Family states and the wage gap between men and women in Canada

Jarl Mooyaart, Céline Le Bourdais

Abstract

Family decisions have a different impact for men and women on their income over the life-course. Previous research has demonstrated many examples of this, including the motherhood penalty, the marriage premium and the differential impact of divorce. However, most research has focused on one aspect of family related to gender wage differences, e.g. the impact of marriage/cohabitation or that of parenthood. The aim of this research is to provide an overview of how combined family states, i.e. marital status and parenthood status are associated with income from wage for men and women. We examine differences between single, cohabiting, married, divorced/separated and repartnered men and women, with and without children, in order to understand how different family states are associated with men's and women's wage income. We use the linked data of the 2011 Canadian General Social Survey (GSS), containing retrospective family histories, and respondents' annual tax records starting from 1982 until 2011 (T1 Family Files – T1FF), including observations from the ages 25 to 55. Results demonstrate the largest gender gaps are found in family states in which the respondent has had a child of their own. This result persists even when controlling for the number of children in the household. Furthermore, the gap is larger in family states with marriage compared with states with cohabitation, but in the more recent years this difference is no longer significant. Finally, the gender gap is smallest in single (never partnered without child) and the separated (after cohabitation without child) family states.

Introduction

Women earn less income over the life-course compared with men. Although over the last decades women have become closer to men in their labor market participation, research indicates that the gap in income between men and women is still substantial (Baker and Drolet

2010; Blau and Kahn 2017). One of the most heard explanations as to why women earn less income than men is that they make different decisions in balancing their career and family life, in which women generally still devote more time to childrearing and household tasks compared with men (England et al. 2016).

Previous research on the link between family and the gender wage gap has demonstrated that there is a motherhood penalty for women (Gangl and Ziefle 2009; Kahn, García-Manglano, and Bianchi 2014; Budig and England 2001), while there is a fatherhood premium for men (Killewald 2013; Glauber 2018; Hodges and Budig 2010). Furthermore, there is research indicating a marriage premium particularly for men (Ahituv and Lerman 2007; de Linde Leonard and Stanley 2015; Cheng 2016) and to a lesser extent a cohabitation premium (Light 2004; Mamun 2012). While there is some research investigating multiple aspect of family, for instance the impact of being married and parenthood (Loughran and Zissimopoulos 2009; Killewald and Gough 2013), there is no research comparing wage differences across a diverse set of family settings. By focusing only on a limited number of family settings, one does not get the full picture of the role of family in the income gap between men and women. In order to get a broader understanding on how family settings are related to income one needs to draw more comparisons between different family states Furthermore, family settings have become less standard. Over the last decades family settings have become more diverse with the rise of unmarried cohabitation, single parenthood and divorce/separation. By researching the impact of these diverse family settings are related to larger or smaller wage gaps between men and women, we increase our understanding of the role that family settings play in the gender wage gap.

In this study we examine income differences between men and women taking into account both differences in marital/relationship status and parenthood status. The focus of this research will be to compare the gender income gaps on the basis of combined relationship (single, cohabiting, married, separated, divorced) and parenthood status (having become a parent or not). Furthermore, we also examine the income gaps in family settings where men and women have reparterned, which to our knowledge has not been done before. By having all these comparisons we can have a more accurate picture of how family decisions are related to income. The aim of this paper is not to test explanations as to why gender gaps may be larger in certain family settings compared with others, but rather to compare raw unadjusted wage differences between men and women across different family states. While our main focus is on assessing the income gaps between men and women, we also compare the incomes within men and women. That is, even though there may be a large gap in a particular family state between

men and women, that does not necessarily mean that women in that state are disadvantaged compared with women in other family states. Thus, we formulate the following research question: How are the different family states related to wage differences between men and women?

Previous studies have examined differences in income, wage and wealth between men and women. In this study we examine differences in income between men and women depending on their family status. This study uses data from the Canadian GSS of 2011 linked with Canadian tax register data. These data provide an ideal opportunity to analyze the impact of family states on income.

Background

Family states and the wage gap

Family transitions have a different impact on wage for men and women. An important reason as to why incomes of men are higher than women is that parenthood negatively affects the income of women, also known as the motherhood penalty. There are a couple of theorized mechanisms as to why there is this motherhood penalty. Mothers are likely to spend more time outside of the labour force compared with fathers, therefore foregoing on a wage growth (Correll, Benard, and Paik 2007). However, even after controlling for work hours and work experience, there still is a motherhood penalty when comparing the incomes of men and women, which may be due to employers being less inclined to hire mothers and decreasing job performance (England et al. 2016). The decreasing job performance may have to do with women still performing most of the household childcare tasks. Even though women have increased their labor market participation, the time that men spend on household and childcare tasks has hardly increased (England 2010). Men, on the other hand, appear to experience a fatherhood premium (Cooke and Fuller 2018). Possible mechanisms for this phenomenon are the increase in work hours and effort after becoming fathers (or become more productive; transforming event see Mari2018). However, even after controlling for these factors, married men earn higher wages which may have to do with signaling to employers personal traits such as loyalty and dependability, which are considered unobservable traits as these cannot be easily measured (Hodges and Budig 2010).

The literature on the motherhood penalty reveals that the costs of motherhood are not only short term, but also long term (Loughran and Zissimopoulos 2009). The idea is that

because of motherhood, the earnings potential of women is permanently scarred and will never reach the same as non-mothers, given the missed job experience as a result of the pregnancy, therefore also being worse for women who had multiple children. Zhang (2010) finds that in Canada mother's earn about 5-10% less compared with childless women in the years following maternity leave. The decision for women to get a child may put them on a pathway of lower future earnings, whereas for men becoming a parent potentially increases their earnings, meaning that this gap is likely to persist throughout the life-course, especially when they spend more time outside of the labor force after having the child (Aisenbrey 2009).

