

L'effet des politiques familiales sur les trajectoires de revenus des femmes suite à la naissance d'un enfant

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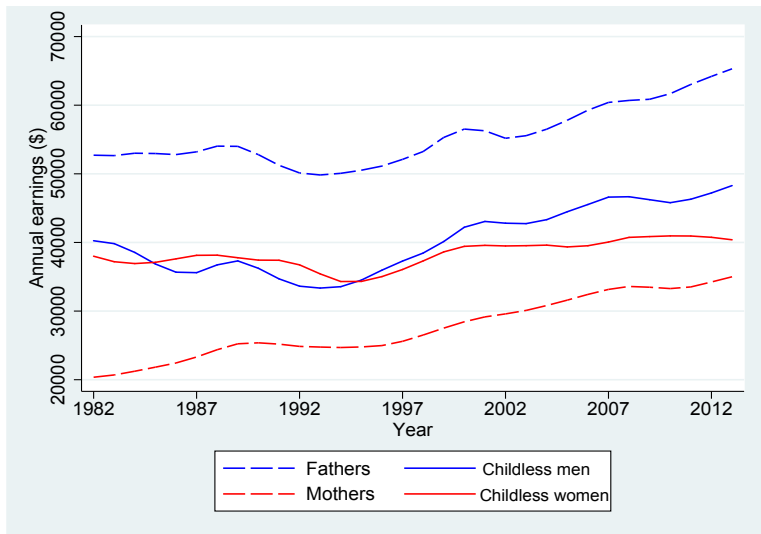
Colloque "Diversité en emploi : perspectives et enjeux au Québec et au Canada"

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Motivation

- "The Grand Gender Convergence" (Goldin, 2014)
 - ▶ Great convergence of social role and gender expectation
 - ▶ Narrowing of the gender gap in education, LFP, occupation, hours worked (paid and unpaid)
 - ▶ Narrowing of the gender wage gap
- Since 1990s this convergence has been stagnating (Blau and Kahn, 2017)
- Supporting hypothesis of persistence of the gender pay gap : children (Waldfogel, 1998 ; Weeden et al., 2018)
 - ▶ Motherhood penalty : mothers earn less than childless women (Waldfogel, 1998)
 - ▶ Fatherhood premium : fathers earn more than childless men (Phipps et al., 2001)

Motivation



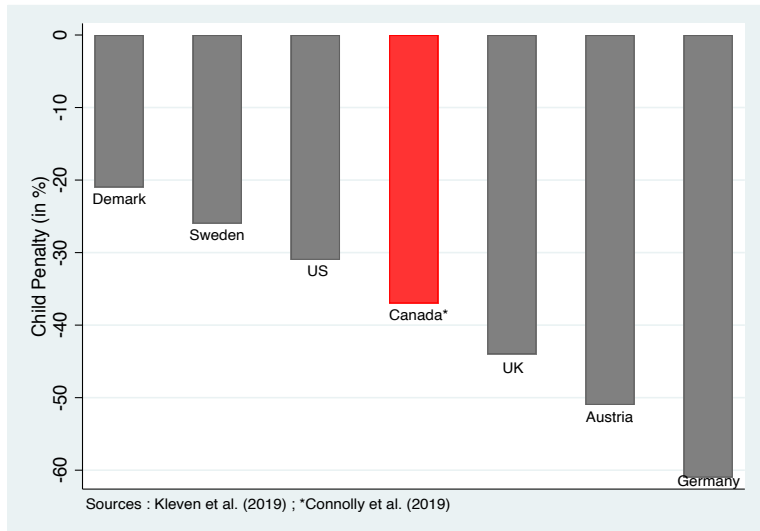
Source : LISA (W1-W2) and T1 Files (1982-2013) authors' calculations

Note : earnings are in constant 2016 dollars and weighted with Statistics Canada sample weights

Summary

- Research questions :
 - ① Estimate the Family Gap with a new approach
 - ② Evaluate the effect of Québec family policies on the Family Gap
- Data :
 - ▶ Rich nationally representative survey and administrative data
- Results :
 - ▶ Women experience a drop in earnings of about 50% in $\tau=0$
 - ▶ Long run child penalty is about 40% in $\tau=10$
 - ▶ Earnings of fathers are not affected by the arrival of a child
 - ▶ Québec family policies decrease by 30 pp. the Family Gap in the long run

