

Making Leave Easier: Better Compensation and Daddy-Only Entitlements*

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Abstract

In 2006, Quebec enacted a landmark reform to paid parental leave that greatly improved the generosity of entitlements and established a father's non-transferable right to paid leave. Using data from the Employment Insurance Coverage Survey and employing a difference-in-differences setup, I find that the reform was associated with a striking rise in fathers participation: an increase of 59 percentage points in the probability of a father receiving parental leave benefits. Further, there is evidence of an intra-household flypaper effect via the labeling of leave as 'daddy-only', i.e., the allocation of leave within a household appears to be influenced by the framing of legal rights even when they do not bind. In the case of mothers, the reform was associated with an increase of 14 percentage points in claim rates. The duration of the average maternity leave increased by over half a month under the new program. I find no change in mothers exit rates from the labor market on average but do find the reform to be associated with an increase in the probability of returning to the pre-birth employer, especially for first-time mothers.

JEL Classification: J13, J22, J16, J18, J53, I38

*Working Paper: Please do not cite or distribute without author's permission. This analysis is based on the Statistics Canada Employment Insurance Coverage Survey, (2001- 2011). All computations, use and interpretation of these data are entirely that of the author.

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1 Introduction

Job-protected parental leave mandates are a common public provision in developed countries, with the aim of promoting the welfare of infants and parents. They vary considerably internationally - they tend to be long, universal and generously compensated in European countries, whereas they are short, restricted and unpaid in most of the United States.¹ The central aim of maternity leave is to allow mothers to fully recover from childbirth and to form a bond with their babies. Other rationales for providing parental leave include maintaining a productive economy by retaining female workers, sustaining birth rates, decreasing unemployment and relieving some of the parenting deficit that is growing alongside the increasing incidence of dual-earner parents with long working hours (Haas, 1992; Wilkinson, 1997).

In countries that have well-established provisions for paid leave, the recent trend in policy-making has been towards increasing the generosity of entitlements (Öun, 2010). For example, a reform to the paid parental leave program in Quebec, which is the subject of this study, aimed to improve access and feasibility of leave for a majority of men and women. This was likely in response to the criticisms of the older Employment Insurance (EI) system that it offers weak and gendered coverage, and that it is inaccessible to that share of the population that is more likely to have non-standard employment (Vosko, 2000). Workers who undertake part-time, casual, seasonal or temporary employment, or who work for several employers or are self-employed are less likely to meet the eligibility criteria. Moreover, they are also more likely to have limited financial resources, making it financially infeasible to take leave that is inadequately compensated, especially at a crucial time such as the birth of a child which entails many expenses. Accordingly, there have been moves towards not only relaxing eligibility criteria so that more people qualify for benefits, but also making compensation more generous such that they offer a viable substitute for regular pay.

As the single breadwinner model increasingly gives way to the dual-earner household, another increasingly common objective of parental leave reforms is to promote gender equality. There has been a trend in policy-making, beginning in Scandinavia but now catching on in other countries, towards promoting equality by modifying the traditional division of labor so that both financial and household responsibilities are fairly shared by women and men.² One such strategy is to encourage fathers to take more parental leave. Such a strategy aims to increase fathers' contact with and care for their infants, train them as sole caregivers, reduce work-family frictions by labeling working men as fathers in the workplace, and offer a more supportive home environment for working mothers by reducing the burden of childcare and domestic work that falls on them. These policies aim to strengthen the ties of fathers to their family and simultaneously the ties of mothers to working life. Fathers' participation in parental leave programs has thus become a notable area of policy debate in many OECD countries (Moss and O'Brien).

In this study, I explore the effects of a landmark reform to parental leave benefits in Quebec which both increased the generosity of leave entitlements and established 'daddy-only' leave, on fathers' and mothers' participation in the program, as well as mothers' labor market behavior. I explore four main questions. First, how does the leave-taking behavior of fathers and mothers respond to such an increase in generosity? Second, from a policy design perspective, does it matter how we allocate the legal rights to benefits within the household? Third, what were the effects on mothers' labor market outcomes such as employment and job continuity? Fourth, did the effects of the reform differ for parents who may be vulnerable to additional pressures surrounding the issue of leave-taking, such as parents from low-income households or first-time parents?

My strategy is rooted in exploiting variation in paid leave entitlements across Canadian provinces over time.

¹By state mandate, pregnancy and childbirth-related leave are available to eligible employees in California, Colorado (for public employees), Hawaii, New Jersey, New York, Rhode Island, via Temporary Disability Insurance. Further, California, New Jersey and Rhode Island have established Paid Family Leave Programs to augment their existing TDI Programs

²The first country to introduce an explicit period of leave reserved for only fathers' use, i.e., a 'Daddy quota', was Norway. The belief that paternity leave can promote these changes in gender dynamics is expressed in a series of white papers *Likestilling og Likelønn* (<http://www.regjeringen.no/nb/dep/bld/pressesenter/pressemeldinger/2010/likestilling-for-likelonn.html?id=626450>, accessed 10/05/2012.) and *Reformerad Föräldraförsäkring* Kärlek, Omvardnad, Trygghet (<http://www.regeringen.se/sb/d/5140/a/49766> - accessed 10/05/2012)

From 2001 to 2005, eligible employees in all provinces could claim parental leave benefits through the Employment Insurance (EI) Program. In 2006, Quebec left the national Employment Insurance system and established the Quebec Parental Insurance Plan (QPIP). The new program lowered the eligibility criteria so that many more parents could qualify, increased the income replacement rate offered by benefits, raised the earnings ceiling that benefits could be claimed on, offered flexibility through more leave options, and established a fathers individual non-transferable right to leave (Doucet et al., 2010). The reform offers an attractive basis for inference due to not only the existence of a natural control group in the form of the other provinces but also the orthogonality of the changes in the structure of benefit entitlements to unobserved individual characteristics. This paper is the first to conduct a detailed examination of this policy episode while examining a long span of data, exploiting variation across provinces and across time, controlling for individual characteristics and province trends, and conducting detailed regression analyses in order to identify causal relationships.³citetmarshall2008 conducts a basic study of how fathers claim rates responded to the QPIP reform but the study has multiple limitations: it only examines data up to one year after the reform occurred, it only looks at overall patterns by comparing averages in Quebec to averages in other provinces, it does not control for any individual characteristics or province trends, and it does not conduct any statistical tests of significance. This paper conducts a more thorough analysis by examining a longer span of data, exploiting variation across provinces and across time, controlling for individual characteristics and province trends, and conducting detailed regression analyses in order to evaluate statistical significance. Moreover, this paper possesses a wider scope, evaluating the existence of a labeling effect, considering labor-market outcomes for mothers, and exploring how the effects of the reform may have differed for members of particularly vulnerable groups. Further, This paper is the first to evaluate a 'use it or lose it' Daddy quota on fathers leave-taking using a difference-in-difference technique with a natural control group, and is the first to offer causal evidence that the 'daddy-only' label matters even when a quota does not present a binding constraint, i.e., that an intra-household flypaper effect exists between spouses in the consumption of parental leave benefits.

2 Background

2.1 Policy Environment

In every Canadian province, at least a full year of job-guaranteed parental leave is available to every parent who has worked 52 weeks or more with their current employer.⁴ Further, eligible parents can claim parental leave benefits, thus converting some of this leave into paid leave. The Employment Insurance (EI) Program, which all Canadian provinces used from 2001 through 2005, offers maternity benefits which mothers can take in the weeks immediately succeeding the birth, and some parental benefits which mothers and fathers must decide how to share between them. Most provinces continue to subscribe to the EI Program, except for the province of Quebec. On the 1st of January 2006, Quebec introduced the Regime Quebecois D'assurance Parentale or the Quebec Parental Insurance Plan (QPIP), to which employees could contribute and claim benefits from instead of the traditional EI system.

The current details of the Employment Insurance plan, available to residents of other provinces, and the QPIP Basic and Special plans, available to residents of Quebec, are given by Table 1. QPIP's features were designed to offer an improvement over the traditional EI system by easing some of the common barriers that parents previously faced to taking leave, namely, ineligibility, financial feasibility, and in the case of fathers, gendered attitudes. First, the reform lowered the eligibility criteria for claiming benefits, thereby improving coverage and making taking leave possible for more parents by improving access to income replacement. Under the EI system, workers from seasonal, temporary, part-time or otherwise non-standard employment, who tend disproportionately to be low-income mothers, often have difficulty meeting the hours and tenure-based requirements for eligibility, whereas the QPIP system uses a earnings-based threshold which is easier to meet. Second, QPIP boasts more generous financial compensation. By raising the income replacement rate and the ceiling of maximum insurable earnings on which one could claim, QPIP ensures that a greater

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⁴In Quebec, the duration of job-guaranteed leave is 52 continuous weeks but is available up to 70 weeks after the birth of the child. However, the period of paid leave can only be taken in the 52 weeks after the birth of the child.

Table 1: Details of Paid Parental Leave Programs in Canada

	Employment Insurance	QPIP Basic Plan	QPIP Special Plan
Eligibility	600 hours of insurable employment	\$2000 of insurable earnings	\$2000 of insurable earnings
Basic Replacement Rate	55%	70% for all maternity & paternity, and first 5 weeks of parental leave, and 50% thereafter	75%
Max insurable earnings	\$43,200	\$62,500	\$62,500
Waiting Period	2 weeks	None	None
Duration	Total 50 weeks: 15 weeks maternity leave 35 weeks parental leave no paternity leave	Total 55 weeks: 18 weeks maternity leave 32 weeks parental leave 5 weeks paternity leave	Total 40 weeks: 15 weeks maternity leave 25 weeks parental leave 3 weeks paternity leave

Table 1: Source: Table constructed by author using information from the Digest of Benefit Entitlement Principles, available at http://www.servicecanada.gc.ca/eng/ei/digest/chp12_appendix.shtml. For features which may change on a yearly basis, such as the amount of maximum insurable earnings, figures provided are for 2010.

portion of foregone wages can be recovered via benefits while on parental leave. Third, to combat fathers' unwillingness to take leave, correct gendered workplace attitudes, and remove the need for fathers to negotiate with spouses who may be unwilling to share parental leave, QPIP offers the nation's first of its kind 'daddy quota', whereby 5 weeks of leave (or 3 weeks under the Special Plan) are set aside for the father and cannot be transferred to the mother. Lastly, the new system is more flexible by offering a choice between the Basic or Special plan, thereby letting parents select the combination of duration and amount of benefits which best suits their needs.