Next to the influence of parenthood there has also been research on the influence of marital status on income differences between men and women. An influential theory in this domain is the theory of specialization posited by Becker (2009). The idea behind specialization in couples is that it would be most optimal for a couple to have one partner specialize in paid work and the other in unpaid work, in order for the one doing the paid work to receive the maximum returns from the paid work as that person could fully focus on this task. As men would historically have the better labor market position over women, it would predominantly be the men who would do the paid work and women who would do the unpaid work. A large body of research indicates that there is a marriage premium for men, whereas for women the results are mixed, with some studies even finding a negative impact of marriage on income for women (de Linde Leonard and Stanley 2015; Ahituv and Lerman 2007). Similar to the fatherhood premium, some scholars argue that married men would signal positive traits to employers such as being more responsible. Others argue that this is because of specialization, which allows married men to focus more on work whereas wives perform more household and childcare tasks (Killewald and Gough 2013), although de Linde Leonard & Stanley (2015) find no evidence for this explanation. Finally, Killewald and Lundberg 2017, state that men who have increasing wages are also the ones who are more likely to marry, thereby making the men that marry a selective group. Some have studied the combined impact of marriage and parenthood on men's and women's income. Killewald and Gough (2013) find that both men and women have a marriage premium if they do not have children. Married men with children had a higher premium than those without children. Loughran and Zissimopoulos (2009), examining the impact of marriage and childbearing, find a strong wage penalty for married women with children, but observe that married men without children also have a lower wage growth compared with men who do have children in marriage.

With the rise of unmarried cohabitation there has also been an increasing interest in the impact of this type of family state on income. Cohabiters may be more cautious on potential

separation, meaning that women may be less likely to give up their job or work less hours. Also cohabiters are considered more egalitarian, less traditional. For instance, cohabiters are found to split paid work and household tasks more evenly compared with married couples (Davis, Greenstein, and Gerteisen Marks 2007). Light (2004) finds that when transitioning from single to cohabiting there is no change in income for men and women, but when moving to marriage there is a decline in own income for women but not for men.

Many marriages and cohabiting relationships end and thus it is also important to examine income differences between men and women after divorce or separation. Although women may return to the labor market as a result of the divorce or separation they will still be relatively disadvantaged given women's lower labor market investment relative to men, which may especially be the case for divorced mothers (Mortelmans and Jansen 2010; Manting and Bouman 2006; De Vaus et al. 2014). De Regt et al. (2013) find that there is a higher income loss for previously married than cohabiting women, for men the other way around, although generally the decline in income much larger for women. Le Bourdais et al. (2016) find that while all women experience a loss of income after separation from a marriage or cohabiting union, women who ended cohabiting with their partner had more income compared with women who had ended a marriage.

While there is research on the influence of repartnering on income, this research mainly focused on repartnering as a strategy for women to increase their family income, mitigating the negative impact of divorce or separation (de Regt, Mortelmans, and Marynissen 2013; Tamborini, Couch, and Reznik 2015). However, the personal incomes of men and women who repartner are rarely studied, let alone compared. The obvious difference between those who have repartnered also those who never left their first (cohabiting) partner is that the former has experienced the failure of a marriage or cohabiting relationship. This may result in women being less inclined to decrease the number of paid working hours when moving into a new partnership, as in to maintain more financial independence. However, perhaps women who repartner and marry may still resemble a group who want a more traditional division paid and domestic work compared to women who do not marry but rather cohabit.

Based on the literature and research findings described above we can formulate a couple of expectations. We expect the gender gap to be larger for:

-family states with child(ren) compared with family states without

-family states with marriage, smaller for family states with cohabitation and smallest for those not in a union, particularly single (never partnered)

-those who divorce (separation after marriage) compared with those who separate after unmarried cohabitation

-first partnered compared with repartnered

-those who repartnered through marriage compared with those who repartnered through unmarried cohabitation.

The Canadian context: Over time and regional differences

As in many Western countries labor market participation of women has increased over the last decades, which has consequently led to a decrease in the gender wage gap (Baker and Drolet 2010). The rise in female labor participation can be partly contributed to changes in family policy. In 1971 the federal law introduced parental leave to be paid from employment insurance. (Beaujot, Du, and Ravanera 2013). In 1945 the family allowance was introduced, it then changed in 1993 with the introduction of child tax benefits which was particularly aimed at low income families and in 2006 it changed again into a universal child-care benefit.

Next to changes in labor market participation and family policies there have been dramatic shifts in the occurrence different types of family settings. Unmarried cohabitation has become more mainstream over the last decades. In 2011 about 20% of cohabiting couples lived with a common law partner whereas in 1981 this was only about 6% (Milan 2013). While common law couples are mostly found among those their 20s and 30s, there has been an increase in all age groups (Milan 2013). Furthermore, there has been an increase in divorce and separation since the 1960, although stabilizing and slightly decreasing after the 1980s (ref). The increase in divorce has in turn and as a result also more people repartnering and remarrying. In 2001, an estimated 9% of Canadians above age 25 had remarried at least once (Clark & Crompton 2006). There are no national statistics on how many previously married or cohabiting with an ex-partner now live in cohabiting union with another partner. However, most who experience a divorce or separation enter a common law union when they repartner (Wu and Schimmele 2005), making it likely that an even higher percentage is repartnered while not being married. Finally, childbirth outside of marriage has become more prevalent, particularly within a cohabiting union (Girard 2012). Diffusion of a diverse set of family behaviors suggests that the influence of family settings on the gender earnings gap would decrease if certain family settings are no longer a type of family setting that only a select minority opts for.

