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The gendered economic consequences of forming a single-parent household after separation

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Abstract

Objective: To document gender differences in income trajectories before and after forming a single-parent household following separation in Belgium between 2005 and 2018.

Background: Previous research has shown that the economic consequences of partnership dissolution are less severe for fathers than for mothers because of the greater likelihood for women to live with children after separation than men. However, it remains unclear how economic conditions change when men live with children after partnership dissolution.

Method: Combining information from the Belgian National Register and the Tax-register over 14 years, we estimate time-distributed fixed effects (TDFE) models on a sample of 47,496 men and 151,389 women to investigate how the transition into a single-parent household after separation impacts equivalized household income, as well as other income measures, from five years before to five years after the event.

Results: Overall, there is an economic disadvantage related to becoming a single parent co-residing with children after separation for both men and women. Hence, single fathers are at risk of economic vulnerability, but, after transitioning into a single-parent household, men lose less in terms of partner income and are faster to recover in terms of couple and equivalized household income than women do.

Conclusion: Men experience important drops in incomes after becoming a single parent co-residing with children, but drops in income are greater for women.

Keywords: Single-parent families**,** Economic issues**,** Fixed effects models, Western European families

Introduction

High-income societies have not yet managed to minimize economic differentials between two-parent and single-parent families. Despite an increase in work intensity among single parents (Nieuwenhuis, 2020) almost half (44.1%) of dependent children living in single-parent families are at risk of poverty or social exclusion in Europe (Eurostat, 2022). Low income often results from lower labor force participation among parents due to increased childcare needs, and a low number of earners in the household as compared to dual-breadwinner households, which are increasingly common.

Existing studies have shown gender disparities in the economic consequences of union dissolution (Hogendoorn et al., 2019; Leopold & Kalmijn, 2016). Particularly, women tend to fare worse than men as they are more likely to obtain custody of their children and lose more partner income after separation as compared to men (Mortelmans & Defever, 2018; Poortman, 2000). However, it is unclear what happens when men co-reside with children after separation. Therefore, we aim to answer the following research question: *Does becoming the co-resident parent after separation have the same consequences for the income of fathers as for mothers?*

Answering this question is relevant to improve our understanding of how economic disadvantages experienced by women are produced, but also to understand men's economic situation as societies might become more gender egalitarian. Single-father households have grown steadily across Europe over the last decade (Nieuwenhuis, 2020). In Belgium, one in

five single-parent families is now headed by a man. Studying their economic situation can give us some insight into whether trends towards a more gender-equal division of co-residence after separation or divorce could equalize gender differences in the economic consequences of union dissolution (Mortelmans, 2020).

A large body of research has investigated income changes before and after union dissolution for men and women in general (Harkness, 2018; McManus & DiPrete, 2001; Poortman, 2000; Tach & Eads, 2015). However, the relatively small number of men co-residing with children after separation has often prevented studies from studying their economic situation (Mortelmans, 2020; Ongaro et al., 2009). Some evidence exists that, when compared to fathers in couples, single fathers co-residing with children are less educated, less likely employed and face a disproportionately high risk of poverty (L. Bernardi et al., 2018). However, in comparison to single mothers co-residing with children, single fathers seem to fare better. They have, for example, older children (which allows them to combine work and childcare more easily) and the time they spend in a single-father household is shorter than for single mothers (L. Bernardi et al., 2018). To our knowledge, only one study provided descriptive evidence on income changes after entering a single-parent household for men. This study showed that men who co-reside with children after union dissolution do experience household income losses (Mortelmans & Defever, 2018; for similar results on poverty see also Thielemans & Mortelmans, 2022).

Our paper goes beyond these results by estimating gender differences in the effects of transitioning into a single-parent household on equivalized household income and testing their statistical significance. In addition, for the first time, we document the pathways through which gender differences in the effects of entering a single-parent household are produced, and we look at the moderating effect of education. The moderating effect of socioeconomic factors has received increasing attention over the last years as it is important for

understanding the role single parenthood plays in socioeconomic inequality more generally (Hogendoorn, 2022), but many studies do not look at single fathers (e.g. Ananat & Michaels, 2008; Nylin, 2020), and none at co-resident fathers in particular. Can single fatherhood become an important factor strengthening socioeconomic inequality among men too?

To achieve these goals, we use the largest sample to date by pooling different years (2005-2018) of data from Belgian administrative records (the DEMOBEL and the IPCAL datasets). We use time-distributed fixed effects (TDFE) models to analyze changes in equivalized household income, as well as a range of other income measures, before and after the transition to single fatherhood and single motherhood.

Gender inequality and single-father households

The larger consequences of union dissolution for women's household income compared to men's are related to several society-wide gender inequalities. Firstly, women are less often (full-time) employed, have less financially rewarding occupations, and, even if they have the same occupation, earn less than men (England, 2010). Because women earn less than men, on average, they will lose more from a male partner leaving the household than men do when a female partner leaves within different-sex relationships (Harkness, 2013; Radenacker, 2020). This also implies that as dual-breadwinner families become the norm, and if the gender gap in earnings becomes smaller, gender differences in the consequences related to union dissolution are expected to decline (Oppenheimer, 1997). Indeed, McManus and DiPrete (2001) showed how men also lose in terms of equivalized household income when their partner leaves the household, particularly in the United States, a country where dual breadwinner couples are common.

The second feature of gender inequality that affects the consequences of union dissolution is the unequal division of care responsibilities. After union dissolution, children often live with their mothers, which can make it harder for women to remain full-time employed or increase their labor force participation (Mortelmans & Defever, 2018; Poortman, 2000). In addition, finding a new partner can be harder when living with children (Di Nallo, 2019), whereas partner income is another way of increasing household income. We know much less about the extent to which men's income losses following union dissolution increase as they take on more childcare responsibilities. In this article, we therefore study fathers who co-reside with their children after union dissolution (we use "transitioning into a single-parent household" as a synonym). In the remainder of this literature review we discuss the previously discussed mechanisms from the perspective of men who transition into a single-parent household (and compare their situation to women who enter single-parent households): own earnings, losses in partner income, and re-partnering.

Mechanism 1: Changes in own earnings

After entering a single-parent household, the need for more income and time increases as access to partner's income and time is reduced. Hence, on the one hand, single parents have incentives to increase employment to compensate for losses in economic resources. On the other hand, single parents could feel pressure to reduce employment to meet increased time demands related to childcare (Uunk, 2004). Which process dominates is likely to depend on individual-level factors, such as job flexibility, earning capacity, access to childcare services, or the ability to outsource childcare. For example, childcare services can reduce time pressures for single parents, and welfare state support can compensate for income losses after separation (van Damme et al., 2009). There can also be constraints on who has the possibility

to increase employment, which can be more limited in areas with high unemployment. Increasing work hours can also be complicated within given jobs and might require changing jobs or occupations. Indeed, single parents might look for jobs that allow for better possibilities to combine work and family responsibilities. This calls attention to the importance of looking at earnings trajectories for longer periods after separation, as increased care demands can prevent single parents from upward mobility in the labor market and attaining related increases in earnings in the long term (Nylin, 2020; Radenacker, 2020; Tamborini et al., 2015). Indeed, many studies find that single mothers increase employment and earnings (before and) after separation, but that they experience long-term earnings penalties as compared to partnered women (Nylin, 2020; Radenacker, 2020; Tamborini et al., 2015; Uunk, 2004; van Damme et al., 2009).

Can we expect similar changes in earnings for men who transition into single-father households? Women are more likely to work in part-time jobs (and less likely to do any paid work) than men (Stier & Lewin-Epstein, 2000). Even though part-time employed individuals might not find a full-time job, men who become single co-resident parents may find it more often challenging to increase their involvement in paid employment since they typically already hold full-time jobs (Nieuwenhuis, 2020). Full-time employed individuals could take on a second job, but time constraints are likely to pose a great obstacle for such strategies to increase income. Hence, men might be less able to increase earnings as compared to women, because they are more likely to have high working hours already. Hence, we expect *the transition into a single-parent household to, on average, be related to larger increases in earnings for women than for men* (Hypothesis 1).

At the same time, gender norms related to parenting can increase the help that single fathers receive with childcare from people in their environment as compared to the help single mothers receive. An important factor here is the involvement of ex-partners. In this paper, we

focus on co-residence with children, hence it might be that single fathers more often share custody with their former partners than single mothers, and therefore receive more help from ex-partners. Higher levels of help with childrearing might make it easier for men to perform well at work, make more ambitious career choices, and thereby avoid earnings losses in the long run.

Mechanism 2: Loss of partner income

Separation and divorce are the primary pathways through which individuals enter into single parenthood in contemporary societies (L. Bernardi et al., 2018). As argued by Oppenheimer (1997), women increasingly participate in the labor force, resulting in mothers making substantial contributions to their household income (Blossfeld & Drobnič, 2010). Consequently, when a partnership breaks down (or the partner dies), the loss of partner income has a significant impact on the financial situation of both fathers and mothers in couples where both individuals work (Brewer & Nandi, 2014). However, women experience more pronounced income losses compared to men as they still earn less than men, even when full-time employed (Andreß et al., 2006). It lies within the line of expectation that this mechanism creates similar gender differences in income trajectories after entering single-parent households. This might not be the case if women who earn more than their partner are more likely to live with their children after separation than other women. However, as we are not aware of empirical evidence in that regard, it is very likely that *the transition to single parenthood has, on average, more negative consequences on partner income for women than men* (Hypotheses 2).