Under the reform, the amount of gender-neutral leave to be shared between parents was reduced and some weeks were reallocated to individual non-transferable leave for each parent. The net result was that mothers retained access to the same amount of potential leave as before, 50 weeks, but a larger share now came through maternity leave. Fathers gained access to more leave than they had earlier, 37 possible weeks under QPIP versus 35 possible weeks under the EI Program. Note that QPIP increased the total amount of leave available to a family from 50 weeks to 55 weeks, so the total family leave increased by the amount equivalent to the 'daddy-only' weeks. Thus, if a mother consumed all 50 weeks of the family's leave under the counter-factual, it was not necessary for her to reduce her own consumption of leave in order for the father to utilize his quota. Therefore, it did not become necessary for the fathers to increase their consumption in order to maintain the previous amount of family leave, only to maximize the new amount of total family leave. Further, for all families with mothers consuming less 45 weeks (approximately 11 months) of leave under the counter-factual, the introduction of the daddy quota resembled an ordinary transfer of 5 weeks since these new weeks should have seemed effectively fungible.

2.2 Theoretical Considerations

To consider how these changes to the structure of benefits may have influenced parents' leave participation decisions we can consider a simple model of the maximization problem faced by a parent over the one-year period of job-protection that is offered. The representative parent has utility $U(Y, L)$ over two normal goods: real income, Y , and weeks of Leave, L . They then face two constraints. First, a time constraint, whereby weeks of employment, E , and weeks of leave, L , must add up to the 52 consecutive weeks of job-guaranteed

leave a parent is eligible for, such that

$$L + E = 52 \tag{1}$$

. Second, a Goods constraint: where real income is the sum of wage income, wE , and benefit income, bL , such that

$$Y = wE + bL \tag{2}$$

In addition, a representative father faces the additional constraint that only 35 weeks of the total 52 weeks of job-protection can be paid leave, such that for fathers: $bL = 35b$ if $L \leq 35$ and bL if $L > 35$.

Combining equations (1) and (2) results in the familiar full-income constraint:

$$Y + (w - b)L = 52w \tag{3}$$

(3) is the parent's budget constraint, which requires that the explicit real income, Y , and the implicit cost of taking leave, $(w - b)L$, equal the parent's total potential earnings over the year, $52w$.

It should be noted that

To consider the possible effects of the move from the EI Program to QPIP, let us consider how the reform altered the budget constraint faced by parents of different genders and income statuses, as shown in Figure 1.

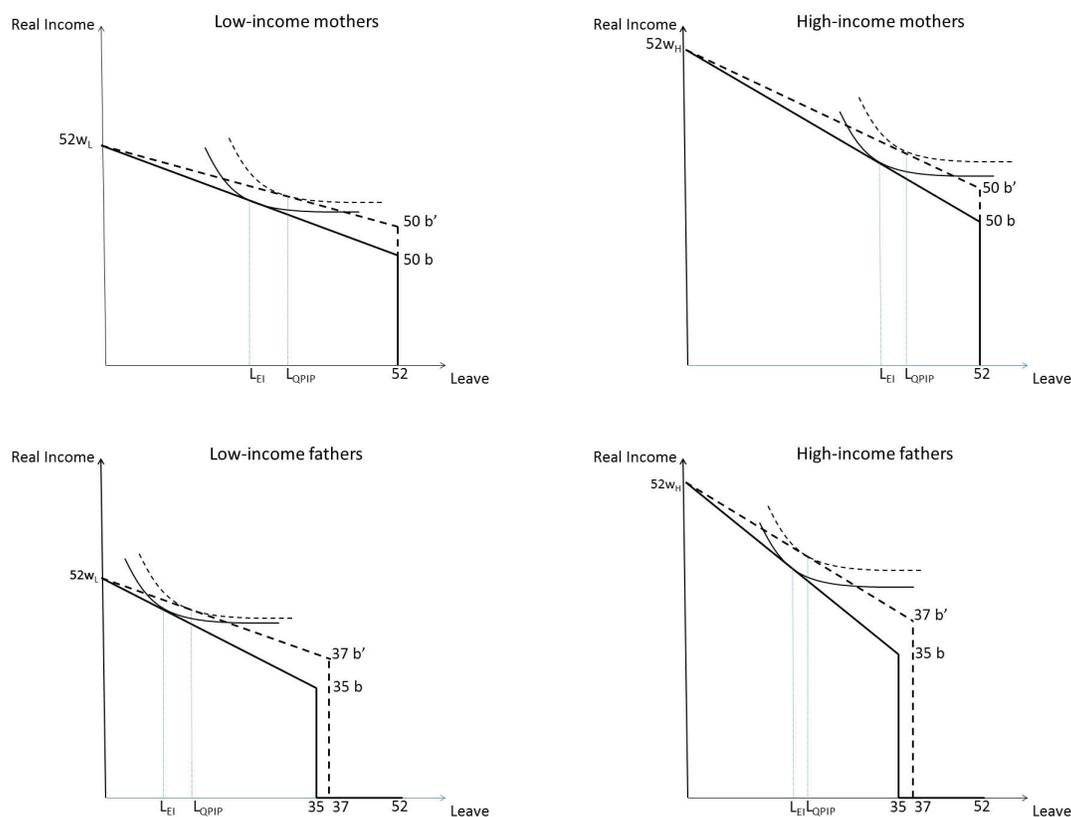


Figure 1: Changes in Budget Constraints for low- and high-income mothers and fathers

For all parents, the increased generosity of benefits from b to b' , changes the slope of the budget constraint, by altering the relative price of $(w - b)$. In addition, fathers gained access to 2 more potential weeks of leave under QPIP, so the portion of their budget constraint corresponding to paid leave shifted out from 35 to 37 weeks of Leave. Since leave is a normal good we expect positive income and substitution effects from this

reduction in price, and outward shift of the kink in the case of fathers, so the improved generosity of benefits and additional paid weeks for fathers should have resulted in an unambiguous increase in the consumption of leave. Further, although benefits are calculated as a percentage amount, they are subject to a maximum ceiling, therefore a parent earning high wages, w_H , faces a larger wage-benefit differential than a parent earning low wages, w_L . Therefore it is also reasonable to expect that low-income parents will start out with lower leave consumption but since they face a smaller wage-benefit differential, the marginal reduction in the price of leave due to QPIP is larger, and their response should be stronger.

The effect of the reservation of daddy-only weeks on the household’s optimization problem requires a nuanced evaluation. Under a unitary model of household decision-making, if the family’s objective is to maximize total time with the baby and it always consumes the total amount of leave available, then the daddy quota would induce fathers’ participation by making it necessary for maximization that fathers consume their reserved leave. Thus the introduction of the quota could make the difference between a father participating or not participating if, under the counter-factual, his wife consumed the total amount of leave allocated to the family, i.e. 50 weeks of paid leave plus the mandatory 2-week waiting period. Figure 2 shows the distribution of leave (both paid and unpaid) in Quebec in the period before the reform. It is clear that although there was bunching at the cap of 52 weeks (approximately 12 months), a significant portion of mothers were not consuming all the paid leave available to the household.

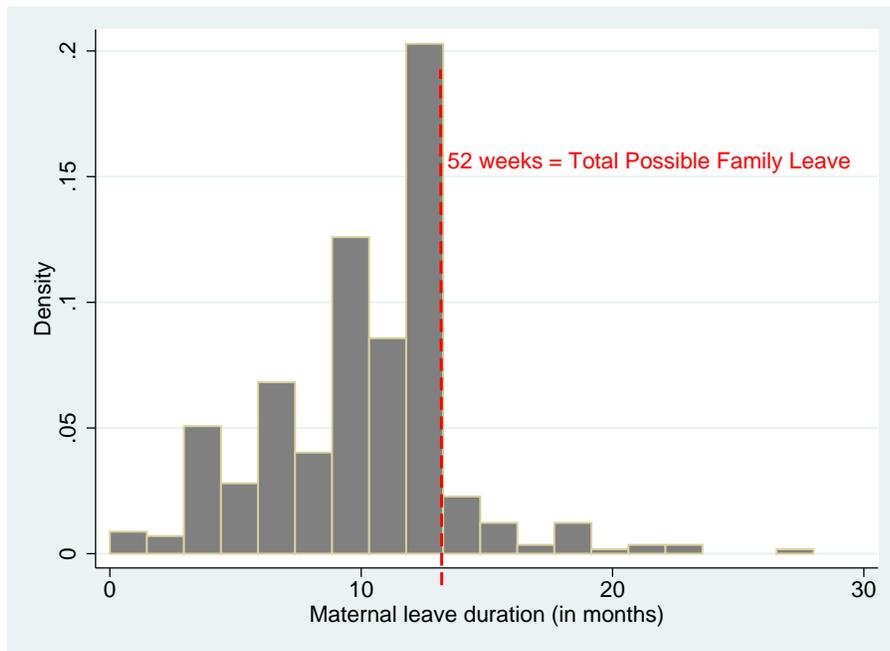


Figure 2: The Distribution of Maternal Leave Duration in Quebec Pre-reform (2002-2004)

In fact, when we consider the cumulative density function in Figure 3, we see that more than 60% of mothers consumed 11 months or less of leave, essentially leaving at least a month of paid leave that fathers could have consumed. Under the EI Program the first 2 weeks of leave had to be unpaid due to the 2-week waiting period for benefits, so in these 60% of households, there was at least 1.5 months of paid leave that was being left on the table, that was always available for fathers to utilize. Since the survey question asks for all leave taken, this is a conservative estimate of the leave that was available to the father, since it is possible some of the reported mothers’ weeks were taken as unpaid job-protected leave or other forms of paid leave such as sick or vacation leave. In the case of the majority of families then, who were not consuming at the cap pre-reform, the newly imposed constraint of the daddy quota should not have been binding and we should expect no effect on the relative proportion of family leave consumed by husbands.