From a specialization perspective one would expect a decreasing influence of family on the gender pay gap. With women now exceeding men in educational level, men no longer have the clear labor market advantage over women, meaning that couples would be less likely to

have the man as the single breadwinner. Furthermore, one can argue that family policies have made reduced the necessity to have couples specialize in paid and unpaid work as work-family policies have lowered the costs of outsourcing childcare and increasing the possibility to combine childcare tasks with work (i.e. working from home). Indeed there has been a sharp increase in dual-earner families. While in 1976 only 36% of families with children were dual-earners, this has increased to 69% in 2015 (Statscan 2016). Not only have the dual earner couples become more prevalent with respect to the breadwinner the dual earner couples have also been increasingly outperforming the breadwinner couples economically (Budig et al 2016). Geist (2006) finds that in Canada there is even a slight marriage premium for women when comparing married and unmarried women, although this premium is substantially lower for women (6-7%), compared with men (15-20%). It thus appears that married couples may specialize less and therefore become like unmarried cohabiting couples. In summary the influence of marital status on the wage gap between men and women is likely to have decreased. It appears, however, that parenthood continues to create a gap between men and women's wages. Pal and Waldfogel (2016) find a small general decrease in motherhood penalty, but that mainly the relative position of married mothers compared with unmarried mothers has improved. Furthermore, Juhn & McCue (2017) claim that while the gender gap has decreased the relative share of parenthood on explaining that gap has increased. Weeden et al (2016) argue that the motherhood penalty may persist as fathers may still be more likely to work over-hours whereas mothers on the other hand may work part-time. General conclusion appears to be that while the influence of marital status decreased, the motherhood penalty is likely to have remained more stable.

However, the diffusion of family behavior and the changes in family policy have not been uniform across the country. Particularly Quebec has diverged from the other provinces of Canada in terms of demographic changes and family policy. First, unmarried cohabitation has increased more rapidly in Quebec compared with the rest of Canada, with unmarried cohabitation replacing marriage as the most dominant union type and with most children now being born to unmarried cohabiting couples rather than married couples (Laplante and Fostik 2016).This is unlike the rest of Canada where although unmarried cohabitation rates increased, marriage remains the dominant union type and also the dominant setting for childbearing (Laplante and Fostik 2016). In terms of family policy, the Quebec government since the 1990s diverged from the rest of Canada in higher pregnancy leave payment (with less strict requirements) and strongly subsidized childcare and non-transferable paternity leave for fathers (Mayer and Le Bourdais 2019).

Another important difference between Quebec and the rest of Canada is their system of law which has implications for married and cohabiting couples, particularly when they separate. Quebec has developed a law system based on French civil law, while in the rest of Canada the law is based on common law, in which in the latter system cohabiting partners have more legal protection under the first, although there is no difference for childcare allowences (Le Bourdais et al. 2016; Laplante and Fostik 2016). Therefore especially women with low personal income would seek the safety of marriage (Laplante Fostik 2016). On the other hand, Le Bourdais et al. (2016) find that in Quebec the difference between married and cohabiters in income after separation is less compared to the rest of Canada in the more recent birth cohorts and attribute this to cohabitation having become more similar to marriage. While there are some subtle differences between the other provinces, as a whole the provinces other than Quebec display a similar development to the US when it comes to demographic changes and family policy (Laplante and Fostik 2016). Thus, overall we expect less variation in the gender pay gap across different family states in Quebec with respect to the rest of Canada, particularly in the difference in the gap between marriage and cohabitation to be more similar in Quebec compared with the Rest of Canada.

Educational level differences

The differences in incomes between men and women may depend on educational level. It is argued that higher educated individuals have more egalitarian values, which could mean that highly educated couples share paid and unpaid work more equally (Raley, Bianchi, and Wang 2012). Women do most of the house work, but differences are smaller among highly educated men and women. Furthermore, the gap is largest among lower educated, although mainly because women participate less in labour force (Evertsson et al. 2009). Therefore one could expect differences between men and women in the different family settings to be smaller for higher educated than for the lower educated. However, one can also argue that high skilled women also have more to lose from inactivity on the labor market because of childbearing and rearing, which could lead to larger differences in income between highly educated mothers and fathers (England et al. 2016). Furthermore, the field of study has an important influence on future income, as women still tend to opt for fields of lower income compared with men (Bobbitt-Zeher 2007), meaning that perhaps particularly among higher educated there is a larger gap in income as the consequence of this phenomenon. On the other hand, Buchmann and

McDaniel (2016) find that the motherhood penalty particularly among the highly skilled mothers declined.

Data & Variables

In order to investigate income differences between men and women depending on their family state, we use data of the 2011 Canadian General Social Survey (GSS) and linked with respondents' annual tax records starting from 1982 (T1 Family Files – T1FF), thereby providing detailed information on individual and family income. The GSS survey is representative of all Canadians aged 15 years and older who were not residing in the Yukon, Northwest Territories or Nunavut, and who were not living in an institution at the time of the interview. The GSS collected retrospective family histories, including all marriages, common law unions, separations, divorces and dates of birth of children.

Wage is constructed, as the income from employment (earnings from T4 slips), self-employment, employment insurance, worker's compensation and other employment income. This higher level of detail compared with studies deriving income from survey data is particularly important when comparing women who during pregnancy with men as in previous studies pregnant women may not have reported an income from wage, which would result in an overestimation of the gender income gap in these situations. We excluded income from alimony and government benefits as these are directed at households rather than individuals. Furthermore, income from investments and dividends are not included. Thus, our measure in general represents income from work, whether from wage or self-employment and whether currently working or not being able to work at that time (because of disability, pregnancy etc.). Information on taxes becomes increasingly precise over the years, that is why particularly in the 1980's not all forms of income are accurately registered, meaning that there could be slight bias in that people in more recent years have a higher income.

Fourteen family states are identified based on relationship status and parenthood status. We distinguish 7 different relationship states, based on the information of the GSS 2011. 1) single 2) cohabiting 3) married 4) separated after cohabitation 5) separated after marriage 6) repartnered previously cohabiting 7) repartnered previously married. The last four categories also include those who had multiple episodes of repartnering/separating. For all these relationship states we then distinguish individuals who had a child (biological or adopted based

on the GSS). Once having had a child one cannot go back to a state without a child, i.e. once transitioned to a state with child it is considered irreversible regardless if one loses the child or the child leaves the parental home. That is, the notion of becoming a parent is considered as a life-changing event that will have repercussions for future income.