Mechanism 3: Repartnering

One major way through which individuals can recover from the negative financial effects of partnership dissolution is repartnering (Jansen et al., 2009). A substantial body of research has focused on understanding the mechanisms that explain the role played by children in the process of repartnering, as well as the gender disparities associated with the formation of new partnerships (Beaujouan, 2012; Steele et al., 2005). For example, norms in the repartnering market lead men to find a new partner more often and quicker than women (Poortman, 2007). Having dependent children reduces the time and resources available for parents to dedicate to seeking a new partner (de Graaf & Kalmijn, 2003), and can affect parents' attractiveness in the repartnering market (Vanassche et al., 2015). In a longitudinal study, di Nallo (2019) found that mothers co-residing with their children show a significantly lower rate of repartnering compared to fathers in the same situation, which could be indicative of unequal gender norms related to whether parenthood is regarded as attractive in the partnering market or not. This would suggest that men's household income recovers more quickly after entering a single-parent household than women's household income.

That said, research has often indicated a positive effect of repartnering for separated women and a negative effect of repartnering for separated men on their equivalized household income (Brewer & Nandi, 2014; Ozawa & Yoon, 2002). This can be explained by the fact that women who experience partnership dissolution usually find new partners who are in a better financial position compared to themselves, while men, who are usually already in a good economic position, often repartner with individuals who are economically less well-off (Mortelmans & Jansen, 2010).

Hence, rates of re-partnering are likely to favor the recovery of household income for men after entering a single-parent household, but the benefits of re-partnering are greater for women, which might compensate for or even outweigh the importance of lower rates of re-

partnering. Nonetheless, we hypothesize that, *on average, partner income recovers more quickly for men than for women after the transition into single parenthood* (Hypotheses 3).

Moderating effects: the role of education

Single parenthood has been argued to contribute to socioeconomic inequalities as people with lower socioeconomic status are more likely to experience separation and enter a single-parent family (Härkönen, 2017; McLanahan, 2004). However, if the consequences of divorce are smaller among lower-educated people, the role of single parenthood could be more limited than expected (Brady et al., 2018). Previous research has come to mixed conclusions in this regard with some studies finding greater consequences among high-SES individuals (Fisher & Low, 2016; Hogendoorn, 2022) and others finding the opposite (Nylin, 2020; Radenacker, 2020), or the middle-educated being affected most (Jansen et al., 2009).

Some of the discrepancies found in previous research relate to the income definition used. Studies focusing on own earnings often find that, in the long run, women with lower levels of pre-separation earnings recover less quickly than women with higher levels of pre-separation earnings (Nylin, 2020; Radenacker, 2020). This could indicate difficulties in finding better jobs or more working hours for women with lower levels of human capital. Studies that also look at partner income and transfer income, however, noted that high-SES women lose more partner income and receive less transfer income than low-SES women, leading to an overall greater effect of separation on high-SES women's household income (Fisher & Low, 2016; Hogendoorn, 2022). Low-SES women appear also more likely to repartner than high-SES women, which could reflect higher levels of need or a less restricted partner market for low-SES women (Di Nallo et al., 2023; Pasteels & Mortelmans, 2017).

Hence, overall, women with lower SES seem to lose less following separation than high-SES women. However, this conclusion can depend on whether one looks at absolute or relative drops in income. Higher-educated individuals are likely to lose more partner income in absolute terms after separation because their partners are more likely to be higher educated too. However, it is less clear whether this holds in relative terms too (Endeweld et al., 2022).

Would we expect the same patterns for fathers who co-reside with their children after separation? Previous research has looked at the consequences of separation for men, however, without focusing on co-resident fathers. These studies yield mixed results. For example, Brewer and Nandi (2014) found that fathers with low levels of education are economically vulnerable to divorce, whereas those with higher education levels are more likely to maintain employment and work full-time following separation. Conversely, recent evidence from the Netherlands suggests that divorced fathers with lower education levels may experience economic benefits compared to their highly educated counterparts (Hogendoorn et al., 2019). An explanation for this is that lower-educated parents may be more likely to receive economic benefits, especially in more generous welfare states. However, these studies do not account for whether men and women continue to reside with their children after the dissolution of their partnership.

Co-residence with children is likely to affect the possibilities of increasing or decreasing one's own earnings and the possibilities of re-partnering. Similar to high-SES women (Nylin, 2020), high-SES men might have more possibilities to prevent their earnings from being negatively affected by entering a single-parent household, for instance, by outsourcing unpaid labor and childcare. High-SES fathers might also more often have joint custody arrangements or receive help from extended family (Fisher & Low, 2016) which can minimize any negative impact on men’s earnings. High-SES fathers are also likely to lose more partner income after separation than low-SES fathers, but this impact might be relatively smaller as compared to

women because men rely relatively less on partner income for their economic well-being. Finally, compared to high-SES women, high-SES men might have better possibilities to re-partner related to gender norms regarding the attractiveness of having economic resources, even when fathers co-reside with children (Di Nallo, 2019).

Hence, even though we expect high-SES mothers to lose more income after entering a single-parent household than low-SES mothers, SES differences could be smaller among men because men rely less on partner income and because high-SES men are more likely to re-partner than low-SES men (in contrast to what has been observed for women in previous research; Di Nallo, 2019). Also here, conclusions possibly differ depending on whether one looks at absolute or relative changes in income after transitioning into a single-parent household. Also, for high-SES men, partner income losses are likely to be large in absolute terms, and the same is to be expected from recoveries in partner income after re-partnering, but it is unclear to what extent this holds in relative terms.

Hence, we expect *the transition to single parenthood to have, on average, more negative consequences on household income for parents with a high level of education compared to those with lower education, but these educational differences are smaller among fathers than among mothers* (Hypotheses 4).

The Belgian Context

In Belgium, around 15% of the households with dependent children are single-parent households; of these, approximately one-fifth are headed by men (Nieuwenhuis, 2020). At the same time, the share of non-resident mothers increased steadily from 15% in 1992 to 23% in 2018 (Zilincikova & Schnor, 2023). Individual data from the European Union Labour Force Survey (EU-LFS) 2019 indicate that Belgium has one of the highest rates of single-

father households (around 3%) in Western Europe. At the same time, the European Union Statistics on Income and Living Conditions (EU-SILC) data 2018 indicate that Belgian single parents' risk of poverty is among the highest in Europe (around 40% vs. EU-27 average of 34%); and increased compared to 2010 (around 34%).

The high poverty risk faced by single-parent households might be explained by contextual factors such as the labor market and social policies (Brady, 2019). Overall Belgium does well in terms of gender equality in the labor market and work-family policies that support parents to work. For example, it has one of the lowest gender pay gaps in Europe (5% vs. 13% of EU-27) (European Union, 2022). Also, the Belgian welfare regime encourages parents to work by providing over 95% of children from age 3 to school age high quality and affordable childcare, the highest rate among EU-27 countries, which is vital for working parents (European Union, 2018). However, the structure of the labor market is still gendered. In fact, although the gender employment gap (8%) is rather modest compared to the EU-27 average (11%), part-time work is much more common among women (37,5%) than men (10%) (Eurostat, 2023).

Belgian family policies remain strongly gendered too. Parents have little incentive to take parental leave in general, but it remains longer for women than for men. However, single parents who can only rely on their own income, seldom take a career break. This is because Belgian leave schemes never compensate for the entire income from work. Consequently, most single parents stay in (or enter) the labor market and may increase their working hours to cope with the new family composition (Struffolino & Mortelmans, 2018). Despite this, EU-SILC data show that in-work poverty among Belgian single parents has increased markedly over the last 10 years (Nieuwenhuis, 2020). This may be because single parents are mainly employed in part-time or low-paid positions.

Social allowances for single parents are not that generous. All children living in Belgium are entitled to the so-called "Child Benefit", the amount of which depends on the child's age and region of residence. Out of these contextual characteristics, the high levels of part-time employment could be most consequential for our results and might set Belgium apart from other contexts. Given the importance of the partner's income when studying changes in household income, losses of income might be more limited for men in Belgium who often have partners who work part-time.

Data and Methods

Data. We use administrative data from DEMOBEL, the Statistics Belgium (STATBEL) demographic database, and the IPCAL dataset based on tax-register data, over 14 years (2005-2018). DEMOBEL data contain micro-level demographic (gender, age, nationality, civil status) and household (household size, municipality) information on the complete Belgian population since 1991. The database is updated on an annual basis with January 1st as the reference date. IPCAL data contain individual-level total net taxable income information derived from Belgians' annual tax returns from 2005 to 2018. Finally, we use data from the 2001 and 2011 Belgian Census to include educational-level information in additional analysis. Population register data allow us to overcome limitations related to sample sizes when studying single fathers and to precisely measure over time without attrition bias.