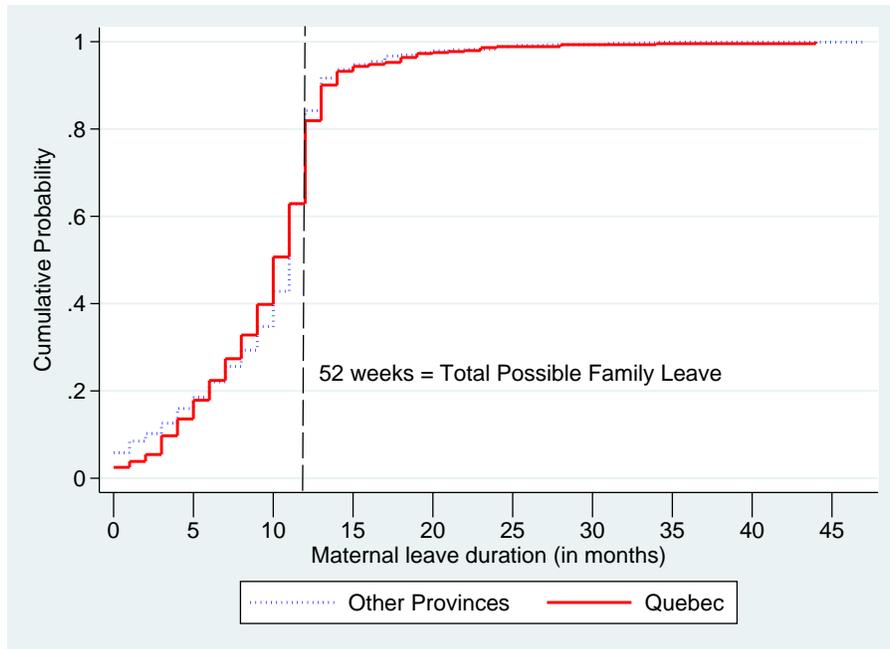


Figure 3: The Cumulative Density Function of Maternal Leave Duration in Quebec and Other Provinces Pre-reform (2002-2004)

2.3 Motivation and Previous Research

This paper seeks to answer four questions about the impact of the 2006 Quebec reform which introduced more generous parental leave benefits and established a daddy quota. First, how does the leave-taking behavior of fathers and mothers respond to this reforms? Second, from a policy design perspective, does it matter how we allocate the legal rights to benefits within the household, i.e., does an intra-household fly-paper effect exist between spouses, whereby benefits 'stick' to the household member they land on? Third, were there any effects on mothers' labor market outcomes such as employment and job continuity? Fourth, did the effects of the reform differ for parents who may be who may be vulnerable to additional pressures surrounding the issue of leave-taking, such as low-income parents or first-time parents? The motivation for each of these questions as well as a brief discussion of previous research is outlined below.

The research on fathers' leave participation is motivated by the potential welfare consequences for fathers, mothers and children. Advocates of paternity-leave argue that it helps new fathers accommodate the demands of parenting, promote greater involvement and attachment with their offspring, and diminish the proportion of childcare responsibilities that falls on the mothers. Fathers' use of parental leave has a positive association with fathers' participation in childcare and their satisfaction with contact with their children (L. and C.P., 2008). To the extent that paternity leave facilitate men's involvement in the care of their children, such policies have positive consequences for child well-being since numerous studies show that fathers' involvement is positively associated with children's social, emotional, physical, and cognitive development (Allen and Daly (2007) provide an extensive summary). Further, there is evidence to suggest that fathers who take parental leave are more involved in childcare and housework even after the leave period ends (Tanaka and Waldfogel, 2007; Nepomnyaschy and Waldfogel, 2007; Patnaik, 2012). Fathers' leave-taking can also have positive effects on their wives' careers. The evidence suggests that when the amount of leave reserved for fathers increases, mothers return to work faster, even controlling for the statutory length of maternity leave (Pylkkänen and Smith, 2003). Since fathers' leave-taking is associated with greater involvement later in the household, this may relieve mothers of some domestic responsibilities, freeing up time and resources to dedicate to their own careers. Lastly, as fathers increase their leave participation, women could face less statistical discrimination in employer's hiring and training decisions, as they increasingly will not be the only ones taking time away from paid work to care for children (Haas, 1992).

Despite the multitude of reasons that fathers' leave participation may be beneficial to fathers, mothers and children, research has shown that participation rates of fathers remain much lower than that of mothers (Bruning and Plantenga). Since fathers are more likely to be full-time full-year workers in standard employment than mothers, ineligibility is less likely to be a barrier to their leave participation.⁵ However, since the father is often the higher-earning parent, the issue of financial compensation plays a large role in their decision to take leave, and studies have consistently showed that the loss of earnings via foregone wages while on leave is an important factor in fathers' decisions to take parental leave (Beckmann, 2001; Zhelyazkova, 2013). It is also common for fathers to cite workplace attitudes as an obstacle to utilizing leave even when they are entitled to it, out of fear it could damage their careers (Bygren and Duvander, 2006). Social and psychological factors may also play a role: it is possible men display a lower taste for childcare than women, that social gender constructs push men to see themselves as the primary breadwinner who must prioritize paid work, and that they are rarely exposed to role models in the form of men who care for infants. In addition, some women may have a greater taste for childcare, and desire to spend more time with the baby and thus be unwilling to share leave with their spouse (Seward, 2006).

Previous research has confirmed that reforms which ease these barriers to leave are successful in encouraging fathers' leave-taking. Fathers' leave take-up is higher in countries with generous compensation rates (Moss and O'Brien) and is especially low in countries like the US where leave is unpaid (Han et al., 2009). Findings show that fathers' use of statutory leave is greatest when high income replacement (50 percent or more of earnings) is combined with extended duration (more than fourteen days) (O'Brien, 2009). When only gender-neutral shared parental leave is offered to parents it often becomes de-facto maternity leave, whereas establishing a period of father-only leave not only brings the issue of father participation to the forefront of peoples minds, but also helps fathers get past organizational constraints to leave-taking and bargaining with spouses who are unwilling to share leave. Several studies have shown that fathers are more likely to utilize leave when a daddy quota is in place (Haas and Rostgaard, 2011; Bruning and Plantenga). However, these studies provide reviews or cross-country comparisons which may be subject to endogeneity bias. Further, these studies exploit reforms in Nordic and Scandinavian countries where the redistribution from gender-neutral leave to a daddy quota meant that often the total amount of family leave was reduced if the father did not participate. This design, combined with the high proportion of mothers who exhausted the family's total leave prior to the reforms in these countries, means that the positive effect of the daddy quota on fathers' take up may have stemmed simply from the introduction of a binding constraint. This paper utilizes a quasi-experimental setup with a natural control group to exploit exogenous variation in policy, and offer a causal estimate of the effect of a daddy-quota. This paper is also the first to directly explore whether the 'daddy-only' label could matter even if the constraint doesn't bind, i.e., whether there may be a fly-paper effect within the household such that benefits appear to stick to the household member they land on, even when they are effectively fungible⁶

Considerable research has been conducted on the association between leave provisions and the leave-taking behavior and labor market outcomes of mothers. For a full review of the literature please see Rossin, Ruhm Waldfoegel (2012). This literature is motivated by the positive association between maternal leave-taking and child and self-reported mental and physical health outcomes

Evaluating the long-term labor market consequences of the Quebec reform is then important not only for the sake of the mothers' welfare, but also from a political economy perspective- the high tax burden of the parental benefits program would seem more justifiable if it led to higher wages and higher tax revenues in the long run.⁷

⁵This is the case in countries where eligibility is linked to the individual workers' status, as it is in all provinces of Canada. In some nations, such as Norway, eligibility is derived through the mothers' employment status, such that if she does not qualify for benefits then the father cannot qualify either.

⁶A small number of studies have provided evidence of such an intra-household flypaper effect that stem from educational fee reforms (Shi 2012), School feeding programs (Jacoby, 2002) or child benefits (Kooreman, 2000), but they all examine the reallocation of expenditures in response to directives aimed at children. This paper provides the first evidence of an intra-household flypaper effect in the allocation of benefit consumption between husband and wife stemming from a labeling effect.

⁷The Conseil de gestion de l'assurance parentale, had estimated the initial cost of the QPIP at 1,080 million CAD and expected that 70% of its funding would come from the employment insurance premium rebate from the federal program.

Since a key rationale for expanding coverage under the QPIP Program was to increase economic equality, it is imperative to assess whether it succeeded in remedying some of these inequalities. Given the benefits of parental leave-taking for not only early child development but also parents' labor market outcomes, any inequalities in access and usage of parental leave across income classes may further exacerbate inequalities in health, education and quality of life outcomes for children. Since low-income families face more limited financial resources, parents from these families may not be able to afford even small reductions in take-home earnings occasioned by taking parental leave. Therefore their leave participation is likely to be more sensitive to an increase in generosity of benefits. Moreover, low-income or poorly-educated women are more likely to have part-time or temporary jobs or otherwise have weaker ties to the labor market; this makes them less likely to be eligible for benefits, or less likely to work for employers who are cooperative and supportive about extended family leave. Lastly, determining whether the program effects differed by income groups has implications for the allocative efficiency. Since benefit programs are often regressive, with higher-income parents being more likely to be eligible and to receive higher benefit amounts (up to a cap), changes in the composition of leave participants may offer greater or lesser justification for such a generous extension of paid leave, which entails high public expenditures.⁸

It is also interesting to explore whether the program effects differed for parents having their first child for several reasons. First-time parents may be vulnerable to more financial pressures due to expenditures from fixed costs of children, and in the case of higher parity births, gendered household roles may be reinforced with mothers less likely to be in paid employment and fathers less likely to take time away from work. Other factors behind a differential first child effect are the novelty of a first birth and a potential association with age: younger fathers are likely to have lower income and savings, but are also less likely to be constrained by traditional attitudes about sharing family care and taking leave (Beaujot and Liu, 2005). There is evidence that fathers are more likely to take leave for the first time for their first child than for children born later (Whitehouse, 2007) and that fathers who use their rights to parental leave want to develop a close relationship with their children (Brandth and Kvande, 1998) and so should want to take more leave if they have more children in the future. It is thus interesting to consider the impact of the policy reform on first-time fathers since they have just had their gateway child.

