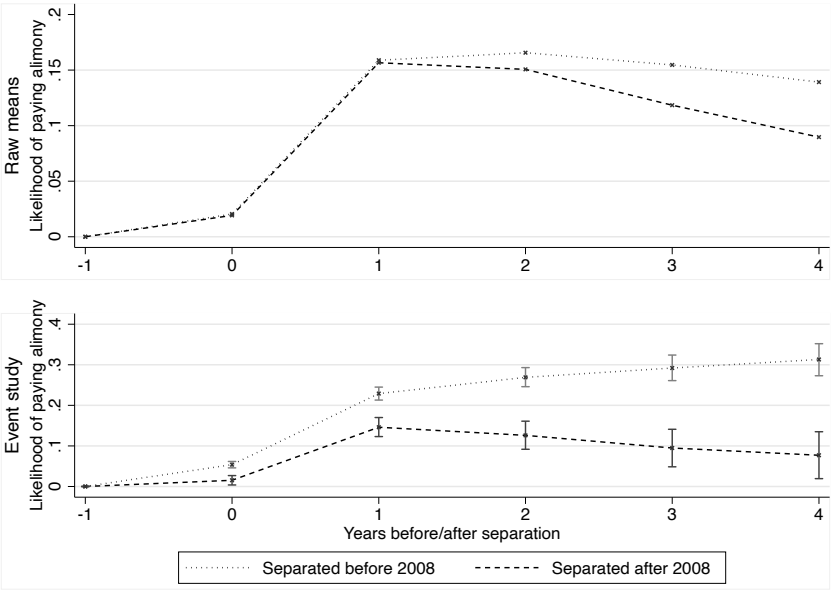
There are many reasons to expect different outcomes for East and West Germany. For example, in the former German Democratic Republic (GDR), alimony was granted during the separation period of up to 2 years – thus, for a very short period of time. West German family policy, in contrast, was based on the male bread-winner 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 Figure 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 childcare, and the division of labor within the household (see, e.g., Campa and Serafinelli 2019, Lippmann et al. 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 Figure 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

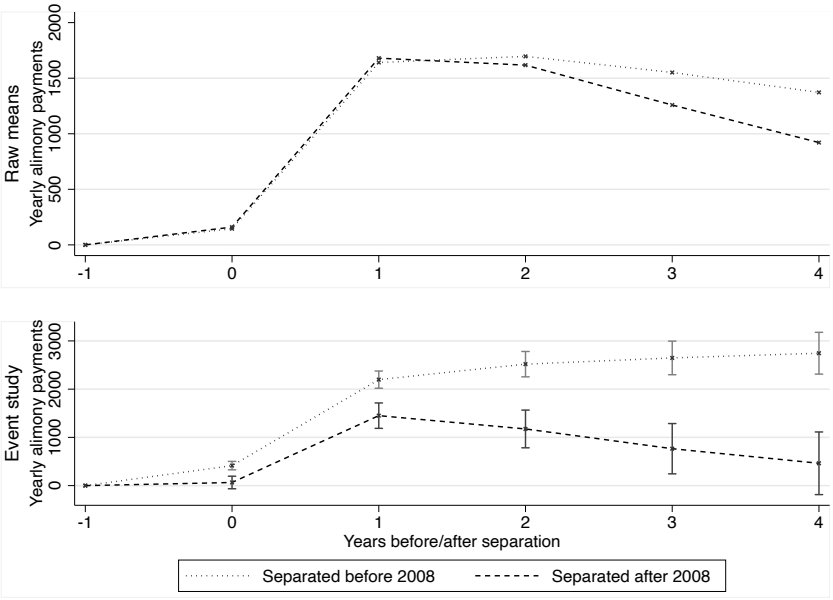
[25] In order to compare our results with Family court statistics Berlin is assumed to belong to West Germany. However, as a robustness check, Berlin is shifted to East Germany.

Figure 3: Likelihood of alimony payments



Notes: The figure includes 95% confidence intervals around the event coefficients. Data: TPP 2001-2012

Figure 4: Average alimony amount



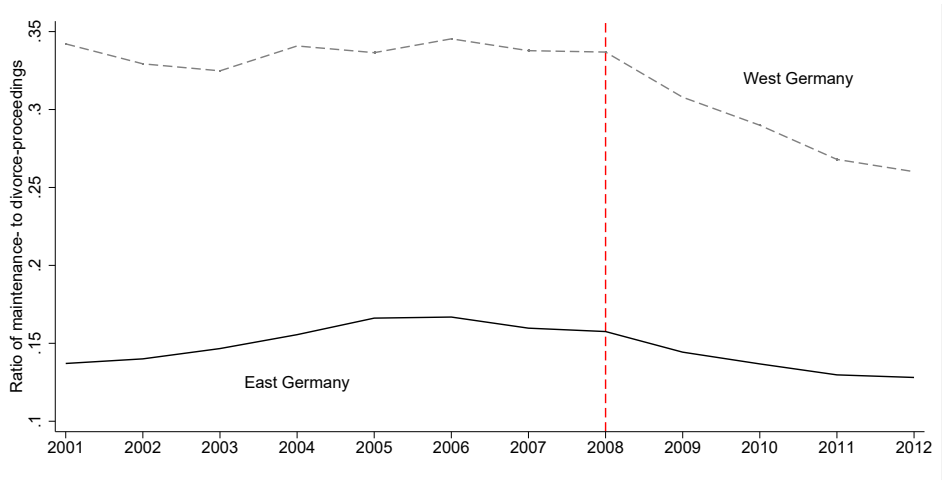
Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012

other two outcome variables. All corresponding results are in Appendix A.3.3.

6.2.4. Couples with versus without children

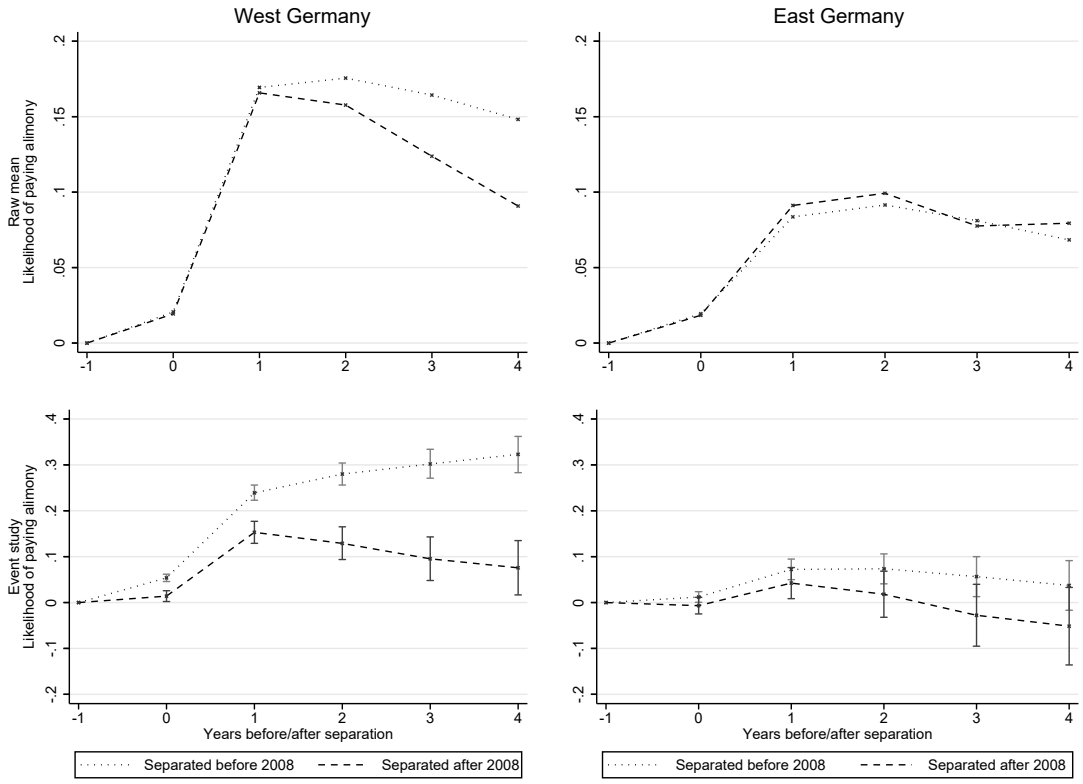
There is one main reason why we expect childless couples to be less affected by alimony reforms than couples with children. There is usually an intrahousehold specialization following childbirth that leads to a larger difference in marital incomes and, thus, to alimony claims or higher alimony amounts. This might be

Figure 5: The ratio of maintenance- to divorce proceedings in West and East Germany



Notes: Maintenance proceedings cover all completed alimony cases in a given year, separately for East and West Germany. We relate these to all divorce cases that have been completed in the same year and the same area. Berlin is assigned to West Germany. Own compilation based on Ekert and Heiderhoff (2018) and Federal Office of Statistics (2022b).

Figure 6: Likelihood of paying alimony in East and West Germany



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

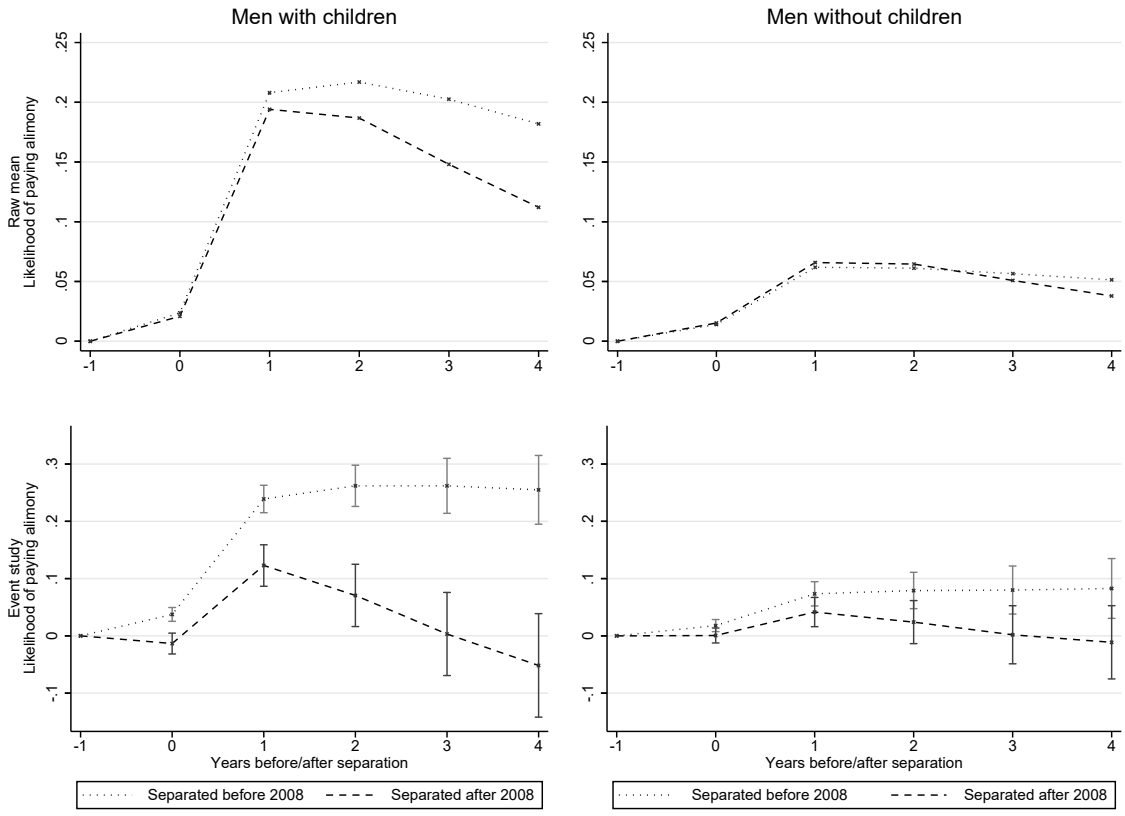
especially significant for West Germans as new mothers living there experience a larger decline in earnings in comparison to mothers with higher childcare provisions in East Germany (see, e.g., Chhaochharia et al. 2022). Childless individuals never drop out or opt out of having a career because of children, 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 Figure 7). The same holds for the amount and likelihood of cooperation.

Figure 7: Reform effect for men with and without children



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

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

[26] As described in Subsection 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).

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.

6.2.5. 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 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, although here we consider incomes from employment and self-employment that are just a part of alimony-relevant incomes (see, e.g., Figure 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

[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).

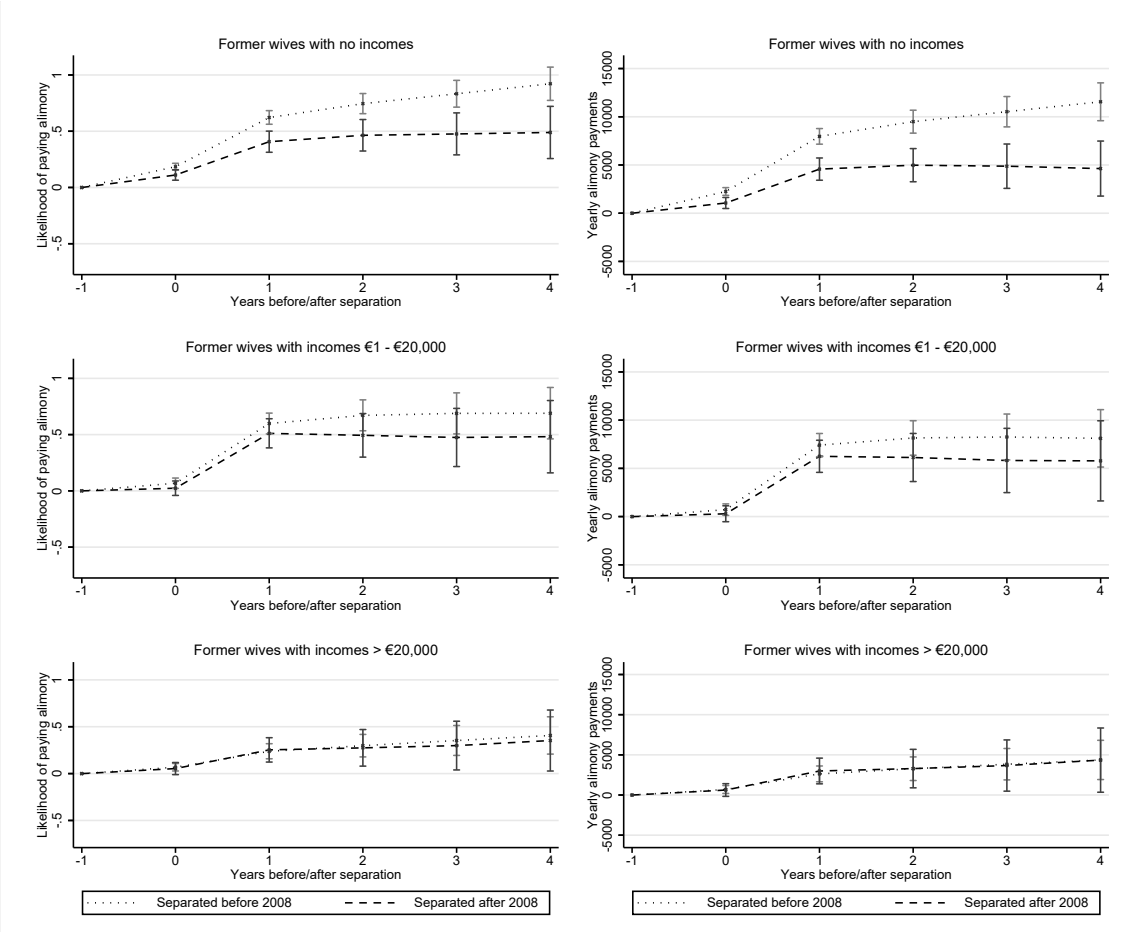
the alimony amount. The new obligation to enter gainful employment after a finalized divorce (§1574 (1) Civil Code) might, at least in part, explain these findings.