Sample. In this study, we focus on formerly partnered men and women who transitioned into a single-parent household following union dissolution during the observation period (2005-2018). Hence, individuals who never lived in single-parent households are excluded from our sample. In addition, to increase the comparability of trajectories, we exclude cases where single parenthood resulted from the loss of a partner or where parents moved in with children

more than one year after separation. In line with the recommendations of Ludwig and Brüderl (2021), we also exclude those who were already single parents when first observed. Note that our sample does not capture cases where individuals separated and re-partnered within the same year.

We define single parents as those "*fathers and mothers who live (i.e., are registered as domiciled in the same dwelling) with at least one minor child, but neither a partner nor other adults, in the same household*". In additional analyses available upon request, we do include single parents living with other adults in the same household, which did not alter the results. Single parents might have both biological and non-biological children, or a partner registered at another address. While our data does not allow for the identification of joint custody, studies using population register data commonly define single (or partnered) parenthood by relying on residence information (for example, Härkönen et al., 2016; Jalovaara & Fasang, 2019). Also, recent findings from the Netherlands indicate that for the vast majority of children from separated parents (89%) the registered address matches the main place of residence (van der Wiel & Kooiman, 2019).

All individuals have at least two observations in the data. In this way, we were able to examine changes in income over time before and after the transition to single parenthood. We exclude cases with missing information on individual income (4.6%) and partner income (4.8%). Missing information might refer to people who did not submit their tax return on time or are no longer in the registers (e.g. due to emigration or death). Together, these restrictions resulted in an analytical sample of 47,496 men (381,084 person-years) and 151,389 women (1,187,316 person-years) who became single parents between 2005 and 2018 (Table 1). The percentages and number of excluded individuals and observations are presented in Appendix, Table A1. Table 1 shows that the minimum cell size employed in our main analysis is 23,911 individuals (for men five years after entering a single-parent household).

Table 1. Longitudinal sample composition of men and women experiencing single parenthood

	Years before and after entering single parenthood											Total
	-5	-4	-3	-2	-1	0	1	2	3	4	5	N
Men (N)	25,136	31,609	36,799	40,969	41,575	46,811	40,461	35,334	31,181	27,298	23,911	381,084
Women (N)	67,615	85,757	105,591	124,840	132,279	147,366	130,502	116,239	103,686	92,097	81,344	1,187,316
Total (N)	92,751	117,366	142,390	165,809	173,854	194,177	170,963	151,573	134,867	119,395	105,255	1,568,400

Note: N= absolute frequency in the data.

Dependent Variables: income. We examine three outcome variables, including total household income to look at overall income effects, as well as individual and partner income to look at the role of various mechanisms producing overall changes in household income. First, we look at individual income (annual net taxable income) which measures the vast majority of taxable income (e.g. work, property, investments, etc.), but not incomes taxed at sources, such as unemployment benefits or family allowances, an issue we return to in the discussion. Individual income was provided as a categorical variable of 5,000 euros intervals. We first converted the variable to continuous by assigning the mid-point income of each interval. For the upper open-ended category, we adopted the lowest value (42,500 euros). Given the average income in Belgium ranged approximately from 18,000 euros per year in 2016 to 20,000 euros per year in 2021 (*Statbel*, 2023), our income variable is well-aligned with the income distribution in our study context. Nonetheless, we ran robustness checks using a higher upper limit of the income variable, which was available in the more recent years of the observation period; results were very similar (see Appendix, Figure A1). Finally, we also look at the natural logarithm of income to enable the interpretation of coefficients in terms of percentage changes.

Second, partner income is used to observe the economic consequences due to moving out of partners and the potential effect of repartnering as a recovery mechanism after entering single

parenthood. Partner income captures the annual individual income of an individual's current co-residential partner, regardless of marital status.

Third, we look at household income which includes the total income of all members within the household equivalized according to the "OECD-modified scale" which assigns a value of 1 to the household head, 0.5 to each additional adult and 0.3 to each child (Hagenaars et al., 1994).

In additional analyses (Appendix, Figure A2 and Figure A3), we look at couple's income (the sum of own and partner income) and compare it to the results for equivalized household income to see whether other household members (number of children and other adults moving in during t+1 to t+5) could play a role. For single people (individuals without a resident or non-resident partner) this measure corresponds to individual income. The operationalization of the four income variables is summarized in the online supplementary material (Appendix, Table A2). All income variables are indexed at 2015 prices using the Consumer Price Index (CPI).

Further, we look at gender differences in the likelihood of repartnering up to 5 years after entering single parenthood (0= without a partner, 1= with a partner). Having a partner is defined as having a co-residing partner (based on residence information). Also, we estimate the proportion of those in poverty (0= above the poverty line, 1= below the poverty line) to enhance the interpretability of our results (presented in the Appendix, Figure A4). The poverty threshold (60%) was defined in relation to the median national household income of each year using the equivalized household income variable we created.

Independent Variable: time before/after single parenthood. The main independent variable in all models identifies the number of years before and after the transition to single parenthood. We create 11 categories by dividing the pre- and post-event periods into 1-year intervals

starting from five years before the event until five years after the event. Year 0 represents entrance into single parenthood. In our analysis, this event is defined as the first time someone is observed living as the only adult with at least one minor child in the household. A single parent might come from a couple with children that separated or divorced (which is by far the most common route in our sample as shown in Appendix, Table A1), but cannot be a single person starting to live with children or someone who has become widowed between time t_{-1} and time t_0. In other words, all observations in the sample have a partner at the time t_{-1}, become single parents at the time t_0 and may remain single or live with a new partner from time t_{+1} onwards. Also, since the variable indicating the presence of children in the household is time-varying, a person who is considered a single parent at the time t_0 may no longer be single at the time t_{+1} if the youngest resident child becomes an adult (18 years old) but will remain part of the sample to monitor the impact of post-separation processes.

Control Variables: individual characteristics. Parents' time-varying characteristics known to be associated with changes in economic outcomes, and that precede the entrance into single parenthood in time are as follows: age (ten five-year categories), the number of co-resident minor children (0,1,2,3 or more), and the age of children (four categories).

In a further step, we also explored the moderating role of education (low = less than high school diploma, medium = high school or post-secondary diploma, high = bachelor or higher degree). Information on education was only available for the census years 2001 and 2011, and we used the latest available value for each individual. Note that as the level of education information was not available for the entire population (17% of the analytical sample missing) due to the lack of availability in administrative data sources on which the Census data are based, we ran these analyses on a restricted sample (N= 1,301,467). The composition and construction of the restricted sample including the education variable are detailed in the

Appendix (respectively, Table A3 and Table A4). Table 2 reports the summary statistics for the final sample used to perform the main analyses.

Analytical strategy. To examine changes over time in the economic outcomes before and after the transition to single parenthood, we estimate a set of time-distributed fixed effects (TDFE) linear regression models for panel data. The TDFE model is essentially a fixed effects (FE) model which includes a set of dummy variables for each year before and after the event. The advantages of this dynamic modelling strategy are manifold: it enables us to control for all observed and unobserved confounders that are constant over time, such as the family background (Wooldridge, 2015). Also, unlike standard fixed effects methods, it allows us to assess the effect of single parenthood on the economic outcomes for each year around the event. This is particularly relevant to capture either potential *anticipation effects* occurring before the event (e.g. parents may decide to increase the work intensity in preparation for the union dissolution), or *short-term economic changes* after the event followed by a return to prior economic levels (e.g. if parents re-partner shortly after entering single parenthood).

Thus, for each of the four economic outcomes, we estimate the following regression model:

$$O_{it} = \sum_{p=-s}^{s} \beta_p \, F_{it}^{p} + \beta_2 X'_{it} + \, A_i + \, \varepsilon_{it},$$

In this model, O represents the economic outcome of interest of individual i at time t. F_{it}^{p} identifies a set of dummy variables where p is the number of years before and after the transition to single parenthood, while s identifies the maximum horizon forward and $-s$ identifies the maximum horizon backwards from the time of the event. X'_{it} represents a set of time-varying covariates (age, age of children, number of children), A_i identifies the individual unobserved time-constant components, and ε is the idiosyncratic error term. To

test whether there are significant gender-based differences in the economic outcomes related to single parenthood, both in absolute and relative terms, we employ two approaches: 1) estimating TDFE models with an interaction term between the parents' gender and the main independent variable, and 2) estimating separate TDFE models for each gender while taking the natural logarithm of each independent variable.