Related literature



Long run child penalties across countries

Related literature

- **Denmark** : Child penalty of 30 % at $t=0$ and 20% in the long run ($t=10/20$) (*Kleven et al.*, 2018)
- **United States** :
 - ▶ Motherhood penalties of 7.5% for mothers with 2 children and more (*Pal and Waldfogel*, 2016)
 - ▶ The motherhood penalty decreased while the fatherhood bonus increased over time (*Glauber*, 2018)
- **Canada** :
 - ▶ Motherhood pay gap of 12.5 %, and no significant gap for those who return to the same job (*Phipps et al.*, 2001)
 - ▶ Longitudinal analysis : motherhood penalties of 40% in the year of the childbirth that totally disappear after 7 years (*Zhang*, 2010)
 - ▶ Motherhood penalties of 35 % resorbed after 4 years in Québec and 12 in RoC with longitudinal data and no significant gap in Québec compared to 6.5 % in RoC with cross-sectional data (*Connolly, Fontaine, Haeck*, 2018)

Hypothesis behind the motherhood penalty

- Depreciation of human capital (*Mincer and Polachek, 1974 ; Anderson et al., 2002*)
- Mothers choose more family-friendly employment (*Budig, 2014*)
- Mothers are less productive due to family responsibilities (*Becker, 1985*)
- Employer discrimination (*Correll et al., 2007*)
- Selection (*Peace and Rosenbloom, 1999*)
- Availability of childcare services (*Shelf, 2005*)

The effects of family policies

- Childcare service
 - ▶ Higher subsidized childcare program had a positive and strong effect on mothers LFP (*Haeck et al.*, 2015 ; *Baker et al.*, 2008)
- Extension of maternity/parental leave
 - ▶ Extension of job-protected leave significantly increase the probability of women returning to their pre-birth employer (*Baker et al.*, 2008)
 - ▶ Mixed long-term effects : long leave significantly increases the time women spend out of work, resulting in negative impact on the labour supply
- Father's paternity leave
 - ▶ Father's leave reduces the within-household gender wage though increasing mother's wages (*Andersen*, 2018)

Data source

- Longitudinal and International Study of Adults (LISA)
 - ▶ Wave 1 (2012), Wave 2 (2014), Wave 3 (2016)
- Sample : permanent members (plus their future descendants and new household members)
- Core content : labour market, education/training/skills and family experiences
- Linked with several administrative data sources
 - ▶ T1FF : historical data of personal and family earnings, transfers, income and after tax income (1982-2015)
 - ▶ T4 : historical data of earnings and employers (2000-2015)

Sample selection

- Balanced panel of parents
 - ▶ Non-missing income in the 15-year window surrounding the first childbirth ($-5 < \tau < 10$)
 - ▶ First childbirth occurring between 1987 and 2005
 - ▶ $N = 3,000$ mothers and fathers
- Childless men and women
 - ▶ Building counterfactuals using matching methods and assigning placebo birth
 - ▶ $N = 1,700$ women and men without children

Methodology - Child Penalties

1) Event study analysis (*Kleven et. al.* (2018)) :

$$Y_{it}^g = \sum_{\tau=-5}^{10} \beta_{\tau} \cdot I[\tau = t - YOB_i] + \sum_{\alpha} \beta_{\alpha} \cdot I[\alpha = Age_{it}] + \sum_{\rho} \beta_{\rho} \cdot I[\rho = Province_t] + \gamma_t + \alpha_i + \mu_{it}$$

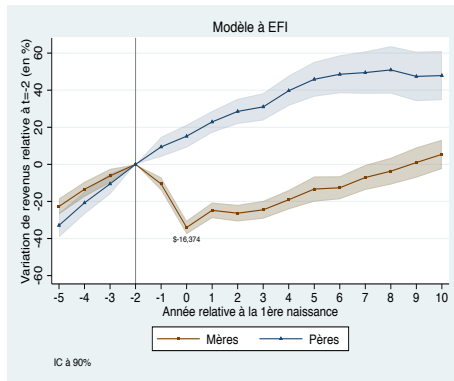
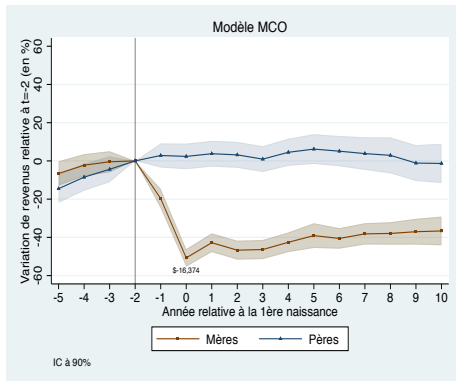
Y_{it}^g : earnings (in level) at time t for individual i of gender g