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.

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



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

6.2.6. 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 Figure 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 Table 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 Figure 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.

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

[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).

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.

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 et al. 2022). Divorce is one of the main life events that have long-term negative economic con-

[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.

sequences (Bröckel and Andreß 2015, Hogendoorn et al. 2020, Mortelmans 2020. The question remains whether the 2008 Alimony Reform worsened the situation for women.

References

Andreß, H.J., Borgloh, B., Güllner, M., Wilking, K., 2003. Wenn aus Liebe rote Zahlen werden: Über die wirtschaftlichen Folgen von Trennung und Scheidung. Springer-Verlag.

Angrist, J.D., Pischke, J.S., 2009. Mostly Harmless Econometrics, An Empiricist's Companion. Princeton University Press.

Angrist, J.D., Pischke, J.S., 2015. Mastering 'metrics, the path from cause to effect. Princeton University Press.

Bauernschuster, S., Rainer, H., 2012. Political regimes and the family: how sex-role attitudes continue to differ in reunified Germany. Journal of Population Economics 25, 5–27.

Bayaz-Ozturk, G., Burkhauser, R.V., Couch, K.A., Hauser, R., 2018. The Effects of Union Dissolution on the Economic Resources of Men and Women: A Comparative Analysis of Germany and the United States, 1985–2013. The Annals of the American Academy of Political and Social Science 680, 235–258.

Borth, H., 2011. Praxis des Unterhaltsrechts: Das UÄndG und seine Folgen. Verlag Ernst und Werner Gieseking GmbH.

Bredtmann, J., Vonnahme, C., 2019. Less money after divorce–how the 2008 alimony reform in Germany affected spouses' labor supply, leisure and marital stability. Review of Economics of the Household 17, 1191–1223.

Breitenbach, A., 2010. Welche Kinder haben Einfluss auf das Scheidungsrisiko? Inaugural-Dissertation zur Erlangung der Doktorwürde der Philosophischen Fakultät II der Julius-Maximilians-Universität Würzburg.

Bröckel, M., Andreß, H.J., 2015. The Economic Consequences of Divorce in Germany: What Has Changed since the Turn of the Millennium? Comparative Population Studies 40.

Brüggmann, D., 2020. Women's employment, income and divorce in West Germany: a causal approach. Journal for Labour Market Research 54, 1–22.

Bryson, C., McKay, S., 2018. Non-resident parents: Why are they hard to capture in surveys and what can we do about it? Working Paper, The London School of Economics and Political Science.

Campa, P., Serafinelli, M., 2019. Politico-economic regimes and attitudes: Female workers under state socialism. Review of Economics and Statistics 101, 233–248.

Chhaochharia, V., Ghosh, S., Niessen-Ruenzi, A., Schneider, C., 2022. Public child care provision and women's career choices. Working paper, October 21, 2022.

Clarke, D., Tapia-Schythe, K., 2021. Implementing the panel event study. The Stata Journal 21, 853–884.

Drechsel-Grau, M., Peichl, A., Schmid, K.D., Schmieder, J.F., Walz, H., Wolter, S., 2022. Inequality and income dynamics in Germany. Quantitative Economics 13, 1593–1635.

Dziobon, R., Stewart, J., 2016. From dependency to self-sufficiency: the international spousal maintenance barometer. Family law 46, 884–887.

Ekert, S., Heiderhoff, B., 2018. Die Evaluierung der FGG-Reform: Abschlussbericht zum Forschungsvorhaben. Herausgegeben vom Bundesministerium der Justiz und für Verbraucherschutz, Berlin .

Federal Constitutional Court, 2011. New case-law on the calculation of post-marital maintenance applying the so-called division-by-three method is unconstitutional. Press Release No. 13/2011. URL: http://www.bundesverfassungsgericht.de/SharedDocs/Pressemitteilungen/EN/2011/bvg11-013.html, last accessed on 01.12.2015.

Federal Office of Statistics, 2018. Bevölkerung und Erwerbstätigkeit: Statistik der rechtskräftigen Beschlüsse in Eheauflösungssachen (Scheidungsstatistik) und Statistik der Aufhebung von Lebenspartnerschaften. Fachserie 1 Reihe 1.4. https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Eheschliessungen-Ehescheidungen-Lebenspartnerschaften/Publikationen/Downloads-Eheschliessungen/scheidungsstatistik-2010140167004.pdf?__blob=publicationFile.

Federal Office of Statistics, 2022a. Statistik der Ehescheidungen auf 10 000 bestehende Ehen.

Federal Office of Statistics, 2022b. Rechtspflege: Familiengerichte 2021. Fachserie 10 Reihe 2.2. https://www.destatis.de/DE/Themen/Staat/Justiz-Rechtspflege/Publikationen/Downloads-Gerichte/familiengerichte-2100220217004.pdf?__blob=publicationFile.

Federal Office of Statistics, 2022c. Taxpayer-Panel 2001-2018, KDFV, Dataset of the Research Data Centres of the Federal Statistical Office (Destatis) and the Statistical Offices of the Federal States. URL: https://doi.org/10.21242/73111.2018.00.01.1.1.1.

Fernandez-Kranz, D., Roff, J.L., 2021a. The effect of alimony reform on married women's labor supply: Evidence from the american time use survey. IZA Discussion Papers, No. 14949, Institute of Labor Economics (IZA), Bonn.

Finzi-Dottan, R., Cohen, O., 2014. Predictors of parental communication and cooperation among divorcing spouses. Journal of Child and family Studies 23, 39–51.

Forsa, 2003. Unterhaltszahlungen für minderjährige Kinder in Deutschland. in Schriftenreihe des Bundesministeriums für Familie, Senioren, Frauen und Jugend. Verlag W. Kohlhammer, Stuttgart, vol. 228.

German Bundestag, 2006. Antrag der Abgeordneten Sibylle Laurischk, Dr. Karl Addicks, Daniel Bahr (Münster), Rainer Brüderle, Angelika Brunkhorst, Ernst Burgbacher, Helga Daub, Jörg van Essen, Ulrike Flach, Otto Fricke, Horst Friedrich (Bayreuth), Rainer Funke, Hans-Michael Goldmann, Joachim Günther (Plauen), Dr. Karlheinz Guttmacher, Dr. Christel Happach-Kasan, Klaus Haupt, Ulrich Heinrich, Dr. Werner Hoyer, Michael Kauch, Dr. Heinrich L. Kolb, Gudrun Kopp, Jürgen Koppelin, Harald Leibrecht, Ina Lenke, Dirk Niebel, Günther Friedrich Nolting, Hans-Joachim Otto (Frankfurt), Detlef Parr, Gisela Piltz, Dr. Hermann Otto Solms, Dr. Max Stadler, Dr. Rainer Stinner, Jürgen Türk, Dr. Claudia Winterstein, Dr. Wolfgang Gerhardt und der Fraktion der FDP Unterhaltsrecht sozial und verantwortungsbewusst gesellschaftlichen Rahmenbedingungen anpassen. BT-Drs. 16/891, 08.03.2006 .

German Bundestag, 2007a. Beschlussempfehlung und Bericht des Rechtsausschusses (6. Ausschuss). BT-Drs. 16/6980, 07.11.2007 .

German Bundestag, 2007b. Gesetz zur Änderung des Unterhaltsrechts vom 21. Dezember 2007. Bundesgesetzblatt Jahrgang 2007, Teil I, 69, 12.28.2007, pp. 3189-3193 .

German Bundestag, 2012. Beschlussempfehlung und Bericht des Rechtsausschusses (6. Ausschuss) zu dem Gesetzentwurf der Bundesregierung, Drucksache 17/10492, Entwurf eines Gesetzes zur Durchführung des Haager Übereinkommens vom 23. November 2007 über die internationale Geltendmachung der Unterhaltsansprüche von Kindern und anderen Familienangehörigen sowie zur Änderung von Vorschriften auf dem Gebiet des internationalen Unterhaltsverfahrensrechts. BT-Drs. 17/11885, 12.12.2012 .

GKV, 2011. Faktenblatt: ärztliche vergütung. Pressestelle GKV-SV, 21.03.2011.

Google Trends, 2024a. Regional web search interest, search keyword: "neues unterhaltsrecht". Accessed on 01.24.2024.

Google Trends, 2024b. Search keywords: "unterhaltsrecht" and "neues unterhaltsrecht". Accessed on 01.23.2024.

Grave, B.S., Schmidt, C.M., 2012. The dynamics of assortative mating in Germany. Ruhr Economic Papers, 346, Rheinisch-Westfälisches Institut für Wirtschaftsforschung (RWI), Essen.

Greene, W.H., 2012. Econometric Analysis. Pearson Education. Harlow.

Grünheid, E., 2013. Ehescheidungen in Deutschland: Entwicklungen und Hintergründe. Wiesbaden: Bundesinstitut für Bevölkerungsforschung (BIB). URL: https://nbn-resolving.org/urn:nbn:de:bib-wp-2013-011.

Herold, E., Wallossek, L., 2023. The marriage earnings gap. Working paper, November 2023, https://www.luisa-wallossek.com/research.

Hogendoorn, B., Leopold, T., Bol, T., 2020. Divorce and diverging poverty rates: a risk-and-vulnerability approach. Journal of Marriage and Family 82, 1089–1109.

Kessler, D., 2020. Economic Gender Equality and the Decline of Alimony in Switzerland. Journal of Empirical Legal Studies 17, 493–518.

Kessler, D., Potarca, G., Bernardi, L., 2022. Measuring public-private-substitution after divorce: Ex-spouse income and the effect of marital separation on social assistance take-up. International Journal of Social Welfare 31, 176–186.

Kleven, H., Landais, C., Søgaard, J.E., 2019. Children and gender inequality: Evidence from Denmark. American Economic Journal: Applied Economics 11, 181–209.

Konsortium Bildungsberichterstattung, 2006. Bildung in Deutschland – Ein indikatorengestützter Bericht mit einer Analyse zu Bildung und Migration. W. Bertelsmann Verlag GmbH & Co. KG.

Krause, L., 2008. Unterhatsrecht. URL: https://www.rak-freiburg.de/fileadmin/dokumente/Referendare/Krause_Unterhaltsrecht_ab_2008.pdf.

Le Bourdais, C., Jeon, S.H., Clark, S., Lapierre-Adamcyk, É., 2016. Impact of conjugal separation on women's income in Canada: Does the type of union matter? Demographic Research 35, 1489–1522.

Lippmann, Q., Georgieff, A., Senik, C., 2020. Undoing gender with institutions: Lessons from the german division and reunification. The Economic Journal 130, 1445–1470.

Mätzke, M., Ostner, I., 2010. The Role of Old Ideas in the New German Family Policy Agenda. German Policy Studies 6.

Morgan, L.W., 2017. A nationwide review of alimony legislation, 2007–2016. Family Law Quarterly 51, 39–50.

Mortelmans, D., 2020. Economic consequences of divorce: A review. Parental life courses after separation and divorce in Europe , 23–41.

Müller, B., Castiglioni, L., 2015. Stable Relationships, Stable Participation? The Effects of Partnership Dissolution and Changes in Relationship Stability on Attrition in a Relationship and Family Panel. Survey Research Methods 9.

Panforti, M.D., 2021. The parabola of fault in the Italian law of separation and divorce. The Cardozo Electronic Law Bulletin 27.

Pintens, W., 2012. Principles of European Family Law (PEFL), in: Max Planck Encyclopedia of European Private Law. URL: https://max-eup2012.mpipriv.de/index.php/Principles_of_European_Family_Law_(PEFL), last accessed on 18.01.2024.

Radenacker, A., 2020. Changes in mothers' earnings around the time of divorce. Parental life courses after separation and divorce in Europe , 65–81.

Ribot, J., 2011. The financial consequences of divorce across Europe, in: ERA Forum, Springer-Verlag Berlin/Heidelberg. pp. 71–87.

Rossin-Slater, M., Wüst, M., 2018. Parental responses to child support obligations: Evidence from administrative data. Journal of Public Economics 164, 183–196.

Schaubert, M., 2017. Do Alimony Regulations Matter inside Marriage? Evidence from the 2008 Reform of the German Maintenance Law. Working Paper.

Schaubert, M., 2018. Behavioral Response of Non-Resident Parents to Child Support Obligations: Evidence From SOEP. Working Paper.

Schaubert, M., 2022. Do courts know how to incentivize? behavioral response of non-resident parents to child support obligations. Children and Youth Services Review 137, 106487.

Schaubert, M., 2023. Do Alimony Regulations Matter Inside Marriage? Evidence from the 2008 Reform of the German Maintenance Law. Journal of Labor Research , 1–34.

Schaubert, M., Hänisch, C., 2020. Do Non-Resident Parents with Lower Labor Market Attachment React to Institutional Changes in Child Support Obligations? Evidence from IAB-PASS. Working Paper.

Strasser, M., 2021. Determining marriage length in support calculations: Should cohabitation count? JL & Pol'y 30, 396.

Stykes, J.B., Manning, W.D., Brown, S.L., 2013. Nonresident Fathers and Formal Child Support: Evidence from the CPS, NSFG, and SIPP. Demographic Reasearch 29.

Thielemans, G., Mortelmans, D., 2019. Female Labour Force Participation After Divorce: How Employment Histories Matter. Journal of Family and Economic Issues 40, 180–193.

Verma, A.P., 2021. Female labor supply response to alimony: Evidence from massachusetts. Available at SSRN: https://ssrn.com/abstract=3899981 or /http://dx.doi.org/10.2139/ssrn.3899981.

Willenbacher, B., 2010. Die Umgestaltung des Geschlechterkontraktes durch das nacheheliche Unterhaltsrecht, in: Wie wirkt Recht?, Nomos Verlagsgesellschaft mbH & Co. KG. pp. 369–390.