Table 2. Sample description

	Whole Sample		Men at T-1		Women at T-1	
	% (mean)	SD	% (mean)	SD	% (mean)	SD
Economic Outcomes						
Annual individual income	(22768)	11683	(28307)	11262	(20118)	11107
Annual partner income	(12238)	14771	(20392)	11442	(25642)	11766
Annual couple income	(35007)	19087	(48699)	18968	(45759)	18974
Annual equivalized hh income	(19385)	9386	(23185)	9444	(22057)	9541
Log of annual individual income	(9.82)	0.66	(10.08)	0.55	(9.66)	0.68
Log of annual partner income	(1.55)	8.40	(9.60)	1.35	(9.92)	0.89
Log of annual couple income	(10.24)	0.65	(10.64)	0.49	(10.56)	0.52
Log of annual equivalized hh income	(9.68)	0.59	(9.89)	0.51	(9.82)	0.54
Individual Characteristics						
Age						
15-19 years old	0.13		0.01		0.22	
20-24 years old	1.90		0.63		3.36	
25-29 years old	7.28		4.00		10.80	
30-34 years old	16.54		12.91		21.51	
35-39 years old	24.77		23.86		27.93	
40-44 years old	25.35		28.95		23.47	
45-49 years old	16.09		18.69		10.29	
50-54 years old	6.00		7.49		2.20	
55-59 years old	1.47		2.4		0.22	
60+ years old	0.46		1.05		0.01	
Number of resident minor children						
No children	11.03		6.84		4.44	
1	42.47		38.86		42.87	
2	34.69		40.67		39.04	
3+	11.81		13.63		13.65	
Age of youngest resident child						
0-5 years old	30.86		33.70		43.11	
6-10 years old	32.14		31.80		29.43	
11-17 years old	30.91		34.50		27.46	
18+ years old	6.09		0.00		0.00	
N person			41,575		132,279	
N person-years	1,568,400					

Note. T-1 = year before entering single-parent household; SD = Standard Deviation.

Results

We start by presenting descriptive trends for the three income variables (individual income, partner income and equivalized household income) for both genders. Then, for each variable, we examine the absolute changes in income of men and women based on predictions from time-distributed fixed effects (TDFE) models that control for age, number of resident minor children, and age of the youngest resident child. Finally, we present the results in relative terms using the natural logarithm of income as the outcome. These models also include interaction terms between the time before and after the transition to single parenthood and gender. This allows us to test for gender differences in economic outcomes post-separation. Note that practically all differences between men and women are statistically significant due to the very large sample size used unless mentioned otherwise. The regression coefficients for the full models, including interaction effects, are provided in Appendix Table A5.

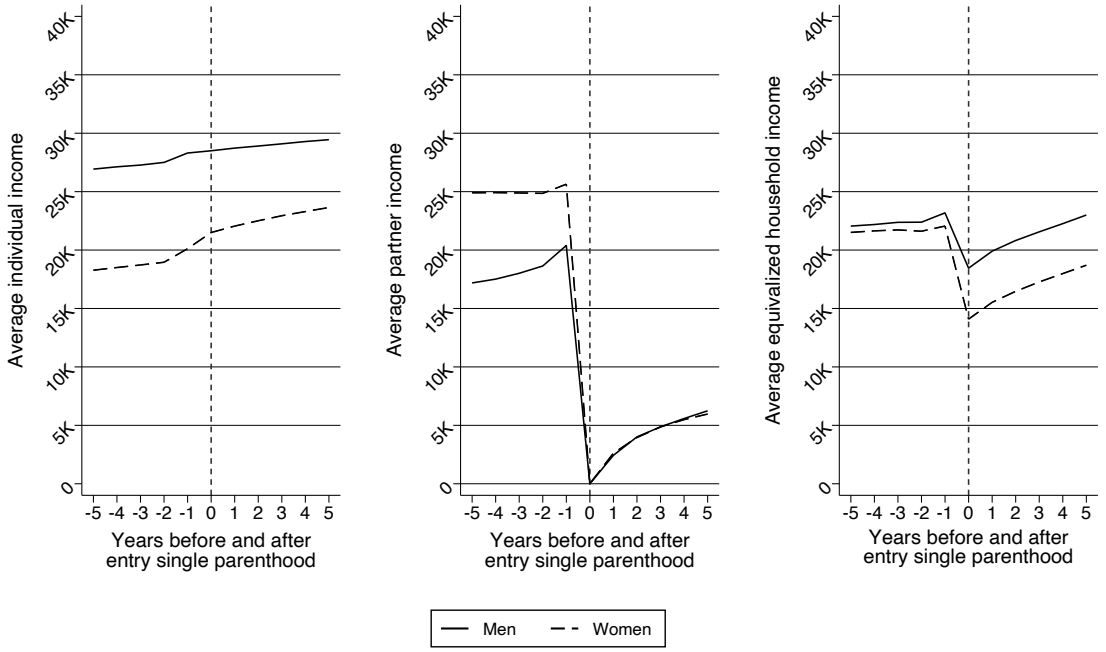
Descriptive findings

We first present the time trends for individual, partner, and household income for both men and women (Figure 1). Overall, the trajectories for each income measure are similar for men and women. For example, the first graph shows a steady increase in individual income over time for both men and women. Similarly, both groups experience a sharp decline in partner income (second graph) and household income (third graph) at the time of entering a single-parent household, followed by a partial recovery in subsequent years.

Although the patterns are similar, these findings already reveal considerable gender differences in absolute income levels. As shown in the first graph, women earn less than men the year before separation, with an average income of 20,117 euros compared to 28,307 euros for men, and their individual income remains lower throughout the observed period, even

though gender differences become somewhat smaller. The second graph shows that women experience a more pronounced decrease in partner income at the time of separation, with an absolute difference in income loss of around 26%. However, there is no major gender difference in the recovery of partner income in the five years following separation. Finally, women experience a greater loss in household income compared to men and recover more slowly in the following years. Interestingly, it seems that men return to pre-separation income levels five years after entering a single-parenthood household, whereas women do not.

Figure 1. Descriptive patterns of annual individual income, annual partner income and annual equivalized household income before and after single parenthood



Note: time t_0 is the year of entry into single parenthood (year 0).

We now scrutinize each of these trends by looking at results from time-distributed fixed-effects (TDFE) models which allow us to control for relevant observed characteristics, to

control for unobserved time-invariant characteristics and to test gender differences more directly.

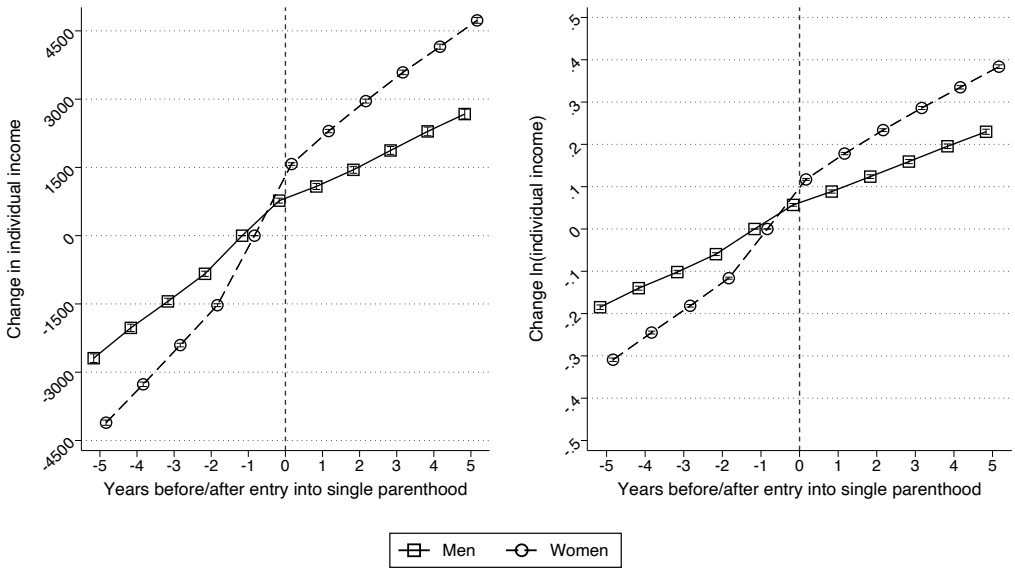
Changes in own earnings

Becoming a single parent is commonly associated with several changes. These changes (e.g. in working hours, childcare responsibilities, etc.) may affect the capability of both fathers and mothers to attain personal economic resources. For this reason, our first interest is in the gender difference in individual income changes related to the event of single parenthood, i.e. the point at which men and women start living with their co-resident minor children as single persons. Figure 2 displays the changes in annual individual income for men and women experiencing single parenthood during the observation period. Results are based on predictions from the TDFE models and with 95% confidence intervals (barely visible as they are very small) and indicate changes in income as compared to t-1. Table A5 in the Appendix shows the underlying regression results and indicates how the interaction between gender and time is statistically significant for all time points considered (i.e. t-5 until t+5); note that this applies to the results presented later for partner income and household income too.

The results from the TDFE model presented in the first graph confirm the steady average increase in the annual individual income for both men and women over time. Mothers experience a greater increase in individual income following the entrance into single-parent households. Increases for women are particularly large between t-2 and t=0 which may reflect an anticipation effect in response to separation. Absolute changes in income are less pronounced in the fixed-effects models as compared to the descriptive findings because they account for time-constant (unobserved) heterogeneity that can upward bias the between-individuals estimates on which the descriptive findings are based (Wooldridge, 2015). The

second graph in Figure 2 shows that results are similar in relative terms, with women earning more than men following entrance into single parenthood.