In order to disentangle differences between family states and the impact that having, particularly young, children in the household we include two variables. We control for the number of children in the household under 18, including stepchildren, in three categories (0=no children 1=1 child, 2=2 children 3=3 or more children), from which we use the information derived from the T1FF tax files regarding the family composition. We use the information of the T1FF because this is more accurate in terms of the number of children living in a household in a given year compared with the GSS 2011. Second we control for the presence of a 4 year old or less young child, also based on information from the T1FF tax files , coded 0=no children of four or younger, 1=one child of four or younger, 2=two or more children of four or younger. This variable is included as children younger than 5 require more care as they are not yet of school going age. These variables help to distinguish the impact that one or multiple young and resident children have on income for men and women, from the influence of the different family states on income differentials between men and women.

Educational level – 1) college education or higher 2) certificate community college 3) high school or less, some college (everyone who has not got a post-secondary degree)

Finally, we control for year and age (and its quadratic term).

Methods

To estimate differences in income between men and women in different family states we use OLS regression in which we account for the fact that individuals have multiple observations (using the VCE cluster option in STATA). We convert the incomes to 2002 Canadian dollars and subsequently to a logarithmic scale in order to improve the income distribution to a more normal distribution. Only those with an income are included in the analysis. By excluding those observations without income we can more precisely observe income differences between men and women depending on their family states, as we can include income as a continuous measure, rather than income deciles as a dependent (which would be an approach if one would want to include those with 0 income) This means that we only study income gaps between those who have an income. The general model includes three interactions. First, we interact gender with

the family states in order to establish whether family states have a different impact on income for men and women. In order to distinguish the influence of the family states from the influence of children and how this may differ for men and women, we also interact gender with the number of children under age 18 variable and with the number of children under age 5 variable. This way we can investigate family state, on top of or next to the care burden of one or multiple children.

In order to assess to what extent the family state differences in the gender gap vary across educational groups and vary for those living in Quebec vs. the rest of Canada, we conduct two three-way interactions. In both these models we also include the three-way interaction with the number of children under age 18 and the number of children under age 5, in order to control that differences between educational groups and region are not the result of differences in number of children in different family states.

Results

Figure 1 shows the predicted wage for men and women in each family state. From figure 1 it is immediately clear that men always have a higher or equal wage compared with women. The differences are largest in states family states that include having (had) a child. This is the result of men having relatively high incomes in these family states, while women having relatively low income. The differences between women in family states with children appear to be non-significant. For men, the separated with child have a lower income compared with those in the married with child state. Women in family states without children have a higher income compared with women who have had a child. When comparing the family states without children between men and women there are some significant income gaps. Men have a significantly higher income in the cohabitation, marriage and divorced family states. Yet, the gap between single women and men is not significant. However, this does not mean that single women have a higher income than married or cohabiting women, but rather that single men have a lower income compared with men who are married or cohabiting. Separated men and women without children have the same predicted wage, whereas divorced men without children earn more than their female counterparts . This is again because of separated and divorced women without children have about the same estimated income, whereas for men the divorced have a higher income than men who separate. Among the repartnered, whether married or cohabiting, we do not find statistical differences in states without child. The differences for the

repartnered with a child between men and women, whether cohabiting or married, are similar with the income gaps of married and cohabiting with children.

When we test differences in the gender gaps (F-tests) there is one consistent finding, which is that the gender gap is larger in the same state with child compared with the same state without child. When we compare family states without child, the gender gap is smaller for cohabitation than it is for marriage and the gap is not significant for singles. There is also a significant difference in the gender gap between those who separate after cohabitation compared with those who separate after marriage, as for the first there is no significant gap, whereas for the latter there is. There are no significant differences between married or cohabiting in first union and those who repartnered. However, for repartnered we do not find a significantly larger gap for those who repartner through cohabitation compared with those who repartner through marriage.

Figure 1 Comparisons of men's and women's wages across family states

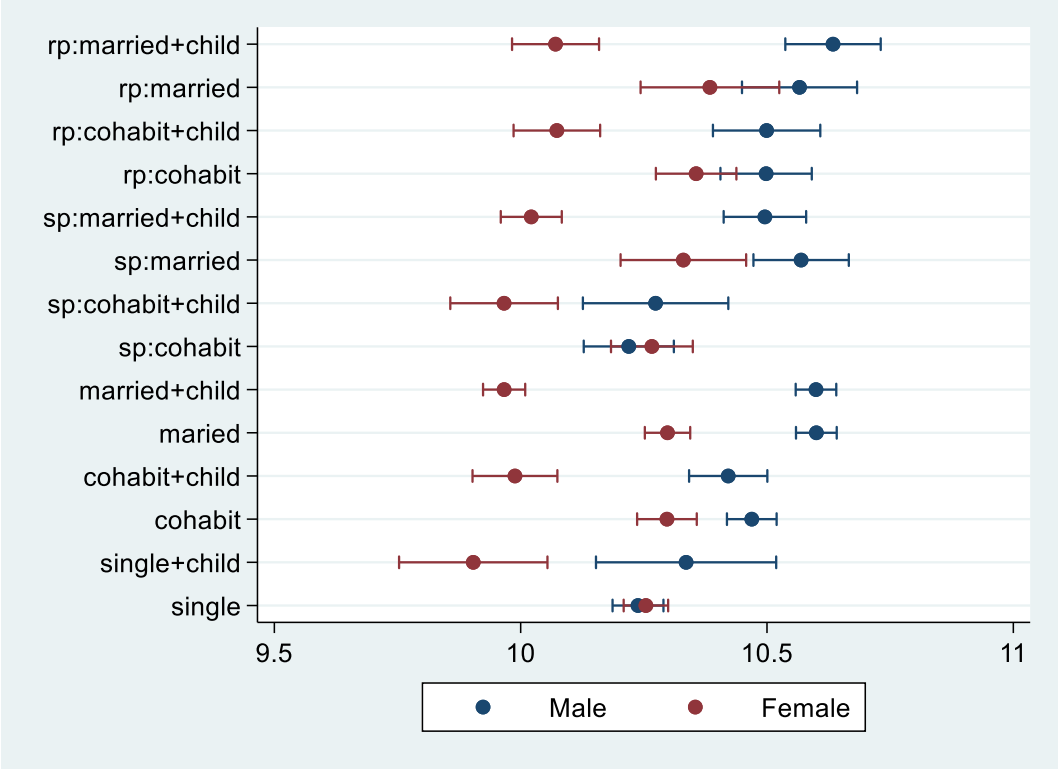


Figure 2 displays the same model only excluding the observations from the 1996 and older tax years, thereby showing the results of the model for only the most recent 15 years. The results are generally similar to those in Figure 1. There are, however, some differences between

gender gaps are no longer significant in the results from Figure 2. The gender gap for married is no longer larger than the gap of cohabitation. Furthermore, the gender gap for separated after marriage is not significantly larger than the gender gap for separated after cohabitation. Generally, the standard errors are larger, yet there remain substantial gender gap differences between states with child and without even when controlling for number of children younger than 5 and the number of children younger than 18 in the household.

