

# Disentangling Household Taxation and Gender Norms <sup>\*</sup>

Elena Herold

Leonie Koch

Carina Neisser

October 2, 2025

PRELIMINARY AND INCOMPLETE

## Abstract

Joint taxation of couples is often criticized for distorting household labor supply and reinforcing income inequality, particularly by disincentivizing secondary earners. However, empirical evidence remains limited, as transitions in tax regimes are typically endogenous coinciding with marriage and observed responses are shaped by prevailing gender norms, especially when women are secondary earners. To address these challenges, we examine the 2013 extension of joint income taxation to same-sex civil partners in Germany to isolate how tax incentives influence household labor supply and income allocation. Using administrative tax return data on the universe of tax filers, we provide the first large-scale descriptive evidence on same-sex couples in Germany, who exhibit relatively equal earnings prior to the reform. The introduction of joint taxation increases within-couple inequality, primarily through reduced earnings of secondary earners. The observed tax elasticities largely reflect these within-couple reallocations rather than individual responses to marginal tax incentives. Additionally, same-sex couples are less likely to adopt withholding schemes that reinforce within-household income inequality.

**Keywords:** Joint Income Taxation, Gender Norms, Female Labor Participation, LGBTQ

**JEL Codes:** J12, J16, J22, H24, D13

---

<sup>\*</sup>**Herold:** Ifo Institute, LMU Munich (herold@ifo.de); **Koch:** LMU Munich (leonie.koch@econ.lmu.de); **Neisser:** University Cologne (neisser@wiso.uni-koeln.de). We thank Michael Baker, Felix Bierbrauer, Clemens Fuest, Ulrich Glogowski, Valentina Melentyeva, Andreas Peichl, Dominik Sachs, Sebastian Sieglöcher, Michael Smart, Luisa Wallossek and seminar audiences at C-SEB Workshop 2024, Canadian Public Economics Group, IZA Applied Day 2024, University Cologne Applied Seminar, Munich Public Economics Week, NTA Annual Conference, the Politics of Gendered Taxation conference, ZEW Public Finance Conference, IIPF, and UoT Applied Micro Seminar. The authors acknowledge financial support from Dr. Hans Riegel Stiftung. Carina Neisser acknowledges that the project is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) under Germany's Excellence Strategy EXC 2126/1 390838866.

# 1 Introduction

Household-level policies influence individual incentives and the division of labor, which have significant implications for labor market participation and intra-household inequality (Albanesi et al., 2023; Geyer et al., 2015; Olivetti and Petrongolo, 2017). A key policy is household taxation: under joint taxation, spouses are taxed on their combined income. In progressive tax schedules, this raises the marginal tax rate for the secondary earner while lowering it for the primary earner. As a result, there are concerns that joint taxation discourages secondary earners – often women – and reinforces specialization within households (Bick and Fuchs-Schündeln, 2017; Borella et al., 2023; Bronson et al., 2024).

Despite its policy importance, empirical evidence on the effects of joint taxation remains scarce for several reasons. First, there is a lack of exogenous variation that could change the tax burden between spouses. Second, transitions between tax regimes often coincide with changes in marital status, which introduces an additional source of distortion. Third, existing empirical studies focus almost exclusively on different-sex couples, where labor market responses are entangled with gender roles. Traditional gender norms, such as the male-breadwinner model, prescribe men as primary earners and women as secondary earners (Bertrand et al., 2015; Bursztyn et al., 2017). As a result, tax incentives and norms often reinforce one another, making it difficult to determine whether observed specialization reflects policy, norms, or their interaction. Identifying the behavioral effects of joint taxation thus requires a setting where tax incentives vary independently of marital transitions and entrenched gender roles. Our empirical context offers such a setting.

In this paper, we exploit the 2013 extension of joint income taxation to same-sex civil partners in Germany. While same-sex civil partnerships were already introduced in 2001, they had previously been excluded from joint filing – a feature that was already available to different-sex couples. This institutional setting offers a unique opportunity to examine the impact of household taxation. The reform creates a quasi-experimental framework, as it altered only the tax treatment of same-sex partners while leaving other legal aspects unchanged. Same-sex couples are also less bound by traditional within-household gender roles (Goldberg, 2013; Siminski and Yetsenga, 2022), enabling us to isolate the pure effects of tax incentives. Moreover, same-sex couples became systematically identifiable in administrative data through joint filing.

We use income tax return data from 2008 to 2020, covering the universe of income tax returns of all same-sex civil partners (SSCPs) who have ever filed jointly, as well as income tax records for different-sex couples (DSCs), which serve as benchmarks in our analyses. In addition, we link joint tax filings to individuals tax records prior to the reform. Compared

to survey data, these records overcome the problems of misreporting and limited coverage, providing comprehensive information on income and tax obligations.

Our analysis yields three main contributions. First, by leveraging comprehensive administrative data, we present the first large-scale descriptive analysis of the income and household composition of same-sex couples in Germany. We show that SSCPs allocate intra-household income more equally than their different-sex counterparts. We also document distinct individual earnings profiles, such as the "gay penalty" and "lesbian premium." Women in same-sex partnerships - especially when in secondary-earner - have considerably higher incomes than their different-sex counterparts, while it's the opposite for men in same-sex couples. Moreover, within the overall income distribution, SSCPs are slightly overrepresented in the middle percentiles and underrepresented at both the bottom and the top.

Second, to provide evidence on the effects of introducing joint income taxation, we exploit the 2013 reform using an event-study and difference-in-differences design that compares outcomes for SSCPs, who were directly affected, to DSCs. We focus on behavioral responses reflected in changes in income at both the individual and household levels. Since DSCs differ systematically in their household composition and income allocation, we create a matched comparison sample of DSCs based on pre-reform demographic and income characteristics to enhance comparability. This design enables us to analyze the impact on each partner individually as well as on the household as a whole. We find that joint taxation increases inequality within couples, primarily due to reduced earnings of secondary earners, while primary earners remain unaffected. Three years after the reform, the partner pay gap widened by up to 3.8% relative to different-sex couples, driven by earnings reductions of secondary earners of up to -11.8%. The effects are most pronounced among couples with children and those with initially equal pre-reform incomes. In the latter group, the widening gap may reflect not only reductions in secondary earners income but also potential declines in income among primary earners. Taken together, these findings suggest that joint taxation incentivizes greater household specialization by enhancing the tax benefit associated with unequal earnings.

Third, to assess the role of gender norms in shaping household responses to tax incentives, we analyze tax responses for same-sex couples and contrast our findings with evidence for different-sex couples. We estimate taxable income elasticities for same-sex civil partners (SSCPs) and find positive and statistically significant responses of approximately 0.3 - comparable to average estimates in the literature, but smaller than those typically found for women in different-sex couples. However, when analyzing primary and secondary earners separately, the elasticities are small and insignificant. This indicates that the observed responses reflect income reallocation between partners rather than individual adjustments

to tax incentives. In addition, we examine tax-planning behavior through withholding class choices, which allow couples to shift the monthly tax burden between partners and offer insights into how tax incentives interact with household decision-making norms. We find that SSCPs are less likely than DSCs to choose withholding systems that increase the secondary earner’s tax burden, while DSCs are particularly likely to select classes that adversely affect the wife’s net income. Our findings highlight that observed tax responses depend on their interaction with norms, with their strength determined by whether these norms reinforce or counteract incentives.

We contribute to several strands of literature. First, we contribute to the literature that examines spouses’ labor supply responses to family income tax reforms. There are only a limited number of studies due to the lack of natural experiments. These findings consistently show that joint (individual) taxation has a negative (positive) impact on women’s labor supply. No significant effect has been found for men (Kalíšková, 2014; Herold and Wallossek, 2024; LaLumia, 2008; Selin, 2014; Isaac, 2023). However, most of this evidence comes from survey or cross-sectional data, or from policy changes implemented decades ago.<sup>1</sup> In addition to these quasi-experimental studies, a series of papers employ structural life cycle models to evaluate the effect of joint taxation on married women’s labor supply (Bick and Fuchs-Schündeln, 2017, 2018; Borella et al., 2023; Guner et al., 2012). Our study contributes to the literature by exploiting a recent policy change using comprehensive administrative tax data that faces fewer problems of measurement error, and we observe both partners’ earnings and intra-household allocation over time. In addition, the German tax system offers consistently strong financial incentives for switching from individual to joint filing and for household specialization. It almost always reduces the couples overall tax burden.<sup>2</sup> Consistent with the prior literature, we find that joint taxation reduces the labor supply of secondary earners and, by observing both partners simultaneously, we also show that it persistently increases within-couple inequality.

We also contribute to the growing literature on the labor supply and earnings of same-

---

<sup>1</sup>LaLumia (2008) uses repeated cross-sectional survey data to examine the transition from separate to joint taxation in certain US states in 1948, revealing significant decreases in the labor force participation among married women. Selin (2014) analyzes Sweden’s shift from joint to separate taxation in the 1970s with a small-sample two-wave panel data, finding increased employment among wives of high-income men. Kalíšková (2014) studies the Czech introduction of joint taxation for married couples (with at least one child) in 2005 using Labor Force Survey data and estimates a decline in the employment rate of married women with children, but only a minimal effect on hours worked. Closest to our paper, Isaac (2023) examines the introduction of joint filing for same-sex marriages in the US on their labor supply using cross-sectional survey data. He finds no significant intensive margin responses (hours worked) but relatively large extensive margin responses (participation) among secondary earners, in line with Selin (2014).

<sup>2</sup>We estimate that same-sex couples in Germany receive an average tax benefit of €829 from switching, whereas in the U.S., approximately 40% of marriages face a marriage penalty (Isaac, 2023).

sex couples. For a recent overview, see [Badgett et al. \(2021\)](#) and [Badgett et al. \(2024\)](#). Existing research shows that same-sex couples tend to allocate household and labor market responsibilities more equally and specialize less than different-sex couples even when children are present ([Van der Vleuten et al., 2021](#); [Andresen and Nix, 2022](#); [van der Vleuten et al., 2023](#)). Male same-sex couples typically spend less time in the labor force, while female same-sex couples spend more time than their heterosexual counterparts. Wage gaps also exist between heterosexual and homosexual individuals, often characterized by a "lesbian premium" and a "gay penalty" ([Antecol and Steinberger, 2013](#); [Drydakis, 2022](#); [Leppel, 2009](#); [Tebaldi and Elmslie, 2006](#); [Carpenter, 2007](#); [Humpert, 2016](#)). Further studies analyze the impact of marriage legalization and find mixed results.<sup>3</sup> We contribute to this literature by assembling comprehensive administrative tax data covering the universe of same-sex civil partners in Germany who have ever filed jointly. Most prior studies rely on small or non-representative survey data ([Badgett et al., 2024](#)), as administrative data on same-sex couples is rare outside Scandinavia ([Andresen and Nix, 2022](#); [van der Vleuten et al., 2023](#)). Our data systematically identify same-sex couples through tax filings and enable the first large-scale descriptive evidence on household incomes and intra-household allocation in Germany.<sup>4</sup> Our results confirm and expand upon earlier research showing that compared to different-sex couples, same-sex couples tend to match less on age, have fewer children, a more equal distribution of household income, and a higher rate of female labor force participation. Moreover, quasi-experimental evidence on how public policies affect same-sex couples remains scarce ([Badgett et al., 2024](#); [Isaac, 2023](#)). By exploiting the introduction of joint taxation for SSCPs, we provide new evidence on its impact on intra-household earnings and labor supply, contributing to ongoing debates about the distributional and behavioral effects of family tax policy in this under-researched population.

Lastly, we contribute to the literature on the role of gender norms in intra-household decision-making and their interaction with policy incentives. While seminal work such as [Becker \(1981\)](#) models household decision-making as the outcome of efficient specialization, a large body of research shows that income and labor supply decisions are also shaped by traditional gender norms and social expectations ([Bertrand et al., 2015](#); [Bertrand, 2020](#); [Andresen and Nix, 2022](#); [Kleven, 2022](#); [Fernández et al., 2004](#)). However, much less is known about how these norms interact with household-level policy incentives such as taxation, to

---

<sup>3</sup>[Hansen et al. \(2020\)](#) study the state-wise legalization of same-sex marriage in the US and show that legalization has led to a decrease in labor among female same-sex spouses. [Hamermesh and Delhommer \(2020\)](#) uses the same setting and finds higher family incomes among couples with longer marriage exposure. [Sansone \(2019\)](#) shows increased individual and joint employment probabilities and a reduced gap in hours worked between the household head and the secondary earner following marriage equality.

<sup>4</sup>[Humpert \(2016\)](#) uses Mikrozensus 2009 cross-sectional survey data to study German same-sex individuals. Our findings are broadly aligned, although our data are more comprehensive.

shape behavior (Coelho et al., 2024). Recent evidence from Germany shows that responses to joint taxation are concentrated on women’s earnings, with little effect on men (Herold and Wallossek, 2024). Both Giommoni and Rubolino (2022) and Ichino et al. (2019) show that gender norms shape how households respond to tax incentives: in Italy, women reduce earnings to qualify as so-called dependent spouses, while in Sweden, couples respond more strongly to policies that align with their prevailing norms—traditional or egalitarian. Buettner et al. (2019) show that German couples are more likely to shift net income within the year through their withholding scheme when the secondary earner is the wife. Together, these studies suggest that tax policy effects are amplified by existing gender norms. We contribute by showing that same-sex partners allocate income more equally and are less responsive to secondary-earner tax incentives. Extending Buettner et al. (2019), we also document that tax planning behavior differs substantially between same-sex and different-sex couples.

This paper is structured as follows. Section 2 sets out the theoretical considerations and outlines the institutional background on joint taxation and same-sex civil partnerships in Germany. Section 3 presents the administrative data and descriptive evidence on same-sex couples. Section 4 analyzes the impact of introducing joint taxation on their income levels and distribution. Section 5 disentangles tax incentives from gender norms by comparing the tax responsiveness of households with different sex compositions. Section 6 concludes.

## 2 Conceptual Framework and Institutional Setting

### 2.1 Conceptual Framework

Following Becker (1981), we consider a household with two partners  $i \in \{1, 2\}$  choosing consumption goods ( $C$ ), household-produced goods ( $H$ ), and leisure ( $\ell$ ) to maximize joint utility:

$$\begin{aligned} \max_{C, H, \ell} U(C, H, \ell; Z) \quad \text{s.t.} \quad pC \leq Y_1 + Y_2 \quad \& \quad 1 = L_{m,i} + L_{h,i} + \ell_i \\ \text{with} \quad Y_i = w_i L_{m,i} \quad \& \quad H = \phi_1 L_{h,1} + \phi_2 L_{h,2} \end{aligned}$$

with  $w_i$  denoting the market wage,  $L_{m,i}$  market labor,  $L_{h,i}$  household labor, and  $\phi_i$  productivity in household production.  $Z$  captures demographic or relationship-specific characteristics (e.g., children, relationship duration). Comparative advantage arises when  $\phi_1/w_1 \neq \phi_2/w_2$ , leading one partner to specialize in household production while the other focuses on market work.<sup>5</sup>

---

<sup>5</sup>Bargaining models relax the pure efficiency view, allowing allocations to depend on relative bargaining

Including taxation changes the net return to market work by altering the effective marginal wage, thereby modifying their labor supply incentives:

$$Y_i^* = Y_i (1 - \tau^{av}(Y^{tax})) , \quad \text{where} \quad \tau^{av}(Y^{tax}) = \frac{T(Y^{tax})}{Y^{tax}}$$

$$w_i^* = w_i (1 - \tau^{mtr}(Y^{tax})) , \quad \text{with} \quad \tau^{mtr}(Y^{tax}) = \frac{dT(Y^{tax})}{dY^{tax}}$$

where  $T(\cdot)$  is the tax liability and  $Y^{tax}$  the taxable income. Under individual taxation,  $Y^{tax} = Y_i$ , while under joint taxation,  $Y^{tax} = Y_1 + Y_2$ . In a progressive tax system, joint taxation typically raises  $\tau^{mtr}$  for the secondary earner and lowers it for the primary earner, reducing the secondary earners net wage  $w_i^*$  and incentivizing greater within-household specialization. Labor supply choices  $L_{m,i}$  then respond to these net wages through the households utility maximization, affecting the allocation between market work, household work, and leisure ([Bick and Fuchs-Schündeln, 2018](#); [Saez et al., 2012](#)).