Figure 2. Absolute and relative changes in annual individual income before and after experiencing single parenthood



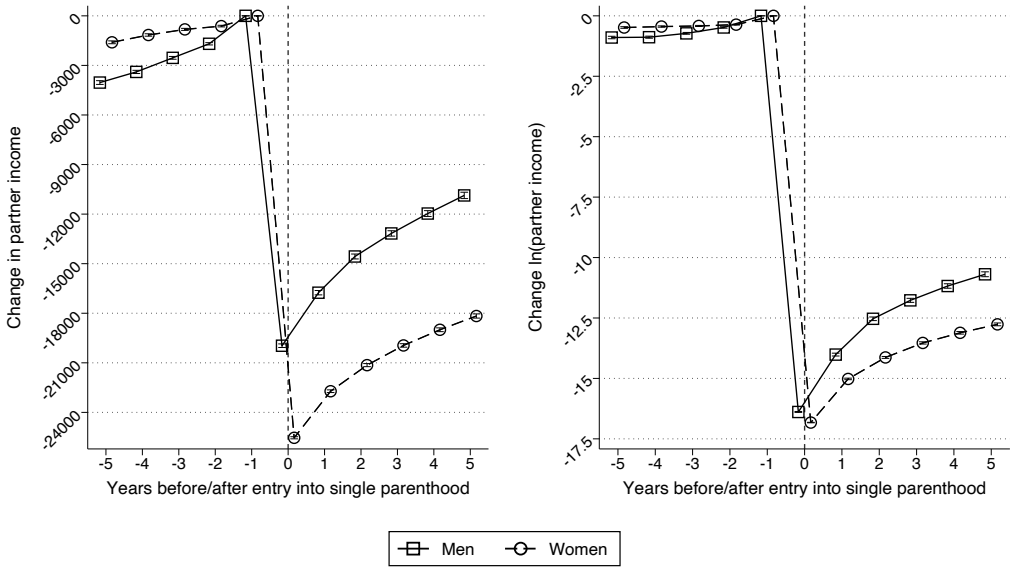
Note: confidence intervals are so small they fall within the markers. Time t_0 is the year of entry into single parenthood (year 0). Predicted values from time-distributed fixed-effects models including an interaction between gender and years before/after intro into single parenthood.

Loss of partner income and Repartnering

Our second dependent variable is partner income. On the one hand, most single parents lose their partner's income upon divorce or separation. On the other hand, after entering single parenthood, single fathers and mothers might find a new partner who brings an economic benefit to the household and relieves them from supporting it alone. Figure 3 shows that the general trend is similar for men and women (first graph): unsurprisingly, both suffer a substantial economic loss (loss of annual partner income) in the year of entry into single parenthood and this loss is no longer compensated in the years following the event. For

instance, women suffer an average annual loss of 25,536 euros in partner income during the transition to single parenthood (between year -1 and year 0), whereas men experience a loss of 19,963 euros. The second graph shows how economic losses are worse for women than for men also in relative terms. Men and women experience relatively similar drops in partner income in the year entering single parenthood. However, the growth trajectory of annual partner income in the years following the entry into single parenthood (occurring at year 0) is superior for men compared to women (note that all interaction effects of gender with time are statistically significant, see Table A5). This is somewhat surprising, as previous research has shown that women usually have a better income recovery than men following a new union (Ozawa & Yoon, 2002).

Figure 3. Absolute and relative changes in annual partner income before and after experiencing single parenthood



Note: confidence intervals are so small they fall within the markers. Time t_0 is the year of entry into single parenthood (year 0). Predicted values from time-distributed fixed-effects models including an interaction between gender and years before/after intro into single parenthood.

To help us better understand this result we look at the partnership trajectories for men and women before and after entering single parenthood (Figure 4). Earlier we noted that men who have children are more often find a new partner following a separation than women (Di Nallo, 2019) which could help explain why the partner income of single fathers tends to rise at a quicker pace than that of single mothers. Therefore, we verified whether single fathers tend to form new partnerships before single mothers do also in our study. Indeed, men, who are less likely than women to have a partner before entering single parenthood, repartner more quickly after the event. However, it should be noted that the rate of repartnering remains low for both men and women.

Figure 4. Changes in partnership status of men and women experiencing single parenthood

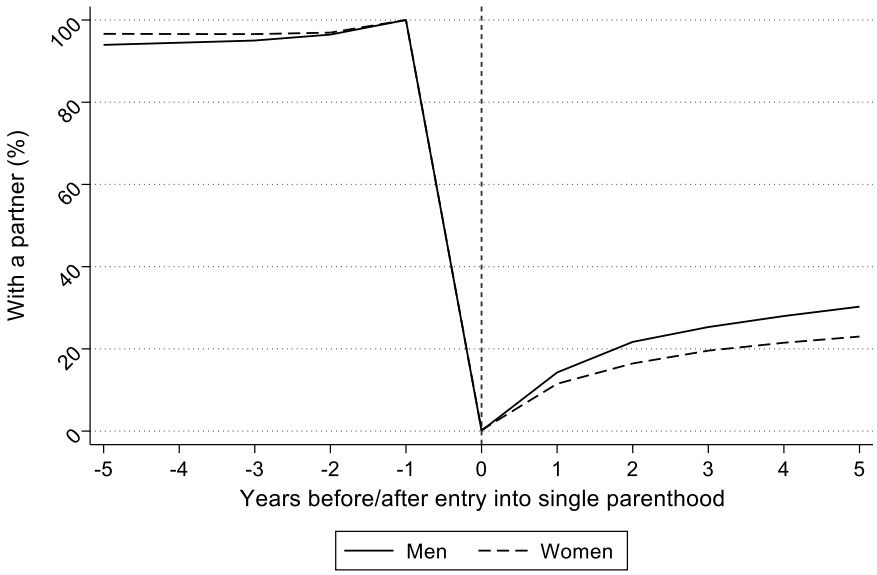
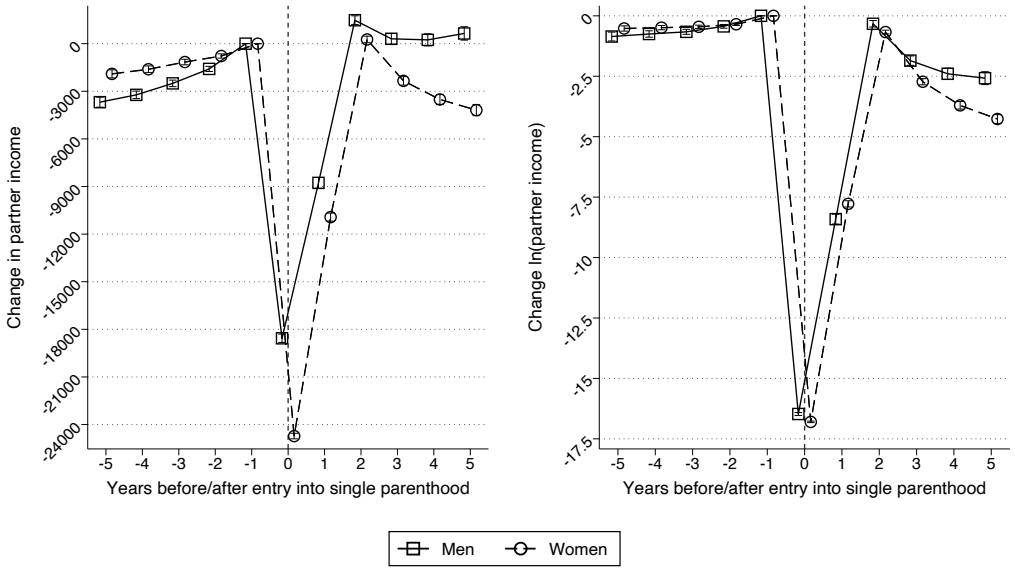


Figure 5 suggests that for those parents who find a new partner within 2 years of entering single parenthood, the partner income returns to the same pre-event levels, both for men and women. This indicates that repartnering could be an effective way to recover income, but that this route appears unavailable for most single parents, and single mothers in particular. In

addition, partner income appears to drop again in subsequent years, suggesting that an important share separates again from their new partners relatively quickly.