Figure 2 Comparisons of men's and women's wages across family states using 1997-2011 taxfile data only

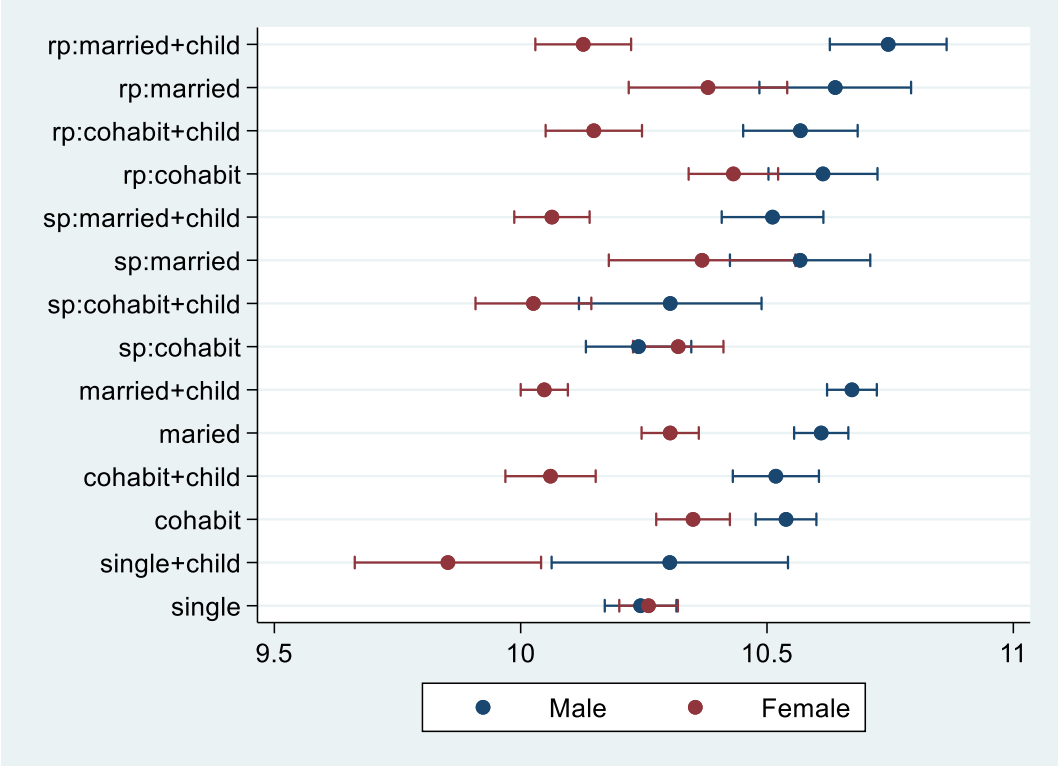


Figure 3 shows the estimated mean wages for men and women in Quebec and the other provinces of Canada. Generally, the same pattern emerges in Quebec and the rest of Canada, in which the gaps are largest in family states with child compared with those without. Results do not support the expectation that the gender wage gaps across the family states are lower in Quebec compared with the rest of Canada. In fact, there are two family states in which the gender wage gap is larger in Quebec than it is in the rest of Canada. The gender wage gaps in the family states cohabitation and separated after cohabitation with child are larger in Quebec compared with the rest of Canada. Furthermore, the gender gap in cohabitation in not smaller

to the gap in marriage in Quebec, whereas this is the case in the rest of Canada. This is in line with the expectation that cohabitation is more similar to marriage in Quebec than in the rest of Canada. However, there is an important differences that is not visible from Figure 3, which is that the wage penalty for women for the number of children in the household is lower in Quebec compared with the rest of Canada. Table 1 displays coefficients of the three-way interaction between gender, number of children (in two variables nr. of children <5 and nr. children <18) and region (Quebec vs. Rest of Canada). The table shows negative coefficients for the interaction between female and number of children, in which the coefficients are larger for a higher number of children. The three-way interaction with Quebec shows positive coefficients, meaning that the negative impact of having (young) children in the household in Quebec is lower. Thus, the more socio-democratic family policies in Quebec appear to have a moderating effect in the impact that (young) children have on wage differentials between men and women, while it does not change the gender gaps based on the family states.

Figure 3 Comparison of Quebec and Rest of Canada in men's and women's wages across family states