Beyond economic incentives, preferences and social norms also shape household labor allocation. Preferences represent intrinsic valuations or tastes regarding the division of labor and leisure, including a desire for equality ([Hermle et al., 2024](#)). Social norms, especially traditional gender norms, impose external expectations that assign roles for market work and household production ([Akerlof and Kranton, 2000](#)). Norms enter the households utility through individual-specific disutility terms when partners deviate from prescribed labor allocations, with  $\psi_i$  capturing the intensity and direction of the norm - positive values penalize higher market work, negative values penalize lower market work - and  $D(\cdot)$  the deviation from the target allocation.

$$U_i = U_i(C_i, H, \ell_i) - \psi_i \cdot D(L_{m,i}, \theta), \quad (1)$$

For different-sex couples with  $i = \{f, m\}$ , gender norms often prescribe asymmetric household roles, such as assigning a higher share of household work to women or expecting men to be the primary earner, implying  $\psi_f > 0$  for women by penalizing a higher market labor supply ([Bertrand et al., 2015](#)). For same-sex couples, the target allocation may be more egalitarian or individually negotiated, implying smaller  $|\psi_i|$ . Empirical evidence supports this interpretation: same-sex couples tend to divide paid and household labor more equally, with less specialization driven by traditional gender roles ([Martell and Roncolato, 2020](#); [Van der Vleuten et al., 2021](#); [Bauer, 2016](#)). While parenthood and the duration of relationships can

---

power, itself shaped by outside options. Here, household decisions are the outcome of a negotiated equilibrium, where the household maximizes a weighted sum of individual utilities ([Manser and Brown, 1980](#); [McElroy and Horney, 1981](#); [Chiappori, 1992](#); [Lundberg and Pollak, 1994](#)).

lead to increased specialization among couples, qualitative studies emphasize that gender norms do not rigidly dictate labor division in same-sex households (Goldberg, 2013; Kelly and Hauck, 2015).

**Combined effect of taxation and norms** Consider a progressive tax schedule where partner 1 has higher pre-tax earnings and thus has a comparative advantage in the labor market. Switching to joint taxation increases (decreases) the marginal tax rate  $\tau^{mtr}$  for partner 2 (1), reducing (increasing) their effective wage  $w_i^*$ . In the absence of norms, partner  $i$  chooses  $L_{m,i}$  to satisfy

$$U_C w_i^* = U_{\ell_i},$$

which, totally differentiated with respect to  $\tau^{mtr}$ , yields

$$\frac{dL_{m,i}}{d\tau^{mtr}} = \frac{[U_{CC} L_{m,i} w_i^* + U_C] w_i}{U_{CC} (w_i^*)^2 + U_{\ell_i \ell_i}} < 0.$$

Thus, a higher marginal tax rate reduces market hours through the mechanical fall in  $w_i^*$ .

**Hypothesis 1** *Introducing joint taxation lowers the secondary earners net wage, reducing their market labor supply and increasing specialization.*

Now suppose a norm prescribes partner 2 to spend more time on housework. The FOC then becomes

$$U_C w_i^* = U_{\ell} + \psi_i D_{L_{m,i}},$$

and the corresponding labor-supply response to  $\tau^{mtr}$  has an additional curvature term  $\psi_i D_{L_{m,i} L_{m,i}}$  in the denominator:

$$\frac{dL_{m,i}}{d\tau^{mtr}} = \frac{[U_{CC} L_{m,i} w_i^* + U_C] w_i}{U_{CC} (w_i^*)^2 + U_{\ell_i \ell_i} + \psi_i D_{L_{m,i} L_{m,i}}}.$$

When  $\psi_2 > 0$  (norm penalizes higher market work), this term amplifies the tax response; when  $\psi_2 < 0$  (norm penalizes lower market work), it dampens it.

**Hypothesis 2** *In different-sex couples, norms amplify specialization when aligned with taxation incentives and dampen it when they oppose each other.*

Same-sex couples provide a clearer separation of economic incentives from gender norms, as they do not adhere to fixed gender roles. Consequently, norm-related costs are minimal ( $\psi_i \approx 0$ ), allowing observed responses to reflect the pure tax channel.



**Hypothesis 3** *In same-sex couples, weak norms suggest that responses closely follow the pure tax channel. As a result, the response of secondary earners is weaker than in different-sex couples with a male breadwinner, but stronger than in those with a female breadwinner.*

Children enhance tax-induced specialization through two channels. First, they raise the marginal product of time spent at home, such as childcare, thereby widening the comparative advantage. Second, they can increase the salience of norm-related disutility  $\psi_i$ . In different-sex couples, these two channels often reinforce one another; in same-sex couples, effects primarily operate through the first.

**Hypothesis 4** *Children amplify specialization, especially in different-sex couples where norms and technology interact.*

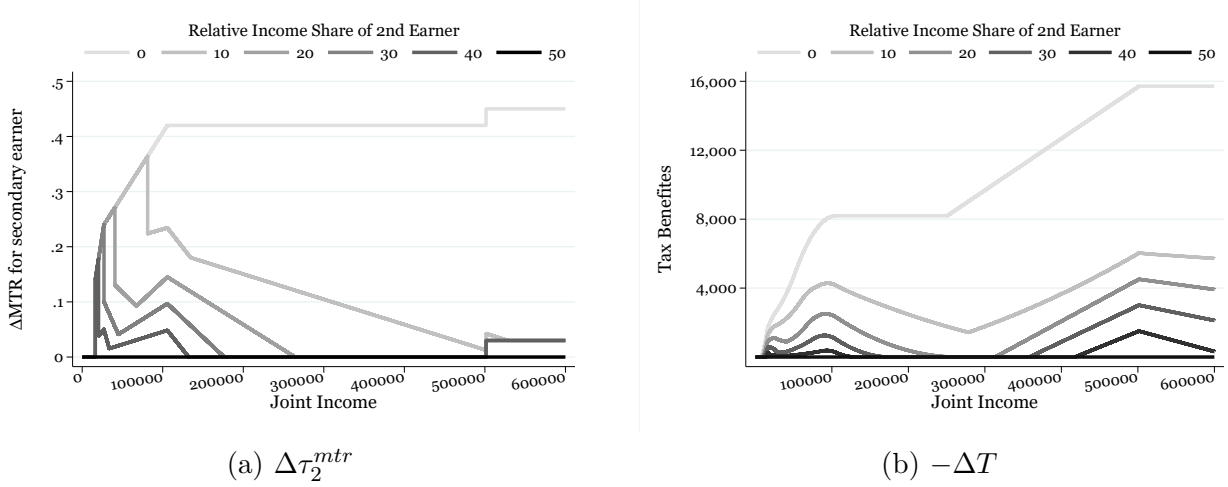
## 2.2 Income Taxation of Couples in Germany

**Final income tax** As in many other countries, such as the US and various European countries, the German tax system allows married couples and civil partners to file either individually or jointly (refer to Appendix Table A.1 for an overview). In practice, the vast majority of couples (around 95%) opt for joint filing. Under individual taxation, the total tax liability,  $T^{ind}$ , is calculated by summing the tax liabilities based on the income of spouse 1 (denoted as  $Y_1$ ) and spouse 2 ( $Y_2$ ). By contrast, when filing taxes jointly, the couple's income tax liability,  $T^{joint}$ , is calculated on the average of both partners' income, and then doubling it:

$$\begin{aligned} T^{ind} &= T(Y_1) + T(Y_2) \\ T^{joint} &= 2 \cdot T((Y_1 + Y_2)/2) \end{aligned}$$

Because Germany has a progressive income tax schedule, joint income taxation has two effects. First, marginal tax rates respond asymmetrically: the primary earner faces a lower marginal tax rate  $\tau^{mtr}$  compared to individual taxation, while the secondary earner faces a higher rate  $\tau^{mtr}$ . Figure 1a illustrates how the secondary earners  $\tau^{mtr}$  increases with both own income and household income under joint filing. Generally, the greater the income difference between spouses, the greater the increase in the  $\tau^{mtr}$  for the secondary earner. Various kinks in the German tax code contribute to variations in the  $\tau^{mtr}$  for the secondary earner in relation to the overall household income. This corresponds to the distortion in subsection 2.1, where joint taxation reduces the secondary earners incentive to increase labor supply. Second, joint taxation lowers the overall tax burden, producing net tax benefits for

Figure 1: Difference joint vs. individual taxation



Notes: Figure (a) shows the difference in marginal tax rates for the secondary earner, and Figure (b) shows the tax benefits when switching from single to joint taxation for different levels of the income of the partner and for specific relative income distributions among partners. Source: Own calculation based on the tax schedule in 2013.

couples who file jointly.<sup>6</sup> Figure 1b shows these benefits across different household incomes and relative income shares. The magnitude of tax benefits increases with the difference in relative income between spouses, particularly favoring the single-earner model. Additionally, tax benefits vary across the income distribution due to tax kinks in the German income tax schedule. In Appendix B.1, we provide a numerical example comparing joint taxation with individual taxation for two partners to further illustrate these effects.

**Withholding income tax** In the German context, the negative effects on the income and labor supply of the secondary earner may be exacerbated by the choice of the withholding income tax schedule (*Lohnsteuerklassen*). Just like many other developed and developing countries, Germany has an automatic income tax withholding system from income earned from employment. Under this system, the employer deducts the expected income tax payments from the employee’s salary each month and transfers them directly to the tax authority. This withholding income tax is then applied towards the individual or married couple’s final income tax liability when they file their tax return the following year.

The withholding tax is determined by the so-called tax class. By default, both spouses are assigned to tax class IV, which corresponds to the individual tax schedule.<sup>7</sup> Due to the

<sup>6</sup>In contrast, some systems, such as in the US or Switzerland, may imply a “marriage penalty” where joint filers pay more than comparable unmarried individuals.

<sup>7</sup>The default tax class of IV/IV was implemented in 2013. Before 2013, spouses had to actively select their tax classes at their local city office (Koch, 2024).

tax benefits from joint income taxation and income splitting, couples with unequal earnings often face excessive withholding taxes during the year, followed by tax refunds upon annual filing. To ensure that monthly withholding income taxes align with the final annual income taxes, spouses can therefore choose to assign a different tax class, III/V. Typically, the primary earner is assigned tax class III, while the secondary earner is assigned tax class V. This means that the basic tax allowance from the spouse in tax class V is transferred to the spouse in tax class III. However, this choice also has implications for the tax burden and net earnings of each spouse. The secondary earner, now subject to higher average and marginal tax rates, faces a higher individual tax burden on their monthly wage income and lower net earnings. On the other hand, the primary earner benefits from lower average and marginal tax rates, resulting in a smaller monthly tax burden and higher net earnings. Notably, the couple's effective final income tax burden is not influenced by the choice of the withholding tax schedule. However, it influences the timing of tax payments throughout the year and how the individual tax burden is distributed within the couple.

In theory, the labor supply decision should not be affected by withholding rates as long as households are not constrained by liquidity throughout the year, spouses fully combine their incomes, and do not mistake their final income tax with their withholding income tax. However, studies have shown that spouses do not completely pool their incomes (see e.g. [Attanasio and Lechene, 2014](#); [Beblo and Beninger, 2017](#); [Blundell et al., 2007](#); [Giommoni and Rubolino, 2022](#); [Lundberg et al., 1997](#)) and that individuals have a misunderstanding of complex tax schedules (see e.g. [Abeler and Jäger, 2015](#)). Consequently, the German income tax not only incentivizes unequal earnings among spouses through joint taxation but also reinforces intra-household income inequality by shifting net wage income from the secondary to the primary earner via withholding tax assignments. This not only increases the salience of the disincentives but also amplifies the negative impact of joint taxation on secondary earners.

## 2.3 Same-Sex Civil Partnerships

To establish a legal framework for same-sex couples in Germany, the concept of civil partnership (*Eingetragene Lebenspartnerschaft*) was introduced in 2001.<sup>8</sup> This marked a pivotal shift from a historical backdrop tainted by anti-homosexual regulations.<sup>9</sup> While civil partnerships in Germany granted homosexual couples access to many rights similar to different-sex mar-

---

<sup>8</sup>Civil partnership was only available for same-sex partners in Germany, setting it apart from countries like France, where civil partnerships are open to both same-sex and different-sex couples.

<sup>9</sup>Most notably, until 1994, the *law against homosexuality act* criminalized relationships between two males. However, in 1969, it was partially amended to only prohibit homosexual prostitution and illicit relations involving individuals under the age of 21.

riages, certain distinctions still remained. These distinctions were intentionally maintained in order to secure a majority in the Federal Council (Sanders, 2016).

In 2013, joint income taxation was extended to include same-sex civil partnerships (SSCP), which corrected a previous inequality. On May 7, 2013, the different income tax treatment of same-sex and different-sex couples was declared incompatible with the constitution (BVerfGE, May 2013). The reform was implemented in July 2013. Figure A.1 displays the number of Google searches on joint taxation (*Ehegattensplitting*) and civil partnership (*Lebenspartnerschaft*) around the time of the reform. From now on, civil partnerships could file their taxes jointly. In some cases, SSCPs were even able to retroactively file together for previous years. This was possible if they had not already filed their taxes for those years, or if they had filed objections against their local tax authority for not allowing joint filing.<sup>10</sup> As a result, these tax assessments were not yet legally binding. As a one-off payment, the SSCPs received refunds for the years they filed retroactively, including interest. This observation is in line with expectations, considering the significant benefits outlined in Figure 1b. The implementation of joint filing for SSCPs did not immediately result in the automatic assignment of tax classes IV/IV, as is the case for married different-sex spouses. Instead, this change was only introduced in 2015. SSCPs were required to submit a letter to their local tax authority requesting a change in their tax classes to IV/IV or III/V.

In October 2017, same-sex marriage was finally introduced, allowing marriage for same-sex couples.<sup>11</sup> Couples who already had civil partnerships could choose to maintain their status or convert it into a marriage. As part of this legislative change, the option to enter into new civil partnerships was abolished.

Figure A.2a shows the absolute number of registered civil partnerships and marriages from 2008 to 2020. The total number of civil partnerships increased each year until 2017, when same-sex marriage became legal. After that, no new civil partnerships were established, and existing ones had the option to transition to marriage. It is worth noting that there is no significant increase in partnerships from 2013 to 2014, indicating a consistent pattern in the dynamics of civil partnerships even after the introduction of joint filing for same-sex civil partnerships.

---

<sup>10</sup>It is difficult to find information on this process. Thus, we conducted interviews with two activist lawyers who were part of the leading legal LGBTQ+ collective *LSVD* that fought for same-sex equality and same-sex marriage, while also advocating for civil partners to legally claim joint taxation before the reform in 2013. You can find the interview script in Appendix B.2 for more detailed insights on this process, as well as the perception of the introduction of civil partnership, joint taxation, and marriage in the community.

<sup>11</sup>Same-sex marriage was supported by a majority of the population (Küpper et al., 2017).

## 3 Administrative Data on Same-Sex Couples

### 3.1 German Taxpayer Panel

For our analysis, we leverage the *German Taxpayer Panel* (TPP) for the years 2008-2020. The TPP is a yearly data set that includes information on all German income filing taxpayers.<sup>12</sup> It is managed and provided by the German Federal Statistical Office and the statistical offices of the Länder. The dataset consists of administrative microdata obtained by merging income tax returns and tax assessments from the tax authority. The tax unit can be either single individuals or married couples and civil partners who file their taxes jointly.

We have access to the entire population of German taxpayers. This access requires specific research project inquiries and is granted with a restricted set of variables.<sup>13</sup> The data includes specific information about taxable income, which is divided by all different income sources. It also provides details about final and withholding income taxes. Additionally, it includes basic sociodemographic characteristics, such as gender, marital status, filing status, year of birth, state of residence, religion, year of birth of children, and the number of children. To correctly identify same-sex couples, specifically those in registered civil partnerships, we rely on a unique feature in our data set. In 2013, a same-sex marker was introduced to indicate joint filing for civil partners. This distinction enables us to create a sample of all same-sex civil partners who have ever filed their taxes jointly at some point in time.

Upon filing jointly, one partner is added to the other partner’s spell in the data.<sup>14</sup> This means that both partners can be observed when filing jointly. However, the original data does not allow for the observation of individual filing spells for both partners before and after joint filing. By utilizing individual tax IDs introduced in Germany in 2010, we are able to link partners across all years. To the best of our knowledge, we are the first to link German income tax data for same-sex couples before they file jointly. With our unique access to the entire population of same-sex civil partnerships filing jointly, this data set allows us to explore the dynamics of same-sex couples surrounding civil partnerships.

**Main Variables** Throughout this paper, we focus on two main constructed variables to analyze income and within-couple income distribution: the earned income of the primary and secondary earners, and the partner pay gap. Earned income refers to combined earnings from three sources: income from employment, self-employment, and business income. Although

---

<sup>12</sup>Since 2012, it also includes employer-provided information for employed individuals who do not file their taxes (Fauser, 2022)

<sup>13</sup>Usually, the TPP is only provided as a stratified 5% random sample.