$\tau = -2$: omitted variable

2) We convert the estimated coefficients into percentages :

$$P_{\tau}^g = \hat{\beta}_{\tau}^g / E[\hat{Y}_{it}^g | \tau]$$

Child Penalties in Earnings

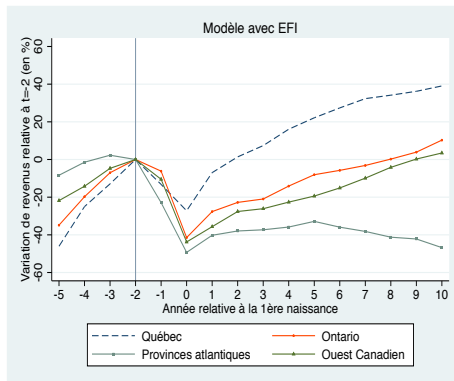
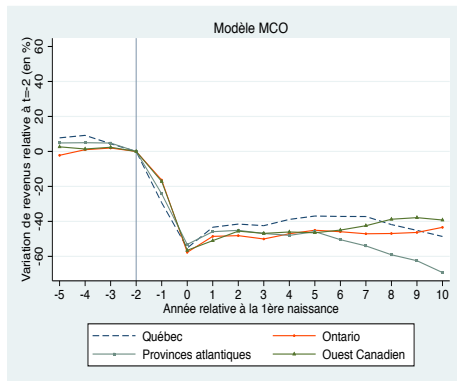


Source : LISA and T1FF Files (1982-2015), author's calculations

OLS model : Women experience in average a child penalty of 40% in the long run

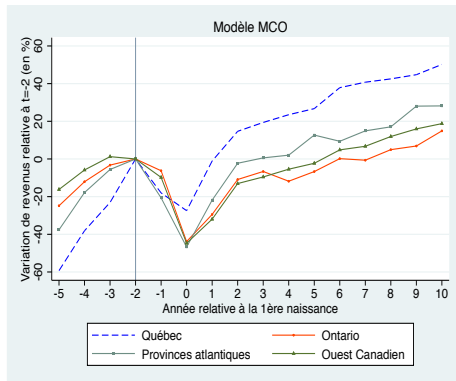
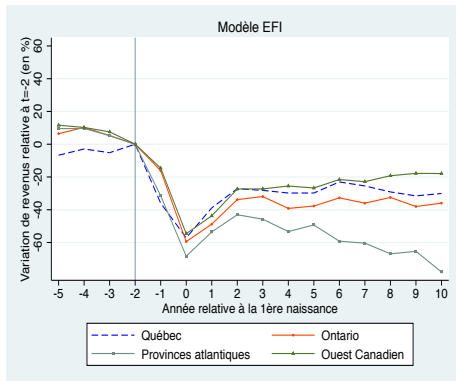
FE model : It takes on average 8 years for women to recover their pre-child earnings

Child Penalties in Earnings : Effects by Region



Source : author's calculations from LISA (2012;2014) and T1 Files (1982-2013)

Child Penalties in Earnings on Single Child Parents : Effects by Region



Source : author's calculations from LISA (2012;2014) and T1 Files (1982-2013)

Family policies in Canada and Québec

Canada :

- ① 2001 Parental leave reform : increase duration to 52 weeks in all provinces

Quebec :

- ① 1997-2001 : Introduction of program of highly subsidized daycare for children aged 0-5
- ② 2006 Québec parental leave reform : increase parental leave benefits and replacement rate plus creation of paternity leave.

Methodology : policy analysis

1) Simple-difference approach :

$$Y_{it} = \sum_{\tau \neq -2} \beta_{\tau} \cdot I[\tau = t - YOB_i] * Post_{2001} + X_{it} + \mu_{it}$$