Wooldridge, J.M., 2002. Econometric Analysis of Cross Section and Panel Data. The MIT Press. Massachusetts, London, England.

A. Online Appendix

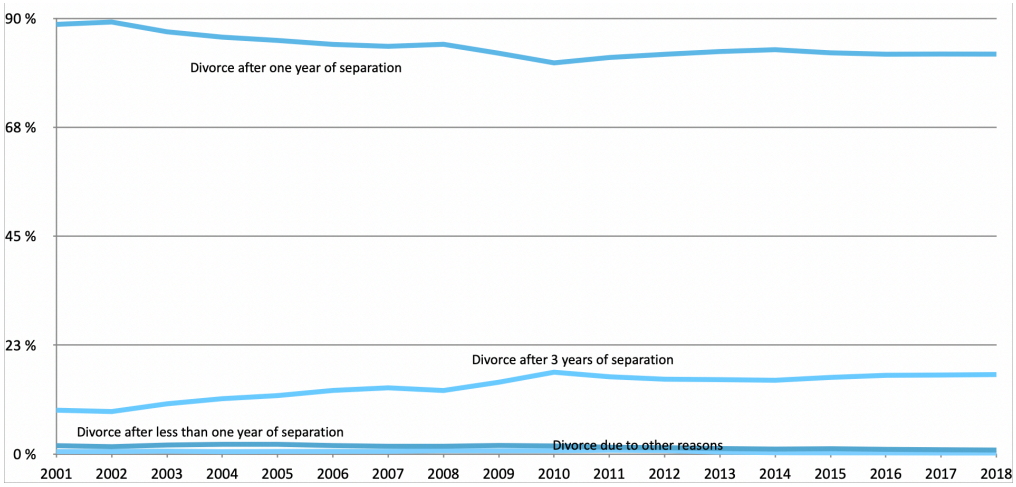
A.1. Background

Table A.1.1: Literature overview: Alimony and divorce; consequences of divorce

Ref	Ctry	Source of variation	Outcome	Method	Results
Alimony laws and divorcees					
Kessler 2020	CH	introduction of no-fault divorce and new alimony regime	probability of alimony awards	cohort-specific logistic regression model and three-fold Blinder-Oaxaca decomposition	decline in alimony (18 pp), partly explained by the reduction in intra-marital income inequality; probably partly by alimony law changes
Consequences of divorce					
Bayaz-Ozturk et al. 2018	GER, USA	divorce	pre- and post-government income adjusted for alimony and child support payments	fixed-effects model	long-term decline in incomes of women are more pronounced and sustained than those of men;
Le Bourdais et al. 2016	CAN	union dissolution	post-tax adjusted family income	fixed effects models	strong income loss for women after separation; about 5 to 7 percent of former married women reported receiving support payments (mainly spousal alimony)
Brüggmann 2020	West GER	divorce	employment rate, gross income	propensity score matching	overall employment rate not affected; marginal employment reduced by 9 pp; an increase in regular employment by 8 pp
Bröckel and Andreß 2015	GER	divorce	child custody, support payments, housing, employment, and economic well-being	change scores, violin plots, logistic regression	more negative economic consequences for women than for men; for budgets of separated individuals: support payments are of minor importance, higher importance of public transfers
Radenacker 2020	GER	three divorce cohorts	mothers' earnings around the time of divorce	pooled OLS regression	increase of earnings throughout the divorce process; highest average earnings in 2008-2013 cohort
Thielemans and Mortelmans 2019	BEL (Flanders)	divorce	probability of employment	discrete-time hazard model	women are up to seven times more likely to increase employment in the 3 months period after separation in comparison to any other 3 months period around the time of separation

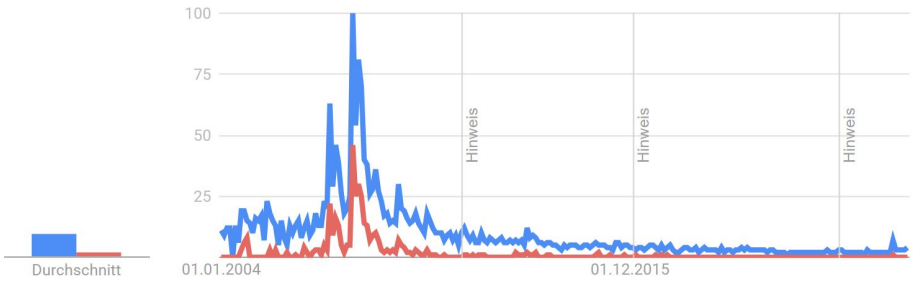
Notes: pp stands for percentage points.Source: Own compilation

Figure A.2.1: Separation period



Notes: Own compilation based on Federal Office of Statistics (2018).

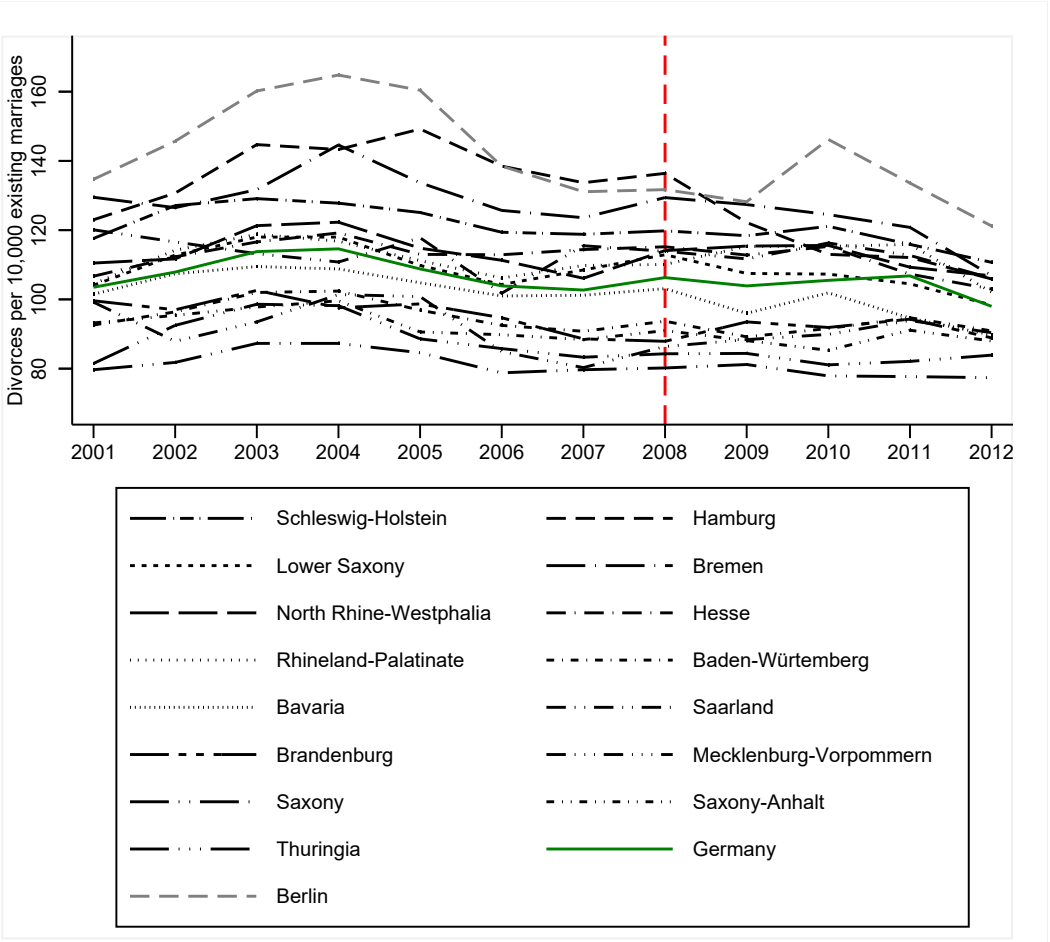
Figure A.2.2: Web search interest for "maintenance law" and "new maintenance law"



Notes: The term "unterhaltsrecht" can be also translated as "alimony regulations" (in blue), and "neues unterhaltsrecht" as "new alimony regulations" (in red). The average search for "new alimony regulations" was lower (on the left, "Durchschnitt"). We observe a peak (100) in November 2007, followed by interest January/February 2008, and March 2007. Important dates: June 15, 2006 – first draft; February 28, 2007 – parts of the draft bill unconstitutional (decided by the Federal Constitutional Court); December 21, 2007 – the Act for the Reform of the Maintenance Law was passed by the German Bundestag; January 1, 2008 – entry into force. Source: Google Trends (2024b), accessed on 01.23.2024.

We also consider whether the reform has changed the probability of divorce, although there is no indication that a change in the probability of divorce could distort our results. The reduction in maintenance claims reduces the potential costs of a divorce for the primary earner, while the opposite is the case for the potential maintenance recipient. This might influence the likelihood of divorce in both directions. Due to the sudden introduction of the reform and the mandatory separation year, the reform cannot lead to a higher probability of divorce before 2008. Looking at the development of divorces per 10,000 existing marriages, no strong volatility can be observed between 2001 and 2012 (see Figure A.2.3). Since no major changes can be observed around the reform year of 2008, it can be assumed that the probability of divorce has not changed as a result of the reform. A changed divorce rate would only impact our estimation results if the reform changed the socio-economic structure of divorcees. Our estimation strategy, however, controls for all indicators that could influence the amount of maintenance.

Figure A.2.3: Divorces per 10,000 existing marriages in Germany



Notes: Own compilation based on Federal Office of Statistics (2022a)

Table A.2.1: Legal framework before and after 2008

Before the 2008 Alimony Reform	**After 2008**
Legal doctrine (§1569 of the Civil Code)	
Long-lasting post-marital solidarity and the notion of a "marriage-created need"	Principle of financial self-sufficiency
Restriction of alimony	
Restriction of (1)-(4) of §1573 Civil Code (Maintenance for unemployment and topping-up maintenance) is possible if an unlimited claim would be inequitable	Reduction and/or time limitation of maintenance, covering *any* ground for alimony claims (creation of §1578b of the Civil Code)
Work requirements (§1574 (1) of the Civil Code)	
The divorced spouse was *only* expected to enter gainful employment that was appropriate for her/him	The divorced spouse is *under an obligation* to enter gainful employment that is appropriate for her/him.
Definition of an appropriate gainful employment (§1570 of the Civil Code)	
	New criterion: A former employment
Maintenance to care for a child (§1570 of the Civil Code)	
No obligation to secure income due to being the primary carer of a ...	
0-8 years old child; part-time employment: 8/9-11 years old child; full-time: 12-16 years old child; Two children: No obligation to secure income until the youngest child is 14 years old; part-time employment: 15- 16 years old child; Full-time: Youngest child is 18 years old	children younger than three years old; exceptions if the best interests of the child so require
In so-called cases of short-fall: Ranking of several dependent entitled to maintenance (§1609 (2) of the Civil Code)	
The spouse had the same priority as minor children	Divorced and subsequent spouses are now of lower priority