Figure 5. Absolute and relative changes in annual partner income for individuals repartnering 2 years after experiencing single parenthood

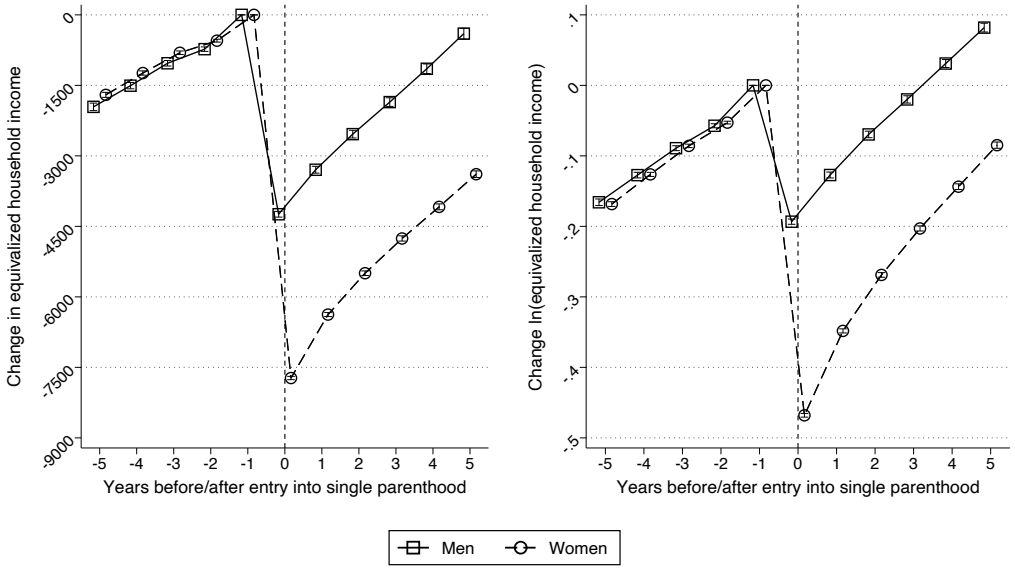


Note: confidence intervals are so small they fall within the markers. Time t_0 is the year of entry into single parenthood (year 0). Predicted values from time-distributed fixed-effects models including an interaction between gender and years before/after intro into single parenthood.

Household income

Up to this point, we observed that 1) women experience greater increases in individual income when compared to men, 2) but at the same time greater losses in partner income and 3) repartnering does not seem to be a common coping strategy for either men or women. However, the emerging picture may be incomplete if we do not account for other factors that might affect income such as the number of children living in the household and grandparents (or other relatives/adults) who may move in after entering single parenthood. To account for these factors, and to provide an overall picture, we look at annual equivalized household income in Figure 6.

Figure 6. Absolute and relative changes in annual equivalized household income before and after experiencing single parenthood



Note: confidence intervals are so small they fall within the markers. Time t_0 is the year of entry into single parenthood (year 0). Predicted values from time-distributed fixed-effects models including an interaction between gender and years before/after intro into single parenthood.

The transition to single parenthood resulted in a drop in annual equivalized household income in the year of entry into single parenthood (between year -1 and year 0) by 4,241 euros for fathers and 7,727 euros for mothers, on average. The first graph of Figure 6 also suggests that household income increased over time after the transition to single parenthood for both genders. However, five years after separation, men appear to have nearly fully recovered from the initial loss, with only 399 euros below pre-separation levels (year -1), whereas women experience a slower recovery, remaining 3,389 euros below their pre-separation income. The second graph depicts the relative changes in the log of annual equivalized household income. The relative drop in annual equivalized household income at the mean is almost double for women relative to men when entering single parenthood (between year -1

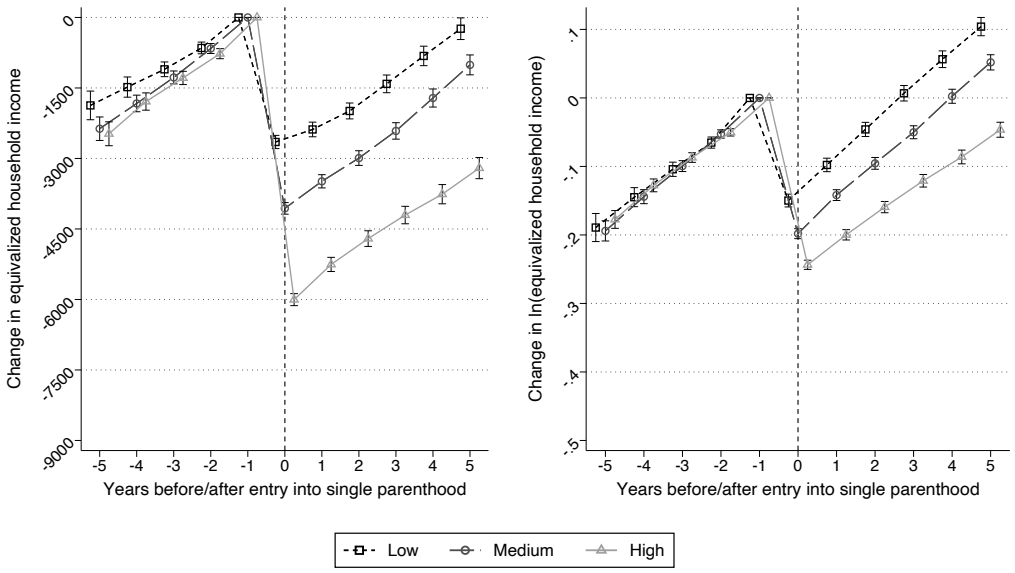
and year 0), although the gap somewhat narrows in the following years. Hence, both men and women experience important drops in household income after entering a single-parent household, but this drop is greater for women who also seem to take longer to recover their income compared to men.

Although entering single parenthood has negative consequences for the income of both fathers and mothers, overall, it appears that women's income is impacted more than men's. This is supported by the results of our supplementary analyses on the relationship between poverty and single parenthood, which show that even five years after the event, women's risk of poverty is double that of men (see Appendix, Figure A4).

The role of education. In additional analysis, we aimed to examine the potential moderating effect of education on the income outcomes of entering a single-parent household. An interaction term between education and time before and after the transition to single parenthood was used to test differences in education. Figure 7 presents the overall pattern of changes in annual equivalized household income before and after entry into single parenthood for men, both in absolute and relative terms. The graph on the left shows similar patterns across all educational levels: on average, men follow income growth trajectories before entering single parenthood and experience a decrease in income at the time of the event (year 0), with partial recovery thereafter. However, while less-educated men seem to fully recover from the income loss within five years after separation, highly educated men suffer greater losses. For example, the average income loss for highly educated men five years after separation is around 3,204 euros compared to the reference year (year -1). In contrast, low-educated men experience an average loss of around 239 euros. The graph on the

right shows that similar results are observed for relative income losses, even though differences in penalties are somewhat smaller across educational groups.

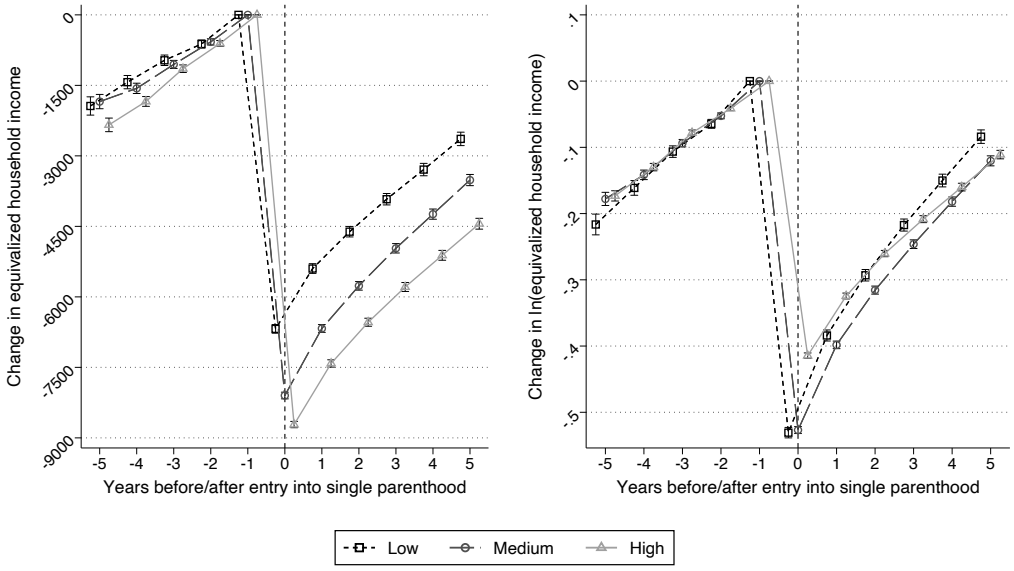
Figure 7. Absolute and relative changes in annual equivalized household income before and after experiencing single parenthood by level of education for men



Note: whiskers indicate 95% confidence intervals. Time t_0 is the year of entry into single parenthood (year 0). Predicted values from time-distributed fixed-effects models including an interaction between education and time before/after the event.

Similar patterns are observed when looking at the educational differences in annual equivalized household income changes for mothers in Figure 8. The first graph shows that when entering single parenthood (from year -1 to year 0), on average, low-educated women experience an absolute annual equivalized household income loss of 6,681 euros, medium-educated women of 8,098 euros, and high-educated women of 8,717 euros. Moreover, regardless of their level of education, after entering single parenthood women recover economically over the subsequent five years, even if only partially, similar to men.

Figure 8. Absolute and relative changes in annual equivalized household income before and after experiencing single parenthood by level of education for women



Note: whiskers indicate 95% confidence intervals. Time t_0 is the year of entry into single parenthood (year 0). Predicted values from time-distributed fixed-effects models including an interaction between education and time before/after the event.