<sup>14</sup>For different-sex couples, the wife is typically appended to the husband’s spell.

the data also contain information on rental income, capital income, income from forestry and agriculture, and other sources, the three earnings categories above are arguably the most responsive to labor supply changes. It is important to note that we use labor income as a proxy for labor supply because the tax return data does not contain information about hours worked.

We define the primary (secondary) earner as the partner earning more (less) than 51% (49%) of the total household income. For descriptive statistics, we define primary and secondary earners based on income in the analyzed year. However, for our analysis of the impact of joint taxation and tax elasticities, we fix primary and secondary earner status based on the pre-treatment years. This approach allows us to follow individuals consistently over time. However, this comes with drawbacks. Fixing the relative income status induces some mean reversion and does not account for couples switching earner roles over time. To address these issues, we also estimate a general partner pay gap, defined as the absolute income difference between partners divided by their total income. A pay gap of 0 indicates a fully equal income distribution, while a pay gap of 1 indicates a single earner household. This measure allows analysis of within-couple income inequality without fixing relative earner statuses.

### 3.2 Descriptive Evidence: Same-Sex Couples

The dataset’s unique coverage of the universe of German same-sex civil partnerships (SSCPs) who filed jointly between 2008 and 2020 offers a rare opportunity to document stylized facts about their economic characteristics. Before applying further sample restrictions for our empirical analysis on joint taxation and tax responsiveness, we use the full set of observed SSPCs to present descriptive evidence on their income, filing behavior, and sociodemographic composition.

**General Information** Our data contains a total of 76,693 unique civil partnerships, 139,728 unique individual SSPC partners, and 1,500,854 observations at the individual-year level. Table A.2 reports the yearly number of newly observed same-sex civil partnerships, distinguishing between male and female couples, marriages, and the number of partnerships that first file jointly in that given year, while comparing it to the total number of registered SSPCs. The frequency and composition of entries over time reflect institutional and social changes affecting civil partnerships in Germany, including the introduction of joint taxation in 2013 and same-sex marriage in 2017.<sup>15</sup>

---

<sup>15</sup>Note that the absolute number of SSPCs does not equal the sum of male and female observations due to inconsistencies in the sex variable, which prevent us from reliably identifying the sex composition of all

As illustrated, there are very few observations of SSPCs filing jointly even before the formal introduction of joint taxation in 2013. These cases either reflect couples who were filing objections, as discussed in subsection 2.3, or couples with unfinished tax filings who filed retroactively after the reform was passed. Unfortunately, we are unable to distinguish between these two groups in the early data. However, there are very few SSPCs filing jointly in 2011 or prior. The first noticeable increase occurs in 2012. This timing implies that there are only a few cases of filed objections, while the high number in 2012 is likely driven by not yet turned in filings, as income tax returns for 2012 could be submitted until June 2013, which is after the reform was announced in May.

From 2013 onward, the number of jointly filing SSPCs has increased steadily. This trend likely reflects both the gradual adoption of the new joint filing option and the broader rise in the number of registered partnerships. By 2016, the number of jointly filing SSPCs in the tax data nearly matches the official count of registered partnerships. This suggests that our data captures a large share of the relevant population. However, a complete match is not expected, as certain groups, such as students, unemployed individuals, or individuals below the basic tax-free allowance, either have no taxable income or are not required to file tax returns.

The analysis hinges highly on identifying couples. However, as mentioned, joint filing is not mandatory. Individuals can choose to file separately (separate filers) or – if employed – not to file taxes (non-filers). Due to the financial benefits of joint filing, most couples file jointly. Among different-sex marriages, this amounts to 97%. The TPP allows identifying separate filing for married couples. However, due to the unique institutional setting, for SSPCs, prior to the legalization of same-sex marriage in 2017, we can mainly identify separate filing among SSPCs when they have filed their taxes jointly once before, marking them as SSPCs. Among these observations, 3.5% file their taxes separately. Regarding non-filing, since 2012, the TPP includes non-filers, which enables the inclusion of these observations.

**Descriptives** Table 1 presents summary statistics for all observed SSPCs in the first year they file jointly. As a comparison group, we include married different-sex couples (DSCs) who filed jointly in 2013, restricted to individuals aged 25 to 55. Approximately 46% of SSPCs are female couples, in line with the official registry data. The SSPCs in our data are, on average, 44 years old and exhibit an age gap between partners of 6.3 which is larger compared to the average age gap of 3.5 in DSCs - particularly among male couples.<sup>16</sup> This

---

couples.

<sup>16</sup>Note that since we restrict DSC couples to being aged 25 to 55, we are bounding this average from above. Using the same restriction for SSPCs reduces the age gap average to 5.1, 5.8 for male couples and 4.4 for female couples.

Table 1: Descriptive Statistics of Same-Sex Civil Partners

	SSPC			DSC
	All	Female	Male	
Female	0.46	1.00	0.00	0.46
Age	44	43	45	45
Age difference	6.3	5.0	7.5	3.5
Nr. children	0.25	0.38	0.12	1.61
West Germany	0.79	0.80	0.77	0.83
Income	39,090	34,928	42,742	40,086
Income 1st earner	59,060	50,105	66,926	55,771
Income 2nd earner	20,258	20,487	20,028	18,048
Partner paygap	0.50	0.45	0.55	0.61
Share both work	0.76	0.81	0.73	0.65
Wage income > 0	0.78	0.81	0.74	0.78
Self-empl. income > 0	0.11	0.10	0.11	0.05
Business income > 0	0.08	0.06	0.11	0.12
Wage income if > 0	41,849	37,330	45,812	41,033
Self-empl. income if > 0	37,325	30,532	43,390	50,041
Business income if > 0	34,234	26,569	41,086	31,560
N	139,726	63,366	74,424	10,240,300

*Notes:* Table illustrates the descriptive statistics of all observed same-sex civil partners (SSPCs) in the data, as well as grouped into male and female SSPCs. Note that the sum of female and male couples does not equal the total number of observations due to missings in the sex variable. Statistics of the SSPC sample are taken from the first year the partners file jointly. The statistics are compared to a sample of different-sex married spouses that are restricted to individuals aged 25-55 which have already had been jointly filing in 2013 and are observed in the data for at least 9 years. Income is the sum of income from business, self-employment and employment. The partner pay gap is defined as the difference between partners' income relative to the total household income. *Source:* Taxpayer Panel.

is consistent with prior evidence of greater demographic heterogeneity, and in particular larger age differences, among same-sex couples (Badgett et al., 2024; Ciscato et al., 2020).<sup>17</sup> Childbearing rates differ substantially across groups. Female SSPCs have an average of 0.38 children, male SSPCs 0.12, and DSCs 1.61. These differences reflect both institutional barriers to parenthood and higher biological and procedural hurdles - particularly for male couples (Badgett et al., 2024). The share of couples residing in West Germany is also somewhat lower among SSPCs (79%) than DSCs (83%).

The total income from business, self-employment, and employment is broadly similar between SSPCs and DSCs. However, within SSPCs, individuals in male couples earn more on average than in female couples, reflecting the underlying gender earnings gap in Germany. Female SSPCs have the lowest total household earnings, driven by lower incomes of the

<sup>17</sup>Smaller age gaps among female SSPCs may be related to their higher rates of parenthood. Child-rearing increases commitment and relationship stability, which tends to make partner selection more assortative (Ciscato et al., 2020; Lundberg et al., 2016).



primary earner, although they exhibit a higher average income among secondary earners. In contrast, male SSPCs have both the highest total earnings and the highest average earnings among primary earners. However, if we also split the DSC income outcomes by sex, as reported in Table A.3, we replicate the general finding from the literature: same-sex men earn less than men in different-sex marriages, while same-sex women earn more than different-sex women (Badgett et al., 2021; Drydakis, 2022; Humpert, 2016). It even holds when considering only observations with positive income.

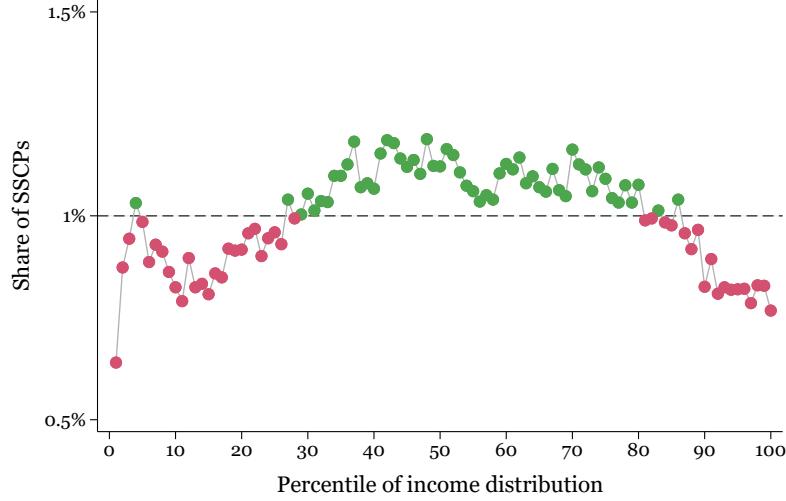
The income patterns align with the within-couple income distribution results. The average partner pay gap is substantially lower among SSPCs (0.50) than DSCs (0.61). This is likely related to lower childbearing rates and correspondingly less household specialization, in line with previous findings (Black et al., 2007). The pay gap is lowest among female SSPCs with 0.45, compared to 0.55 among male SSPCs, consistent with less specialization and more equal labor market participation among women in same-sex relationships (Antecol and Steinberger, 2013; Badgett et al., 2021, 2024; Martell and Roncolato, 2020). Interestingly, the share of couples in which both partners report positive income is slightly lower among male than female SSPCs. Still, this share is 11 percentage points higher in SSPCs compared to DSCs, reinforcing the notion of lower specialization among same-sex couples. Another notable difference emerges in income sources: the share of individuals with self-employed income is substantially higher among SSPCs (11%) than among DSCs (5%). This may reflect occupational self-selection or higher average education levels among SSCs (Carpenter, 2005; Antecol et al., 2008; Badgett et al., 2024).

**Income Distribution** We calculate income distribution percentiles using the full sample of jointly filing SSPCs and the DSC observations used in Table 1, excluding individuals with zero income. Specifically, we construct percentile ranks of earned income separately by year and then compute the share of SSPCs within each percentile. Figure 2 plots the resulting distribution. If SSPCs were uniformly distributed, their share would equal 1% in every percentile. The results show that they are underrepresented at both the bottom and the very top of the income distribution, while they are overrepresented in the middle-to-upper-middle percentiles.

## 4 The Impact of Joint Taxation

Building on the descriptive evidence, this chapter examines how the 2013 reform extending joint income taxation to SSPCs affected income levels and intra-household allocation.

Figure 2: SSCP along the Income Distribution



*Notes:* This figure plots the share of individuals in same-sex couples (SSCPs) within each percentile of the income distribution. Percentiles are calculated by year using the sample of SSCPs and DSCs, excluding zero-income observations. Deviations above (green) or below (red) 1% line indicate over- or underrepresentation relative to different-sex couples. *Source:* TaxPayer Panel

## 4.1 Analyzed Sample

**Sample Restrictions** We restrict the sample of SSCPs to individuals aged 25 to 55 in 2013 for whom both partners can be linked in the baseline year 2012, the year preceding the reform. Our main analysis focuses on couples who first filed jointly in 2013, i.e., those directly affected by the policy change. In supplementary analyses, we relax this restriction. Additionally, our main analysis restricts the sample to individuals with stable pre-reform earnings, defined as annual deviations no larger than 30% from their pre-reform average. Estimates using the full sample without this restriction are also reported.

As discussed in Section 3.2, SSCPs were also allowed to file taxes retroactively for preceding partnership years, provided tax assessments for those years were still pending due to ongoing legal disputes or incomplete filings. We exclude retroactive filers, identified as those submitting joint returns before 2013, from the main analysis for three reasons. First, retroactive filing likely reflects higher tax literacy or strong financial incentives. Second, these couples received lump-sum reimbursements for forgone tax benefits, which in some cases constituted substantial income shocks (see Appendix B.2). Third, because their initial joint filing years range between 2008 and 2012, this subgroup exhibits systematic differences in intra-household income distribution.

Table 2: Descriptive Statistics of Analyzed Samples

	SSCP		DSC
	(1) Main	(2) Retro	(3) Matched
Female	0.46	0.43	0.41
Age	41	42	42
Age difference	5.3	5.5	3.9
Nr. children	0.20	0.27	0.33
West Germany	0.82	0.80	0.80
Income 1st earner	58,076	68,259	60,932
Income 2nd earner	28,911	26,824	28,645
Partner paygap	0.32	0.41	0.39
Share both work	0.92	0.87	0.85
Benefits JF	885	1,353	.
$\Delta$ MTR 1st earner	-0.03	-0.04	.
$\Delta$ MTR 2nd earner	0.07	0.10	.
N	8,455	11,274	4,159,126

*Notes:* This Table illustrates the descriptive statistics of the *Main* analysis sample of SSCPs, the sample of *Retro* SSCPs joint-filers that made use of joint-filing prior to the reform and for the full sample of different-sex couples and the control group of matched different-sex couples. The statistics in columns (1), (3), and (4) are depicted for 2012, which is the event time baseline year  $-1$ . For the *Retro* sample, the statistics are depicted for their respective event time  $-1$ , relative to their first joint filing year. The partner pay gap is defined as the difference between partners' income relative to the total household income. The benefits from joint filing (Benefits JF) are estimated as the hypothetical tax benefits if a couple could already joint file in  $t = -1$ . The  $\Delta MTR$  is the hypothetical change in the marginal tax rate if the couple could already change to joint filing in  $t = -1$ . *Source:* Taxpayer Panel.

**Control Group: Different-sex couples** As a control group, we construct a sample of married different-sex couples (DSCs) who meet the same age and linkage restrictions and were married by 2013. As shown in Table 1, DSCs systematically differ from SSCPs, particularly in household composition and within-couple income distribution. To improve comparability, we apply a two-step matching procedure. First, we perform exact matching at the individual level on age, sex, number of children, pre-reform income decile, and relative earner status.<sup>18</sup> Second, within each exact matching cell, we assign weights to DSC observations equal to the ratio of SSCPs to DSCs in that cell. This reweighting aligns the covariate distribution of the control group with that of the treated group. Unmatched control observations are excluded from the analysis.

**Descriptive Statistics** Table 2 reports descriptive statistics for the analyzed samples. Columns (1) and (2) present statistics for our main SSCP analysis sample and for the subgroup of retroactive filers (called: *retro*). These statistics refer to the year immediately preceding each couples first joint filing (event time  $t = -1$ ), which corresponds uniformly

<sup>18</sup>Primary and secondary earners are defined solely by pre-reform income rank within the couple, regardless of gender.

to 2012 for the main sample but varies for retro filers depending on their initial filing year. General characteristics closely align with those previously reported for all SSCPs in the year of their first joint filing in Table 1.

SSCPs in the main analysis sample are on average 41 years old, with an age difference of 5.3 years between partners, and 46% of couples are female. Relative to the full SSCP population, the average secondary earner has higher earnings. This reflects the fact that the descriptives are from the pre-joint-filing years and that both partners must be observed in the data.<sup>19</sup> Consequently, the partner pay gap in the main sample is smaller than in the broader SSCP population. Table 2 also reports simulated tax savings had couples been able to file jointly in their baseline year. For the main sample, average savings would have been about €857. These benefits reflect a decrease of roughly -0.03 in the marginal tax rate (MTR) of primary earners and an increase of 0.07 for secondary earners. This confirms the expected incentive structure: joint taxation reduces tax burdens for the higher earner while raising them for the lower earner.

Retroactive filers differ systematically from couples who first filed in 2013. Their partner pay gap is about 9 percentage points larger, driven primarily by higher primary earner incomes. As a result, their hypothetical tax benefits are considerably larger, averaging €1,269. This pattern suggests that couples with the highest potential gains were more likely to file retroactively. Probit regressions support this interpretation: retroactive filing is strongly associated with higher household income, a larger partner pay gap, and the presence of children. In contrast, couples first filing in 2013 are more often wage earners, consistent with lower tax literacy or less complex tax incentives.

Turning to DSCs, Table 1 shows that raw differences relative to SSCPs are substantial, particularly in household composition and the distribution of income between partners. After applying the two-step matching procedure, these differences narrow considerably. The matched DSC sample provides a more comparable control group, which we use in the diff-in-diff analysis below.