Source: Schaubert 2017

A.3. Results

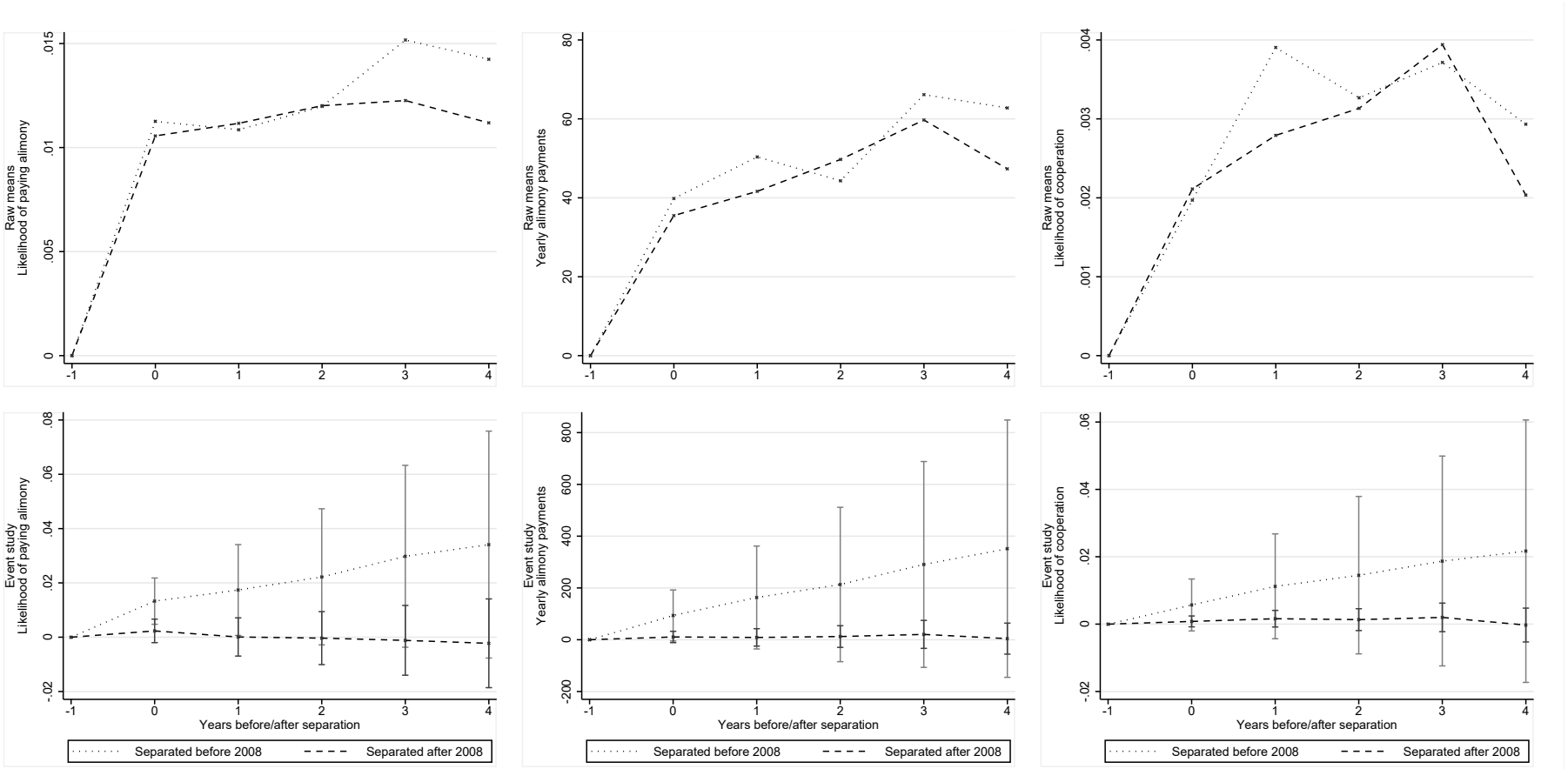
A.3.1. Results for women

Table A.3.2: Results for former wives

	Likelihood of paying alimony		Yearly alimony payments		Likelihood of cooperation	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Panel A: Separated before 2008					
Year of separation	0.0133***	0.0131***	93.56*	92.44*	0.0057	0.0057
	(0.0044)	(0.0044)	(50.33)	(50.37)	(50.33)	(50.37)
1 year later	0.0174**	0.0172**	163.07	160.42	0.0112	0.0114
	(0.0085)	(0.0086)	(101.39)	(101.49)	(101.39)	(101.49)
2 years later	0.0222*	0.0218*	213.40	210.10	0.0145	0.0146
	(0.0128)	(0.0129)	(152.14)	(152.27)	(152.14)	(152.27)
3 years later	0.0298*	0.0291*	290.72	285.33	0.0187	0.0187
	(0.0171)	(0.0172)	(202.83)	(203.01)	(202.83)	(203.01)
4 years later	0.0341	0.0332	351.64	344.20	0.0217	0.0217
	(0.0213)	(0.0214)	(253.56)	(253.81)	(253.56)	(253.81)
No. of children	no	yes	no	yes	no	yes
Income	no	yes	no	yes	no	yes
Income ex-spouse	no	yes	no	yes	no	yes
N	46,729	46,729	46,729	46,729	46,729	46,729
Adj. R^2	0.0035	0.0037	0.0030	0.0036	0.0022	0.0029
	Panel B: Separated after 2008					
Year of separation	0.0023	0.0023	10.55	11.17	0.0008	0.0009
	(0.0022)	(0.0023)	(11.17)	(11.08)	(0.0008)	(0.0008)
1 year later	0.0001	0.0001	8.90	9.91	0.0016	0.0018
	(0.0036)	(0.0038)	(17.19)	(17.47)	(.0.0013)	(0.0013)
2 years later	-0.0003	-0.0005	12.28	14.00	0.0013	0.0017
	(0.0050)	(0.0053)	(21.33)	(21.89)	(0.0017)	(0.0017)
3 years later	-0.0012	-0.0015	20.65	23.71	0.0020	0.0025
	(0.0066)	(0.0071)	(27.58)	(27.27)	(0.0022)	(0.0021)
4 years later	-0.0023	-0.0026	4.21	9.74	-0.0003	0.0004
	(0.0084)	(0.0090)	(30.59)	(31.14)	(0.0026)	(0.0025)
No. of children	no	yes	no	yes	no	yes
Income	no	yes	no	yes	no	yes
Income ex-spouse	no	yes	no	yes	no	yes
N	19,524	19,524	19,524	19,524	19,524	19,524
Adj. R^2	0.0042	0.0053	0.0016	0.0067	0.0029	0.0076

Notes: Event study models; standard errors are clustered at individual level. State-Year fixed effects and individual's age as a second order polynomial are always included. All sums of money are in year 2009 real €. Data: TPP 2001-2012
Significance levels: $*$ 10%; $**$ 5%; $***$ 1%

Figure A.3.4: Effekt of the 2008 Alimony Reform on former wives



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

A.3.2. Main results for men

Table A.3.3: Effect of the 2008 alimony reform on likelihood of paying alimony

	Likelihood of paying post-marital alimony							
	Separated before 2008				Separated after 2008			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Year of separation	0.0538***	0.0486***	0.0537***	0.0484***	0.0153***	0.0115*	0.0149**	0.0111*
	(0.0040)	(0.0040)	(0.0040)	(0.0040)	(0.0059)	(0.0059)	(0.0059)	(0.0059)
1 year later	0.2287***	0.2182***	0.2284***	0.2179***	0.1463***	0.1389***	0.1455***	0.1380***
	(0.0082)	(0.0082)	(0.0082)	(0.0082)	(0.0119)	(0.0119)	(0.0119)	(0.0119)
2 years later	0.2694***	0.2536***	0.2690***	0.2531***	0.1263***	0.1151***	0.1245***	0.1132***
	(0.0121)	(0.0121)	(0.0121)	(0.0121)	(0.0177)	(0.0177)	(0.0177)	(0.0177)
3 years later	0.2925***	0.2711***	0.2918***	0.2705***	0.0948***	0.0800***	0.0920***	0.0771***
	(0.0160)	(0.0161)	(0.0160)	(0.0161)	(0.0236)	(0.0236)	(0.0236)	(0.0235)
4 years later	0.3126***	0.2860***	0.3117***	0.2850***	0.0770***	0.0589**	0.0734**	0.0550*
	(0.0200)	(0.0200)	(0.0200)	(0.0200)	(0.0295)	(0.0294)	(0.0294)	(0.0294)
No. of children	no	yes	no	yes	no	yes	no	yes
Income	no	no	yes	yes	no	no	yes	yes
Income ex-spouse	no	no	yes	yes	no	no	yes	yes
N	195,184	195,184	195,184	195,184	83,042	83,042	83,042	83,042
Adj. R^2	0.1179	0.1198	0.1181	0.1200	0.1296	0.1315	0.1305	0.1324

Notes: Event study models; standard errors are clustered at individual level. State-Year fixed effects and individual's age as a second order polynomial are always included. All sums of money are in year 2009 real €.
Data: TPP 2001-2012
Significance levels: $*$ 10%; $**$ 5%; $***$ 1%

Table A.3.4: Effect of the 2008 alimony reform on yearly alimony payments

	Yearly alimony payments							
	Separated before 2008				Separated after 2008			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Year of separation	415.10***	354.43***	412.70***	352.15***	65.31	19.57	60.28	14.10
	(44.61)	(44.72)	(44.61)	(44.72)	(66.40)	(66.30)	(66.33)	(66.21)
1 year later	2197.01***	2075.79***	2192.57***	2071.61***	1450.18***	1360.00***	1440.31***	1349.25***
	(91.00)	(91.03)	(90.98)	(91.01)	(134.24)	(133.71)	(134.06)	(133.49)
2 years later	2517.86***	2335.34***	2511.11***	2329.00***	1174.78***	1039.32***	1153.31***	1016.53***
	(134.05)	(134.08)	(134.03)	(134.07)	(199.56)	(198.75)	(199.29)	(198.43)
3 years later	2646.76***	2400.64***	2636.90***	2391.35***	765.42***	587.18**	732.75***	552.75**
	(177.58)	(177.77)	(177.57)	(177.77)	(265.75)	(264.72)	(265.42)	(264.33)
4 years later	2744.29***	2435.51***	2732.36***	2424.28***	463.18	243.01	419.65	197.23
	(220.99)	(221.30)	(220.97)	(221.29)	(331.19)	(330.13)	(330.77)	(329.63)
No. of children	no	yes	no	yes	no	yes	no	yes
Income	no	no	yes	yes	no	no	yes	yes
Income ex-spouse	no	no	yes	yes	no	no	yes	yes
N	195,184	195,184	195,184	195,184	83,042	83,042	83,042	83,042
Adj. R^2	0.1083	0.1104	0.1086	0.1108	0.1214	0.1235	0.1224	0.1245

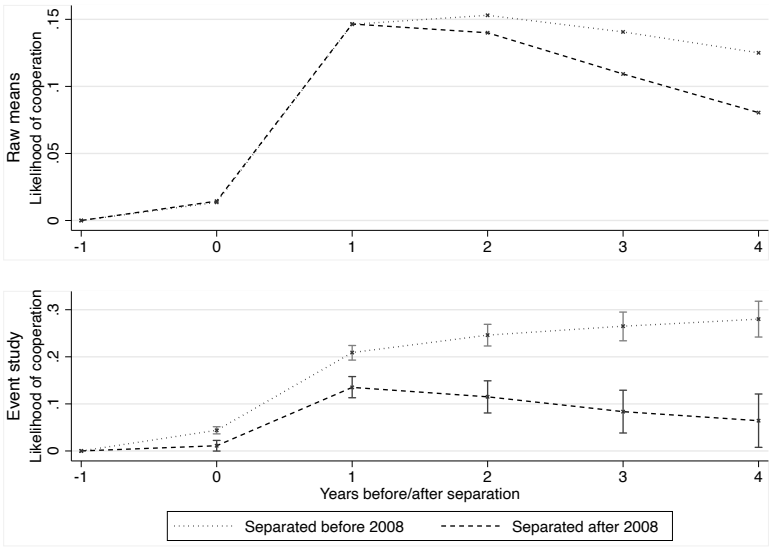
Notes: Event study models; standard errors are clustered at individual level. State-Year fixed effects and individual's age as a second order polynomial are always included. All sums of money are in year 2009 real €.
Data: TPP 2001-2012
Significance levels: $*$ 10%; $**$ 5%; $***$ 1%

Table A.3.5: Effect of the 2008 alimony reform on likelihood of cooperation

	Likelihood of cooperation							
	Separated before 2008				Separated after 2008			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Year of separation	0.0439***	0.0391***	0.0437***	0.0389***	0.0111*	0.0075	0.0107*	0.0070
	(0.0039)	(0.0039)	(0.0039)	(0.0039)	(0.0058)	(0.0058)	(0.0057)	(0.0057)
1 year later	0.2089***	0.1993***	0.2086***	0.1990***	0.1355***	0.1284***	0.1347***	0.1275***
	(0.0079)	(0.0079)	(0.0079)	(0.0079)	(0.0117)	(0.0116)	(0.0117)	(0.0116)
2 years later	0.2459***	0.2314***	0.2455***	0.2310***	0.1147***	0.1040***	0.1129***	0.1021***
	(0.0117)	(0.0117)	(0.0117)	(0.0117)	(0.0173)	(0.0173)	(0.0173)	(0.0173)
3 years later	0.2646***	0.2452***	0.2640***	0.2446***	0.0835***	0.0695**	0.0808***	0.0666**
	(0.0154)	(0.0155)	(0.0154)	(0.0155)	(0.0231)	(0.0231)	(0.0231)	(0.0230)
4 years later	0.2802***	0.2560***	0.2794***	0.2550***	0.0643**	0.0470	0.0607**	0.0433
	(0.0192)	(0.0193)	(0.0192)	(0.0193)	(0.0289)	(0.0288)	(0.0288)	(0.0288)
No. of children	no	yes	no	yes	no	yes	no	yes
Income	no	no	yes	yes	no	no	yes	yes
Income ex-spouse	no	no	yes	yes	no	no	yes	yes
N	195,184	195,184	195,184	195,184	83,042	83,042	83,042	83,042
Adj. R^2	0.1176	0.1197	0.1178	0.1199	0.1301	0.1319	0.1310	0.1328

Notes: Event study models; standard errors are clustered at individual level. State-Year fixed effects and individual's age as a second order polynomial are always included. All sums of money are in year 2009 real €.
Data: TPP 2001-2012
Significance levels: ∗ 10%; ∗∗ 5%; ∗ ∗ ∗ 1%

Figure A.3.5: Likelihood of cooperation



Differences in likelihood
Year of separation (t=0): 3.28 pp (-74.7%)
Year of divorce (t=1): 7.40 pp (-35.4%)
First year after divorce (t=2): 13.10 pp (-53.3%)
Second year after divorce (t=3): 18.15 pp (-68.5%)
Third year after divorce (t=4): 21.57 pp (-77.0%)

Notes: The figure includes 95% confidence intervals around the event coefficients. Data: TPP 2001-2012

Table A.3.6: Reform effect: Differences in likelihood of paying alimony (before 2008 → after 2008)

Overall	West Germans	Couples with children	Incomes: Men > €80,000 & former wives = €0
Year of separation (t=0):			
3.85 pp (-71.6%)	3.98 pp (-74.0%)‡	5.08 pp (-135.8%)‡	statistically insign.
Year of divorce (t=1):			
8.24 pp (-36.0%)	8.64 pp (-36.1%)	11.61 pp (-48.6%)	21.50 pp (-34.6%)
First year after divorce (t=2):			
14.31 pp (-53.1%)	15.05 pp (-53.8%)	19.17 pp (-73.1%)	28.10 pp (-37.7%)
Second year after divorce (t=3):			
19.77 pp (-67.6%)	20.72 pp (-68.5%)‡	25.83 pp (-98.7%)‡	35.70 pp (-42.9%)
Third year after divorce (t=4):			
23.56 pp (-75.4%)	24.69 pp (-76.5%)‡	30.69 pp (-120.3%)‡	43.30 pp (-47.0%)

Notes: All sums of money are in year 2009 real €. Data: TPP 2001-2012
‡ The coefficient in the treatment group is statistically insignificant at 5% level.

Table A.3.7: Reform effect: Differences in alimony (before 2008 → after 2008)

Overall	West Germans	Couples with children	Incomes: Men > €80,000 & former wives = €0
Year of separation (t=0):			
€349.79 (-84.3%)‡	€362.10 (-87.9%)‡	€465.87 (-449.0%)‡	€1,192.1 (-52.9%)
Year of divorce (t=1):			
€746.83 (-34.0%)	€786.00 (-33.9%)	€1,079.39 (-52.5%)	€3,393.9 (-42.6%)
First year after divorce (t=2):			
€1,343.08 (-53.3%)	€1,421.93 (-54.1%)	€1,809.60 (-88.5%)‡	€4,512.5 (47.5%)
Second year after divorce (t=3):			
€1,881.34 (-71.1%)	€1,989.73 (-72.5%)	€2,452.37 (-137.90%)‡	€5,650.1 (-53.7%)
Third year after divorce (t=4):			
€2,281.11 (-83.1%)‡	€2,394.50 (-84.8%)‡	€2,977.21 (-205.1%)‡	€6,925.3 (-59.9%)

Notes: Avg. income of wives before 2008: €10,158.18. All sums of money are in year 2009 real €. Data: TPP 2001-2012
‡The coefficient in the treatment group is statistically insignificant at 5% level.