3 Research Data & Design

I use data from Statistics Canada's Employment Insurance Coverage Survey (EICS) to analyze the effect of the 2006 reform to paid parental leave on parents' participation rates and mothers' labor market outcomes. The target population for this survey is a subset of the target population for the Labour Force Survey (LFS), and comprises unemployed individuals (as defined by the Labour Force Survey) and other individuals who, given their recent status in the labour market, could potentially be eligible for employment insurance. Mothers of infants less than one year old, who I will focus on in this study, fall into this last category, since they could potentially be eligible for benefits via maternity or parental leave. Specifically excluded from coverage are residents of the Yukon, Northwest Territories and Nunavut, persons living on Indian Reserves, full-time members of the Canadian Armed Forces and inmates of institutions.⁹

The Employment Insurance Coverage Survey is conducted annually, and this study focuses on mothers in a

However as of 2009 the value of the federal rebate now amounts to just 53% of the QPIPs total cost. The architects of QPIP also underestimated the extent to which fathers would respond to the new program. They had expected to pay 55 million CAD of paternity benefits during the plans first year, but the dramatic response from fathers meant that they spent 88 million CAD on paternity benefits in 2006, and have spent more every year since (2010 Report by IEDM -available at <http://www.iedm.org/33500-analysis-of-the-quebec-parental-insurance-plan>)

⁸Dahl et al. (2013) find that an extension in paid leave in Norway did not crowd out unpaid leave, had no effects on wages or tax payments or children's outcomes, and was regressive in that eligibility and benefit amounts increased along the income distribution, such that the increased leave benefits resulted in a pure leisure transfer to lower- and higher-income families. As a result, the large increases in public spending on maternity leave implied a considerable increase in taxes, at a cost to economic efficiency.

⁹These groups together represent an exclusion of approximately 2% of the population aged 15 or over.

8-year window framing the 2006 policy reform, from 2002 to 2010. Specifically, I use data from 2002-2004 as the pre-reform period, and 2007-2010 as the post-reform period. There are several reasons for this choice of time-window. First, although data from previous years is available, I exclude data from 2001 and earlier because there were nation-wide reforms to the length of both job-protected and paid parental leave in late 2000, and also Quebec extended its publicly subsidized childcare to children aged 0 to 1 in 2001. Next, data from 2005 are excluded due to concerns about strategic timing of births due to anticipation of the reform.¹⁰ Lastly, data from 2006 is excluded. Since the survey does not collect information on the child's exact date of birth, it is impossible to determine whether mothers interviewed in Quebec in 2006 were eligible for the new QPIP scheme since it only applied to children born after 1st January 2006. Lack of information on the exact birth date also prevents the use of a regression discontinuity approach.

There is one notable exclusion from the sample. I exclude mothers who report themselves as unattached individuals or single parents for three reasons. First, given the more limited financial resources of single parents, I expect them to respond to changes in the generosity of benefits differently than their partnered counterparts. Second, since they have no partner to share the gender-neutral parental leave with, there is no consideration of allocation decisions, which is an important component of my analysis. Third, I am concerned that their behavior may be influenced by other policy changes which occurred in that period, such as enhancements of the National Child Benefit which particularly targeted lower-income single parents. Small sample sizes preclude a separate analysis of single mothers. I therefore restrict myself to mothers who identify themselves as part of a couple, but supplementary analyses confirm the results are robust to the inclusion of single mothers, and are available upon request.

The primary sample comprises pooled cross-sections of observations, resulting in a total of 5,728 observations of mothers aged 15-64 who identify as part of a couple and have a child under one year old. Roughly 42% of the observations occurred before the reform, and approximately one-fifth of the observations are from Quebec, while the rest of the observations come from the control group which comprises the five largest other provinces, i.e. Ontario, Alberta, British Columbia, Atlantic Region, and Manitoba and Saskatchewan, where the EI system remained in place over the entire period of the analysis.

The survey content is rich in information about the proportion of mothers who received benefits, the duration and amounts of those benefits, the way in which these parental benefits were shared between couples, the timing and circumstances related to mothers decisions to return to the workplace, and household incomes and changes in income after the birth. One limitation of the Employment Insurance Coverage Survey is that since the target respondents are mothers, our only information about fathers is via mothers' reports of their spouse's behavior and characteristics. Fortunately, the survey asks respondents about whether their spouse received parental benefits, the duration of benefits, and whether they claimed benefits at the same time as their spouse - allowing a thorough investigation of these important measures of fathers' uptake and participation in the program. However, there are no questions asked about the fathers education or income, or his job characteristics. Nevertheless, given positive assortative mating, I can use information about the mother's characteristics to instrument for fathers' characteristics.

For the analysis of mothers' claim rates, fathers' claim rates, mothers' exit rates, and household's income loss, I focus on the full sample of partnered mothers aged 15-64 who have non-missing survey responses to questions pertaining to these outcomes. The outcomes regarding claim rates are measured by indicators taking value 1 if the respondent (or her spouse) has claimed or plans to claim maternity/parental/paternity benefits through the EI or QPIP system. Next, Mothers' exit rates as measured by an indicator taking value 1 if the respondent answered that she does not plan to return to the workforce (when asked about her actual or planned duration of leave). For the analysis of mothers' leave duration and employer continuity, I restrict the sample to mothers who have confirmed they do not plan to exit the workforce after their leave ended (4689 observations).¹¹ There are two important things to note about our measure of leave duration. First,

¹⁰A crucial step in implementing QPIP occurred when Quebec and Ottawa sign the Canada-Quebec Final Agreement on the Parental Insurance Plan on March 1 2005. Since this was ten months prior to the introduction of QPIP, it is possible hopeful parents anticipated the reform and timed their fertility accordingly.

¹¹Since the nature of the survey question refers to all leave and not just paid leave, we do not have an accurate duration for

the survey asks new mothers about the duration of all leave (not specifically paid parental leave) taken. Hence, it could also capture any unpaid leave or paid sick or vacation leave mothers take in lieu of paid parental leave. However, given the generous paid parental leave available and lack of stigma to maternal leave-taking, this is unlikely to have been the case except for mothers who used it as a means to supplement the paid parental leave which they had exhausted. Second, it is important to note that the EICS surveys both mothers who are currently on leave at the time of the survey and mothers who have already returned to work. Mothers who are still on leave at the time of survey offer responses about their planned leave duration while mothers who have returned to work report their completed leave duration. Though there is the concern that mothers still on leave may report planned duration that is either shorter or longer than the actual length of leave they end up taking, there is a strong data-motivated rationale for not excluding these mothers. Since the EICS only covers mothers who have an infant under a year old, limiting our sample to mothers who have already returned to work would lead to a systematic over-representation of mothers who took short to medium term leaves, and skew the distribution of leave durations to the left. Consequently, I treat duration of leave to be length of completed leave for those who have returned, and length of planned leave for mothers still on leave. Mothers' job continuity is measured by an indicator taking value 1 if the respondent has returned or plans to return to her pre-birth employer when her leave ends.

Table 2 presents summary statistics for both the full and restricted samples, along with t-tests for differences-in-means between treatment and control groups. If the natural experiment is valid, then there should be few covariate differences between the two groups. Indeed, as Table 2 establishes, the control and treatment groups are balanced in the main covariates, with only two significant exceptions. First, the proportion of parents earning over \$60,000 versus those earnings between \$40,000 and \$60,000 fell more sharply in Quebec than in other provinces. Since our analysis focuses on comparing parents from the lowest income quartile, i.e., those earning less than \$20,000, to fathers from higher-income backgrounds, this movement between groups at the higher end of the distribution should not matter significantly. Second, the proportion of young mothers (aged 15-24) fell more sharply in Quebec than it did in other provinces. There is some cause for concern that very young mothers may both be more likely to have lower income and education and also more likely to live with their parents and so face very different income and care constraints. Therefore, to account for this compositional change in our sample, and the higher participation rates among fathers married to more educated and older partners (Geisler, 2011; Sundström and Duvander, 2002), all regression analyses control for personal covariates such as age and education. Furthermore, robustness checks were carried out to confirm the results are robust to the exclusion of young mothers (These results are available on request).

To analyze the impact of the 2006 reform to parental leave benefits in Quebec I exploit variation in the structure of benefits across provinces and time. I estimate several difference-in-difference models where the treatment group includes mothers in Quebec before and after the reform was implemented, and the control group includes mothers from the other 5 Canadian provinces observed for the same time period. Data from survey years 2006 and later is considered post-treatment. I estimate several specifications: (i) the basic D-in-D model, to explore the average effect of the reform, and (ii) D-in-D-in-D estimates to evaluate if there were differential effects on outcomes for low-income families and first-time parents.

The basic difference-in-difference regression equation takes the form:

$$Y_{it} = \alpha + \theta Q_{it} + \gamma I[t > 2006] + \beta Q_{i,t} * I[t > 2006] + \phi Z_i + \lambda P_{it} + \chi T_i + \epsilon_{it}, \quad (4)$$

where $Y_{i,t}$ represents the outcome of mother i in year t . I study the following outcomes: whether the mother claims parental leave benefits, whether her spouse claims or plans to claim parental leave benefits, the duration of her actual or planned leave, whether she plans to quit the workforce after her leave ends, and whether she plans to return to her pre-birth employer..