## 4.2 Empirical Strategy

To estimate the effect of introducing joint taxation for SSCPs in 2013, we employ two complementary approaches. First, we estimate an event-study design that traces the income dynamics of SSCPs around the introduction of joint filing (Equation 2). Second, we im-

---

<sup>19</sup>Missing individuals are typically those with no income, incomes below the basic tax-free amount, or employed non-filers, who are often located at the lower end of the income distribution ([Hauck and Wallossek, 2024](#)). Requiring both partners thus selects couples with relatively higher individual incomes, inflating average secondary-earner earnings.

plement a dynamic difference-in-differences design using matched DSCs as a control group (Equation 3). The event study allows us to document pre-trends and the timing of effects, while the difference-in-differences design accounts for aggregate time shocks that may have affected all couples:

$$y_{it} = \delta_i + \sum_{k \neq 2012} \beta^k \cdot D_t^k + X_{it} + \epsilon_{it} \quad (2)$$

$$y_{it} = \delta_i + \sum_{k \neq 2012} \beta^k \cdot D_t^k + \sum_{k \neq 2012} \gamma^k \cdot (D_t^k \cdot T_i) + X_{it} + \epsilon_{it} \quad (3)$$

Here,  $y_{it}$  denotes the outcome variable for individual  $i$  at time  $t$ . The index  $i$  refers to all individuals or the respective primary and secondary earners. The outcome variables include the individuals log earned income, a binary indicator for positive earnings (labor force participation), and the couple-level partner pay gap. All income variables are adjusted for inflation using the consumer price index.<sup>20</sup>  $D_t$  is a binary time indicator variable that takes the value 1 if the time indicator  $t$  equals the current period  $k$  and captures dynamic effects relative to the baseline year 2012.  $\delta_i$  denotes individual fixed effects. The vector of control variables  $X_{it}$  includes 5-year age bins, partner age difference, region, number of children, and dummies indicating the presence of children aged under 4, between 4 and 6, and between 7 and 12 years. The error term  $\epsilon_{it}$  captures unobserved factors. In the diff-in-diff design,  $T_i$  is an indicator for being in a same-sex partnership. The interaction term  $(D_t^k \cdot T_i)$  measure the dynamic differential evolution of outcomes for treated SSCPs relative to the matched DSCs control group, with coefficients  $\gamma_k$  as the parameters of interest.<sup>21</sup> Standard errors are clustered at the couple level to account for intra-household correlation.

We define the event window from three years before the reform to four years after, stopping in 2017 when same-sex marriage was legalized, to avoid confounding effects from this subsequent policy change. Primary and secondary earners are defined based on their relative income rank in the pre-reform years,  $t = \{-3, -1\}$ , which keeps relative earner roles constant. To ensure consistent classification of primary and secondary earners and to mitigate mean reversion, our main analysis is based on the pre-reform income-stable sample defined in Section 4.1.

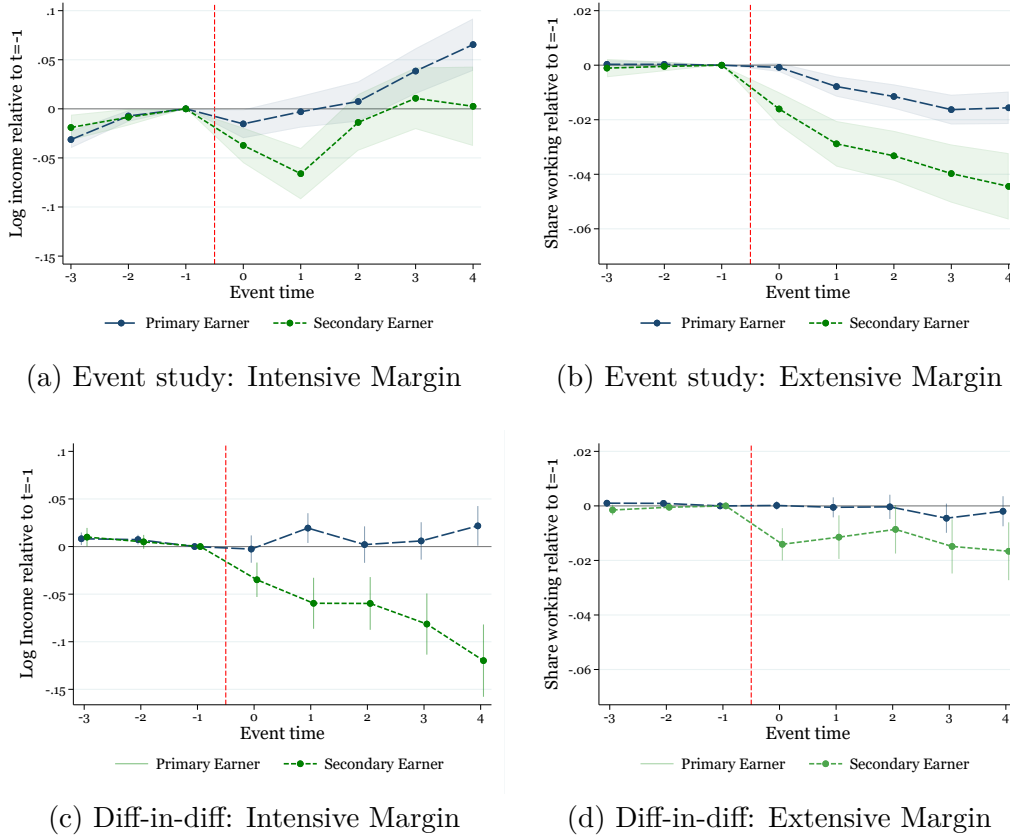
We make two key identifying assumptions in our framework. First, individuals could not select into treatment. Second, in the absence of the 2013 introduction of joint filing for SSCPs, the incomes of same-sex and different-sex couples would have followed parallel trends. We examine the validity of these assumptions in Section 4.3.

---

<sup>20</sup>While labor supply cannot be observed directly, changes in income and intra-couple earnings gaps provide reduced-form evidence of behavioral responses to taxation.

<sup>21</sup>Because our setting involves a single treatment date, we do not require the assumption of homogeneous treatment effects, as discussed in recent diff-in-diff literature (e.g., [Goodman-Bacon, 2021](#)).

Figure 3: Income relative to reform year and treatment effect, by relative earner

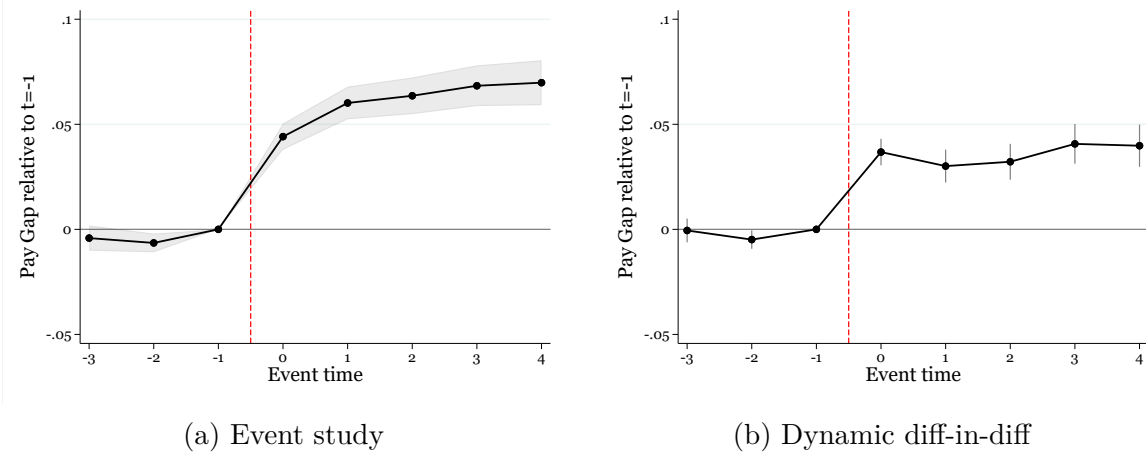


*Notes:* Panels (a) and (b) report event study estimates ( $\beta_k$ ) from Equation 2, while Panels (c) and (d) report dynamic diff-in-diff estimates ( $\gamma^k$ ) from Equation 3. Outcomes are log earnings (intensive margin) and labour force participation (extensive margin), shown separately for primary and secondary earners. The sample comprises same-sex couples who first filed jointly in 2013, with primary and secondary earners defined in pre-reform years. The control group in the DiD design consists of matched different-sex couples. The reform year 2013 is denoted by  $t = 0$ . Shaded areas/vertical bars indicate 95% confidence intervals. *Source:* Taxpayer Panel.

### 4.3 General Results

**Income** Figure 3a and Figure 3b present event-study estimates for log income (intensive margin) and labor force participation (extensive margin), shown separately for primary and secondary earners. Pre-trends are similar for both groups, followed by a visible break in the reform year  $t = 0$ . On the intensive margin, secondary earners experienced a sharp and persistent decline in log income, falling for about two periods before reverting to an upward trend that remained below the pre-reform trajectory, while primary earners are only slightly and temporarily affected. On the extensive margin, labor force participation declines persistently - modestly for primary earners, but substantially for secondary earners. In Figure A.4, we pool all individuals without distinguishing between primary and secondary earners as a robustness check. Overall log income exhibits a clear kink at the reform year,

Figure 4: Partner pay gap relative to reform year and treatment effect



*Notes:* This figure presents estimates of the partner pay gap around the reform year. Panel (a) displays event-study coefficients ( $\beta^k$ ) from Equation 2, while Panel (b) shows interaction-term coefficients ( $\gamma^k$ ) from Equation 3. The sample comprises same-sex couples who first filed jointly in 2013, with the control group in the diff-in-diff estimation consisting of matched different-sex couples. The reform year 2013 corresponds to  $t = 0$ . The partner pay gap is defined as the absolute difference between partners earnings divided by their total household earnings. Shaded areas in Panel (a) and vertical bars in Panel (b) indicate 95% confidence intervals.

followed by two years of slower growth before gradually returning to its pre-reform slope. Labor force participation shows a steady decline, falling by -2.8% relative to the pre-reform level.

Figure 3c and Figure 3d report estimates, using matched DSCs as the control group in our difference-in-differences setting. Pre-reform coefficients are jointly insignificant, supporting the parallel trends assumption. For primary earners, the reform shows no systematic impact on log income: coefficients fluctuate around zero, with at most a small transitory uptick at  $t = 1$  and  $t = 4$ . By contrast, secondary earners earnings decline immediately after the reform and continue to diverge relative to DSCs, cumulating to -11.8% lower earnings by  $t = 4$ . On the extensive margin, primary earners again display no meaningful change. For secondary earners, the probability of positive earnings decreases significantly relative to the control group, falling by -3.3 percentage points by  $t = 4$ . Together, these results demonstrate that the reform reduced the earnings and participation of secondary earners, while leaving primary earners unaffected.

**Partner pay gap** To assess how joint taxation affects the intra-household distribution of income, we next examine the partner pay gap. A key advantage of this measure is that it does not require predefining primary and secondary earners. Figure 4a shows event-study estimates for SSCPs. Pre-trends are stable and close to zero. In the reform year ( $t = 0$ ), the partner pay gap widens significantly and remains at a higher level, with an increase of 6.3

percentage points in the long run. Figure 4b presents estimates relative to matched DSCs using the diff-in-diff approach. The pay gap among SSCPs increases significantly, though the magnitude is somewhat smaller: by  $t = 4$ , the gap is 3.8 percentage points larger than in the control group.

To put these results into perspective, we use the averages reported in Table 2. In the year prior to the reform, the combined household income of SSCPs amounts to approximately € 86 894 (€ 58 037 for the primary earner and € 28 857 for the secondary earner), yielding an absolute partner pay gap of € 29 180, or relative gap of 0.34. The event-study results suggest a widening of the relative pay gap by 7.0 percentage points in the long run. Assuming household income remained constant, this would imply an increase in the absolute pay gap of € 6083. The preferred estimate from the diff-in-diff specification of 3.8 percentage points corresponds to an increase in the euro gap of € 3302.<sup>22</sup>

Taken together, these estimates indicate that joint taxation among SSCPs elicited substantial behavioral responses. Secondary earners significantly and persistently reduced their earnings, resulting in a marked widening of the partner pay gap and shifting household income allocation in line with the incentives created by joint taxation.

## 4.4 Identification and Robustness

**Parallel Trends** A key identifying assumption of the diff-in-dif design is that, in the absence of the reform, the outcomes for SSCPs and matched DSCs would have evolved in parallel. As noted above, pre-trend estimates are not significantly different from zero across all outcomes.

To further assess comparability, we compare the event-study estimates for SSCPs to those of the matched DSC controls in Figure A.6. On the intensive margin (Panels a and b), log earnings of primary and secondary earners display very similar pre-reform trajectories in both groups. For primary earners, SSCPs and DSCs evolve almost identically: both series exhibit a mild kink around  $t = 0$ , followed by a gradual drift upward. This similarity likely reflects the common definition of primary earners and shared macroeconomic developments. For secondary earners, the patterns diverge. SSCPs show a clear break at the reform year and remain below the trajectory of their DSC counterparts, which do not display a contemporaneous break at  $t = 0$  but instead exhibit a mild kink at  $t = 1$  and a stronger subsequent rise. This stronger post-reform increase among DSC is consistent with secondary earners' lower initial earnings levels, which provide more scope for growth, and with mean-reversion

---

<sup>22</sup>It is important to note that changes in the relative partner pay gap can reflect movements in both the numerator and denominator: An increase in the absolute income difference between partners raises the relative gap, while a decrease in total household income can also increase it.



dynamics associated with defining secondary earner status in the pre-reform period. On the extensive margin (Panels d and e), labor force participation is essentially flat in the pre-reform period for both SSCPs and matched DSCs. After the reform, participation declines in both groups, somewhat more for secondary earners than for primaries. For primary earners, the magnitude of the decline is very similar across SSCPs and DSCs, while for secondary earners, the reduction is substantially larger among SSCPs.<sup>23</sup> Turning to the partner pay gap, the DSC event study likewise reveals no significant pre-reform deviations, but does show a moderate post-reform increase. This explains why the diff-in-diff estimate of the pay gap effect is smaller than the SSCP event-study effect. While part of the DSC increase may be due to matched baseline characteristics that also predict income allocation trends, an important factor is the faster rise in the number of children among DSCs in the post period (from 0.32 to 0.72 on average) relative to SSCPs (from 0.21 to 0.34). Overall, these findings confirm the validity of the matched DSCs as a control group: pre-trends are flat, and observed post-reform differences align with common macro shocks and demographic changes rather than violations of the parallel trends assumption.

**Income stability restriction** Excluding individuals with unstable pre-reform income has two important advantages: first, it mitigates mean reversion, which would otherwise dampen the estimated post-reform effects; and second, it minimizes cases in which couples switch relative earner roles after the reform, which could mechanically reduce the observed secondary-earner response. However, the restriction excludes about 10% of primary earners and nearly 30% of secondary earners.

We present in Figure A.3 the results using the full sample. The event studies confirm our main findings. On the intensive margin, the estimated effect at the reform year is somewhat smaller, while on the extensive margin, the decline is even more pronounced. The diff-in-diff results are particularly different on the extensive margin, where pre-trends are no longer parallel. This arises because we match DSCs and SSCPs on baseline outcomes at  $t = -1$ , yet many DSC secondary earners exhibit zero or very low earnings in earlier pre-reform years. This generates a mechanically negative trajectory for DSCs prior to the baseline that converges toward zero at  $t = -1$ , even though SSCPs themselves display flat pre-trends. The resulting imbalance makes the extensive-margin DiD less clean than in the restricted-income sample. Overall, however, the estimated reform effects remain very similar across specifications.

---

<sup>23</sup>The modest post-reform decline in participation among DSCs is consistent with the sample construction. Prior to the reform, SSCPs could only appear in the data if they filed taxes individually, which required having income. Since DSCs are matched to SSCPs on baseline income deciles, a similar restriction applies to them, leaving scope for downward adjustments post-reform, even in the absence of treatment.

**Alternative relative earner definitions** Our baseline definition of primary and secondary earners is based on their relative income rank averaged over the pre-reform event window. This approach minimizes mechanical role switching after the reform, but some switching remains where the secondary earner becomes the primary and vice versa. Switching occurs at least once for about 17% of couples, ranging between 2–8% by event time. It is concentrated among couples with a relatively lower relative pay gap and couple income. The switch persists in about 18% of these couples, whereas 42% only switch in one period. While some of these responses may reflect behavioral reactions to the reform, a large share of it is due to fixing relative earner roles.<sup>24</sup>

As a robustness test, we re-estimate the models under three alternative specifications: (i) limiting the sample to couples where the primary earner accounts for more than 60% of pre-reform income, (ii) a complementary check where we relax the definition and assign roles based only on the baseline year, and (iii) excluding all couples that switch status after the reform.