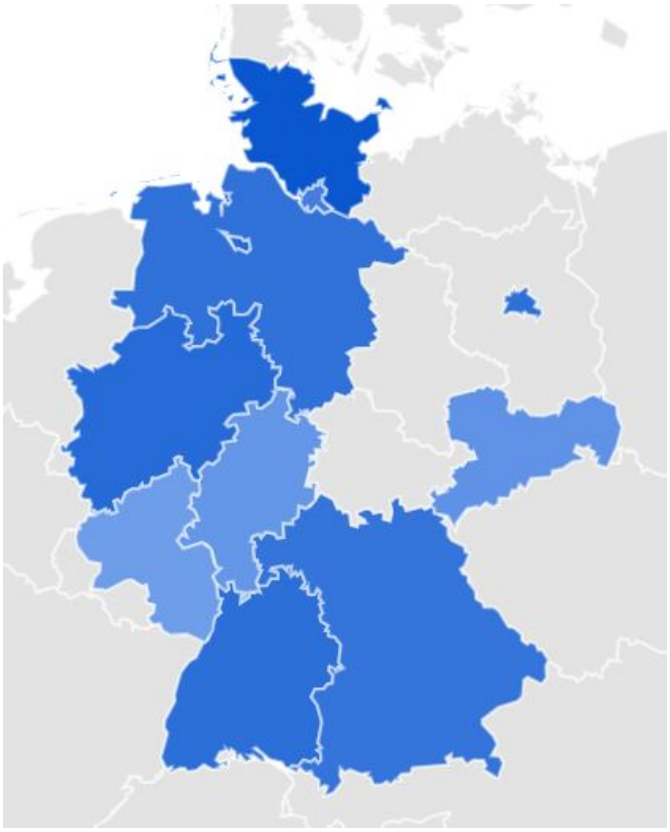
Table A.3.8: Reform effect: Differences in likelihood of cooperation (before 2008 → after 2008)

Overall	West Germans	Couples with children	Incomes: Men > €80,000 & former wives = €0
Year of separation (t=0):			
3.28 pp (-74.7%)	3.31 pp (-75.7%)‡	4.26 pp (-149.0%)‡	statistically insign.
Year of divorce (t=1):			
7.34 pp (-35.1%)	7.55 pp (-34.4%)	10.22 pp (-46.4%)	20.80 pp (-35.3%)
First year after divorce (t=2):			
13.12 pp (-53.4%)	13.55 pp (-52.9%)	17.28 pp (-71.8%)‡	27.40 pp (-38.8%)
Second year after divorce (t=3):			
18.11 pp (-68.4%)	18.66 pp (-68.0%)	23.17 pp (-97.8%)‡	34.00 pp (-43.1%)
Third year after divorce (t=4):			
21.59 pp (-77.1%)	22.20 pp (-76.8%)	27.64 pp (-121.5%)‡	42.10 pp (-48.4%)

Notes: All sums of money are in year 2009 real €. Data: TPP 2001-2012.
‡The coefficient in the treatment group is statistically insignificant at 5% level.

A.3.3. West versus East Germany

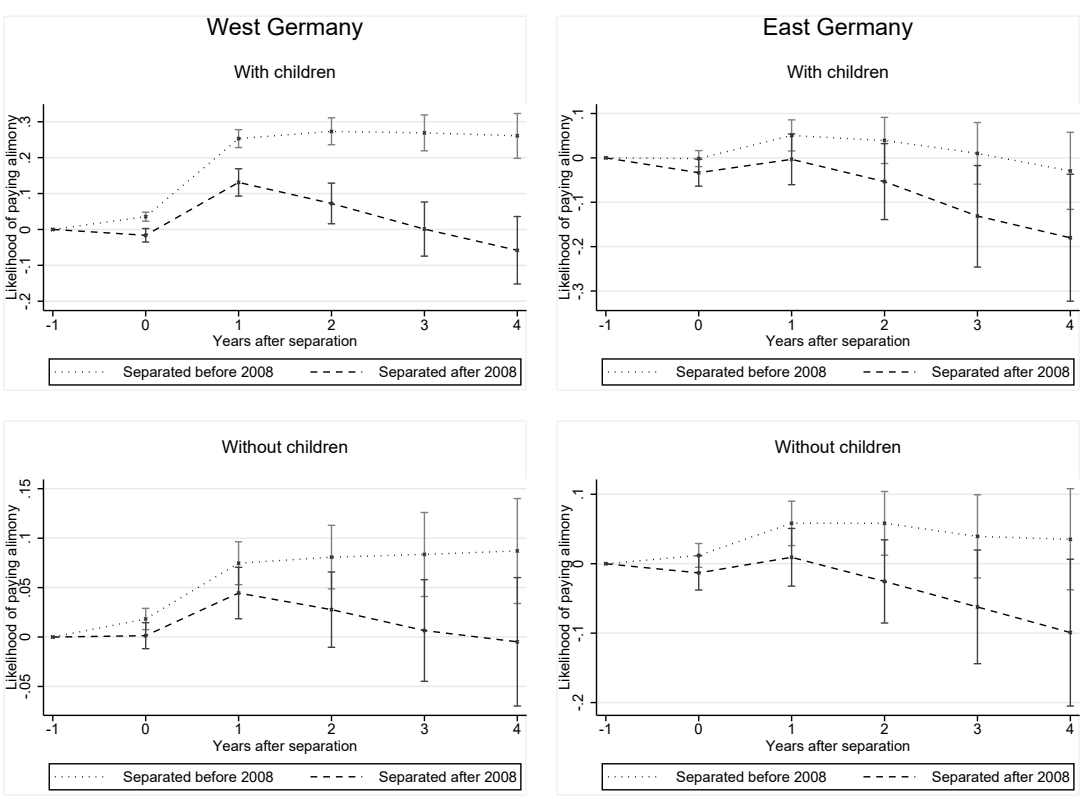
Figure A.3.6: Regional web search interest for “neues unterhaltsrecht” in 2008



Notes: The term “neues unterhaltsrecht” translates to “new alimony regulations”. Ranking in regional web search interest: Schleswig-Holstein 100%, Bremen 83%, North Rhine-Westphalia 82%, Baden-Wuerttemberg 79%, Berlin 78%, Lower Saxony 76%, Bavaria 74%, Hamburg 64%, Saxony 46%, Hessia 43%, Rhineland-Palatinate 37%. These values are relative measures: all of the interest data for the keyword is included and dividing by the highest point of interest for that date range. Zero represents a region that scores less than 1% of the popularity in comparison to the highest value. Source: Google Trends (2024a), accessed on 01.24.2024.

A.3.4. Couples with and without children

Figure A.3.7: Likelihood of alimony payments by West/East and with/without children



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

A.3.5. Income groups

Based on the median pre-tax incomes of full-time working men in 2004 and 2007 (Konsortium Bildungsberichterstattung 2006, GKV 2011), for example, we can assume that husbands with incomes below €20,000 likely had no vocational education and were living in East Germany. Husbands with incomes between €20,001-€40,000 likely completed a vocational education, and those above €40,000 had at least a degree from a university of applied sciences. A bank employee or a teacher would be likely in a €40,001-€60,000-income-bracket, an engineer, an accountant, or a lawyer between €60,001-€80,000. A CEO, a pilot, or a physician was likely in the highest income group.

Men with annual incomes above €80,000

Before 2008, the coefficients for the likelihood of paying alimony were statistically different depending on whether men with incomes above €80,000 were married to women with no income, less than and more than €20,000. For separations after 2008, we observe no statistically different coefficients for the three groups anymore. The reform reduced the likelihood of paying alimony to former wives with no incomes in the years after separation: from 0.622 to 0.407 at divorce (-34.6%), from 0.745 to 0.464 one year later (-37.7%), from 0.833 to 0.476 two years after (-42.9%), and from 0.922 to 0.489 three years after the divorce (-47.0%). The decline of coefficients ranging from -14.7% to - 31.1% after

a marital separation for former wives with incomes below €20,000 after separation is not statistically significant at 0.05 level. The coefficients for wives with incomes above €20,000 remain almost the same.

For the amount of alimony, the differences in coefficients between men with wives without income and incomes below €20,000 are statistically insignificant – although lower for working wives – before 2008.[31] For men with wives earning more than €20,000 coefficients are statistically significantly lower: For example, compared to single-earner couples, €690,0 versus €2,251.7 at separation, €2,629.1 versus €7,967.7 at divorce, €3,275.2 versus €9,491.4 one year after divorce, €3,834.6 versus €10,524.8 two years after divorce, and €4,365.9 versus €11,553.9 three years after a finalized divorce. For separations after 2008, we observe no differences that are statistically significant between the three groups of couples anymore. The main reason for this phenomenon is a decline in the amount of alimony for single-earner households: -52.9% at separation, -42.6% at divorce, -47.5% one year later, -53.7% two years later, and -59.9% three years after divorce.

Our findings for top-earning males reveal that men whose wives had no income at separation benefitted most from the 2008 Alimony Reform. These results suggest that the new obligation to enter gainful employment (§1574 (1) Civil Code) might have played a role. One could argue that the 2008 law changes equalized the likelihood of paying alimony and the amount paid, on average, between the three groups of couples that we created. We can only speculate on the side effects concerning marriage markets or intramarital decisions regarding investments in the labor market or home production.

Men with annual incomes between €60,000-€80,000

Our results for men – whose wives had no income at separation – with incomes between €60,000-€80,000 are interesting in comparison to men with higher incomes. For men with incomes between €60,000-€80,000, the average likelihood of payments was reduced by about 11%-24% following the years after a separation, but these changes after 2008 are statistically insignificant at 0.05 level. However, it seems that the level of the likelihood of paying alimony was equalized between the two groups of men. I.e., for wives without incomes, the average likelihood of receiving alimony was suddenly the same whether their husbands' income was between €60,000-€80,000 or above.

There are insignificant changes for men whose wives earned less than €20,000. For men with former wives earning more than €20,000 and who separated before 2008, the coefficients for the likelihood of payments are statistically insignificant at 0.05 level anyway.[32] In sum, there are no reductions that we can attribute to the 2008 Reform due to statistical insignificance.[33] This holds for all of our three outcomes.

[31] Controlling for incomes and number of children in different age groups leads to a statistically significant difference at separation: €726.7 versus €2,218.6 for single-earner couples. The difference between the coefficients at the remaining years after separation is statistically insignificant at 0.05 level.

[32] In our main specification, at the year of divorce we observe 0.251 (robust se = 0.120). However, after including the number of children in different age groups, the coefficient is reduced to 0.233 (0.119) and is statistically significant at 0.10 level. After the 2008 reform, we observe 0.006 (0.085) for this specification. This difference is, however, statistically insignificant at 0.05 level. The same holds for the alimony amount.

[33] Although we observe the largest declines in the likelihoods and the amount of alimony for men whose wives had incomes above €20,000, all of these changes are statistically insignificant at 0.05 level, additionally to statistically insignificant coefficients at 0.05 level for those who divorced before 2008.

Men with annual incomes between €40,000-€60,000

For men who separated before 2008 and whose wives' incomes were above €20,000, the coefficients for the likelihood of payments are small (between 0.002-0.040) and statistically insignificant, as for the other two outcomes. There is no reform effect.

For men who separated before 2008 and whose wives' incomes were below €20,000, we observe a statistically significant coefficient of 0.238 (robust se = 0.069) at the divorce year for the likelihood of paying alimony. There is a statistically insignificant decline of 29.4% at 0.05 level after the 2008 reform.[34] We also do not observe a reform effect for the other two outcome variables.

Women who had no income at the separation experienced the largest loss, on average. Before 2008, the coefficients for the amount ranged between €635.5-€3,946.4, these are severely reduced by 100%, except for the year of divorce (-92%). The same can be observed for the likelihood of paying alimony or of cooperation for tax purposes. I.e., now alimony is basically not grated except possibly at divorce.[35] An alternate explanation 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.

Men with annual incomes between €20,000-€40,000

Even before the reform in 2008, for couples with a husband's income between €20,001-€40,000 and a wife's income above €20,000, the coefficients for the likelihood of payments were small (0.000-0.022) and statistically insignificant. This is plausible since the difference between their alimony-relevant net incomes is probably small.

The coefficients for men whose wives had less than €20,000 or no income at all are similar in magnitude and statistically insignificantly different when considering the likelihood of paying alimony. For single-earner households, they are 0.0294 (robust se = 0.0113) at the year of separation, 0.1492 (0.0223) at the year of divorce, 0.139 (0.0327) at one year, 0.1192 (0.0432) at two years, and 0.0945 (0.0538) at three years later. After the law change, these are not statistically significant anymore and reduced by 100%, or by 71% at divorce, or by 89% one year after divorce. Changes are similar for wives with incomes less than €20,000, resulting in similar coefficients after 2008: 0.0331 (0.0312) versus 0.0426 (0.0259) at divorce, 0.0010 (0.0464) versus 0.0156 (0.0390) one year after. Results for the likelihood of cooperation and the amount of alimony are in line with these findings.

Men with annual incomes below €20,000

A percentage of men with gross incomes below €20,000 is probably not even liable to pay post-marital alimony because of the SSR. This is, for example, reflected in small coefficients for the likelihood of payments to former wives without income before 2008. They range between 0.0111 and 0.0443. After the law changes, they are further reduced (at the

[34] When controlling for the number of children it is further reduced to 16.6%.

[35] Since we do not observe personal assets or the highest educational attainment, thus earning potential, we cannot determine whether women who had no income at marital separation had the resources to fight for alimony in courts after the 2008 Reform. However, one could argue that women who were earning money, even though less than €20,000, had probably more resources to engage a lawyer. Therefore, there is a possibility that, despite the larger intramarital income gap, women without incomes are worse off as a result of the 2008 Reform.

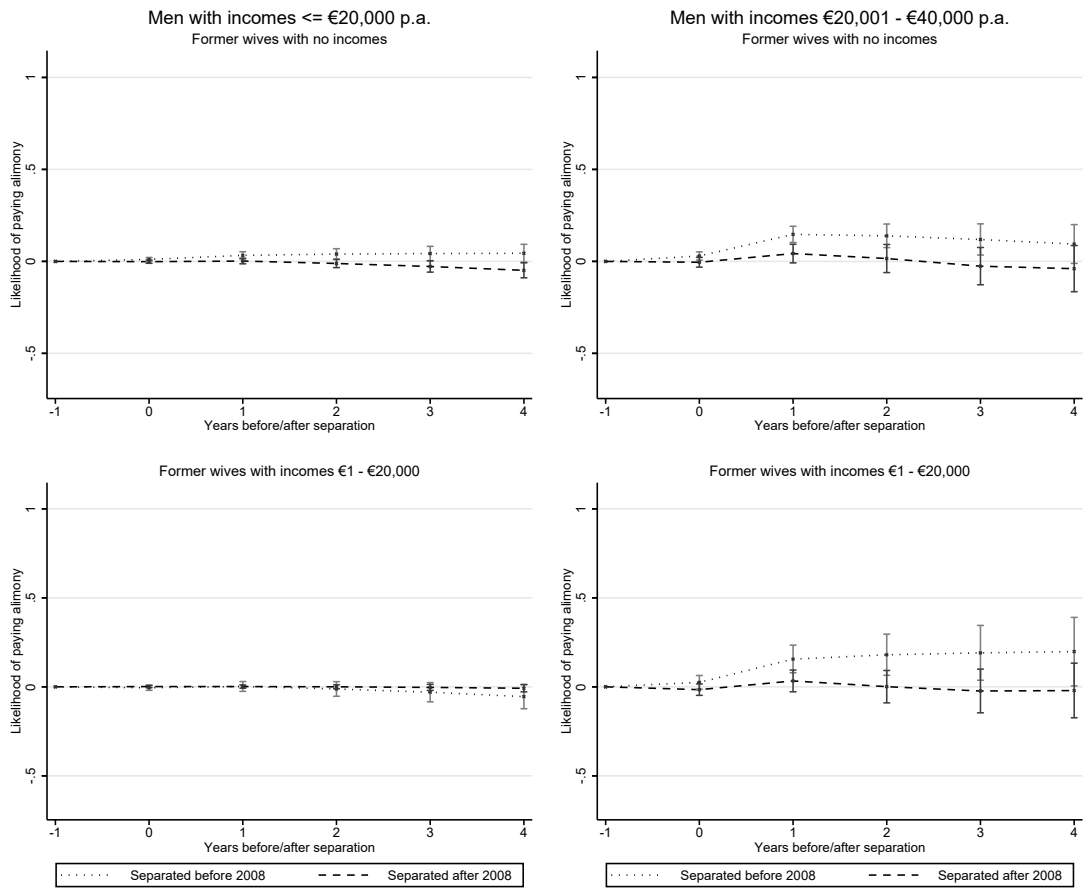
year of divorce to 0.0019), and statistical significance is lost. Thus, on average, for this group of men, likelihoods and payments that were small in the first place are basically eliminated by the reform.