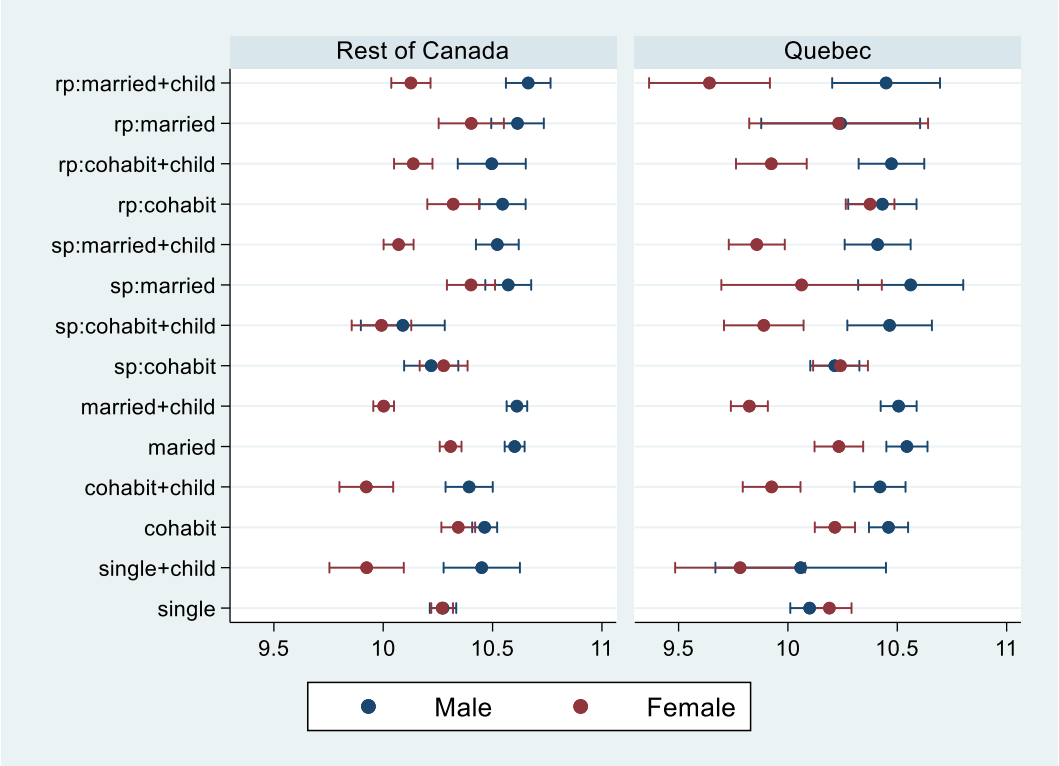


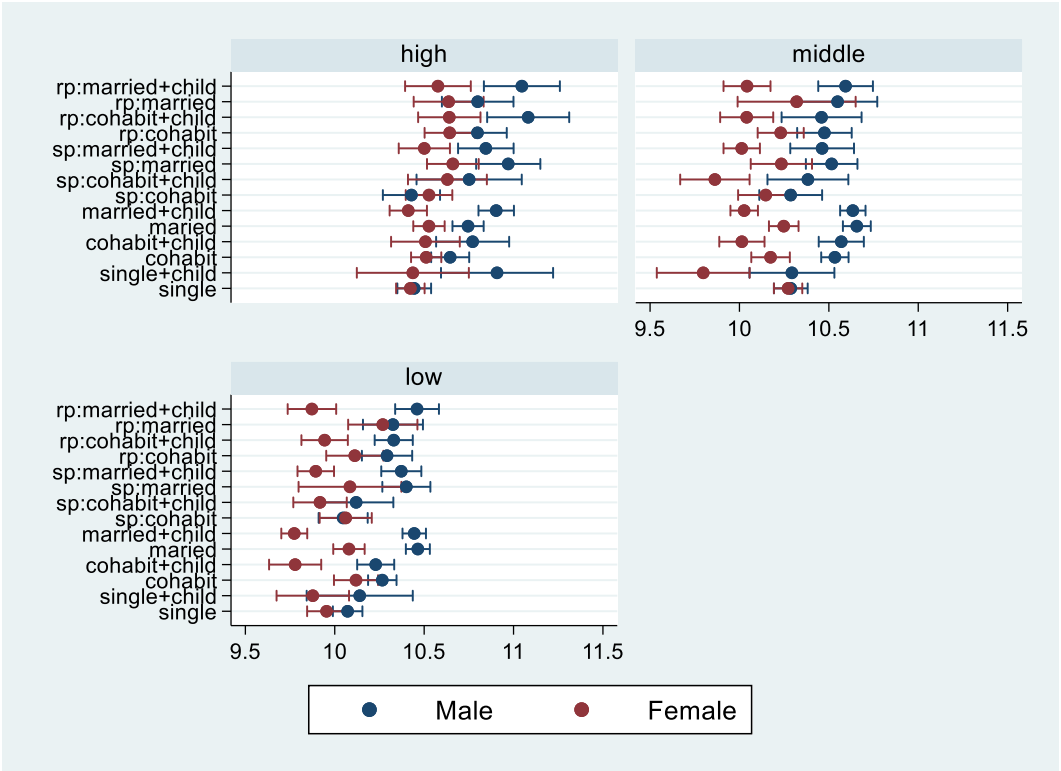
Table 1 Three-way interaction coefficients number of children, gender, Quebec vs Rest of Canada

Variables	**Coefficient**	**Standard Error**
Female*1 child <18	-.083**	.032
Female*2 child <18	-.261**	.035
Female*3 child <18	-.510**	.056
Female*1 child <5	-.044	.027
Female*2 child <5	-.199**	.043
Female*1 child <18*Quebec	.071	.062
Female*2 child <18*Quebec	.145*	.073
Female*3 child <18*Quebec	.229	.119
Female*1 child <5*Quebec	.119*	.053
Female*2 child <5*Quebec	.199*	.097

**p<0.01, *p<0.05

Figure 4 shows the marginal mean wages for men and women in the different family states, split for educational level. Results show that the gender gaps tend to be slightly smaller among the highly educated. However, the middle educated do not uniformly have smaller gender wage gaps compared with the low educated. In fact, the gender gap is significantly larger in the cohabitation family state compared with both the high and low educated. The low educated have a larger gender gap in the marriage and child family state compared with the high educated. Generally, the differences between educational levels in the gender gap appear to be largest among those in first union, rather than repartnered or separated. Thus, there is only weak support for the educational gradient in differences in the relationship between family state and gender wage gap.

Figure 4 Comparison between educational level groups in men's and women's wages across family states



Discussion

Results from this study clearly demonstrate that the gender wage gap is not uniform across different family settings. The gender wage gap is particularly present in family states in which individuals have (had) a child of their own. This gap persist even when controlling for the number of (young) children in the household. Thus, the difference between parents and non-parents cannot only be explained by the unequal division of childcare tasks. Furthermore, the results appear to support the more lasting negative impact of motherhood on wages for women, whereas particularly for married men this is the opposite.