We find that when we exclude couples who switch roles after the reform, the results become more pronounced: primary earners display an unaffected upward income trend, while secondary earners experience an even larger and more persistent drop. This pattern shows that role-switching dampens the contrast between earners, biasing the role-specific effects toward each other. As a result, the baseline estimates are conservative, particularly for secondary earners. Importantly, the partner pay gap result is robust across specifications.

**Selection into Treatment** Regarding selection into treatment, eligibility for joint taxation was expanded exogenously to SSCPs in 2013. However, joint filing itself remained optional. As displayed in Table A.2, 24,294 couples filed jointly in 2013, a number that includes retroactive filers, whom we exclude from our main analysis. Our baseline analysis, therefore, captures couples directly affected by the reform in the first year of eligibility. Yet, there was a share that did not file although registered as SSCPs. By 2014, the number of joint filers had risen to about 30,021. This cohort likely includes both couples who were already eligible in 2013 but delayed filing, and a larger share of newly formed partnerships. Because of this composition, the 2014 cohort is less suited as a baseline, but it remains informative: later adopters may differ systematically in their gains from joint taxation or in other characteristics such as income levels and filing status.<sup>25</sup> For robustness, we therefore

---

<sup>24</sup>Running similar tests for the DSC control sample that experiences no treatment yields that in that sample 23% of couples experience a relative earner switch post-reform.

<sup>25</sup>Probit regressions confirm that couples first filing in 2014 were more likely to have been non-filers in the year prior. This suggests that part of the later take-up reflects administrative inertia or delayed compliance rather than deliberate timing of joint filing.

combine the 2013 and 2014 cohorts, still using 2013 as the treatment year, to test whether our findings are sensitive to timing heterogeneity or selective take-up. The diff-in-diff results for this sample, presented in Figure A.7, show that results are robust to including the 2014 cohort: timing differs in the short run, but long-run effects are unchanged.

## 4.5 Heterogeneous Effects

We next examine how the effects of joint taxation vary across different household compositions and contexts.

**Male vs. Female** The literature on same-sex couples has highlighted differences between male and female couples. Specifically, female same-sex couples tend to have more children and lower levels of household specialization (Badgett et al., 2024; Martell and Roncolato, 2020). To test whether male and female SSCPs reacted differently to the introduction of joint taxation, we estimate the event study separately for male and female couples. Additionally, we use a pooled specification that interacts a couple-sex dummy with the event time dummies, allowing the dynamic treatment effects to differ by sex. Contrary to existing literature, our results indicate that the reform impacted both groups similarly. There is no statistically significant difference in the pay gap results. On average, both primary and secondary earners in female couples decrease their earnings more after the reform, which, however, leaves the overall couple inequality unchanged.

**East vs. West Germany** During the German division, former West Germany adhered to a male breadwinner household model supported by various policies, while former communist East Germany promoted dual-earner households and encouraged female labor participation. Numerous studies have shown that these institutional and normative differences continue to influence economic disparities; specifically, the prevailing gender norms between the formally divided East and West Germany still diverge, even decades after reunification (Alesina and Fuchs-Schündeln, 2007; Boelmann et al., 2025). However, predicting whether these differences will have a similar impact on female economic outcomes in our context is not straightforward. Labor market disparities between the two regions largely arise from lower average wages, higher female labor force participation, and a greater prevalence of dual-earner couples in the former East (Hermle et al., 2024). Nonetheless, we argue that within couples, gender norms likely play a lesser role in this setting, which may explain why regional differences do not significantly affect our results. To analyze regional disparities, we run separate and interacted event studies, similar to our comparison of same-sex civil partners in East and West Germany. Our results show no differences between the regions,

reinforcing the assumption of same-sex couples being less affected by within-couple gender norms.

**Without vs. with Children** Partnerships with childcare responsibilities may be more responsive to the incentives to specialize offered by the joint income tax schedule, as they have a greater potential for specialization (Becker, 1981; Kleven et al., 2019). To test this, we further split our sample based on whether the partnerships have ever had children. The results show that the result of increasing inequality is amplified for couples with children, specifically in the short run. The partner pay gap is about 3-5 percentage points higher in period  $t = 1$  and about 2-3 percentage points in period  $t = 4$ . This comes mainly from a stronger short-term reduction on the intensive margin. On the extensive margin, the difference is not significantly different. However, the results when only looking at couples without children are still significant. The partner pay gap increases by more than 6 percentage points in the long run. As a higher share of couples is childless in our sample, the results for childless couples resemble the overall result more closely. Thus, children enhance the impact of the reform but are not the only driver.

**Income Sources** We also examine whether our findings are driven by all sources of income or if the observed reactions are specifically linked to either wage or non-wage income, which includes business and self-employment income. Wage income is subject to third-party reporting and withholding, leaving little room for behavioral adjustments beyond real labor supply changes. These changes tend to be small because hours and contracts are rigid in the short run (Kleven and Schultz, 2014). In contrast, self-employment income offers more flexibility – both in reporting and timing, as well as in real adjustments such as work hours or effort.

To test this, we assign income types to each individual (or couple): wage earner, non-wage earner, or mixed-income earner. The results indicate that couples in which at least one partner has only non-wage income, or where both partners have mixed earnings, experience the highest increase in within-couple inequality. In the long run, these couples see a partner pay gap of 10-15 percentage points in the event study design. This is due to primary earners increasing their income more significantly, while secondary earners experience substantial drops in income following the reform. In contrast, couples where both partners, or only one partner, have solely wage income show the smallest reaction, with a long-run increase of only 3-6 percentage points.

## 5 Tax Responsiveness

To disentangle tax incentives from gender norms, we compare two tax behaviors for same-sex and different-sex couples. In particular, we compare how SSCPs adjust their reported incomes in response to changes in marginal tax rates and fiscal incentives. Precisely, we first estimate the tax elasticity to quantify the extent to which SSCPs and DSCs respond to changes in their net-of-tax rates. We then investigate couples tax planning behaviour with regard to their choices over income tax withholding schemes.

### 5.1 Tax Elasticity

Our results on the introduction of joint taxation show that the option to file jointly highly increased the income inequality within partners, mainly by reducing the earnings of the secondary earner. However, in section 4 we only analyzed the overall effect for all couples. As shown in Figure 1a, changes in marginal tax rates,  $\Delta\tau^{mtr}$ , from switching to joint taxation, vary strongly across households depending on their income levels and shares. This cross-sectional variation provides an opportunity to go beyond average effects and to estimate the tax elasticity – by how much individuals adjust their income in response to changes in their marginal tax rate, thereby capturing their responsiveness to tax incentives in a standardized way. Moreover, elasticities are widely used in the public finance literature as a benchmark for behavioral responses, and allow us to place the responsiveness of SSCPs in a broader context. In particular, there exists a large body of evidence on income tax elasticities, often disaggregated by gender (e.g. [Herold and Wallossek, 2024](#); [Hermle and Peichl, 2018](#)), which provides a natural comparison point. Contrasting our estimates for SSCPs with these benchmarks enables us to assess whether same-sex partners differ systematically from different-sex couples in their tax responsiveness.

**Sample** We apply the same sample restrictions as in section 4. As a robustness check, we also exclude individuals with a zero marginal tax rate in the baseline year, since their  $\tau^{mtr}$  largely reflects entry into the tax schedule and implies unusually large changes that may disproportionately influence the estimates.

**Approach** In a progressive tax system, the marginal tax rate  $\tau^{mtr}$  and income are jointly determined, which creates a simultaneity bias. To overcome endogeneity when estimating behavioral responses, we follow the standard literature and construct simulated, mechanical marginal tax rates based on pre-reform taxable income ([Gruber and Saez, 2002](#); [Weber, 2014](#)). Specifically, we apply the post-reform tax rules – the joint taxation scheme – to

pre-reform taxable income in the baseline period  $t = -1$ . This allows us to simulate the change in marginal tax rates,  $\Delta\tau^{mtr}$ , that individuals would have faced had they already filed jointly before the reform. Figure A.8 displays the distribution of the implied  $\Delta\tau^{mtr}$  for our sample by relative earner rank.

We then convert these simulated marginal tax rates into net-of-tax rates,  $NTR \equiv 1 - \tau^{mtr}$ , and use proportional (log) changes as the treatment variable in elasticity estimation. Formally, we define the hypothetical net-of-tax rate under joint-filing rules as  $NTR_{i,-1}^{hyp} = 1 - \tau_{i,-1}^{mtr,hyp}$  and the actual net-of-tax rate under individual filing as  $NTR_{i,-1}^{ind} = 1 - \tau_{i,-1}^{mtr,ind}$ . The simulated proportional change is then

$$\Delta \ln NTR_i^s = \ln \left( \frac{NTR_{i,-1}^{hyp}}{NTR_{i,-1}^{ind}} \right) \quad (4)$$

To estimate the elasticity, we regress the change in log income on the actual change in the log net-of-tax rate, instrumented with its simulated counterpart  $\Delta \ln NTR^S$ . This IV strategy purges the mechanical endogeneity between current income and marginal tax rates:

$$\ln \left( \frac{y_{it}}{y_{i,-1}} \right) = \Delta \ln y_{it} = \nu_a + \lambda_t + \epsilon \cdot \widehat{\Delta NTR_i} + X_{it} + \xi_{it} \quad (5)$$

Here,  $e$  measures the percentage change in earnings associated with a 1% change in the net-of-tax rate. We include age fixed effects  $\nu_a$ , and a vector of controls  $X_{it}$  (partner age difference, region, number of children, and child-age dummies for ages 0–3, 4–6, 7–12). In the full sample, which extends beyond couples directly hit by the 2013 reform, we also add year fixed effects  $\lambda_t$ .  $\epsilon_{it}$  is an individual error term. Standard errors are clustered at the couple level.

**Results** Table 3 reports elasticity estimates for different subsamples: all couples, female and male couples, and couples with and without children. Within each panel, we present results for all earners combined as well as separately for primary and secondary earners. Columns distinguish the baseline specification from the robustness check, excluding individuals with a zero marginal tax rate in the baseline year.

In the pooled sample (Column 1), baseline elasticities are small and insignificant, but once individuals with a zero marginal tax rate at baseline are excluded (Column 2), estimates become larger and precisely estimated, highlighting the influence of threshold cases. Turning to relative earner roles, estimates for primary earners are positive (column 3), consistent with theoretical predictions, while those for secondary earners (Column 5) are sometimes negative, which is counterintuitive and largely driven by baseline non-taxpayers, who face the largest

Table 3: Tax Elasticity Estimates

	All		Primary		Secondary	
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Panel A: All</b>						
$\Delta \ln NTR$	0.04 (0.00)	0.38*** (0.10)	0.27 (0.25)	0.48* (0.29)	-0.37** (0.15)	-0.12 (0.19)
<b>Panel B: Female</b>						
$\Delta \ln NTR$	0.09 (0.15)	0.56*** (0.19)	0.37 (0.37)	0.51 (0.40)	-0.58** (0.26)	0.01 (0.40)
<b>Panel C: Male</b>						
$\Delta \ln NTR$	0.05 (0.11)	0.32*** (0.12)	0.13 (0.32)	0.36 (0.37)	-0.16 (0.18)	0.01 (0.22)
<b>Panel D: Children</b>						
$\Delta \ln NTR$	0.15 (0.27)	1.18*** (0.35)	0.58 (0.88)	1.00 (1.02)	-1.02** (0.41)	0.25 (0.68)
<b>Panel E: Childless</b>						
$\Delta \ln NTR$	0.04 (0.09)	0.26** (0.10)	0.16 (0.24)	0.31 (0.26)	-0.21 (0.16)	-0.08 (0.19)
Excl. $\tau_{-1}^{mtr} = 0$	No	Yes	No	Yes	No	Yes
Observations	13281	12761	6900	6832	5501	5061

Notes: This Table shows the elasticity result from running Equation 5 for different subsamples in the rows. Columns divide the subsamples into all observations and primary and secondary earners. Primary and secondary earner are defined based on their relative income status in the baseline period  $t = -1$ . All regressions instrument  $\Delta \ln NTR$  with its simulated counterpart  $\Delta \ln NTR^S$ . Controls include year FE, age FE, region, age difference, number of children and child-age dummies. Restricted specification in columns 2, 3, and 6 excludes individuals with zero baseline MTR. Robust standard errors in parentheses, clustered at the couple level. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

simulated tax increases but can mostly only move income upward from very low levels. Once these cases are excluded (Columns 4 and 6), the negative coefficients for secondary earner vanish, and most remaining estimates are statistically insignificant. The positive and significant pooled elasticity is therefore mainly driven by between-group differences: on average, primaries increase their income while secondaries reduce it. This contrast generates a strong overall effect, even though within-group estimates are weak and do not reveal a systematic link between the size of the tax change and income responses.

Across subsamples, female couples and couples with children display the largest point estimates, while male and childless couples show smaller and mostly insignificant responses. In terms of magnitude, the elasticities in our pooled restricted sample are around 0.30.4, somewhat below the estimates reported for different-sex women in Germany by [Herold and Wallossek \(2024\)](#) (0.3 - 1.1) and at the lower end of the consensus range summarized by [Saez et al. \(2012\)](#). This suggests that same-sex couples are no more responsive to taxation than

different-sex couples, and if anything, their responsiveness appears somewhat weaker.

## 5.2 Whitholding Tax Class

As explained in section 2, the German withholding income tax system allows spouses and civil partners to shift individual withholding tax burdens between partners. This enables them to benefit from income splitting throughout the year by choosing the withholding tax class combination III/V instead of the default IV/IV. This may reinforce the unequal allocation of net labor income, consequently affecting the household bargaining power of partners and increasing intra-household inequality.<sup>26</sup> Tax class III/V indicates the “appropriate” allocation of tax classes, with the primary earner in tax class III and the secondary earner in tax class V. The combination of V/III represents tax class choices that are disadvantageous - or “incorrect” - from tax planning perspective. In this scenario, the primary earner faces a higher tax burden compared to individual taxation, while the secondary earner experiences the opposite effect.

In this section, we analyze if tax class selections align with traditional gender roles and examine whether same-sex partners, who may be less influenced by these norms, make systematically different choices compared to their different-sex counterparts. The joint withholding income tax schedule option for same-sex civil partners was not introduced alongside joint taxation in 2013; it was implemented in 2015. Therefore, our treatment effects in Section 4 are not affected by responses to the withholding income tax. We will explore general tax planning patterns for shifting withholding tax burdens using the years 2015-2020.

Figure 5a plots the shares of the selected tax class combinations among same-sex civil partners from 2015 to 2020, plotted against the relative partner pay gap. We focus exclusively on same-sex couples where both partners have positive labor income, as tax classes are only pertinent to these couples. Our results illustrate that a same-sex primary earner is more likely to benefit from the favorable tax treatment of combination III/V when the partner pay gap is larger. However, even among the most unequal couples, 45% still choose the combination IV/IV. The share of couples selecting that “incorrect” tax class of V/III is only about 1% regardless of the pay gap group. Patterns are almost similar for female and male civil partnerships, as shown in `fig:taxclass_pg_scs_ex`.

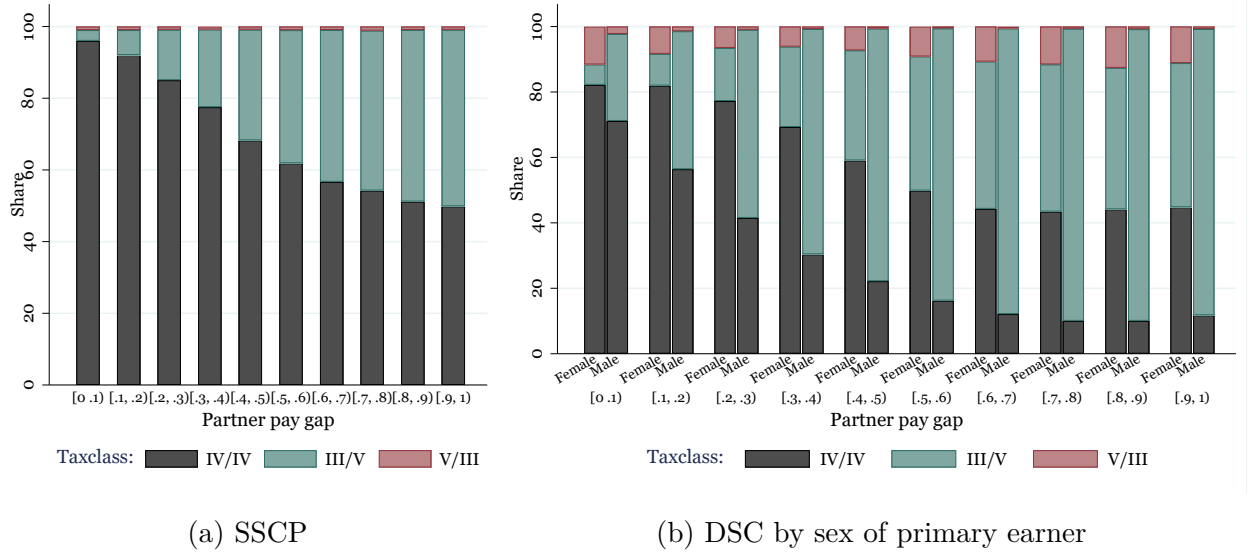
Buettner et al. (2019) study tax planning and withholding classes of different-sex spouses using cross-sectional tax return data for Germany for the year 2004. They show that couples where the husband is the primary earner are more likely to choose the joint withholding tax

---

<sup>26</sup>Koch (2024) provides evidence that withholding income tax schedules impact labor supply. Specifically, she finds that the default introduction of the individual withholding tax schedule for different-sex newlyweds results in significantly higher female labor income and a reduction in the partner pay gap.