The term Q_{it} takes the value of 1 if the mother i lives in Quebec in time t and otherwise takes the value 0, while $I[t > 2006]$ is an indicator variable taking the value 1 if the time t is greater than 2006, i.e., if

mothers who do not plan to return to work are not able to answer the duration of 'leave' they took since this leave is presumed to be indefinite.

the observation occurred after the reform was introduced in Quebec. The term γ represents the change in the value of the outcome that is shared by all provinces. An interaction term, $Q_{it} * I[t > 2006]$ is included to capture the change in the value of the outcome post-reform that is unique to Quebec. Under the assumption that no other policy changes were enacted to affect it, the coefficient β can be thought to represent the program effect that can be attributed to the introduction of QPIP. Assuming that the effects of the reform were heterogeneous, this equation estimates the average treatment effect on the treated (ATT).

The term Z_i is a vector of personal characteristics including age and education which controls for changes in group composition. The term P_i is a set of indicators for each of the 5 provinces in the control group, essentially controlling for province-fixed effects. ϵ_{it} is an i.i.d error term. To account for heteroskedasticity and within-group dependence of standard errors, while acknowledging the small number of province-level clusters available, standard errors are produced using cluster bootstrap-t procedures that provide asymptotic refinement (Cameron et al., 2008).

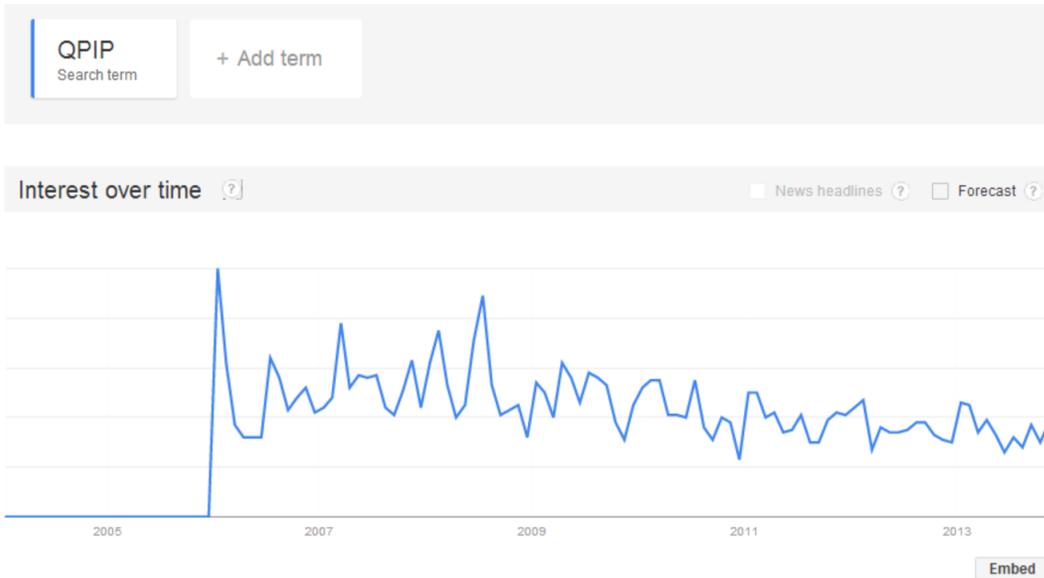
For regressions exploring the differential effects of the policy reform on specific groups, the estimating equation is:

$$Y_{it} = \alpha + \theta Q_{it} + \gamma I[T > 2006] + \beta Q_{i,t} * I[T > 2006] + \chi G_{i,t} + \sigma G_{i,t} * Q_{i,t} + \omega G_{i,t} * I[T > 2006] + \delta G_{i,t} * Q_{i,t} * I[T > 2006] + \phi Z_i + \lambda P_{it} + \pi T_i + \epsilon_{it}, \quad (5)$$

where in addition to the variables outlined above, I also include an indicator $G_{i,t}$ which takes the value 1 if the mother i belonged to a particular group, i.e. was a low-income or first-time mother, depending on the regression. Interaction terms with $Q_{i,t}$ and $I[t > 2006]$ are also included. Here, the parameters of interest are β , the coefficient on $Q_{i,t} * I[t > 2006]$, which describes how the reform affected the average person who does not belong to the particular sub-group, and δ , the coefficient on the triple interaction between $Q_{i,t}$ and $I[t > 2006]$ and $G_{i,t}$, which captures the differential effect of the reform on outcomes for the average mother from the particular sub-group compared to the average mother not in the sub-group.

In order to be valid, the identification strategy requires that mothers did not alter their fertility or labor market behavior in anticipation of the reform, i.e. that the reform was mostly unanticipated. To investigate the validity of this design Figure 4 gives a measure of when and to what extent potential parents could have known about the reform. The figure displays the Google Search Volume Index relating to the number of 'QPIP' searches on Google Canada. It shows that there were virtually no searches before the reform occurred, and there is a pronounced spike in January 2006 when the new program was introduced.

Figure 4: Google Search Volume Index: Searches for the term 'QPIP' over time



One vulnerability of the difference-in-difference identification strategy is that the estimates would be affected by any Quebec-specific shocks that may have coincided with the institution of the QPIP program. Hence we must consider whether the introduction of QPIP coincided with any other major government programs such as publicly subsidized childcare and tax benefits which have been shown to affect the labor market behaviors of parents of young children (Baker et al., 2008; Lefebvre et al., 2009). In Quebec, accredited and regulated childcare facilities have been offering low-fee daycare for children aged 4 and under since 1997. The last change to this system occurred in 2001, when the low-fee policy was extended to include children under the age of 1. Thus, there have been no changes in childcare policies during the time period under study here. A fiscal reform for families with children which included a new working income supplement to low-income households in January 2005 is also relevant, but the eligibility criteria were such that it mostly favors single-parent families working at or near the minimum wage. Our sample, which excludes single parents for precisely such a reason, therefore should not be overtly affected by this program.

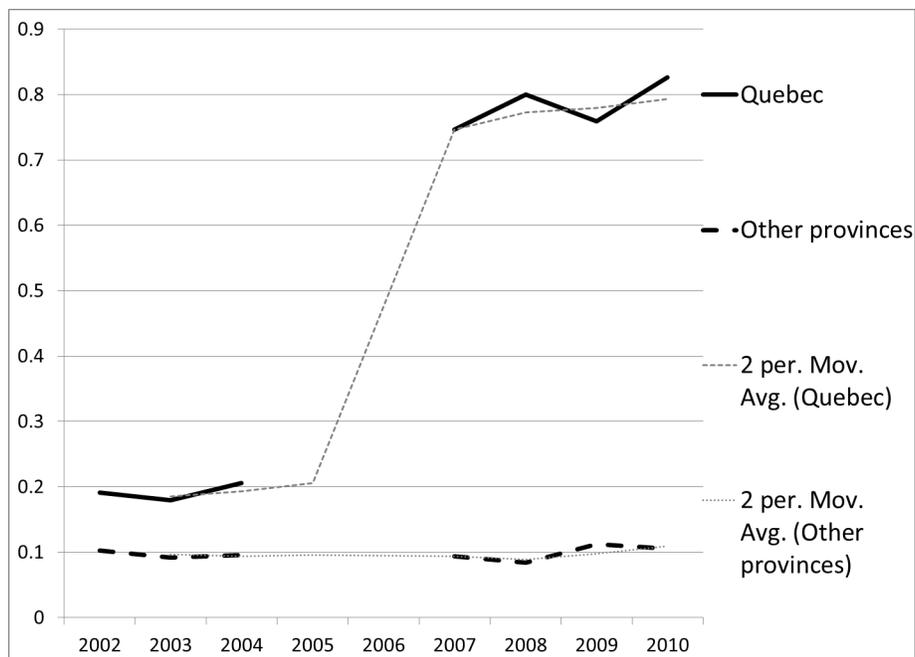


Figure 5: Claim rates of fathers over time

Figures 5 and 6 show a clear program effect on participation rates amongst mothers and fathers around the introduction of the QPIP program. The rise in fathers uptake is dramatic, though of course it began from a much lower baseline so it had more room to grow. There is also a clear rise in mothers' claim rates of parental leave benefits in Quebec in the post-reform period. The 2-period moving average trend lines for the pre-reform and post-reform periods are nearly parallel, lending confidence to our D-in-D assumptions. These figures show that there was a large program effect on the levels of participation rates, but that they then returned to trend level of growth soon thereafter.

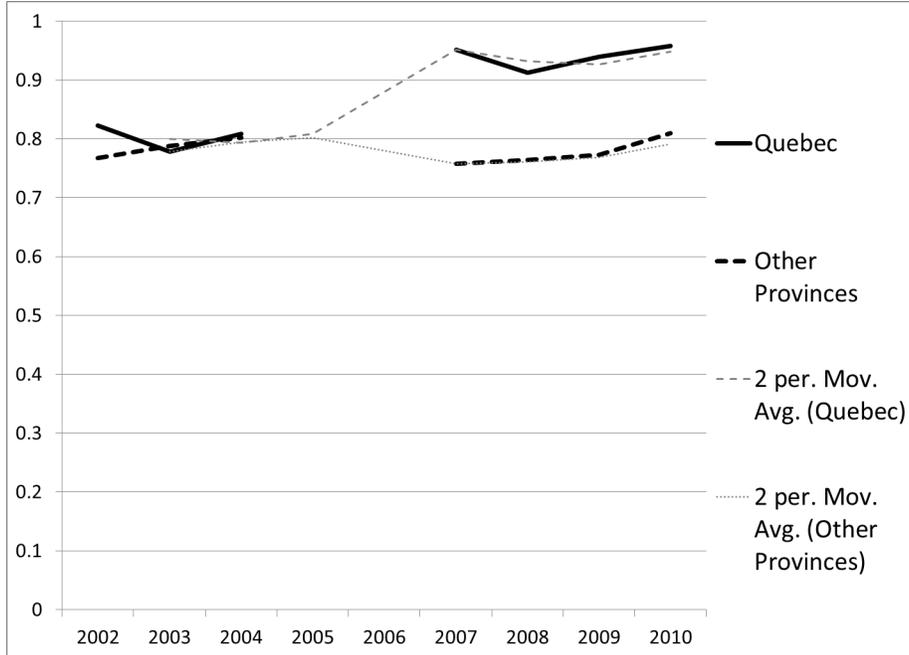


Figure 6: Claim rates of mothers over time

4 Results

Having shown the patterns of participation rates in the respective benefit programs around the introduction of the reform, we now turn to regression estimates. Table 3 presents the most striking finding of this paper: the program effect of the new paid parental leave system on fathers' participation rates. Column 1 of Table 2 presents estimates from our basic difference-in-difference regression and shows that the new QPIP program was associated with a rise of 59 percentage points in fathers' claim rates for parental leave benefits. This result is both economically and statistically significant the magnitude of the marginal effect is enormous given that it represents an increase of over 300% of the pre-reform mean participation rate of 19% of Quebecois fathers. Column 2 of Table 2 shows how the effects may have differed for fathers from different income classes. Fathers from low-income households experienced a smaller increase in claim rates than their higher-earning counterparts. While the difference of 16 percentage points is significant, it is not large enough to neutralize the general rise in claim rates. Therefore the claim rates of low-income fathers' also rose after the reform, but by less than that of fathers from higher-income households. This result is not consistent with the simple maximization model discussed in section 2.2, whereby low-income fathers experienced a larger marginal reduction in price of leave, and should have responded more strongly (if the daddy-quota did not bind).