In the second graph, we examine relative changes across educational levels in the logarithm of the annual equivalized household income for women. In contrast to men, the TDFE estimates show that highly educated women experience a slightly smaller economic loss compared to less educated women when they enter single parenthood (from year -1 to year 0). This might be because women with lower levels of education depend more on their partner's income compared to women with a higher level of education. However, despite experiencing a greater economic loss compared to highly educated women, low and medium-educated women manage to recover more quickly over time. The regression results presented in Table A6 of the Appendix indicate that, for both men and women, the interaction between

education and time is statistically significant for all timepoints after t=0, except for higher educated women at t+3 and t+4 (as compared to the time-effect for lower educated women).

To strengthen confidence in our findings, we conducted a robustness check considering as a proxy for education the average individual income between t-4 and t-2, categorized into terciles. Findings are reported in the Appendix (Figure A5 and Figure A6), and they show similar patterns to those in the main analyses for both men and women, with greater income losses (in the long run) among high-income men and low-income women.

These results align with prior research, highlighting that highly educated couples who separate have more to lose in terms of economic resources (F. Bernardi & Boertien, 2016). However, an exception to this general observation is once looking at income losses in relative terms for women.

Discussion

The key question posed in our introduction is whether co-residing with children after separation, labelled here as the entrance into a single-parent household, has the same consequences for the income of fathers and mothers. Previous studies have mostly studied gender differences in the economic consequences of separation without focusing on the specific case of co-resident fathers, mostly due to data constraints. Studying this case is interesting as it could give insight into whether the gendered consequences of separation will decrease when fathers increasingly co-reside with children after separation. The answer to this question is mixed.

On the one hand, we find that both mothers and fathers lose in terms of equivalized household income after the entrance into a single-parent household. This holds for fathers and mothers of all educational levels. This conclusion differs from that of previous research that

often found that, on average, men lose relatively little, or might even gain, in terms of equivalized household income following separation. Hence, once focusing on fathers who co-reside with children following separation, their economic situation looks more similar to mothers. On the other hand, we find that also among the group of parents co-residing with children after separation, women lose more household income than men. This leads us to the conclusion that the economic consequences partly rely on the gender-unequal assignment of childrearing responsibilities in society, but that gender differences are unlikely to disappear completely when childcaring responsibilities are shared more equally, unless other gender inequalities are also eradicated, such as those related to gender pay gaps and gender norms regarding partnering.

When people experience single parenthood, their needs often change as (in most cases) they no longer have another person contributing to the household income or sharing childcare responsibilities with them. For single parents, this implies that the need to increase their income to support the family alone increases and the need for time to combine work with childcare activities, especially if the children are still young. The results presented here indicate that there are important differences in how these mechanisms work for men and women. On the one hand, we found that entering single parenthood results in a greater increase in terms of individual income for women than for men (hypothesis 1), probably due to the need for mothers to compensate for the loss of partner income. At the same time, this suggests that men often already work full-time and might have limited time to increase working hours further, especially with increased childcare responsibilities. In other words, if childrearing constraints are the same for fathers and mothers, also men are exposed to socio-economic disadvantages. On the other hand, women experience worse losses than men in terms of partner income (hypothesis 2). The high involvement of women in part-time positions in the Belgian labor market, which allows them to combine work and childcare

responsibilities, could explain this result and also points out the persistence of gender inequalities in childcare in Belgium, with women in couples taking on more childcare than men. Hence, in other contexts where women's employment and earnings are more similar to men's, we might see more equality in household income losses among parents who transition into a single-parent household. Indeed, an interesting question for future research would be to study whether there are contexts where gender differences are minimal among the group of parents co-residing with children following separation.

Our findings do not support the argument that women recover faster than men in terms of household income (hypothesis 3). On the contrary, women experience a more significant economic setback compared to men, which is difficult to recover from even in the long run. In fact, women are more able to increase their own income over time, but this alone is not enough to compensate for the loss of their partner's income. Additionally, although repartnering has a positive effect on women entering the labor market (Jansen et al., 2009) we observed that it is a marginal route for household income recovery, available to only a few individuals. In addition, men are slightly more likely to repartner than women, consistent with the findings of Di Nallo (2019), which appears the main reason why their household income recovers faster too.

Finally, we find that, in contrast to higher-educated women, higher-educated men lose more income following the entrance into single parenthood than lower and middle-educated men (hypothesis 4). Hence, single parenthood is likely to be a relatively less important driver of educational inequalities in income among men as compared to women and contributes to the general impression that family dynamics are more important within social stratification among women than among men.

In interpreting these results, some limitations need to be acknowledged. First, the income measures we used in our analyses do not account for the Belgian child allowances, child support and alimony single-parent families could benefit from. This information together would give us a more accurate picture and better interpretation of the economic conditions of single parents living in Belgium. Such transfer income might reduce gender differences in the effects of entrance into single parenthood, as women in general have lower levels of income. It would, however, strengthen our conclusion that higher-educated men lose more in terms of household income than lower-educated men, as the latter would more often benefit from transfer income than the former.

More generally, our analysis only captures one aspect of economic well-being. Even though we provided additional analysis looking at poverty, single parents are likely to also face higher levels of material deprivation and time constraints. Hence, the observation that higher-educated fathers lose more in terms of income as compared to lower-educated fathers does not imply that the latter group is better off after entrance into single parenthood.

Second, the analysis of education was limited to a subsample of cases observed at two points in time. This may have led to the biased results of our estimates. However, as we are looking at the adult population, the level of education should not vary too much over time. Third, the data do not allow us to identify joint custody events. It is likely that many single fathers (but also mothers) in our sample had joint custody arrangements which could have reduced obstacles towards maintaining earnings and re-partnering. However, we observed that men increase their own earnings less than women following the entrance into single parenthood. It is possible that joint custody makes it easier for single fathers to re-partner, but the role of re-partnering in our conclusions was relatively limited. Hence, we would expect that our results would also hold in a sample of parents where fathers and mothers have sole custody, with the

possible exception of the faster recovery for men following entrance into single parenthood (which is related to repartnering).

Fourth, our contribution focuses on only one segment of single parents, namely those who can financially afford single parenthood or co-residence with children. Parents who are unable to manage the associated costs may choose to remain in an unsatisfactory partnership or decide not to live with their children post-separation. This selection bias may influence the observed economic outcomes, potentially leading to an overestimation of the financial resilience of individuals who become single parents.

Finally, in this study, we focused only on the individual characteristics of men and women experiencing single parenthood. Further research addressing the role of the characteristics of both parents could help to gain more insight into the mechanisms that lead men to become single parents.

Regardless of these limitations, our findings have relevant implications for understanding the role of single parenthood on gender economic inequalities in Belgium. In particular, we highlight a greater economic disadvantage for women than men to recover economically, likely explained by mechanisms of partner income loss and repartnering strategies. At the same time, household income drops considerably for both men and women when entering single parenthood. Consequently, single fathers should be recognized as an at-risk group as well. Given the recent rise in single-father families, we hope that these findings will draw greater attention from policymakers to effectively address the increasing risk of poverty among Belgian single parents (Nieuwenhuis, 2020), both fathers and mothers.

REFERENCES

Ananat, E. O., & Michaels, G. (2008). *The Effect of Marital Breakup on the Income Distribution of Women with Children*.

Andreß, H.-J., Borgloh, B., Brockel, M., Giesselmann, M., & Hummelsheim, D. (2006). The Economic Consequences of Partnership Dissolution—A Comparative Analysis of Panel Studies from Belgium, Germany, Great Britain, Italy, and Sweden. *European Sociological Review*, *22*(5), 533–560. https://doi.org/10.1093/esr/jcl012

Beaujouan, É. (2012). Repartnering in France: The role of gender, age and past fertility. *Advances in Life Course Research*, *17*(2), 69–80. https://doi.org/10.1016/j.alcr.2012.03.001

Bernardi, F., & Boertien, D. (2016). Understanding Heterogeneity in the Effects of Parental Separation on Educational Attainment in Britain: Do Children from Lower Educational Backgrounds Have Less to Lose? *European Sociological Review*, *32*(6), 807–819. https://doi.org/10.1093/esr/jcw036

Bernardi, L., Mortelmans, D., & Larenza, O. (2018). Changing lone parents, changing life courses. In *Lone parenthood in the life course* (pp. 1–26). Springer, Cham.

Blossfeld, H.-P., & Drobnič, S. (2010). *Careers of Couples in Contemporary Societies: From Male Breadwinner to Dual Earner Families*. Oxford University Press.

Brady, D. (2019). *Theories of the Causes of Poverty*.

Brady, D., Finnigan, R. M., & Hubgen, S. (2018). Single mothers are not the problem. *The New York Times*.

Brewer, M., & Nandi, A. (2014). *Partnership dissolution: How does it affect income, employment and well-being?* ISER Working Paper Series.

de Graaf, P. M., & Kalmijn, M. (2003). Alternative Routes in the Remarriage Market: Competing-Risk Analyses of Union Formation after Divorce. *Social Forces*, *81*(4), 1459–1498.