Regional differences

Looking at man-year observations, East Germans are, as expected, overrepresented in the low-income group (48% versus 24% for West Germans), and underrepresented among the high-earning group (17% versus 38%). There are no statistically significant coefficients for those separated before 2008 except for two groups – men whose income was above €80,000 with women who had no income or less than €20,000. However, we do not observe a reform effect. Again, West Germans drive our results.

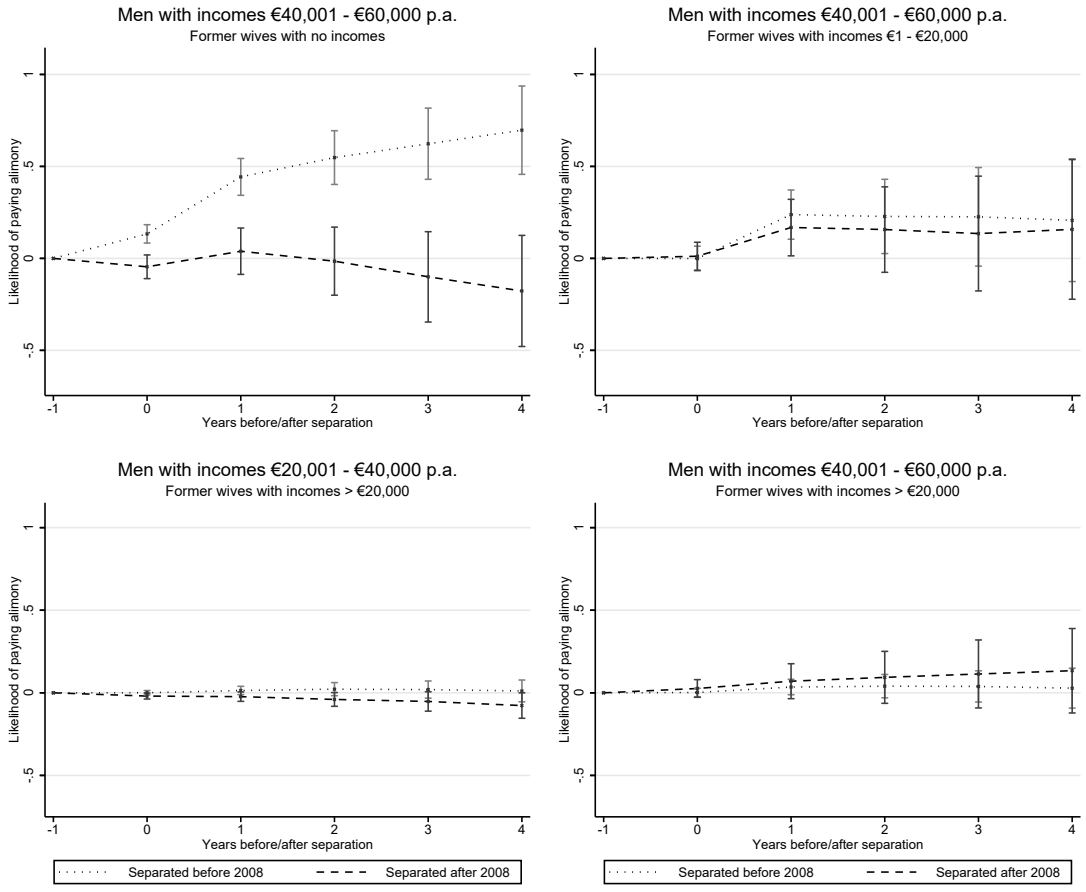
In sum, it seems that the average reform effects are heterogeneous depending on the initial intramarital income gap and the income level of the former husbands. Although we do not observe the incomes of former wives after marital separation, there might be a trade-off between the amount of alimony, a sudden increase in costs to get these payments, and own earning capacity. Unfortunately, we cannot explore the mechanisms that would further explain our findings.

Figure A.3.8: Likelihood of alimony payments by income group (1)



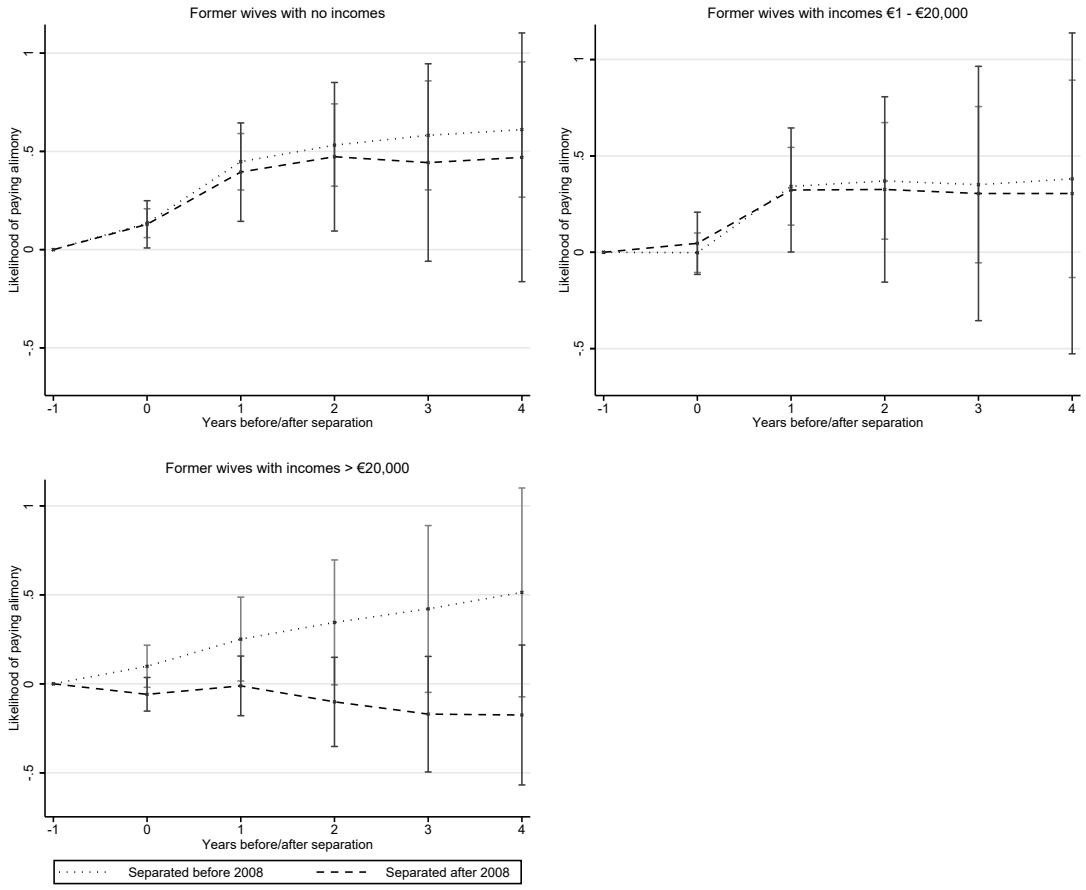
Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012.

Figure A.3.9: Likelihood of alimony payments by income group (2)



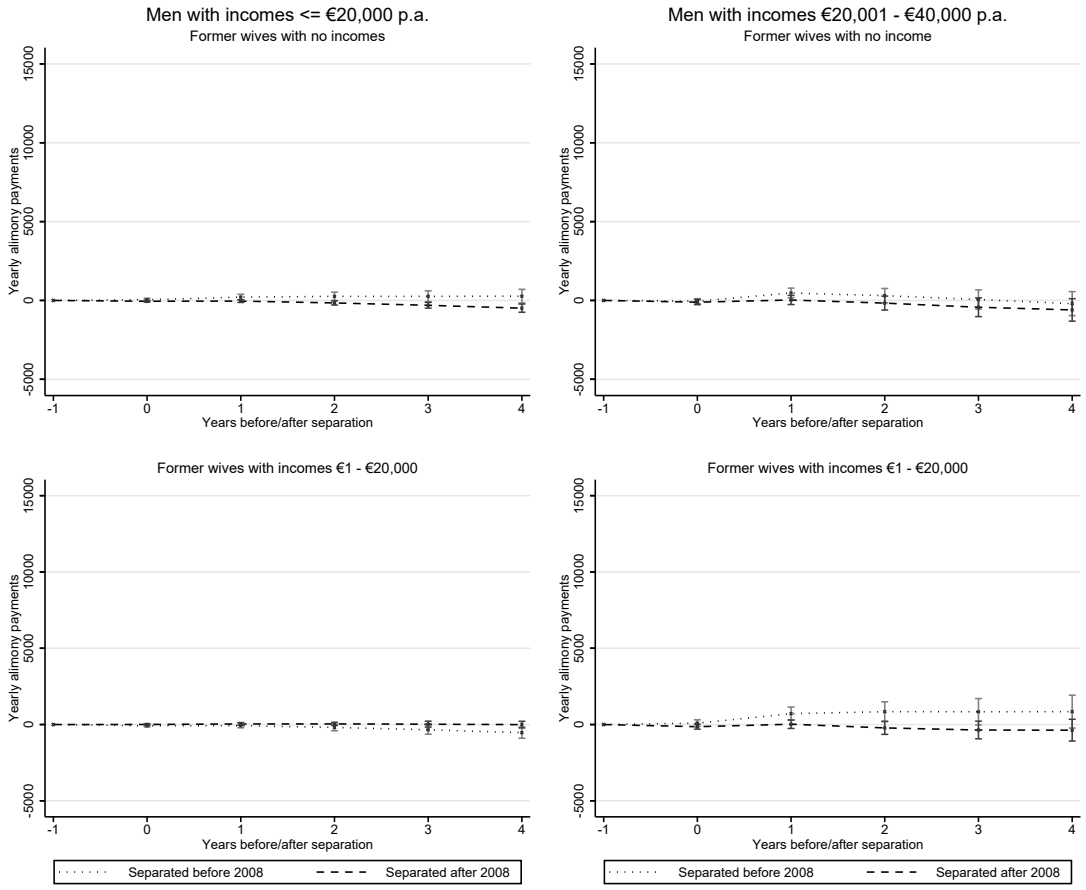
Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012.

Figure A.3.10: Likelihood of alimony payments by income group (3); men with incomes €60,001 - €80,000 p.a.



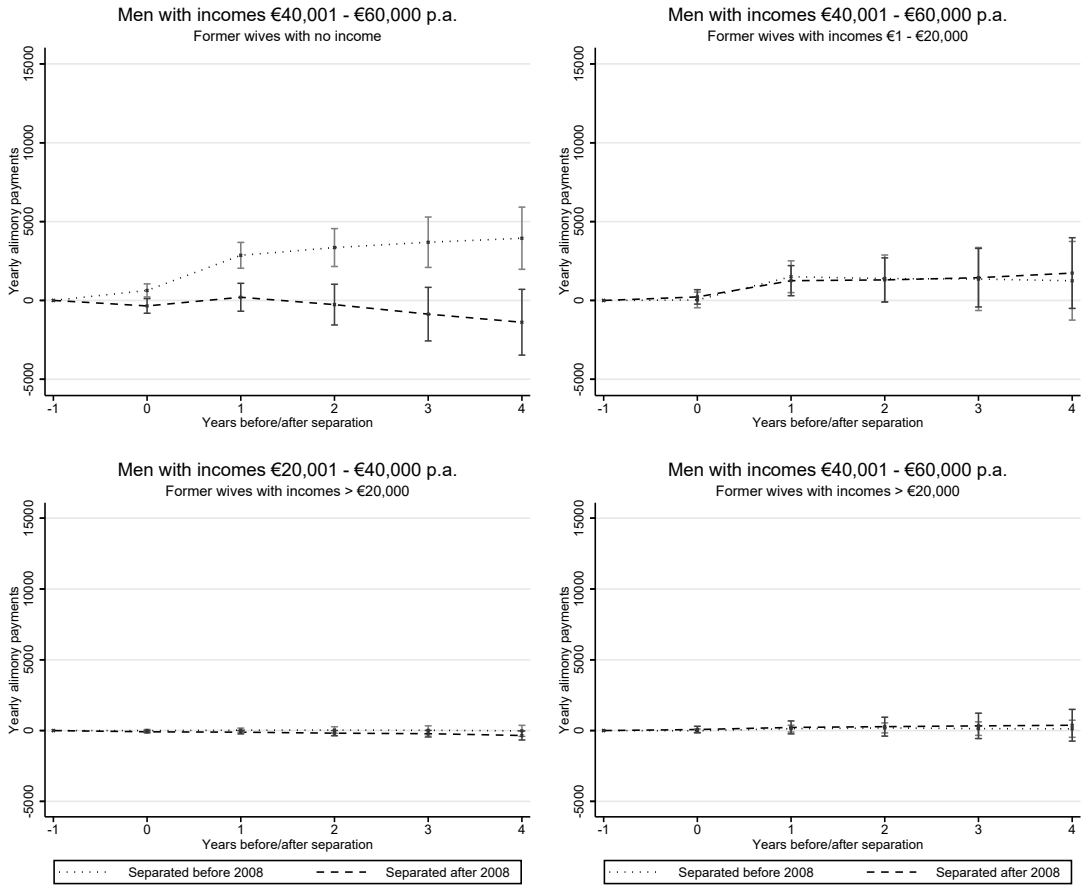
Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012.