This drastic response in claim rates to the new program offers a compelling argument that the way in which the benefits are framed may be important. The reform did not change the total amount of leave

available to a mother, and actually increased the total amount of household leave - so the quota did not necessitate the father take leave in order to maintain the amount of leave consumed by a household under the counter-factual. Moreover, though as discussed in Section II, theoretically the quota made it necessary for maximization that the fathers take leave, the data show that over 60% of families did not use all the leave available to them previously so that the new weeks of leave introduced were essentially fungible. So why did so many more fathers elect to take leave under the new program? It is very likely fathers' claim rates responded to the increased generosity of the new program. However, if financial compensation was the only factor at play we would have expected to see a larger proportional response in claim rates for low-income fathers, for whom the marginal increase in benefits was larger. However, this is not the case, as can be seen clearly in the regression results in Table 3. Therefore, it appears that fathers have responded not only to the better compensation, but also to their ownership of a portion of total family leave. This is suggestive evidence of an intra-household flypaper effect, i.e., that benefits tend to stick to the household member they land on.

This behavioral response to the reservation of weeks for the father when many families did not face a binding constraint seems anomalous. It contradicts the standard theoretical result from a unitary model of household decision making, whereby the parents act as a single representative consumers of leave who (when not at the cap under the counter-factual) should treat any increased leave as an ordinary extension of leave. In this case, an intra-household flypaper effect might suggest irrationality. However, one possible explanation for such an intra-household flypaper effect is that there is a labeling effect from designating some leave as daddy-only.¹² Thaler (1990) proposes that a household may maintain 'mental accounts' with different marginal propensities to consume. If this holds, then labeling a benefit transfer as 'daddy-only' may put it in a different mental account for consumption only by the father. This paper provides the first evidence of an intra-household flypaper effect in the consumption of leave benefits between husband and wife stemming from a pure labeling effect. One possible mechanism behind this intra-household flypaper effect, which would explain the differential response by income group, is that fathers from different income groups have differing marginal propensities to consume time with children. Alternatively, the reservation of daddy weeks may have introduced social stigma to fathers not utilizing this privilege, which differs in intensity by income groups. Both these mechanisms would be consistent with the higher value that higher-earning and better-educated parents place on time with their children (Guryan et al., 2008).¹³

Table 4 presents regression estimates of the program effect on mothers' participation rates. Column 1 shows that the reform was associated with a clear rise in claim rates of 14 percentage points. This represents an 18% increase in claim rates over a mean of 78% for mothers who were not treated. Further, this brings the average post-reform claim rate in Quebec to nearly 94%. Figure 7 shows a closing of the gap in participation rates between mothers from low-income households and those from higher-income households. Column 2 of Table 3 presents results which suggest that lower-income mothers experienced an increase in claim rates of 14 percentage points higher than their higher-earning counterparts, but the coefficient is not statistically significant due to large standard errors.

¹²Another explanation that has been put forward to explain an intra-household flypaper effect is that in collective models of household decision-making, the allocation of resources is determined by a decision-making process which hinges crucially on who received the income (Bourguignon and Chiappori, 1992). This model was used to explain results from Lundberg (1997) which show that transferring child benefits from fathers to mothers in England resulted in increased consumption of childrens' clothes. Using this model in the context of parental leave benefits, decisions about the distribution of paid parental leave between spouses would depend on relative ownerships of leave weeks. This might suggest that the behavioral response of fathers to the QPIP reform is due to fathers' new legal ownership of some leave. However, it should be noted that fathers always had shared ownership of a substantial portion of leave. Further, in order for their new legal ownership to be the deciding factor, it would require that mothers' previously used their bargaining power through leave ownership to negotiate away from fathers taking leave, which seems counter-intuitive and unlikely to have been the case for most couples.

¹³(Guryan et al., 2008) show that time spent with ones children seems to be valued more by individuals with a higher opportunity cost of time i.e. higher-earning and higher-educated parents. The fact that they observe a positive education gradient in child care as a primary activity but not in total time spent with children may suggest that highly-educated parents view child care as an investment which merits their active attention.

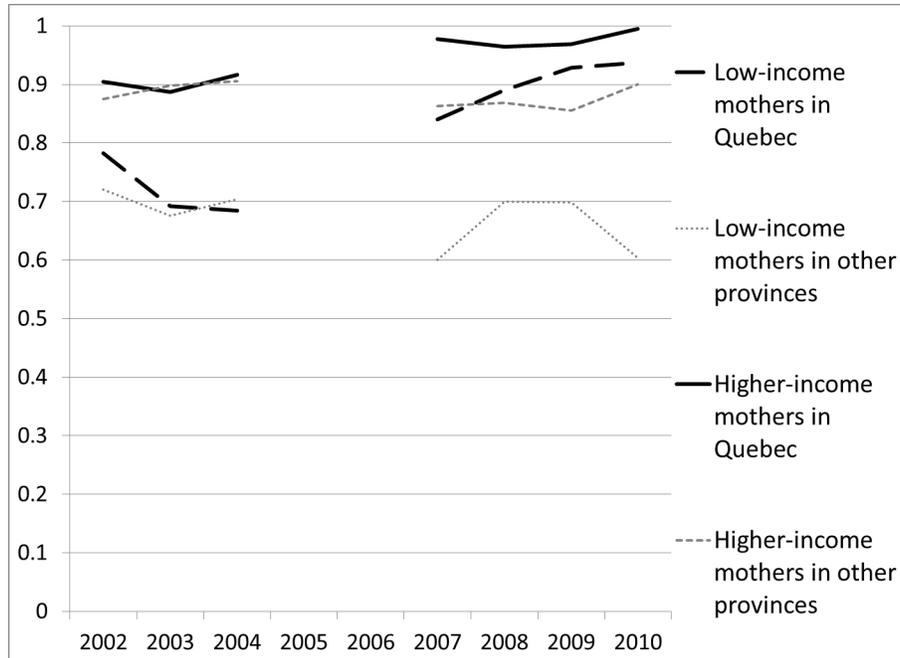


Figure 7: Claim rates of mothers by income group over time

Table 5 presents estimates of the program effect on exit rates, and in all columns we see that the reform was not associated with any increase or decrease in the average exit rates of mothers from the labor market. This confirms the ex-ante expectation that there should have been no change in the incentives for mothers to remain in or leave the workforce since the duration of job-protected leave remained constant in all provinces across this time period.

Table 6 explores the effect of the QPIP Program on the average duration of leave (in months). Columns 1 and 2 of Table 6 reveal that the reform to leave benefits in 2006 was associated with an increase of between 0.64 and .73 months in the average duration of maternity leave for mothers in Quebec. This is a significant increase, considering the mean duration of maternity leave in Quebec prior to the reform was approximately 10 months.

Table 7 explores the effect of the QPIP program on the likelihood of a mother returning to her pre-birth employer once the period of maternity leave ends. Column 1 of Table 7 offers strong evidence that the reform had a positive effect on employer continuity among new mothers, increasing the proportion of mothers who returned to their original employers by 3 percentage points. This estimate is statistically significant, and notable relative to the mean job-retention rate of 85% for Quebecois mothers before the reform. Column 3 further reveals that a large part of this increase was being driven by first-time mothers, who experienced a particularly large increase in their job continuity of 7 percentage points. This is a large increase relative to their pre-reform mean return rate of 81%. There is therefore strong evidence that QPIP increased the job retention rates of mothers in Quebec. It is possible QPIP may have reduced the pressure some mothers face to switch to a more parent-friendly employer for several reasons. First, since Quebecois mothers are taking longer leaves under QPIP, their children are a little older when they return to work and so may demand fewer resources. Second, due to increased fathers leave-taking, some mothers are returning to work while their spouses are on leave, leaving the baby in the fathers care instead of non-family daycare. Alternatively, even if the father has taken leave but already returned to work, he has likely developed competency in care-giving through on-the-job training, such that the mother does not have as strong a comparative advantage in home production. As a result, the couple may be more egalitarian in their sharing of household responsibilities without trading off efficiency, and the mother may feel less pressure to switch to a more accommodating job.

5 Conclusion

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This paper examines the impact of a large expansion of parental leave entitlements through the establishment of a more generous and flexible program in Quebec. It investigates how the lowered eligibility criteria, raised income claims ceilings and replacement rates, and the reservation of daddy weeks may have affected fathers' and mothers' participation in paid parental leave, as well as mothers' labor market outcomes. There are several interesting and relevant findings. First, the reform was associated with a remarkable increase of 58 percentage points in the probability of a father making a claim for parental leave benefits. This dramatic result is robust across all our specifications and confirms a clear increase in participation from fathers of all income groups. However, the reform had a smaller impact on fathers from low income households, who experienced a smaller increase in claim rates than fathers from higher income households. Further, there is evidence that the way in which the rights to leave are distributed within a household seem to influence the household's decisions regarding resource allocation, even if they do not necessarily present a binding constraint. Through the labeling of some leave as 'daddy-only' we observe an intra-household flypaper effect, where parental leave benefits 'stick to' the household member they lands on.