Figure 5: Tax Class Choices by Couple Type



*Notes:* This figure shows the chosen tax class combinations for SSCPs in Panel (a) and for DSC in Panel (b) along the partner pay gap distribution for the years 2015-2018. For DSCs the results are split by couples with a male primary earner (Male) or female primary earner (Female). Taxclass III/V refers to the primary earner being in tax class III and V/III to the primary earner being in tax class V. The partner pay gap is defined as the absolute difference between partners' incomes before taxes relative to the couple's total income before taxes. *Source:* TaxPayer Panel

schedule of III/V, implying a lower (higher) net income for the wife (husband). Following [Buettner et al. \(2019\)](#), we also analyze tax class choices of DSCs using our panel data for the more recent years 2015-2020. In contrast, we also use the partner pay gap to group couples and then separate it by having a male or female primary earner within each group. The results are illustrated in Figure 5b. Overall, the pattern observed by [Buettner et al. \(2019\)](#) remains very similar over the years.

Relative to DSCs, same-sex couples are more likely to choose the tax class combination IV/IV, which results in a lower marginal withholding tax burden for the secondary earner, regardless of the partner pay gap size. When considering only different-sex female breadwinner couples, the choice of the IV/IV tax class combination is more closely correlated with the partner pay gap for same-sex civil partners. However, about 10% of DSCs with a female primary earner select the “unfavorable” tax class combination of V/III, leading to lower net income for the women and higher returns for their husbands. In contrast, different-sex couples with a male primary earner are most likely to choose the III/V combination that benefits the primary earner. Hence, the intra-household bargaining power and potential labor income responses of same-sex couples may be less influenced by the withholding income tax schedule, as they opt for the joint schedule less frequently compared to different-sex couples (DSCs) ([Koch, 2024](#)).<sup>27</sup> These descriptive findings suggest that different-sex couples, where

<sup>27</sup>The majority of different-sex couples are male primary earner couples who select the joint withholding

the husband is the primary earner, are likely affected by gender norms when choosing the withholding income tax class combination.

## 6 Conclusion

Understanding how tax policy shapes household labor supply and income allocation is crucial for both economic theory and public policy, especially as family structures become more diverse. However, isolating the effects of household taxation has been challenging due to the lack of exogenous variation and the confounding influence of traditional gender norms. This paper addresses these challenges by exploiting a unique policy reform in Germany and leveraging novel administrative tax data covering the universe of jointly-filing same-sex civil partners. Our descriptive analysis reveals that same-sex couples are less specialized and allocate their income more equally than different-sex couples. However, the introduction of joint taxation for same-sex couples in 2013 resulted in a significant increase in within-couple pay gaps. This increase was primarily driven by reduced earnings among secondary earners, who face higher marginal tax rates under joint taxation. Although primary earners also experienced income declines, these were much smaller, and mainly concentrated among couples with initially similar earnings. These findings suggest that joint taxation in a progressive tax system exacerbates income inequality within households and may even reduce overall tax revenue due to decreased earnings. We further shed light on the interaction between tax incentives and gender norms by comparing the tax responsiveness of same-sex and different-sex partners. By examining the variation in marginal tax rates when switching to joint taxation, we show that same-sex partners exhibit lower tax elasticities especially among secondary earners than different-sex spouses. Additionally, different-sex couples are more likely to select tax withholding schemes that disadvantage the wife, thereby reinforcing intra-household inequality.

Taken together, these findings indicate that the behavioral response to household tax incentives is not uniform; rather, it depends on the underlying social norms and specialization potential within couples. Consequently, policies aimed at influencing household labor supply may have heterogeneous effects across family types - highlighting the need for more nuanced approaches to tax policy in increasingly diverse societies. This project not only offers the opportunity to further understand the particular economic dynamics experienced by same-sex couples, but also informs policy-makers about the economic costs of joint taxation and its detrimental impact on gender equality within the labor market.

---

tax schedule more often.

## References

- ABELER, J. AND S. JÄGER (2015): “Complex tax incentives,” *American Economic Journal: Economic Policy*, 7, 1–28.
- AKERLOF, G. A. AND R. E. KRANTON (2000): “Economics and identity,” *The quarterly journal of economics*, 115, 715–753.
- ALBANESI, S., C. OLIVETTI, AND B. PETRONGOLO (2023): “Families, labor markets, and policy,” in *Handbook of the Economics of the Family*, Elsevier, vol. 1, 255–326.
- ALESINA, A. AND N. FUCHS-SCHÜNDELN (2007): “Good-bye Lenin (or not?): The effect of communism on people’s preferences,” *American Economic Review*, 97, 1507–1528.
- ANDRESEN, M. E. AND E. NIX (2022): “What causes the child penalty? Evidence from adopting and same-sex couples,” *Journal of Labor Economics*, 40, 971–1004.
- ANTECOL, H., A. JONG, AND M. D. STEINBERGER (2008): “The sexual orientation wage gap: The role of occupational sorting and human capital,” *Industrial and Labor Relations Review*, 61, 518–543.
- ANTECOL, H. AND M. D. STEINBERGER (2013): “Labor supply differences between married heterosexual women and partnered lesbians: A semi-parametric decomposition approach,” *Economic Inquiry*, 51, 783–805.
- ATTANASIO, O. P. AND V. LECHENE (2014): “Efficient responses to targeted cash transfers,” *Journal of Political Economy*, 122, 178–222.
- BADGETT, M. L., C. S. CARPENTER, M. J. LEE, AND D. SANSONE (2024): “A review of the economics of sexual orientation and gender identity,” *Journal of Economic Literature*, 62, 948–994.
- BADGETT, M. L., C. S. CARPENTER, AND D. SANSONE (2021): “LGBTQ Economics,” *Journal of Economic Perspectives*, 35, 141–170.
- BAUER, G. (2016): “Gender roles, comparative advantages and the life course: the division of domestic labor in same-sex and different-sex couples,” *European Journal of Population*, 32, 99–128.
- BEBLO, M. AND D. BENINGER (2017): “Do husbands and wives pool their incomes? A couple experiment,” *Review of Economics of the Household*, 15, 779–805.
- BECKER, G. S. (1981): *A Treatise on the Family*, Harvard University Press.
- BERTRAND, M. (2020): “Gender in the twenty-first century,” *AEA Papers and proceedings*, 110, 1–24.
- BERTRAND, M., E. KAMENICA, AND J. PAN (2015): “Gender identity and relative income within households,” *The Quarterly Journal of Economics*, 130, 571–614.
- BICK, A. AND N. FUCHS-SCHÜNDELN (2017): “Quantifying the disincentive effects of joint taxation on married women’s labor supply,” *American Economic Review*, 107, 100–104.

- (2018): “Taxation and labour supply of married couples across countries: A macroeconomic analysis,” *The Review of Economic Studies*, 85, 1543–1576.
- BLACK, D. A., S. G. SANDERS, AND L. J. TAYLOR (2007): “The economics of lesbian and gay families,” *Journal of Economic Perspectives*, 21, 53–70.
- BLUNDELL, R., P.-A. CHIAPPORI, T. MAGNAC, AND C. MEGHIR (2007): “Collective labour supply: Heterogeneity and non-participation,” *The Review of Economic Studies*, 74, 417–445.
- BOELMANN, B., A. RAUTE, AND U. SCHÖNBERG (2025): “Wind of change? Cultural determinants of maternal labor supply,” *American Economic Journal: Applied Economics*, 17, 41–74.
- BORELLA, M., M. DE NARDI, AND F. YANG (2023): “Are Marriage-Related Taxes and Social Security Benefits Holding Back Female Labour Supply?” *The Review of Economic Studies*, 90, 102–131.
- BRONSON, M. A., D. HAANWINCKEL, AND M. MAZZOCCO (2024): “Taxation and household decisions: an intertemporal analysis,” Tech. rep., National Bureau of Economic Research.
- BUETTNER, T., K. ERBE, AND V. GRIMM (2019): “Tax planning of married couples and intra-household income inequality,” *Journal of Public Economics*, 179, 104048.
- BURSZTYN, L., T. FUJIWARA, AND A. PALLAIS (2017): “Acting wife: Marriage market incentives and labor market investments,” *American Economic Review*, 107, 3288–3319.
- CARPENTER, C. S. (2005): “Self-reported sexual orientation and earnings: Evidence from California,” *Industrial and Labor Relations Review*, 58, 258–273.
- (2007): “Revisiting the income penalty for behaviorally gay men: Evidence from NHANES III,” *Labour Economics*, 14, 25–34.
- CHIAPPORI, P.-A. (1992): “Collective Models of Household Behavior: An Introduction,” *European Economic Review*, 36, 355–364.
- CISCATO, E., A. GALICHON, AND M. GOUSSÉ (2020): “Like attract like? A structural comparison of homogamy across same-sex and different-sex households,” *Journal of Political Economy*, 128, 740–781.
- COELHO, M., A. DAVIS, A. KLEMM, AND C. OSORIO-BUITRON (2024): “Gendered taxes: the interaction of tax policy with gender equality,” *International Tax and Public Finance*, 31, 1413–1460.
- DRYDAKIS, N. (2022): “Sexual orientation and earnings: a meta-analysis 2012–2020,” *Journal of Population Economics*, 35, 409–440.
- FAUSER, H. (2022): “Tax noncompliance and inequality-Three empirical essays for the case of Germany,” Ph.D. thesis.
- FERNÁNDEZ, R., A. FOGLI, AND C. OLIVETTI (2004): “Mothers and sons: Preference formation and female labor force dynamics,” *The Quarterly Journal of Economics*, 119, 1249–1299.

- GEYER, J., P. HAAN, AND K. WROHLICH (2015): “The effects of family policy on maternal labor supply: Combining evidence from a structural model and a quasi-experimental approach,” *Labour Economics*, 36, 84–98.
- GIOMMONI, T. AND E. RUBOLINO (2022): “The Cost of Gender Identity Norms: Evidence from a Spouse Tax Credit,” Working paper.
- GOLDBERG, A. E. (2013): “Doing and undoing gender: The meaning and division of housework in same-sex couples,” *Journal of Family Theory & Review*, 5, 85–104.
- GOODMAN-BACON, A. (2021): “Difference-in-differences with variation in treatment timing,” *Journal of Econometrics*, 225, 254–277.
- GRUBER, J. AND E. SAEZ (2002): “The elasticity of taxable income: evidence and implications,” *Journal of Public Economics*, 84, 1–32.
- GUNER, N., R. KAYGUSUZ, AND G. VENTURA (2012): “Taxation and household labour supply,” *The Review of Economic Studies*, 79, 1113–1149.
- HAMERMESH, D. S. AND S. DELHOMMER (2020): “Same-Sex Couples and the Marital Surplus: The Importance of the Legal Environment,” Working paper, National Bureau of Economic Research.
- HANSEN, M. E., M. E. MARTELL, AND L. RONCOLATO (2020): “A labor of love: The impact of same-sex marriage on labor supply,” *Review of Economics of the Household*, 18, 265–283.
- HAUCK, T. AND L. WALLOSSEK (2024): “Optional (non-) filing and effective taxation,” *Journal of Public Economics*, 238, 105187.
- HERMLE, J., E. HEROLD, AND N. HILDEBRAND (2024): “Preferences over Relative Income within the Household,” Iza working paper dp no. 16803.
- HERMLE, J. AND A. PEICHL (2018): “Jointly optimal taxes for different types of income,” Tech. rep., CESifo Working Paper.
- HEROLD, E. AND L. WALLOSSEK (2024): “Marriage Earnings Gap,” *Working Paper*.
- HUMPERT, S. (2016): “Somewhere over the rainbow: sexual orientation and earnings in Germany,” *International Journal of Manpower*, 37, 69–98.
- ICHINO, A., M. OLSSON, B. PETRONGOLO, AND P. SKOGMAN THOURSIE (2019): “Economic incentives, home production and gender identity norms,” Tech. rep., IZA Discussion Papers.
- ISAAC, E. (2023): “Suddenly married: Joint taxation and the labor supply of same-sex married couples after US v. Windsor,” *Journal of Human Resources*.
- KALÍŠKOVÁ, K. (2014): “Labor supply consequences of family taxation: Evidence from the Czech Republic,” *Labour Economics*, 30, 234–244.
- KELLY, M. AND E. HAUCK (2015): “Doing housework, redoing gender: Queer couples negotiate the household division of labor,” *Journal of GLBT Family Studies*, 11(5), 438–464.
- KLEVEN, H. (2022): *The geography of child penalties and gender norms: Evidence from the United States*, National Bureau of Economic Research.

- KLEVEN, H., C. LANDAIS, J. POSCH, A. STEINHAUER, AND J. ZWEIMÜLLER (2019): “Child penalties across countries: Evidence and explanations,” *AEA Papers and Proceedings*, 109, 122–126.
- KLEVEN, H. J. AND E. A. SCHULTZ (2014): “Estimating taxable income responses using Danish tax reforms,” *American Economic Journal: Economic Policy*, 6, 271–301.
- KOCH, L. (2024): “Income Taxation of Couples and Gender (In)equality in Earnings,” Working paper.
- KÜPPER, B., U. KLOCKE, AND L.-C. HOFFMANN (2017): *Einstellungen gegenüber lesbischen, schwulen und bisexuellen Menschen in Deutschland: Ergebnisse einer bevölkerungsrepräsentativen Umfrage*, Nomos.
- LALUMIA, S. (2008): “The effects of joint taxation of married couples on labor supply and non-wage income,” *Journal of Public Economics*, 92, 1698–1719.
- LEPPEL, K. (2009): “Labour force status and sexual orientation,” *Economica*, 76, 197–207.
- LUNDBERG, S., R. A. POLLAK, AND J. STEARNS (2016): “Family inequality: Diverging patterns in marriage, cohabitation, and childbearing,” *Journal of Economic perspectives*, 30, 79–102.
- LUNDBERG, S. J. AND R. A. POLLAK (1994): “Noncooperative Bargaining Models of Marriage,” *American Economic Review*, 84, 132–137.
- LUNDBERG, S. J., R. A. POLLAK, AND T. J. WALES (1997): “Do husbands and wives pool their resources? Evidence from the United Kingdom child benefit,” *Journal of Human Resources*, 463–480.
- MANSER, M. AND M. BROWN (1980): “Marriage and household decision-making: A bargaining analysis,” *International Economic Review*, 31–44.
- MARTELL, M. E. AND L. RONCOLATO (2020): “Share of household earnings and time use of women in same-sex and different-sex households,” *Eastern Economic Journal*, 46, 414–437.
- MCELROY, M. B. AND M. J. HORNEY (1981): “Nash-Bargained Household Decisions: Toward a Generalization of the Theory of Demand,” *International Economic Review*, 22, 333–349.
- OECD (2016): “Taxing Wages 2016,” Working paper, OECD.
- OLIVETTI, C. AND B. PETRONGOLO (2017): “The economic consequences of family policies: lessons from a century of legislation in high-income countries,” *Journal of Economic Perspectives*, 31, 205–230.
- SAEZ, E., J. SLEMROD, AND S. H. GIERTZ (2012): “The elasticity of taxable income with respect to marginal tax rates: A critical review,” *Journal of Economic Literature*, 50, 3–50.
- SANDERS, A. E. (2016): “When, if not now? An update on civil partnership in Germany,” *German Law Journal*, 17, 487–508.
- SANSONE, D. (2019): “Pink work: Same-sex marriage, employment and discrimination,” *Journal of Public Economics*, 180, 104086.