With respect to marital status, the results demonstrate that the gender wage gap is largest in marriage, but that this is mainly the case because of men having a higher wage in family state with marriage. However, the cohabitation gap appears to converge to the marriage gap as in the more recent observations the difference is no longer significant. The analysis which compares Quebec with the rest of Canada revealed that in Quebec it is already the case that marriage and cohabitation gender gaps are about the same. There does appear to be an educational gradient

with respect to the gender wage gap difference between marriage and cohabitation. Both the high and low educated have a lower gender gap in cohabitation, compared with the middle educated. Possibly this has to do with a different meaning of cohabitation for the high and low educated, in which for the higher educated cohabitation is an alternative to marriage in which couples share paid and unpaid work more equally, whereas among low educated it could be an income pooling strategy to cut costs (Hiekel, Liefbroer, and Poortman 2014).

The gender gap is lowest among those who are single and those who separated after cohabitation. Again, this is mainly because of the variation in men's predicted wage across family states, as for women the main difference is between states with and without a child. Overall, our results agree with findings of Juhn & McCue (2017) in that particularly the motherhood penalty persists whereas differences across marital status decrease.

This study also shed some light on gender wage gap differences in family states of divorce, separation, but also repartnering. Results showed that the gender gap was larger in separation after marriage compared with separation after cohabitation. However, this result became no longer significant when only using the more recent observations. This suggests that divorce and separation have become more similar in their economic consequences, which is not surprising given that the difference between marriage and cohabitation also appeared to have decreased. We did not find significant differences between those in a first union compared to those who repartnered. The standard errors for the predicted wages for men and women in the repartnered states were generally large, which may have to do with the lower number of observations. However, it could also be that the variation in these groups is higher. For instance, those who have repartnered multiple times may be different from those who only repartner once.

This study is not without limitations. Firstly, we did not have a measure for working hours. If we would have had such a measure we could have investigated to what extent the gender gap persists across the different family states. An additional analysis which includes a crude measure of work status (full-time>30 hours, part-time<30 hours) does show a decrease in this motherhood penalty, however, we are unable to assess to what extent the gender gaps can be explained by different number of working hours. A second limitation, is that the data is a bit dated, as the most recent observations are from 2011. Since this time there has been an increasing push for men to take parental leave and to do more childcare tasks, which could mean that in current times the gender gaps across the family states are lower in Canada. Finally, given the low observations in single parenthood, which may be the result of most single parents having found a partner by age 25, we had little observations particularly in this family state. Women in this state may be particularly disadvantaged, but so may men, and thus it is unclear

how strong of a gender gap is present in this family state when comparing it to other family states. Nonetheless, this study has demonstrated gender wage gap differences across multiple aspects of family.

REFERENCES

Ahituv, Avner, and Robert I. Lerman. 2007. "How Do Marital Status, Work Effort, and Wage Rates Interact?" *Demography* 44 (3): 623–47. doi:10.1353/dem.2007.0021.

Aisenbrey, Silke. 2009. "Economic Penalties and Rewards of Family Formation, Gender and Education in the Low-Income Sectorin Germany." *British Journal of Sociology*. doi:10.1111/j.1468-4446.2008.01220.x.

Baker, Michael, and Marie Drolet. 2010. "A New View of the Male/Female Pay Gap." *Canadian Public Policy*. doi:10.3138/cpp.36.4.429.

Beaujot, Roderic, Ching Jiangqin Du, and Zenaida Ravanera. 2013. "Family Policies in Quebec and the Rest of Canada: Implications for Fertility, Child-Care, Women's Paid Work, and Child Development Indicators." *Canadian Public Policy*. doi:10.3138/CPP.39.2.221.

Becker, Gary Stanley, and Gary S Becker. 2009. *A Treatise on the Family*. Harvard university press.

Blau, Francine D., and Lawrence M. Kahn. 2017. "The Gender Wage Gap: Extent, Trends, & Explanations." *Journal of Economic Literature*. doi:10.1257/jel.20160995.

Bobbitt-Zeher, Donna. 2007. "The Gender Income Gap and the Role of Education." *Sociology of Education*. doi:10.1177/003804070708000101.

Bourdais, Céline Le, Sung Hee Jeon, Shelley Clark, and Évelyne Lapierre-Adamcyk. 2016. "Impact of Conjugal Separation on Women's Income in Canada: Does the Type of Union Matter?" *Demographic Research*. doi:10.4054/DemRes.2016.35.50.

Buchmann, Claudia, and Anne McDaniel. 2016. "Motherhood and the Wages of Women in Professional Occupations." *RSF*. doi:10.7758/rsf.2016.2.4.05.

Budig, M. J., and P. England. 2001. "The Wage Penalty for Motherhood." *American*

Sociological Review. doi:10.2307/2657415.

Cheng, Siwei. 2016. "The Accumulation of (Dis)Advantage: The Intersection of Gender and Race in the Long-Term Wage Effect of Marriage." *American Sociological Review* 81 (1): 29–56. doi:10.1177/0003122415621263.

Cooke, Lynn Prince, and Sylvia Fuller. 2018. "Class Differences in Establishment Pathways to Fatherhood Wage Premiums." *Journal of Marriage and Family*. doi:10.1111/jomf.12475.

Correll, Shelley J., Stephen Benard, and In Paik. 2007. "Getting a Job: Is There a Motherhood Penalty? For Helpful Comments and Suggestions." *American Journal of Sociology*.

Davis, Shannon N., Theodore N. Greenstein, and Jennifer P. Gerteisen Marks. 2007. "Effects of Union Type on Division of Household Labor: Do Cohabiting Men Really Perform More Housework?" *Journal of Family Issues*. doi:10.1177/0192513X07300968.

England, Paula. 2010. "The Gender Revolution: Uneven and Stalled." *Gender and Society*. doi:10.1177/0891243210361475.

England, Paula, Jonathan Bearak, Michelle J. Budig, and Melissa J. Hodges. 2016. "Do Highly Paid, Highly Skilled Women Experience the Largest Motherhood Penalty?" *American Sociological Review*. doi:10.1177/0003122416673598.