The move from the EI Program to the QPIP program also had considerable impact on mothers' participation rates. On average, the reform was associated with an increase of 14 percentage points. There is suggestive evidence that the effect was even larger for mothers from low-income households, but the results lack statistical significance. I also find that the reform increased the average length of maternity leave by over half a month, and though there was no change in exit rates from the labor market, there was an increase in the likelihood of a mother returning to her pre-birth employer.

These results point to the success of the reform in attaining several of its goals: increasing access to benefits, increasing parental time with newborns, improving labor market outcomes for mother, and most notably, promoting gender equality by encouraging fathers' participation. These findings should be of interest to policymakers looking to design reforms to remedy issues of access and coverage associated with existing paid parental leave programs, as well as to promote greater gender equality. Perhaps most crucially, the evidence of an intra-household flypaper effect caused by the labeling of some leave as 'daddy-only', seems to offer important justification for the establishment of individual non-transferable rights, and is of relevance to policy-makers aiming to encourage equal participation between spouses in public programs.

Table 2: Summary statistics

VARIABLES	(1)	(2)	(3)	(4)	(5)
	Mean Other Provinces 2002-2004	Mean Other Provinces 2007-2010	Mean Quebec 2002-2004	Mean Quebec 2007-2010	T-statistic for diffh in means
Primary Sample of mothers					
N	1971	2590	449	736	
Age 15-24	0.130	0.119	0.194	0.129	-2.37
Age 25-44	0.869	0.880	0.806	0.871	2.38
High-school Dropout	0.0629	0.0452	0.0735	0.0584	0.17
High School Graduate	0.240	0.202	0.154	0.114	-0.02
Some College	0.694	0.750	0.771	0.825	-0.07
College Graduate	0.308	0.373	0.267	0.355	0.71
First Child	0.439	0.436	0.477	0.447	-0.80
Household Income below \$20,000	0.107	0.0718	0.114	0.0870	0.43
Household Income: \$20,000-\$40,000	0.365	0.281	0.430	0.337	-0.28
Household Income \$40,000-\$60,000	0.266	0.244	0.214	0.254	2.16
Household Income above \$60,000	0.177	0.352	0.187	0.287	-2.60
Proportion of eligible mothers ¹⁴	0.882	0.894	0.906	0.969	2.53
Proportion of eligible spouses	0.871	0.874	0.880	0.921	1.76
Proportion of Mothers who claim benefits	0.783	0.775	0.806	0.940	5.35
Proportion of Spouses who claim benefits	0.0964	0.0985	0.192	0.784	27.39
Proportion that exits the workforce	0.113	0.114	0.0512	0.0679	0.77
Subsample of mothers who did not exit the workforce					
N	1561	2098	388	642	
Maternal leave duration (in months)	9.835	10.39	9.871	10.98	1.54
Proportion of mothers who return to employer	0.893	0.919	0.853	0.919	1.88

Notes:

1. Primary Sample comprises mothers aged 15-24 with a partner/spouse and a child under one year old, with non-missing survey responses related to their claims, their spouse's claims, or their plans to exit the market. The subsample comprises mothers who answered they did not exit or plan to exit the labor market when their leave ended, and had non-missing survey responses related to their leave duration and plans to return to their pre-birth employer.
2. T-statistics presented in bold indicate significance at the 10% level.

Table 3: Results from Regressions for Fathers' Parental Leave Benefits Claim Rates

VARIABLES	(1) All Fathers	(2) All Fathers	(3) All Fathers	(4) All Fathers	(5) All Fathers
Quebec	0.0947* [0.087]	0.0974* [0.071]	0.0897** [0.019]	0.0673 [0.289]	0.0824 [0.235]
Post-reform	-0.0218 [0.405]	-0.0241 [0.371]	-0.0278 [0.250]	-0.0407 [0.214]	-0.0774 [0.160]
Quebec * Post-Reform	0.591** [0.017]	0.603** [0.017]	0.590** [0.017]	0.428** [0.017]	0.533** [0.017]
Low-income household		0.0207 [0.4115]			
Low-income Household * Quebec		-0.0239 [0.354]			
Low-income Household * Post-reform		0.0307 [0.192]			
Low-income Household * Quebec * Post-reform		-0.159* [0.075]			
First Child			0.0183 [0.252]		
First Child * Quebec			0.0101 [0.501]		
First Child * Post-reform			0.0132 [0.515]		
First Child * Quebec * Post-reform			0.00230 [0.842]		
Mother claims benefits				-0.0724** [0.0139]	
Mother claimed * Quebec				0.0360 [0.5035]	
Mother claimed * Post-Reform				0.0180 [0.422]	
Mother claimed * Quebec * Post-Reform				0.175 [0.217]	
Maternal leave duration					-0.0101 [0.3936]
Maternal leave duration * Quebec					0.00143 [0.263]
Maternal leave duration * Post-Reform					0.00362** [0.014]
Maternal leave duration * Quebec * Post-Reform					0.00570 [0.275]
Constant	0.0681 [0.221]	0.0602 [0.226]	0.0497 [0.376]	0.111* [0.0621]	0.138** [0.0229]
Observations	5,728	5,728	5,728	5,728	5,136
R-squared	0.336	0.337	0.337	0.340	0.352

Notes:

1. Dependent variable is an indicator taking value 1 if the respondent reported her spouse has claimed or plans to claim parental leave benefits.
2. Regression Sample comprises mothers aged 15-24 with a partner/spouse and a child under one year old, with non-missing survey responses related to their claims, their spouse's claims, or their plans to exit the market.
3. Robust standard errors were calculated using cluster bootstrap-t procedures and are presented in brackets.
4. *** p<0.01, ** p<0.05, * p<0.1

Table 4: Results from Regressions for Mothers' Parental Leave Benefits Claim Rates

VARIABLES	(1) All Mothers	(2) All Mothers	(3) All Mothers	(4) All Mothers
Quebec	0.0222 [0.352]	0.0200 [0.323]	0.0733 [0.333]	0.0180 [0.403]
Post-reform	-0.0832* [0.09]	-0.0782* [0.099]	-0.0830* [0.099]	-0.0845* [0.099]
Quebec * Post-Reform	0.140** [0.017]	0.129** [0.029]	0.124** [0.017]	0.104* [0.061]
Low-income household			-0.174**	
Low-income Household * Quebec		[0.0139] 0.0213 [0.651]		
Low-income Household * Post-reform		-0.0339 [0.547]		
Low-income Household * Quebec * Post-reform		0.160 [0.2827]		
First Child			0.119** [0.0172]	
First Child * Quebec			-0.112** [0.046]	
First Child * Post-reform			-0.00693 [0.757]	
First Child * Quebec * Post-reform			0.0315 [0.386]	
Father claims benefits				-0.121* [0.079]
Father claims * Quebec				0.0817** [0.186]
Father claims * Post-Reform				0.0123 [0.875]
Father claims * Quebec * Post-Reform				0.0646 [0.333]
Constant	0.540*** [0.000564]	0.622*** [0.000189]	0.455*** [0.000662]	0.553*** [0.000579]
Observations	5,728	5,728	5,728	5,728
R-squared	0.037	0.052	0.053	0.043

Notes:

1. Dependent variable is an indicator taking value 1 if the respondent reported she has claimed or plans to claim parental leave benefits.
2. Regression Sample comprises mothers aged 15-24 with a partner/spouse and a child under one year old, with non-missing survey responses related to their claims, their spouse's claims, or their plans to exit the market.
3. Robust standard errors were calculated using cluster bootstrap-t procedures and are presented in brackets.
4. *** p<0.01, ** p<0.05, * p<0.1

Table 5: Results from Regressions for Mothers' Exit Rates

VARIABLES	(1)	(2)	(3)	(4)
	All Mothers	All Mothers	All Mothers	All Mothers
Quebec	-0.0640 [0.171]	-0.0651 [0.135]	-0.0701 [0.173]	-0.0635 [0.171]
Post-reform	-0.00511 [0.765]	-0.00647 [0.723]	0.00672 [0.829]	-0.0113 [0.573]
Quebec * Post-Reform	0.0195 [0.183]	0.0257 [0.291]	0.0352 [0.254]	0.0228 [0.348]
Low-income household		0.0233 [0.575]		
Low-income Household * Quebec		0.00924 [0.811]		
Low-income Household * Post-reform		0.0131 [0.715]		
Low-income Household * Quebec * Post-reform		-0.0749 [0.388]		
First Child			0.000307 [0.881]	
First Child * Quebec			0.0120 [0.421]	
First Child * Post-reform			-0.0262 [0.107]	
First Child * Quebec * Post-reform			-0.0328 [0.339]	
Father claimed benefits				-0.0456 [0.169]
Father claimed * Quebec				0.0199 [0.426]
Father claimed * Post-Reform				0.0698 [0.245]
Father claimed * Quebec * Post-Reform				-0.0459 [0.285]
Constant	0.359*** [0.000236]	0.347*** [0.000360]	0.365*** [0.000201]	0.365*** [0.000228]
Observations	5,728	5,728	5,728	5,728
R-squared	0.043	0.043	0.044	0.044

Notes:

1. Dependent variable is an indicator taking value 1 if the respondent reported she does not plan to return to work.
2. Regression Sample comprises mothers aged 15-24 with a partner/spouse and a child under one year old, with non-missing survey responses related to their claims, their spouse's claims, or their plans to exit the market.
3. Robust standard errors were calculated using cluster bootstrap-t procedures and are presented in brackets.
4. *** p<0.01, ** p<0.05, * p<0.1