- SELIN, H. (2014): “The rise in female employment and the role of tax incentives. An empirical analysis of the Swedish individual tax reform of 1971,” *International Tax and Public Finance*, 21, 894–922.
- SIMINSKI, P. AND R. YETSENGA (2022): “Specialization, comparative advantage, and the sexual division of labor,” *Journal of Labor Economics*, 40, 851–887.
- TEBALDI, E. AND B. ELMSLIE (2006): “Sexual orientation and labour supply,” *Applied Economics*, 38, 549–562.
- VAN DER VLEUTEN, M., M. EVERTSSON, AND Y. MOBERG (2023): “Joint Utility or Sub-optimal Outcomes? Household Income Development of Same-Sex and Different-Sex Couples Transitioning to Parenthood in Denmark, Finland, Norway, and Sweden,” *Journal of Family Issues*, 0192513X231194305.
- VAN DER VLEUTEN, M., E. JASPERS, AND T. VAN DER LIPPE (2021): “Same-sex couples division of labor from a cross-national perspective,” *Journal of GLBT Family Studies*, 17, 150–167.
- WEBER, C. E. (2014): “Toward obtaining a consistent estimate of the elasticity of taxable income using difference-in-differences,” *Journal of Public Economics*, 117, 90–103.

# A Appendix Tables & Graphs

## A.1 Appendix Tables

Table A.1: Personal Income Tax Systems

Country	Tax filing		
	Joint	Optional	Family
Brazil		x	
Chile		x	
Estonia		x	
France			x
Germany		x	
Ireland		x	
Israel		x	
Luxembourg	x		
Malta		x	
Norway		x	
Panama		x	
Poland		x	
Portugal			x
Spain		x	
Switzerland		x	
United States		x	

*Notes:* Table presents all countries whose personal income tax system is characterized either by joint filing of spouses, an option to file jointly or individually as spouses or income taxation based on the family level.

*Source:* [OECD \(2016\)](#).



Table A.2: Number of SSCPs in the Data and Registered

	Joint Filing in TPP					(6) Registered
	(1) All	(2) Male	(3) Female	(4) Married	(5) First	
<b>Panel A: Couple-Level</b>						
2008	1,226	540	670	.	1,226	19,000
2009	1,314	574	719	.	119	19,000
2010	1,563	677	877	.	251	23,000
2011	5,176	2,095	303	.	3,630	26,000
2012	15,648	6,191	9,294	.	10,635	30,000
2013	24,294	9,896	14,100	.	9,027	35,000
2014	30,021	12,570	17,030	.	6,408	41,000
2015	35,657	15,145	19,919	.	6,424	43,000
2016	40,814	17,601	22,542	.	6,170	44,000
2017	46,056	19,993	25,329	5,867	6,378	55,000
2018	52,049	22,890	28,373	7,991	7,270	59,000
2019	57,605	25,621	31,178	9,239	7,003	76,000
2020	62,589	28,180	33,580	10,501	6,453	87,000
<b>Panel B: ID-Level</b>						
2008	2,410	1,058	1,316	.	241	
2009	2,582	1,128	1,413	.	230	
2010	2,266	1,161	1,087	.	413	
2011	9,399	3,944	5,369	.	7,092	
2012	30,986	12,247	18,431	.	21,056	
2013	48,098	19,533	27,980	.	17,854	
2014	59,473	24,827	33,834	.	12,632	
2015	70,647	29,971	39,547	.	12,678	
2016	80,833	34,826	44,728	.	12,121	
2017	91,191	39,505	50,270	11,588	12,538	
2018	102,945	45,157	56,308	15,775	14,286	
2019	113,762	50,380	61,853	18,234	13,716	
2020	123,313	55,218	66,537	20,666	12,586	

*Notes:* This Table illustrates the absolute number of same-sex civil partners in the data and officially registered. Columns 1 to 3 illustrated the absolute number of jointly filing SSPCs for all, and separated by sex. Column 4 depicts the number of married observations starting in year 2017 when same-sex marriage was legalized. Column 5 depicts the number of couples that are first filing jointly in that year. Column 6 depicts the absolute number of officially registered SSPCs. The number of observations are both showed on individual and couple level. *Source:* Taxpayer Panel.

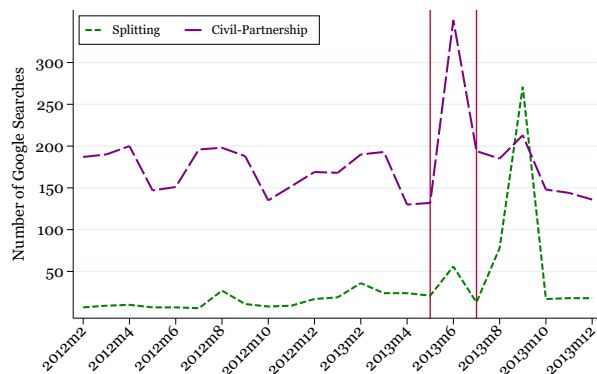
Table A.3: Income Statistics by Sex

	SSCP		DSC	
	(1) Female	(2) Male	(3) Female	(4) Male
Income	34,928	42,742	19,363	58,046
Income if 1st earner	50,105	66,926	45,952	64,280
Income if 2nd earner	20,487	20,028	14,081	21,486
Income if >0	38,898	50,121	26,060	60,084
Relative Share	.	.	0.27	0.75
Income > 0	0.90	0.86	0.75	0.97
Wage income > 0	0.81	0.74	0.68	0.86
Self-empl. income > 0	0.10	0.11	0.04	0.06
Business income > 0	0.06	0.11	0.07	0.17

*Notes:* Table illustrates the descriptive income statistics of SSCPs and DSCs by sex. DSCs are restricted to individuals aged 25-55 who have already been jointly filing in 2013. Income is the sum of income from business, self-employment, and employment. *Source:* Taxpayer Panel.

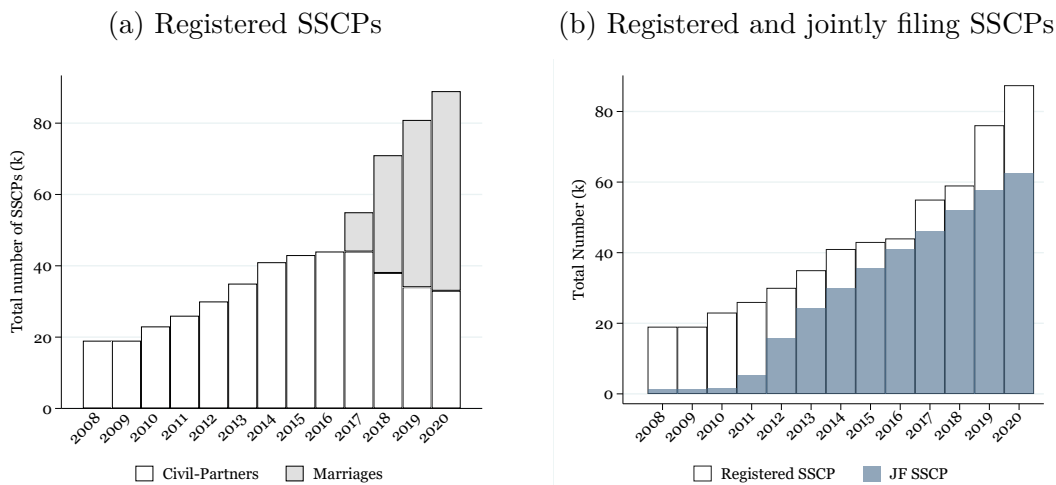
## A.2 Appendix Figures

Figure A.1: Google searches on joint taxation and civil-partnership around reform



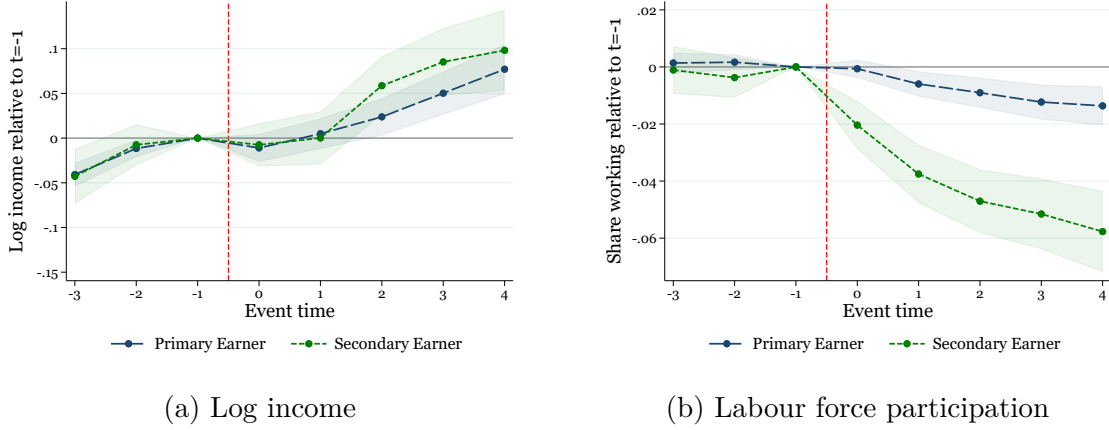
Notes: Figure shows the absolute number of monthly Google searches on joint taxation (*Ehegattensplitting*) and civil-partnership (*Lebenspartnerschaft*) in the months surrounding the ruling in May 2013 and the final reform in July 2013, marked by the red lines. Source: Own calculation based on google trend data.

Figure A.2: Number of same-sex partnerships



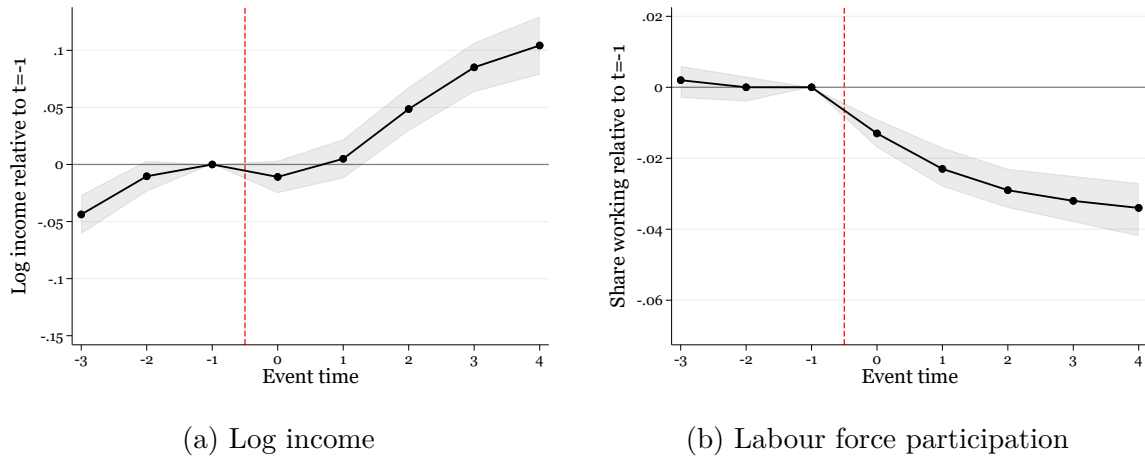
Notes: This figure shows the annual absolute number of registered same-sex civil partnerships in Germany and joint filing SSCPs in the german income tax data (TPP). Panel (a) only displays the absolute number of registered SSCPs. Panel (b) compares this number to the jointly filing SSCPs observed in the data in blue. Source: Federal Statistical Office, based on Micro Census. Taxpayer Panel.

Figure A.3: Income relative to reform year - full sample



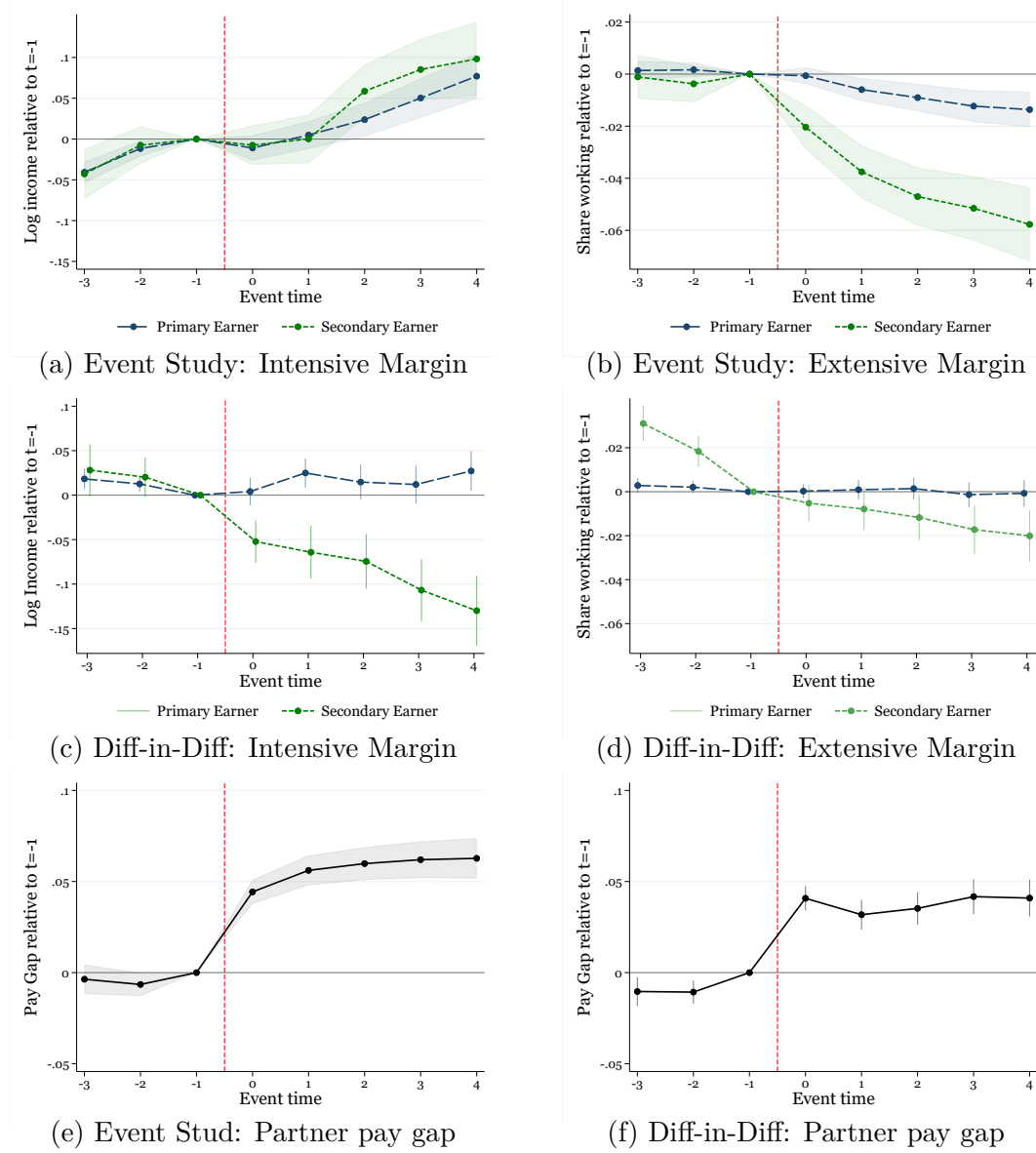
*Notes:* This figure displays event study results ( $\beta_k$ ) from estimating Equation 2 for log earnings (Panel a) and labour force participation (Panel b) separately for primary and secondary earners. The sample comprises same-sex couples who first filed jointly in 2013, restricted to those whose pre-reform earnings did not deviate by more than 30% from their three-year pre-reform mean, with primary and secondary earners defined according to pre-reform years. The reform year 2013 is denoted by  $t = 0$ . Income is measured as the sum of business, self-employment, and employment earnings. Labour force participation is defined as having positive income. Shaded areas indicate 95% confidence intervals. *Source:* Taxpayer Panel.