Evertsson, Marie, Paula England, Irma Mooi-Reci, Joan Hermsen, Jeanne De Bruijn, and David Cotter. 2009. "Is Gender Inequality Greater at Lower or Higher Educational Levels? Common Patterns in the Netherlands, Sweden, and the United States." *Social Politics*. doi:10.1093/sp/jxp008.

Gangl, Markus, and Andrea Ziefle. 2009. "Motherhood, Labor Force Behavior, and Women's Careers: An Empirical Assessment of the Wage Penalty for Motherhood in Britain, Germany, and the United States." *Demography*. doi:10.1353/dem.0.0056.

Glauber, Rebecca. 2018. "Trends in the Motherhood Wage Penalty and Fatherhood Wage Premium for Low, Middle, and High Earners." *Demography*. doi:10.1007/s13524-018-0712-5.

Hiekel, Nicole, Aart C Liefbroer, and Anne-Rigt Poortman. 2014. "Understanding Diversity in the Meaning of Cohabitation across Europe." *European Journal of Population* 30 (4). Springer: 391–410.

Hodges, Melissa J., and Michelle J. Budig. 2010. “Who Gets the Daddy Bonus?: Organizational Hegemonic Masculinity and the Impact of Fatherhood on Earnings.” *Gender and Society*. doi:10.1177/0891243210386729.

Juhn, Chinhui, and Kristin McCue. 2017. “Specialization Then and Now: Marriage, Children, and the Gender Earnings Gap across Cohorts.” In *Journal of Economic Perspectives*. doi:10.1257/jep.31.1.183.

Kahn, Joan R., Javier García-Manglano, and Suzanne M. Bianchi. 2014. “The Motherhood Penalty at Midlife: Long-Term Effects of Children on Women’s Careers.” *Journal of Marriage and Family*. doi:10.1111/jomf.12086.

Killewald, Alexandra. 2013. “A Reconsideration of the Fatherhood Premium: Marriage, Coresidence, Biology, and Fathers’ Wages.” *American Sociological Review*. doi:10.1177/0003122412469204.

Killewald, Alexandra, and Margaret Gough. 2013. “Does Specialization Explain Marriage Penalties and Premiums?” *American Sociological Review* 78 (3). Sage Publications Sage CA: Los Angeles, CA: 477–502.

Laplante, Benoôt, and Ana Laura Fostik. 2016. “Cohabitation and Marriage in Canada. The Geography, Law and Politics of Competing Views on Gender Equality.” In *Cohabitation and Marriage in the Americas: Geo-Historical Legacies and New Trends*. doi:10.1007/978-3-319-31442-6_3.

Light, Audrey. 2004. “Gender Differences in the Marriage and Cohabitation Income Premium.” *Demography* 41 (2): 263–84. doi:10.1353/dem.2004.0016.

Linde Leonard, Megan de, and T. D. Stanley. 2015. “Married with Children: What Remains When Observable Biases Are Removed from the Reported Male Marriage Wage Premium.” *Labour Economics* 33: 72–80. doi:10.1016/j.labeco.2015.02.010.

Loughran, D.S., and J.M. Zissimopoulos. 2009. “Why Wait? The Effect of Marriage and Childbearing the Wages of Men and Women.” *Journal of Human Resources*. doi:10.3368/jhr.44.2.326.

Mamun, Arif. 2012. “Cohabitation Premium in Men’s Earnings: Testing the Joint Human Capital Hypothesis.” *Journal of Family and Economic Issues*. doi:10.1007/s10834-011-9252-5.

Manting, Dorien, and Anne Marthe Bouman. 2006. “Short- and Long-Term Economic Consequences of the Dissolution of Marital and Consensual Unions. The Example of the Netherlands.” *European Sociological Review*. doi:10.1093/esr/jcl005.

Mayer, Molly, and Céline Le Bourdais. 2019. “Sharing Parental Leave Among Dual-Earner Couples in Canada: Does Reserved Paternity Leave Make a Difference?” *Population Research and Policy Review*. doi:10.1007/s11113-018-9497-x.

Mortelmans, Dimitri, and Mieke Jansen. 2010. “Income Dynamics After Divorce. A Latent Growth Model of Income Change on the European Community Household Panel.” *Brussels Economic Review*.

Pal, Ipshita, and Jane Waldfogel. 2016. “The Family Gap in Pay: New Evidence for 1967 to 2013.” *RSF*. doi:10.7758/rsf.2016.2.4.04.

Raley, Sara, Suzanne M. Bianchi, and Wendy Wang. 2012. “When Do Fathers Care? Mothers’ Economic Contribution and Fathers’ Involvement in Child Care.” *American Journal of Sociology*. doi:10.1086/663354.

Regt, Sabrina de, Dimitri Mortelmans, and Tinne Marynissen. 2013. “Financial Consequences of Relationship Dissolution: A Longitudinal Comparison of Formerly Married and Unmarried Cohabiting Men and Women.” *Sociology*. doi:10.1177/0038038512453793.

Tamborini, Christopher R., Kenneth A. Couch, and Gayle L. Reznik. 2015. “Long-Term Impact of Divorce on Women’s Earnings across Multiple Divorce Windows: A Life Course Perspective.” *Advances in Life Course Research*. doi:10.1016/j.alcr.2015.06.001.

Vaus, David De, Matthew Gray, Lixia Qu, and David Stanton. 2014. “The Economic Consequences of Divorce in Australia.” *International Journal of Law, Policy and the Family*. doi:10.1093/lawfam/ebt014.

Weeden, Kim A., Youngjoo Cha, and Mauricio Bucca. 2016. “Long Work Hours, Part-Time Work, and Trends in the Gender Gap in Pay, the Motherhood Wage Penalty, and the Fatherhood Wage Premium.” *RSF*. doi:10.7758/rsf.2016.2.4.03.

Wu, Zheng, and Christoph M. Schimmele. 2005. “Repartnering after First Union Disruption.” *Journal of Marriage and Family*. doi:10.1111/j.0022-2445.2005.00003.x.