Table 7: Results from Regressions for Mothers' Leave Duration

VARIABLES	(1)	(2)	(3)	(4)
	All Mothers	All Mothers	All Mothers	All Mothers
Quebec	-0.182 [0.4665]	-0.206 [0.184]	0.655 [0.249]	-0.0815 [0.766]
Post-reform	-0.125 [0.509]	-0.118 [0.617]	-0.167 [0.637]	-0.185 [0.375]
Quebec * Post-Reform	0.644* [0.089]	0.729* [0.103]	0.339 [0.440]	0.224 [0.467]
Low-income household		-0.174 [0.624]		
Low-income Household * Quebec		0.242 [0.475]		
Low-income Household * Post-reform		-0.0232 [0.979]		
Low-income Household * Quebec * Post-reform		-0.900 [0.349]		
First Child			0.625** [0.045]	
First Child * Quebec			-1.745*** [0.078]	
First Child * Post-reform			0.00664 [0.956]	
First Child * Quebec * Post-reform			0.576 [0.288]	
Father claimed benefits				-2.447** [0.0389]
Father claimed * Quebec				0.692 [0.141]
Father claimed * Post-Reform				-0.0356 [0.796]
Father claimed * Quebec * Post-Reform				1.892 [0.118]
Constant	8.817*** [8.35e-05]	8.913*** [6.43e-05]	8.439*** [0.000145]	8.988*** [7.44e-05]
Observations	4,675	4,675	4,675	4,675
R-squared	0.006	0.007	0.014	0.038

Notes:

1. Dependent variable is a continuous variable measuring months of planned or actual leave taken by the respondent.
2. Regression Sample comprises mothers aged 15-24 with a partner/spouse and a child under one year old, with non-missing survey responses related to their claims, their spouse's claims, leave duration, and job continuity plans, who have reported they do not plan to exit the workforce.
3. Robust standard errors were calculated using cluster bootstrap-t procedures and are presented in brackets.
4. *** p<0.01, ** p<0.05, * p<0.1

Table 6: Results from Regressions for Mothers' Employer Continuity

VARIABLES	(1)	(2)	(3)	(4)
	All Mothers	All Mothers	All Mothers	All Mothers
Quebec	-0.0300 [0.197]	-0.0224 [0.258]	0.00191 [0.772]	-0.0185 [0.172]
Post-reform	-0.0122 [0.753]	-0.00743 [0.807]	0.00236 [0.959]	-0.0181 [0.597]
Quebec * Post-Reform	0.0308*** [0.013]	0.0233 [0.167]	-0.00498 [0.505]	0.0239 [0.172]
Low-income household		-0.165 [0.113]		
Low-income Household * Quebec		-0.0816*** [0.002]		
Low-income Household * Post-reform		0.00925 [0.973]		
Low-income Household * Quebec * Post-reform		0.128 [0.311]		
First Child			0.0171 [0.457]	
First Child * Quebec			-0.0670*** [0.281]	
First Child * Post-reform			-0.0326** [0.039]	
First Child * Quebec * Post-reform			0.0758*** [0.016]	
Father claims benefits				-0.0290 [0.460]
Father claimed * Quebec				-0.0443 [0.272]
Father claimed * Post-Reform				0.0610* [0.097]
Father claimed * Quebec * Post-Reform				0.0103 [0.707]
Constant	0.526*** [0.00101]	0.604*** [0.000496]	0.520*** [0.000770]	0.529*** [0.000946]
Observations	4,675	4,675	4,675	4,675
R-squared	0.041	0.062	0.042	0.042

Notes:

1. Dependent variable is an indicator taking value 1 if the respondent reported she has returned or plans to return to her pre-birth employer.
2. Regression Sample comprises mothers aged 15-24 with a partner/spouse and a child under one year old, with non-missing survey responses related to their claims, their spouse's claims, leave duration, and job continuity plans, who have reported they do not plan to exit the workforce.
3. Robust standard errors were calculated using cluster bootstrap-t procedures and are presented in brackets.
4. *** p<0.01, ** p<0.05, * p<0.1

References

- Allen, S. M. and Daly, K. J. 2007. The effects of father involvement an updated research summary of the evidence. ID: 225639215.
- Baker, M., Gruber, J., and Milligan, K. 2008. Universal child care, maternal labor supply, and family well-being. *The journal of political economy.*, 116(4):709. ID: 262458800.
- Beaujot, R. and Liu, J. 2005. Models of time use in paid and unpaid work. *Journal of Family Issues*, 26(7): 924–946.
- Beckmann, P. 2001. *Neue Vater braucht das Land! wie stehen die Chancen fur eine starkere Beteiligung der Manner am Erziehungsurlaub?* IAB, Nurenberg.
- Bourguignon, F. and Chiappori, P.-A. 1992. Collective models of household behavior:an introduction. *EERj/cja:jidž European Economic Review*, 36(2):355–364.
- Brandth, B. and Kvande, E. 1998. Masculinity and child care: The reconstruction of fathering. *The Sociological Review*, 46(2):293–313.
- Bruning, G. and Plantenga, J. Parental leave and equal opportunities: Experiences in eight european countries. 9(3):195–209.
- Bygren, M. and Duvander, A.-Z. 2006. Parents’ workplace situation and fathers’ parental leave use. *JOMF Journal of Marriage and Family*, 68(2):363–372.
- Cameron, A. C., Gelbach, J. B., and Miller, D. L. 2008. Bootstrap-based improvements for inference with clustered errors. *The review of economics and statistics*, 90(3):414–427.
- Dahl, G. B., L, K. V., Mogstad, M., and Salvanes, K. V. October 2013. What is the case for paid maternity leave? Working Paper 19595, National Bureau of Economic Research.
- Doucet, A., Tremblay, D. G., and Lero, D. *Leave Policy and Research: Canada*. International Review of Leave Policies and Related Research. Employment Relations Research, London, 5th edition edition, 2010. URL [http://www.leavenetwork.org/fileadmin/Leavenetwork/Country_notes/Canada.published.oct₂010.pdf](http://www.leavenetwork.org/fileadmin/Leavenetwork/Country_notes/Canada.published.oct_2010.pdf).
- Geisler, K. M. Esther. 2011. Against all odds: Fathers’ use of parental leave in germany. *Journal of European Social Policy*, 21(1):88–99.
- Guryan, J., Hurst, E., and Kearney, M. 2008. Parental education and parental time with children. *jep Journal of Economic Perspectives*, 22(3):23–46.
- Haas, L. 1992. *Equal parenthood and social policy : a study of parental leave in Sweden*. State University of New York Press, Albany, NY.
- Haas, L. and Rostgaard, T. 2011. Fathers’ rights to paid parental leave in the nordic countries: consequences for the gendered division of leave. *Community, Work Family*, 14(2):177–195.
- Han, W.-J., Ruhm, C., and Waldfogel, J. 2009. Parental leave policies and parents’ employment and leave-taking. *Journal of Policy Analysis Management*, 28(1):29 – 54. ISSN 02768739.
- Jacoby, H. G. 2002. Is there an intrahousehold flypaper effect? evidence from a school feeding programme. *The Economic Journal*, 112(476):196–221.
- Kooreman, P. 2000. The labeling effect of a child benefit system. *The American Economic Review*, 90(3): 571–583.
- L., H. and C.P., H. 2008. The impact of taking parental leave on fathers’ participation in childcare and relationships with children: Lessons from sweden. *Community Work Fam.Community, Work and Family*, 11(1):85–104.

- Lefebvre, P., Merrigan, P., and Verstraete, M. 2009. Dynamic labour supply effects of childcare subsidies: Evidence from a canadian natural experiment on low-fee universal child care. *Labour Economics*, 16(5): 490–502.
- Lundberg, P. R. A. W. T. S. J. 1997. Do husbands and wives pool their resources? evidence from the united kingdom child benefit. *JOURNAL OF HUMAN RESOURCES*, 32(3):463–480.
- Moss, P. and O'Brien, M. International review of leave policies and related research 2006. *Employment Relations Research Series*, (52).
- Nepomnyaschy, L. and Waldfogel, J. 2007. Paternity leave and fathers' involvement with their young children. *Community, Work ; Family*, 10(4):427–453.
- O'Brien, M. 2009. Fathers, parental leave policies, and infant quality of life: International perspectives and policy impact. *The Annals of the American Academy of Political and Social Science*, 624(1):190–213.
- Öun, I. 2010. *Maternity at work : a review of national legislation : findings from the ILO database of conditions of work and employment laws*. International Labour Office, Geneva.
- Patnaik, A. 2012. Merging spheres: The role of policy in promoting dual-earner dual-carer households. Working paper, Cornell University.
- Pylkk "a"nen, E. and Smith, N. March 2003. Career interruptions due to parental leave: A comparative study of denmark and sweden. Technical report, OECD Publishing.
- Seward, Y. D. E. Z. L. K. F. R. R. R. 2006. Fathers taking parental leave and their involvement with children: An exploratory stud. *COMMUNITY WORK AND FAMILY*, 9(1):1–9.
- Sundström, M. and Duvander, A.-Z. E. 2002. Gender division of childcare and the sharing of parental leave among new parents in sweden. *European Sociological Review*, 18(4):433–447.
- Tanaka, S. and Waldfogel, J. 2007. Effects of parental leave and work hours on fathers involvement with their babies. *Community, Work Family*, 10(4):409–426. ID: 4893615150.
- Thaler, R. H. 1990. Anomalies: Saving, fungibility, and mental accounts. *jep Journal of Economic Perspectives*, 4(1):193–205. ID: 5126782308.
- Vosko, L. F. 2000. *Temporary work : the gendered rise of a precarious employment relationship*. University of Toronto Press, Toronto; Buffalo. ID: 43631609.
- Whitehouse, D. C. B. M. Gillian. 2007. Fathers' use of leave in australia. *Community, Work Family*, 10(4): 387–407.
- Wilkinson, H. and Radley, S. 1997. *Time out : the costs and benefits of paid parental leave*. Demos, London.
- Zhelyazkova, N. 2013. Male use of parental leave in luxembourg: Empirical analysis of administrative records. Working paper, UNU-Merit.