Di Nallo, A. (2019). Gender Gap in Repartnering: The Role of Parental Status and Custodial Arrangements. *Journal of Marriage and Family*, *81*(1), 59–78. https://doi.org/10.1111/jomf.12527

Di Nallo, A., Ivanova, K., & Balbo, N. (2023). Repartnering of women in the United States: The interplay between motherhood and socio-economic status. *Population Studies*, *77*(3), 399–416. https://doi.org/10.1080/00324728.2022.2152478

Endeweld, M., Herbst-Debby, A., & Kaplan, A. (2022). Do the Privileged Always Win? Economic Consequences of Divorce by Income and Gender Groups. *Social Indicators Research*, *159*(1), 77–100. https://doi.org/10.1007/s11205-021-02733-4

England, P. (2010). *Toward Gender Equality: Progress and Bottlenecks*. 20.

European Union. (2018). *Barcelona objectives*. https://commission.europa.eu/system/files/2018-05/bcn_objectives-report2018_web_en.pdf

European Union. (2022). *Equal Pay? Time to close the gap!* https://commission.europa.eu/system/files/2022-11/equal_pay_day_factsheet_2022_en_1_0.pdf

Eurostat. (2022). *Children at risk of poverty or social exclusion*. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Children_at_risk_of_poverty_or_social_exclusion

Eurostat. (2023). *Employment in 2022 compared with the EU target*. https://ec.europa.eu/eurostat/databrowser/product/page/LFSI_EMP_A?lang=en

Fisher, H., & Low, H. (2016). Recovery From Divorce: Comparing High and Low Income couples. *International Journal of Law, Policy and the Family*, *30*(3), 338–371. https://doi.org/10.1093/lawfam/ebw011

Hagenaars, A. J., De Vos, K., & Asghar Zaidi, M. (1994). *Poverty statistics in the late 1980s: Research based on micro-data*.

Harkness, S. (2013). Women's employment and household income inequality. In *Income Inequality: Economic Disparities and the Middle Class in Affluent Countries* (pp. 207–233). Stanford University Press.

Harkness, S. (2018). The economic consequences of becoming a lone mother. In *Lone Parenthood in the Life Course* (pp. 213–234). Springer, Cham.

Härkönen, J. (2017). *Single-mother poverty: How much do educational differences in single motherhood matter?*

Härkönen, J., Lappalainen, E., & Jalovaara, M. (2016). Double disadvantage in a Nordic welfare state: A demographic analysis of the single mother employment gap in Finland, 1987–2011. *Stockholm Research Reports in Demography*, *11*.

Hogendoorn, B. (2022). Why do Socioeconomic Differences in Women's Living Standards Converge After Union Dissolution? *European Journal of Population*, *38*(3), 577–622. https://doi.org/10.1007/s10680-022-09620-9

Hogendoorn, B., Leopold, T., & Bol, T. (2019). Divorce and Diverging Poverty Rates: A Risk-and-Vulnerability Approach. *Journal of Marriage and Family*, jomf.12629. https://doi.org/10.1111/jomf.12629

Jalovaara, M., & Fasang, A. E. (2019). Family Life Courses, Gender, and Mid-Life Earnings. *European Sociological Review*, jcz057. https://doi.org/10.1093/esr/jcz057

Jansen, M., Mortelmans, D., & Snoeckx, L. (2009). Repartnering and (Re)employment: Strategies to Cope With the Economic Consequences of Partnership Dissolution.

Journal of Marriage and Family, *71*(5), 1271–1293. https://doi.org/10.1111/j.1741-3737.2009.00668.x

Leopold, T., & Kalmijn, M. (2016). Is Divorce More Painful When Couples Have Children? Evidence From Long-Term Panel Data on Multiple Domains of Well-being. *Demography*, *53*(6), 1717–1742. https://doi.org/10.1007/s13524-016-0518-2

Ludwig, V., & Brüderl, J. (2021). What You Need to Know When Estimating Impact Functions with Panel Data for Demographic Research. *Comparative Population Studies*, *46*. https://doi.org/10.12765/CPoS-2021-16

McLanahan, S. (2004). Diverging destinies: How children are faring under the second demographic transition. *Demography*, *41*(4), 607–627. https://doi.org/10.1353/dem.2004.0033

McManus, P. A., & DiPrete, T. A. (2001). Losers and Winners: The Financial Consequences of Separation and Divorce for Men. *American Sociological Review*, *66*(2), 246. https://doi.org/10.2307/2657417

Mortelmans, D. (2020). Economic consequences of divorce: A review. *Parental Life Courses after Separation and Divorce in Europe*, 23–41.

Mortelmans, D., & Defever, C. (2018). Income trajectories of lone parents after divorce: A view with Belgian register data. In *Lone Parenthood in the Life Course* (pp. 191–211). Springer, Cham.

Mortelmans, D., & Jansen, M. (2010). Income dynamics after divorce: A latent growth model of income change on the European Community Household Panel. *Brussels Economic Review*, *53*(1), 85–107.

Nieuwenhuis, R. (2020). *The situation of single parents in the EU* (p. 98).

Nylin, A.-K. (2020). Earnings trajectories following parental separation among first-time parents in Sweden. *Parental Life Courses after Separation and Divorce in Europe*, 43–64.

Ongaro, F., Mazzuco, S., & Meggiolaro, S. (2009). Economic Consequences of Union Dissolution in Italy: Findings from the European Community Household Panel. *European Journal of Population / Revue Européenne de Démographie*, *25*(1), 45–65. https://doi.org/10.1007/s10680-008-9157-7

Oppenheimer, V. K. (1997). Women's employment and the gain to marriage: The specialization and trading model. *Annual Review of Sociology*, *23*(1), 431–453.

Ozawa, M. N., & Yoon, H.-S. (2002). The Economic Benefit of Remarriage. *Journal of Divorce & Remarriage*, *36*(3–4), 21–39. https://doi.org/10.1300/J087v36n03_02

Pasteels, I., & Mortelmans, D. (2017). The socioeconomic determinants of repartnering after divorce or separation in Belgium. *Demographic Research*, *36*, 1785–1812. https://doi.org/10.4054/DemRes.2017.36.58

Poortman, A.-R. (2000). Sex Differences in the Economic Consequences of Separation: A Panel Study of the Netherlands. *European Sociological Review*, *16*(4), 367–383. https://doi.org/10.1093/esr/16.4.367

Poortman, A.-R. (2007). The First Cut is the Deepest? The Role of the Relationship Career for Union Formation. *European Sociological Review*, *23*(5), 585–598. https://doi.org/10.1093/esr/jcm024

Radenacker, A. (2020). Changes in mothers' earnings around the time of divorce. *Parental Life Courses after Separation and Divorce in Europe*, 65–81.

Statbel. (2023). https://statbel.fgov.be/en/themes/households/taxable-income#news

Steele, F., Kallis, C., Goldstein, H., & Joshi, H. (2005). The relationship between childbearing and transitions from marriage and cohabitation in Britain. *Demography*, *42*(4), 647–673.

Stier, H., & Lewin-Epstein, N. (2000). Women's part-time employment and gender inequality in the family. *Journal of Family Issues*, *21*(3), 390–410.

Struffolino, E., & Mortelmans, D. (2018). *Lone mothers in Belgium: Labor force attachment and risk factors*. Springer International Publishing.

Tach, L. M., & Eads, A. (2015). Trends in the Economic Consequences of Marital and Cohabitation Dissolution in the United States. *Demography*, *52*(2), 401–432. https://doi.org/10.1007/s13524-015-0374-5

Tamborini, C. R., Kim, C., & Sakamoto, A. (2015). Education and Lifetime Earnings in the United States. *Demography*, *52*(4), 1383–1407. https://doi.org/10.1007/s13524-015-0407-0

Thielemans, G., & Mortelmans, D. (2022). Divorce and female labour force participation: Do women who expect an upcoming divorce increase their employment? Evidence from Flanders. *Acta Sociologica*, *65*(1), 3–23. https://doi.org/10.1177/0001699321994189

Uunk, W. (2004). The Economic Consequences of Divorce for Women in the European Union: The Impact of Welfare State Arrangements. *European Journal of Population / Revue Européenne de Démographie*, *20*(3), 251–285. https://doi.org/10.1007/s10680-004-1694-0

van Damme, M., Kalmijn, M., & Uunk, W. (2009). The Employment of Separated Women in Europe: Individual and Institutional Determinants. *European Sociological Review*, *25*(2), 183–197. https://doi.org/10.1093/esr/jcn042

van der Wiel, R., & Kooiman, N. (2019). Children of separated parents: Registered versus reported place of residence. *The Hague : Statistics Netherlands*, 11.

Vanassche, S., Corijn, M., Matthijs, K., & Swicegood, G. (2015). Repartnering and Childbearing After Divorce: Differences According to Parental Status and Custodial Arrangements. *Population Research and Policy Review*, *34*(5), 761–784. https://doi.org/10.1007/s11113-015-9366-9

Wooldridge, J. M. (2015). *Introductory econometrics: A modern approach*. Cengage learning.

Zilincikova, Z., & Schnor, C. (2023). *Trends in distance between non-resident parents and minor children following separation: Analysis of the Belgian case, 1992–2018*.