Figure A.3.11: Average alimony amount by income group (1)



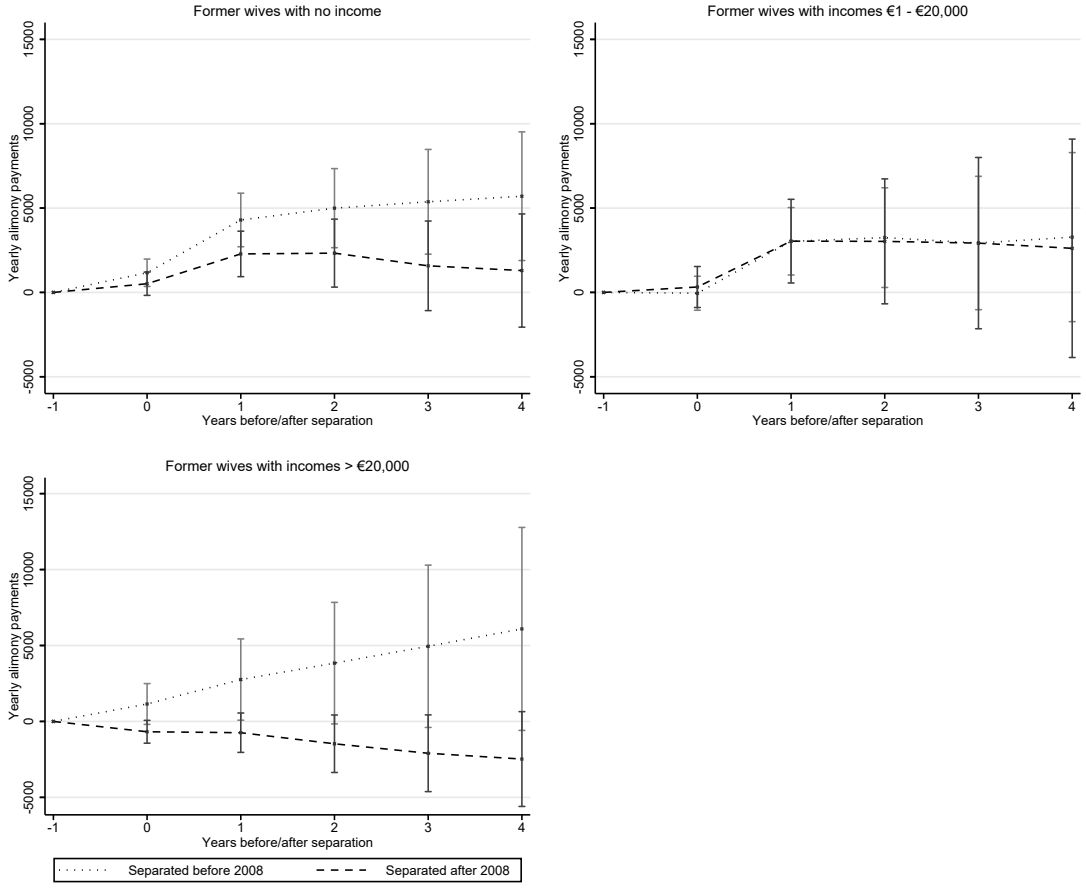
Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012.

Figure A.3.12: Average alimony amount by income group (2)



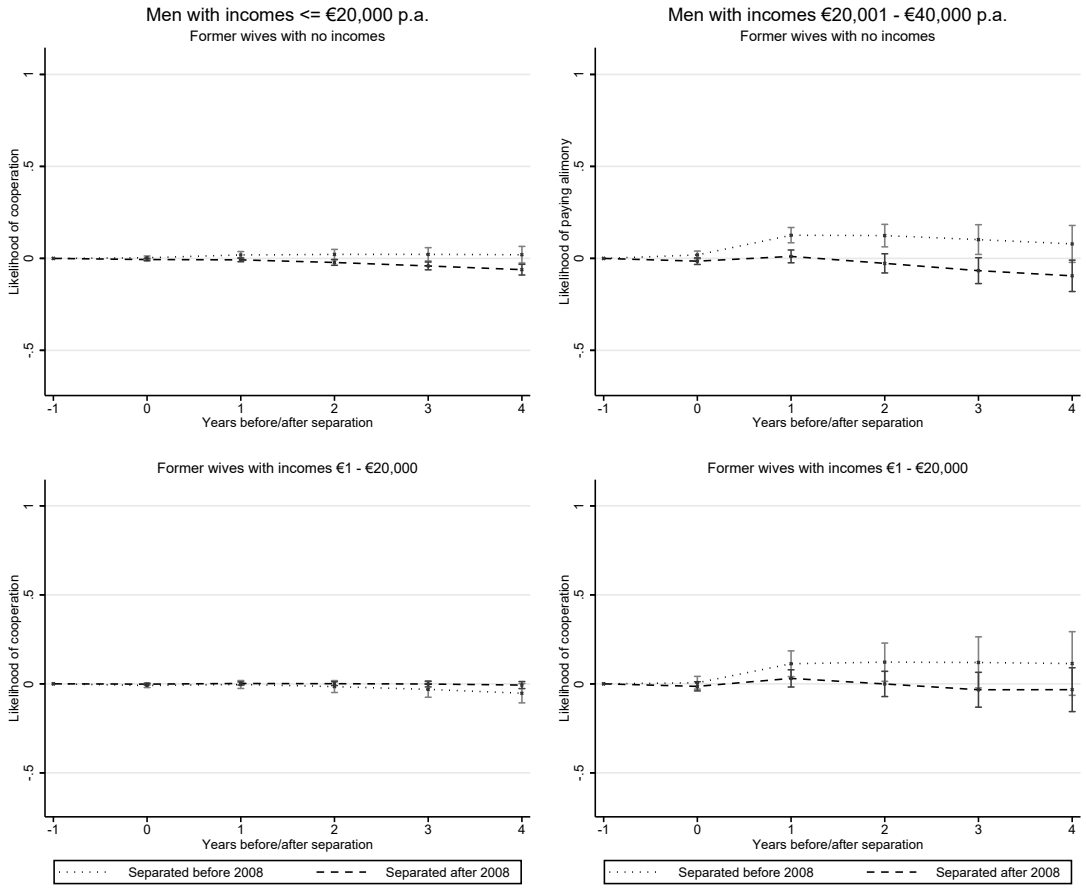
Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012.

Figure A.3.13: Average alimony amount by income group (3); men with incomes €60,001 - €80,000 p.a



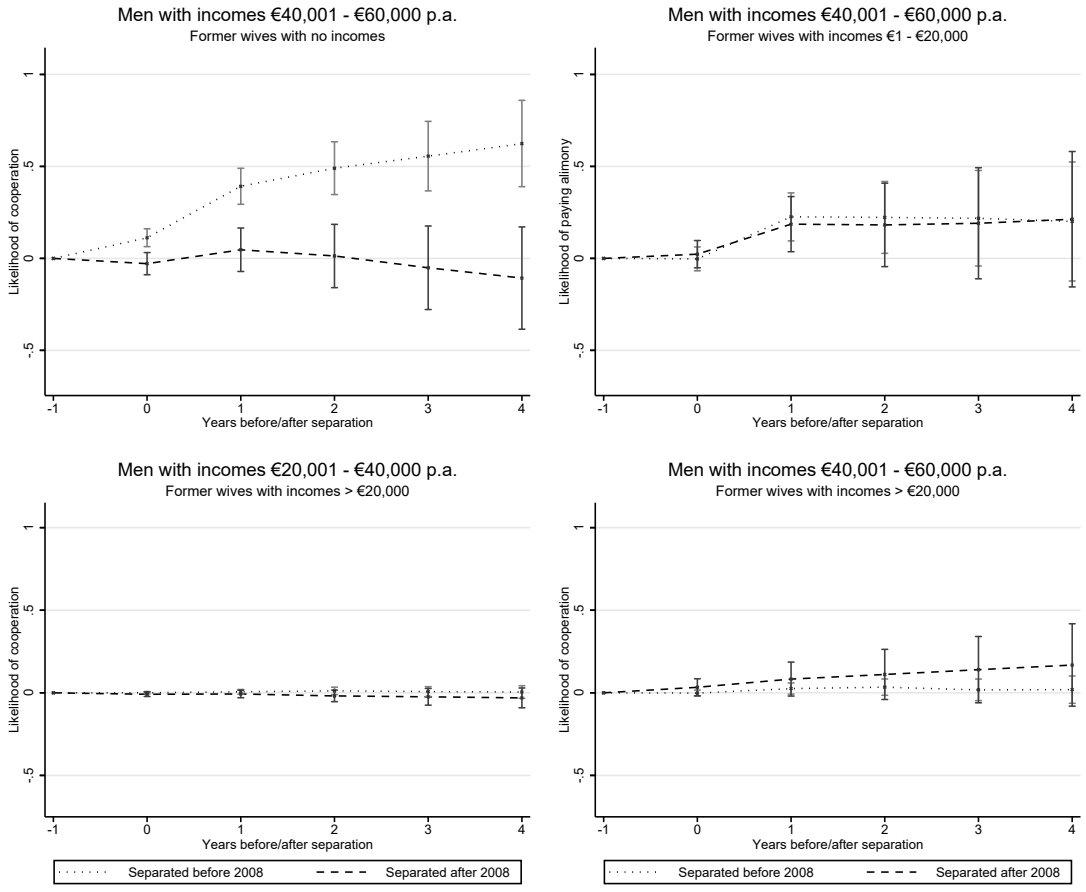
Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012.

Figure A.3.14: Cooperation by income group (1)



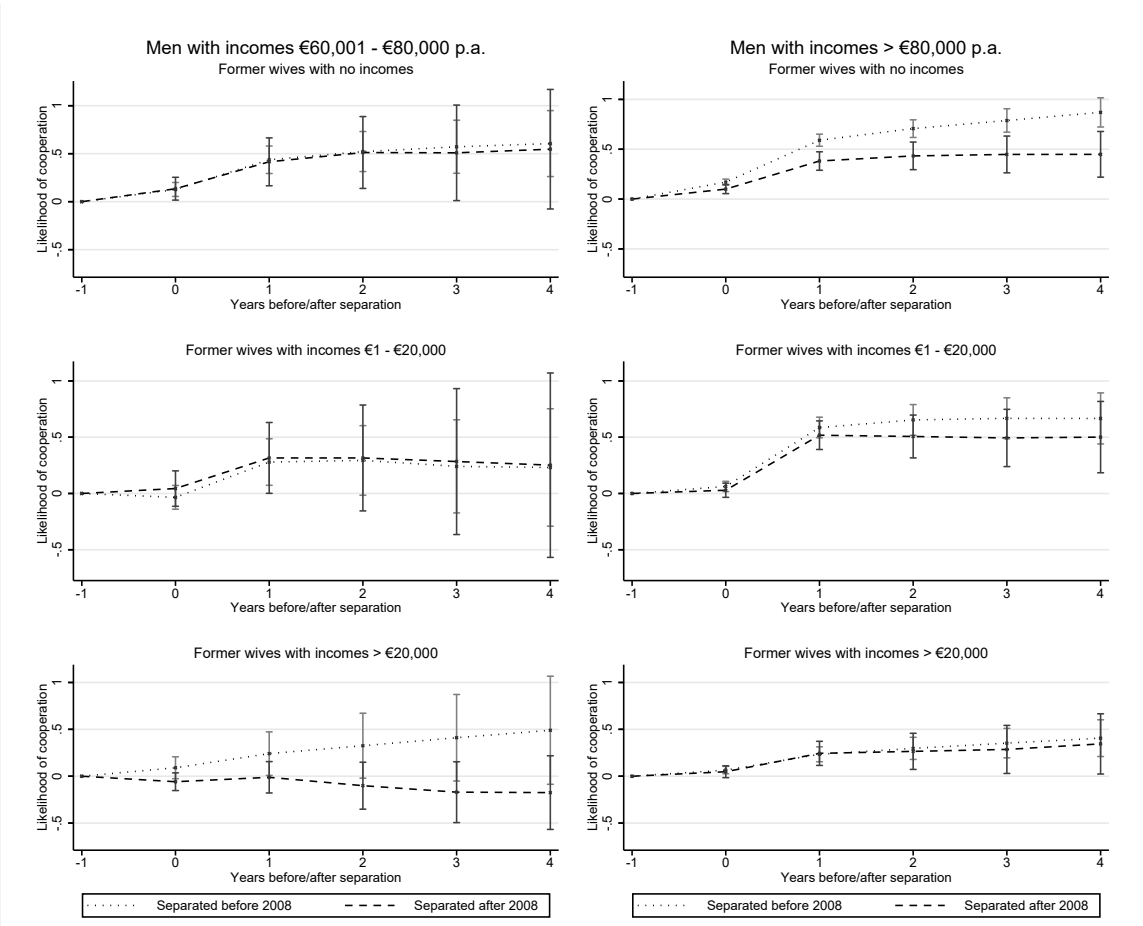
Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012.

Figure A.3.15: Cooperation by income group (2)



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

Figure A.3.16: Cooperation by income group (3)



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

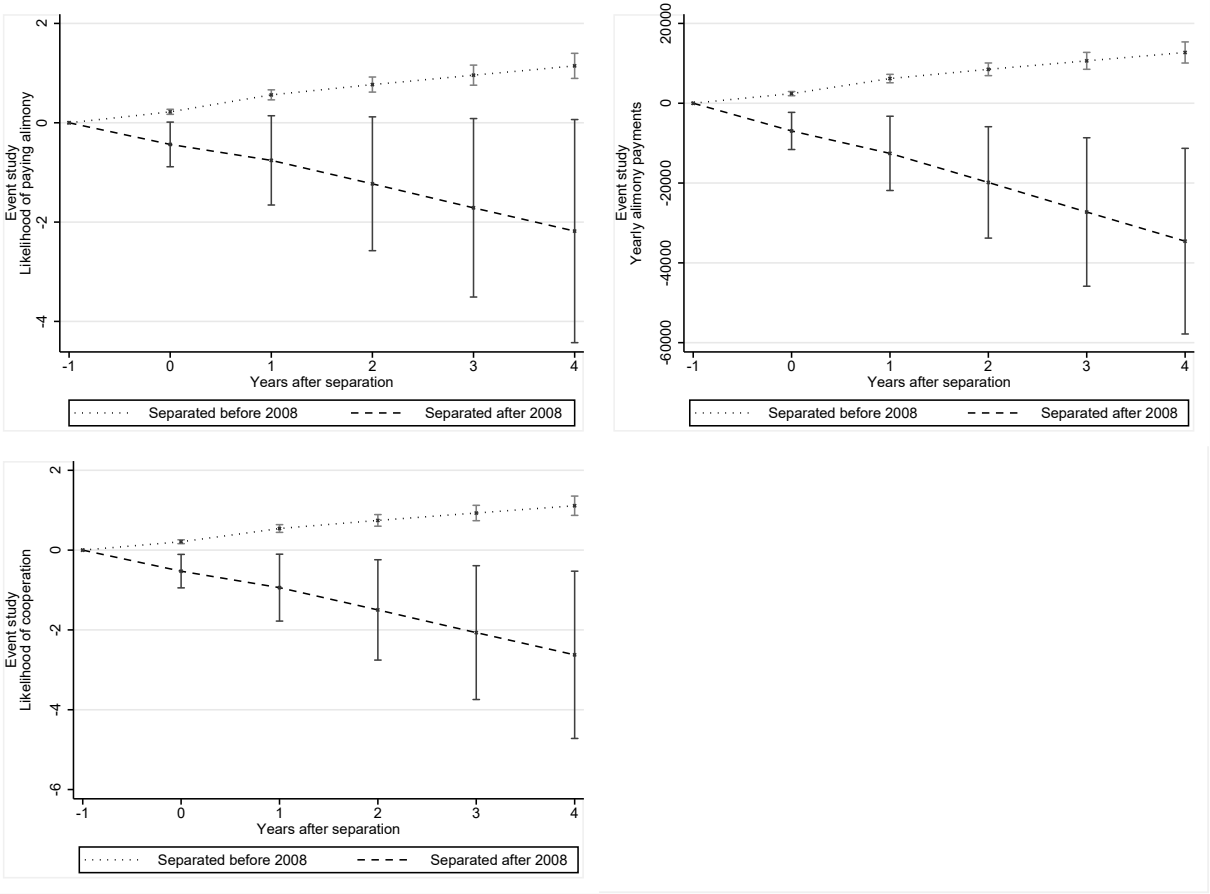
Table A.3.9: Results on likelihood of alimony payments by income groups