Figure A.4: Income relative to reform year, all individuals



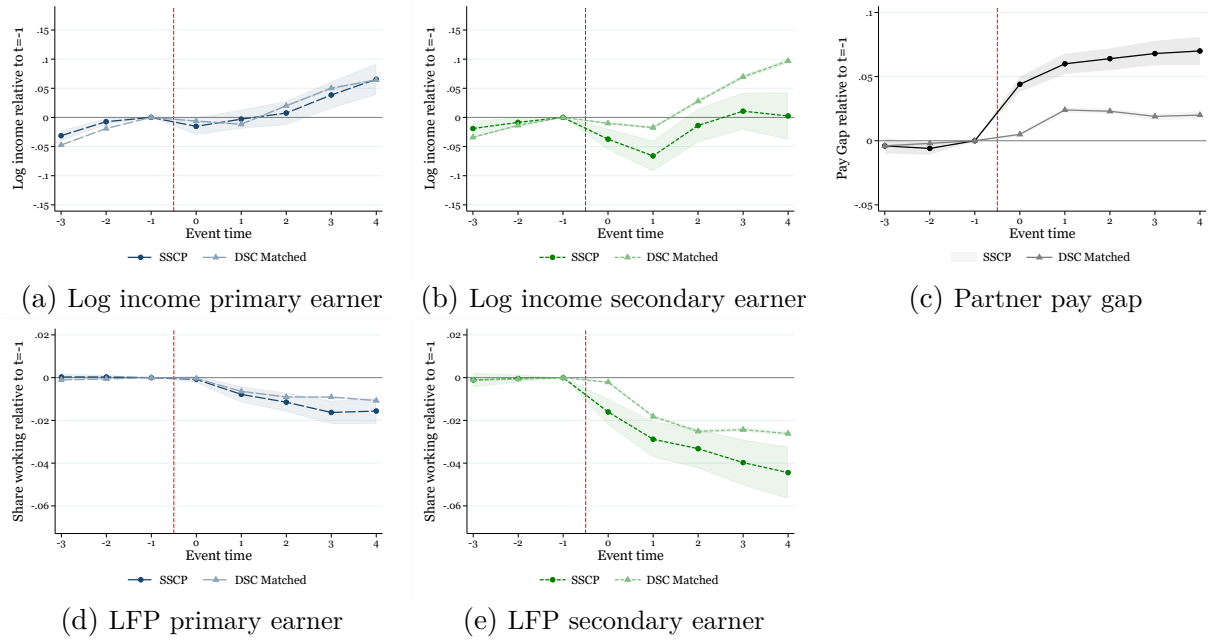
*Notes:* This figure displays event study results ( $\beta_k$ ) from estimating Equation 2 for log earnings (Panel a) and labour force participation (Panel b). The sample comprises all individuals in same-sex couples who first filed jointly in 2013, without distinguishing between primary and secondary earners. The reform year 2013 is denoted by  $t = 0$ . Income is measured as the sum of business, self-employment, and employment earnings. Labour force participation is defined as having positive income. Shaded areas indicate 95% confidence intervals. *Source:* Taxpayer Panel.

Figure A.5: Income and partner pay gap relative to reform year, all individuals



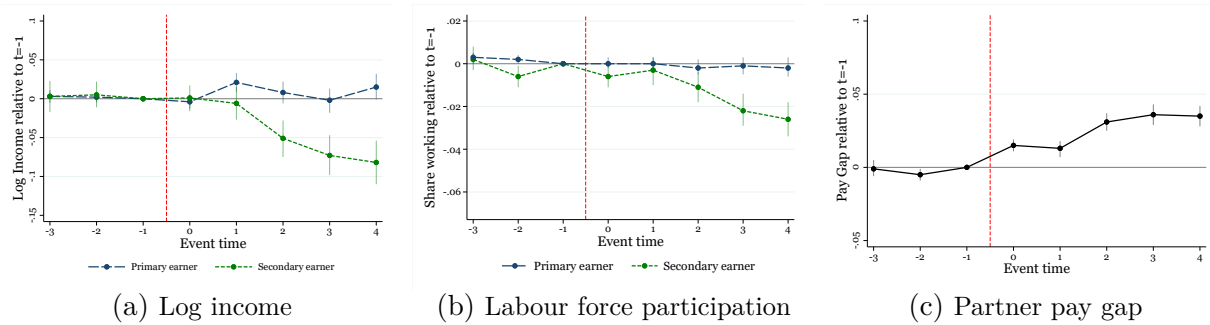
*Notes:* This figure displays event study (ES, Panels a, c, e) and dynamic difference-in-differences (DiD, Panels b, d, f) estimates from Equations 2 and 3. Outcomes are log earnings (intensive margin), labour force participation (extensive margin), and the partner pay gap. The sample comprises all individuals in same-sex couples who first filed jointly in 2013. Primary and secondary earners are defined by relative pre-reform income rank. The control group in the DiD design consists of matched different-sex couples. The reform year 2013 is denoted by  $t = 0$ . Shaded areas/vertical bars indicate 95% confidence intervals.  
*Source:* Taxpayer Panel.

Figure A.6: Eventstudy results comparison to matched DSC



*Notes:* This figure presents event-study estimates ( $\beta^k$ ) from Equation 2 for same-sex couples who first filed jointly in 2013 (SSCPs) and matched different-sex couples (DSCs). The reform year 2013 is denoted by  $t = 0$ . Primary and secondary earners are defined according to their relative income rank in the pre-reform years. Panel (a) shows log earnings of primary earners, Panel (b) log earnings of secondary earners, Panels (c) and (d) labour force participation of primary and secondary earners, and Panel (e) the partner pay gap. Earnings are defined as the sum of employment, self-employment, and business income, while labour force participation is an indicator for having positive earnings. The partner pay gap is defined as the absolute difference in partners earnings divided by total household earnings. Shaded areas indicate 95% confidence intervals. *Source:* Taxpayer Panel.

Figure A.7: Difference estimates to reform year, 2013-2014 sample



*Notes:* This figure displays interaction-term coefficients ( $\gamma^k$ ) from Equation 3 for log earnings (Panel a), labour force participation (Panel b), and the partner pay gap (Panel c), shown separately for primary and secondary earners where applicable. The treatment sample comprises same-sex couples who first filed jointly in either 2013 or 2014, with primary and secondary earners defined according to their relative income rank in the pre-reform years. The control group consists of matched different-sex couples. The reform year 2013 is denoted by  $t = 0$  for both cohorts. Earnings are defined as the sum of business, self-employment, and employment income, labour force participation as having positive earnings, and the partner pay gap as the absolute difference between partners earnings divided by total household earnings. Vertical bars indicate 95% confidence intervals. *Source:* Taxpayer Panel.

Figure A.8: Hypothetical MTR Change before Joint Taxation

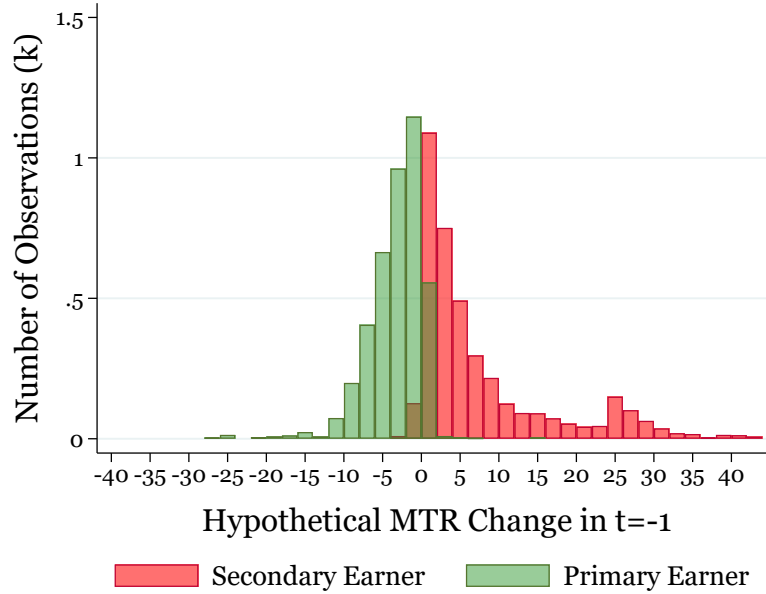
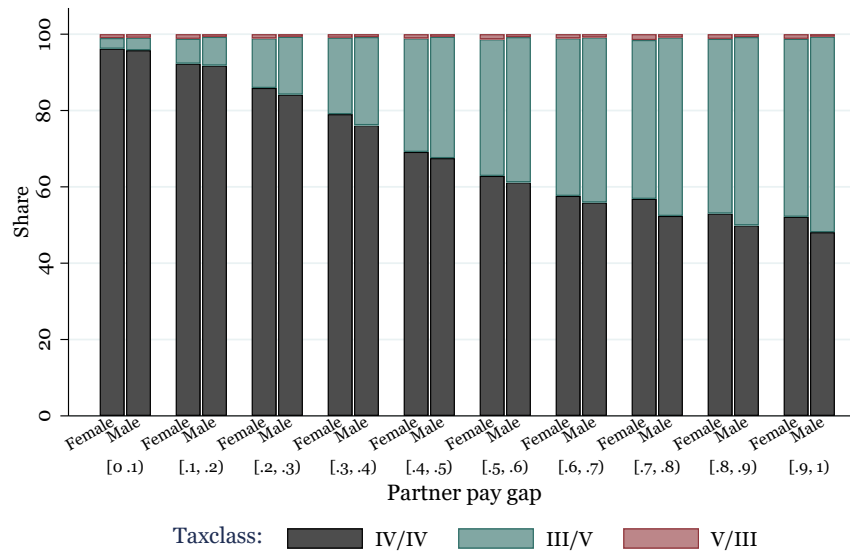


Figure A.9: Reform sample

*Notes:* This figure shows the simulated mechanical change in marginal tax rates,  $\Delta\tau^{mtr}$ , obtained by applying joint filing rules to pre-reform taxable income in  $t = -1$  using Equation 4 for the sample that first filed jointly in 2013. The distribution is displayed separately for primary and secondary earners, defined by the relative income shares in year  $t = -1$ . Positive values indicate an increase in the marginal tax rate under joint taxation, while negative values indicate a decrease. *Source:* Taxpayer Panel.

Figure A.10: Choice of Tax Class Combination of Same-Sex Civil Partners by Sex



*Notes:* This figure shows the chosen tax class combination by partner pay gap for female and male same-sex civil partners for the years 2015-2018. The partner pay gap is defined as the absolute difference between partners' income before taxes relative to the total income before taxes of the couple.

## B Appendix Sublements

### B.1 Numerical Example of Joint vs. Individual Taxation

In this example, we compare the tax liability and marginal tax rates from joint and individual taxation for a hypothetical couple under the German income tax schedule from 2013. Person 1 earns 80,000 annually, while Person 2 earns 20,000 annually. When taxed individually, Person 1s tax liability is 23,576 with a marginal tax rate (MTR) of 42%, and Person 2s tax liability is 1,759 with an MTR of 25%. The combined tax liability for the couple is 25,335. However, when taxed jointly, the couples total tax liability decreases to 21,820 with a joint marginal tax rate of 36%.

Scenario	Tax Liability (€)	Marginal Tax Rate (MTR)
<b>Taxed Individually</b>	25,335	
Person 1 (80,000 €)	23,576	42%
Person 2 (20,000 €)	1,759	25%
<b>Taxed Jointly (100,000 €)</b>	21,820	36%

This reduction illustrates the benefit of joint taxation, particularly when there is a significant disparity in earnings between the two partners. The joint taxation system reduces the overall tax burden by 3,155, primarily by reducing the marginal tax rate applied to the higher earner (Person 1), while increasing it for the lower earner (Person 2).



## B.2 Interviews with legal LGBTQ activists

### Interview 1 conducted 2022

**Q:** Civil-partnerships for same-sex marriages were established in 2001. Can you describe how this introduction was received and perceived by the community?

**A:** Some people saw it as a compromise because they wanted marriage equality and civil partnerships initially lacked most of the legal benefits associated with marriage. My partner and I, along with other same-sex partnerships, viewed the formation of a civil partnership more as a symbolic gesture for our relationship.

**Q:** Joint-taxation was not granted to same-sex civil partnerships before 2013. Several civil partnerships like you and your partner still filed their income taxes jointly to claim that right. Can you describe how this worked in practice?

**A:** At the end of each year, my partner and I simply filed a joint income tax return, similar to what married couples do. We included a note that if joint taxation was denied, the income tax return should be considered provisional and not legally binding, with reference to §165 of the tax code (Abgabenordnung). In the case where our claim was selected as a test case, the tax return remained non-binding until a legally binding decision was reached. If the tax authorities still insisted on individual tax filing, we would submit an objection, again referring to article 165.

**Q:** Can you assess how prevailed this practice was?

**A:** There was a major campaign by the LSVD (Interest Group for Lesbians and Gays) encouraging people to do this. They also published a template text for the claim. However, it was still a significant effort, and I think there were probably about hundreds who did it.

**Q:** How cooperative were the local tax authorities on these claims?

**A:** I personally had no contact with them. However, this claim eventually turned into a test case (at least 100 processes) which helped streamline the efforts on the part of the tax authorities, reducing their administrative costs.

**Q:** What happened to the open claims in 2013, after a reform made joint taxation eligible to civil partnerships?

**A:** In 2013, when joint taxation was finally allowed, all past tax returns that had not been legally binding could be retroactively filed as joint tax returns. The resulting tax benefits were disbursed as a one-time payment with an added 4% interest. Managing these payments was a significant task for the responsible tax authorities, particularly due to the interest component, which sometimes led to errors or miscalculations in the payments.

**Q:** Did you perceive the one-off payment as some sort of windfall money?

**A:** People expected it to work eventually, but it was still an income shock to receive all that money at once.

**Q:** Was fighting for joint taxation viewed as a means of a step towards legalizing same-sex marriage?

**A:** You can truly gauge equality at the cash register. The equalization of income tax treatment was not only perceived as a symbolic step toward achieving marriage equality but also held significant legal value. Article 6 of the German Constitution Code, which states that “Marriage and family are under the special protection of the state order”, had been used as a legal argument against granting joint taxation to civil partnerships. However, it was expected that this article would eventually be interpreted differently.

**Q:** What changed when same-sex marriage was legalized in 2017?

**A:** First off, civil partnerships were not automatically changed into a marriage. Instead, a formal registration of marriage was required. Upon registration, couples received a marriage certificate, that dated the start of their marriage back to the inception of the civil partnerships. This change in legal status allowed same-sex spouses to retroactively file their taxes jointly for all years of their civil partnership in which they initially submitted their taxes separately. To do this, spouses simply had to fill out and submit the tax return of each of these years jointly. There was a specific deadline for this process. Due to the tax benefits from joint taxation, many couples tried to convert their civil partnership into a marriage before this deadline. However, because the change in legal status was not automatic, partnerships where one partner had passed away could not change their legal status and consequently did not receive these tax benefits.

**Q:** How widespread was this process among partnerships that changed their legal status to married.

**A:** There were quite a few people who found it too complicated before 2013. But with marriage equality, many couples did it.

## Interview 2 conducted 2022

**Q:** Civil-partnerships for same-sex marriages were established in 2001. What were your personal experiences leading to the introduction?

**A:** I was a member of both the Schwule Juristen and LSVD. Since the mid-90s, we had been politically involved in the legalization of marriage for same-sex partners. Through the demands and actions of these interest groups, there was a wave of essays assessing same-sex marriage from a legal perspective. The concept of the “Abstandsgebot” was derived from this [By referencing Article 6 of the constitution (GG), Abstandsgebot refers to the demand that civil partnerships should not be granted the same rights as marriage]. Ultimately, the Federal Constitutional Court ruled that Article 6 of the Basic Law did not mandate marriage equality.

**Q:** How did you perceive the introduction of civil partnerships?

**A:** Ambivalent. On one hand, it was positive that it was finally introduced. On the other hand,

the approach of having to include differences to different-sex marriage was frustrating.

**Q:** Joint-taxation was not granted to same-sex civil partnerships before 2013. Several civil partnerships like you and your partner still filed their income taxes jointly to claim that right. Can you describe how this worked in practice?

**A:** We only started filing our tax returns jointly in 2008. We included a cover letter with our tax return, which was drafted using LSVD's template letter. Joint taxation was rejected, so we lodged an objection against the rejection.

**Q:** What happened to the open claims in 2013, after a reform made joint taxation eligible to civil partnerships?

**A:** In 2013, we submitted our tax returns with a note indicating that previous tax returns were still pending. We received termination notices for the past tax returns shortly after. However, it was not until 2015 that we finally received a one-time payment for the pre-2013 tax returns.

**Q:** Was fighting for joint taxation viewed as a means of a step towards legalizing same-sex marriage?

**A:** Yes, there was an impression that it was a step towards achieving same-sex marriage. The Second Senate of the Federal Constitutional Court, which had authority over the matter, had previously imposed restrictions on marriage. However, the constitutional court's stance shifted, emphasizing that differences between different-sex marriage and civil partnerships must be thoroughly justified. This shift was perceived as a gradual erosion of those distinctions, leaving only the political decision as the remaining factor in the path to marriage equality.

**Q:** What changed when same-sex marriage was legalized in 2017?

**A:** We changed our legal status in 2018 because there were no earlier appointments available. It wasn't an emotional date for us. We also undertook the task of retroactively filing our taxes, covering the period from the inception of our partnership in 2002 until 2008 when we began to file claims. Tax authorities typically discard previous tax returns after a period of 10 years. Consequently, we needed to preserve those earlier tax returns, which contained the same income information, to enable us to file them jointly once more.