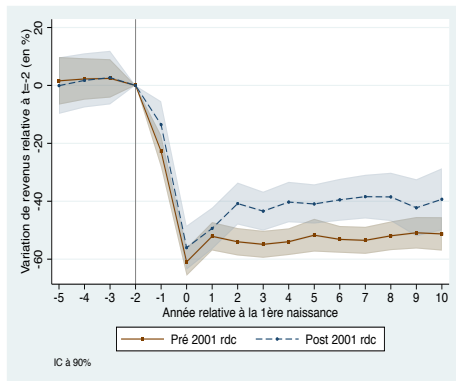
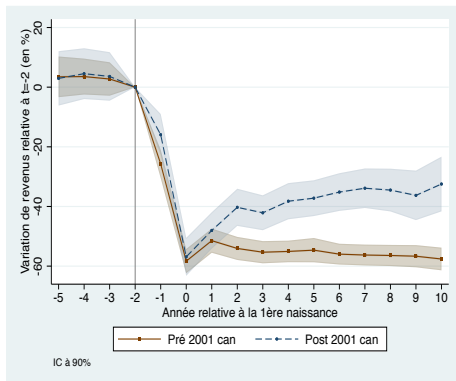
2) Difference-in-differences approach :

$$Y_{it} = \sum_{\tau \neq -2} \beta_{\tau} \cdot I[\tau = t - YOB_i] * Post_{2001} * Quebec + X_{it} + \mu_{it}$$

Y_{it}^g : earnings (in level) at time t for individual i

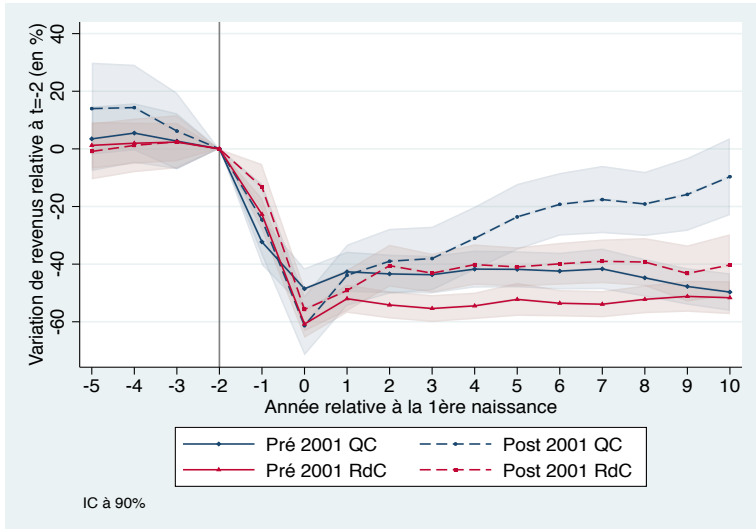
β_{τ} : ITT estimates

Impact of 2001 Reform



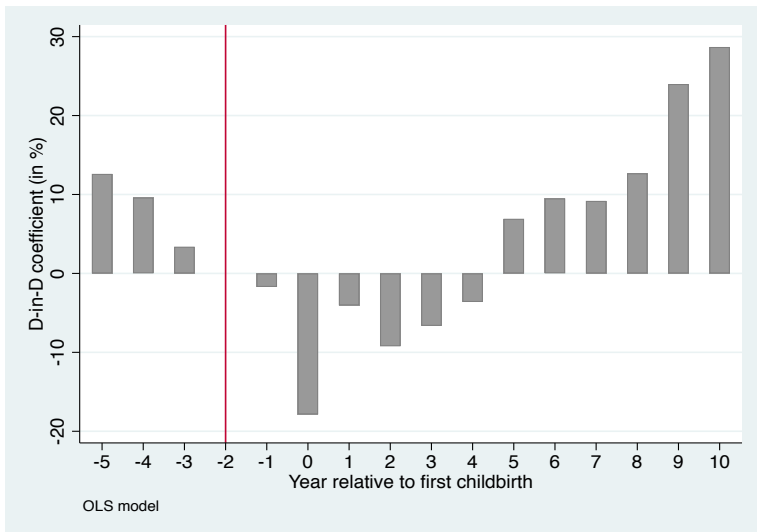
Source : LISA and T1FF Files (1982-2015), authors' calculations

Impact of combined set of policies in Québec



Source : LISA and T1FF Files (1982-2015), authors' calculations

Diff-in-Diff Coefficients



Source : LISA and T1FF Files (1982-2015), authors' calculations

Conclusion

- Motherhood has a negative effect on women's wages (child penalties of about 40% in the long run)
- Earnings trajectories of fathers are not affected by children
- In Québec, higher parental leave benefit combined with affordable childcare service have a positive impact on the family gap, reducing by 30 pp.
- Can family-friendly policies close the family gap?
- However, single mothers and lower educated mothers have larger penalties (Connolly, Fontaine and Haeck, 2018)
- Recommendation :
 - ▶ Change in the labour market to enhance temporal flexibility (*Goldin*, 2014)
 - ★ Firms tend to better value men's patterns of work (long hours worked, particular hours)

Thank you !



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