	Separated before 2008			Separated after 2008		
Ex-wives with incomes	€0	€1 - €20,000	> €20,000	€0	€1 - €20,000	> € 20,000
	Panel A: Men with incomes <= €20,000					
Year of separation	0.0111**	-0.0051		-0.0013	0.0016	
	(0.0052)	(0.0074)		(0.0046)	(0.0032)	
1 year later	0.0327***	0.0022		0.0019	0.0016	
	(0.0100)	(0.0140)		(0.0077)	(0.0046)	
2 years later	0.0400***	-0.0120		-0.0114	0.0004	
	(0.0148)	(0.0209)		(0.0115)	(0.0057)	
3 years later	0.0429**	-0.0301		-0.0276*	-0.0031	
	(0.0198)	(0.0276)		(0.0157)	(0.0086)	
4 years later	0.0443*	-0.0549		-0.0485**	-0.0079	
	(0.0247)	(0.0349)		(0.0208)	(0.0104)	
	Panel B: Men with incomes €20,001 - €40,000					
Year of separation	0.0294***	0.0252	0.0007	-0.0047	-0.0158	-0.0197**
	(0.0113)	(0.0197)	(0.0067)	(0.0135)	(0.0163)	(0.0091)
1 year later	0.1469***	0.1564***	0.0142	0.0426*	0.0331	-0.0231
	(0.0224)	(0.0395)	(0.0128)	(0.0259)	(0.0312)	(0.0145)
2 years later	0.1390***	0.1805***	0.0221	0.0156	0.0010	-0.0400*
	(0.0327)	(0.0589)	(0.0203)	(0.0390)	(0.0464)	(0.0212)
3 years later	0.1192***	0.1910**	0.0197	-0.0260	-0.0234	-0.0522*
	(0.0432)	(0.0785)	(0.0265)	(0.0517)	(0.0627)	(0.0299)
4 years later	0.0945*	0.1976**	0.0115	-0.0396	-0.0207	-0.0771**
	(0.0538)	(0.0980)	(0.0337)	(0.0640)	(0.0783)	(0.0391)
	Panel C: Men with incomes €40,001 - €60,000					
Year of separation	0.1330***	-0.0006	0.0021	-0.0457	0.0117	0.0263
	(0.0254)	(0.0342)	(0.0130)	(0.0329)	(0.0387)	(0.0272)
1 year later	0.4428***	0.2379***	0.0351	0.0390	0.1677**	0.0705
	(0.0509)	(0.0685)	(0.0239)	(0.0642)	(0.0784)	(0.0540)
2 years later	0.5478***	0.2282**	0.0401	-0.0151	0.1569	0.0936
	(0.0745)	(0.1030)	(0.0360)	(0.0945)	(0.1185)	(0.0801)
3 years later	0.6232***	0.2261*	0.0386	-0.1004	0.1349	0.1143
	(0.0987)	(0.1367)	(0.0482)	(0.1251)	(0.1591)	(0.1048)
4 years later	0.6973***	0.2073	0.0281	-0.1770	0.1576	0.1336
	(0.1223)	(0.1700)	(0.0615)	(0.1541)	(0.1934)	(0.1301)
	Panel D: Men with incomes €60,001 - €80,000					
Year of separation	0.1346***	-0.0024	0.0987	0.1286**	0.0466	-0.0589
	(0.0373)	(0.0525)	(0.0603)	(0.0612)	(0.0823)	(0.0481)
1 year later	0.4477***	0.3425***	0.2512**	0.3946***	0.3231**	-0.0114
	(0.0733)	(0.1029)	(0.1200)	(0.1278)	(0.1639)	(0.0853)
2 years later	0.5323***	0.3703**	0.3453*	0.4727**	0.3258	-0.1012
	(0.1068)	(0.1541)	(0.1790)	(0.1927)	(0.2450)	(0.1275)
3 years later	0.5817***	0.3506*	0.4208*	0.4434*	0.3047	-0.1702
	(0.1414)	(0.2067)	(0.2390)	(0.2561)	(0.3362)	(0.1652)
4 years later	0.6110***	0.3812	0.5135*	0.4702	0.3053	-0.1750
	(0.1757)	(0.2609)	(0.2991)	(0.3225)	(0.4239)	(0.2000)
	Panel E: Men with incomes above €80,000					
Year of separation	0.1845***	0.0679***	0.0679***	0.1114***	0.0237	0.0534
	(0.0154)	(0.0234)	(0.0204)	(0.0237)	(0.0327)	(0.0327)
1 year later	0.6225***	0.5986***	0.2383***	0.4069***	0.5113***	0.2533***
	(0.0310)	(0.0472)	(0.0411)	(0.047)	(0.0659)	(0.0663)
2 years later	0.7454***	0.6712***	0.2983***	0.4639***	0.4935***	0.2747***
	(0.0457)	(0.0701)	(0.0613)	(0.0713)	(0.0985)	(0.0994)
3 years later	0.8330***	0.6887***	0.3534***	0.4764***	0.4748***	0.2988**
	(0.0605)	(0.0932)	(0.0815)	(0.0953)	(0.1319)	(0.1325)
4 years later	0.9220***	0.6903***	0.4071***	0.4890***	0.4817***	0.3526**
	(0.0755)	(0.1165)	(0.1017)	(0.1183)	(0.1639)	(0.1659)

Notes: Event study models; standard errors are clustered at individual level. State-Year fixed effects and individual's age as a second order polynomial are always included. All sums of money are in year 2009 real €. Number of man-year observations: 260,229. Data: TPP 2001-2012.
Significance levels: ∗ 10%; ∗∗ 5%; ∗ ∗ ∗ 1%

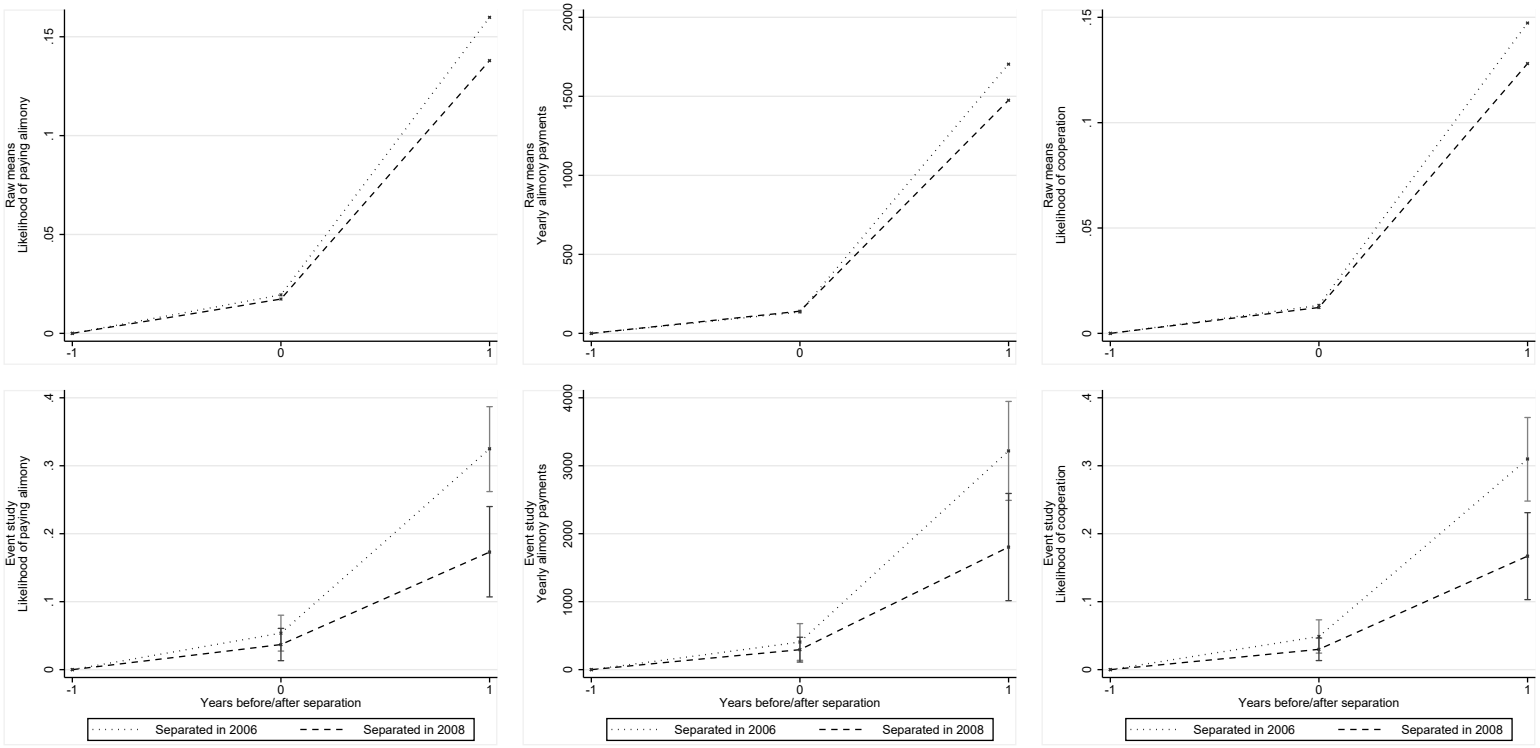
A.3.6. Additional robustness checks

Figure A.3.17: Results controlling for female employment rate at the state level



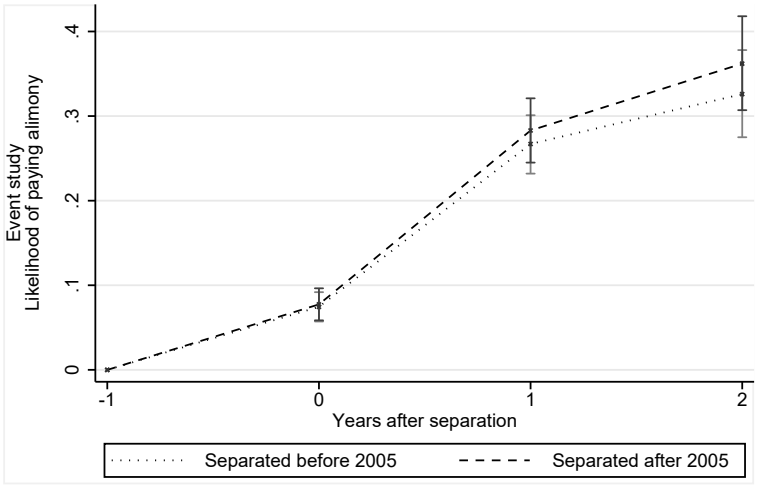
Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012

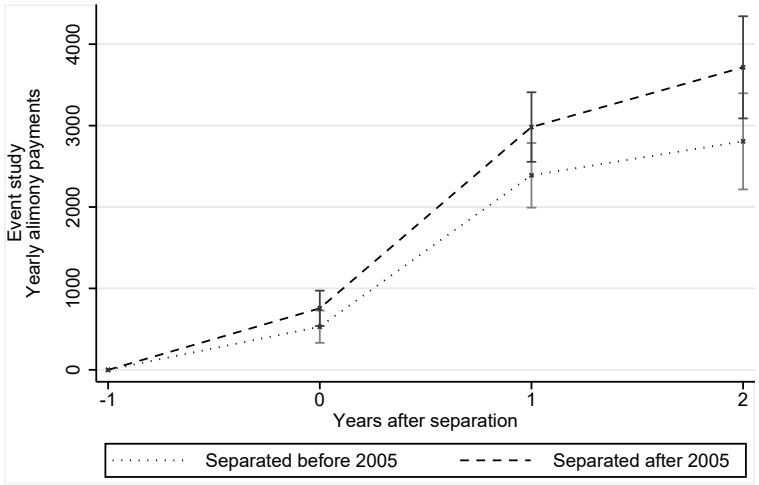
Figure A.3.18: Effekt of the 2008 Alimony Reform by two 2006 and 2008 cohort

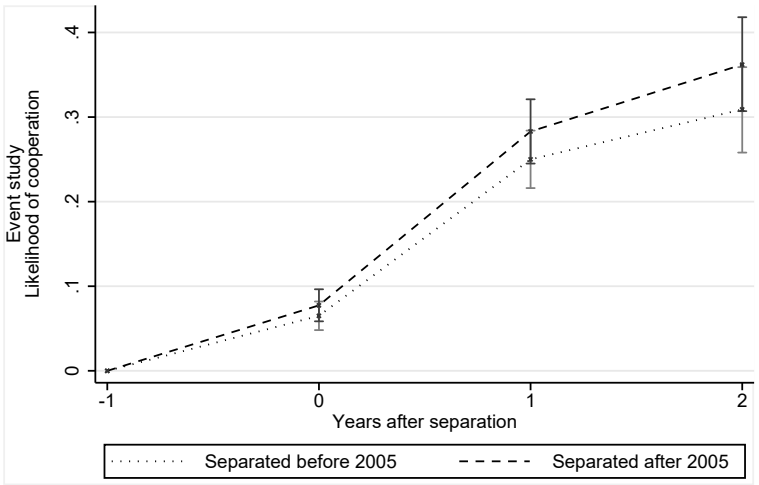


Notes: The figure includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €. Data: TPP 2001-2012

Figure A.3.19: Estimation results for placebo treatment (pseudo-law change in 2005)







Notes: The figure shows the effect of a pseudo-law change in 2005. It includes 95% confidence intervals around the event coefficients. All sums of money are in year 2009 real €.
Data: TPP 2001-2007.