ONLINE APPENDIX
MORE OR LESS UNMARRIED. THE IMPACT OF LEGAL SETTINGS OF COHABITATION ON LABOUR MARKET OUTCOMES

MARION GOUSSÉ*, MARION LETURCQ**

* *Université Laval and CREST - Ensai, marion.gousse@ecn.ulaval.ca*

** *INED, Campus Condorcet, 9 cours des Humanités,93322 Aubervilliers Cedex, France. marion.leturcq@ined.fr.*

A. Example of change in the definition of partners

Figure A1. Definition of Spouse in the Family Property Act. Chapter F-6-3. (Saskatchewan, 1997)

"**spouse**" means either of two persons who:

(a)   at the time an application is made pursuant to this Act, is legally married to the other or is married to the other by a marriage that is voidable and has not been voided by a judgment of nullity;

(b)   has, in good faith, gone through a form of statutory marriage with the other that is void, where they are cohabiting or have cohabited within the two years preceding the making of an application pursuant to this Act; or

(c)   is cohabiting or has cohabited with the other person as spouses continuously for a period of not less than two years;

and includes:

(d)   a surviving spouse who continues or commences an application pursuant to section 30 and who was the spouse, within the meaning of clause (a), (b) or (c), of the deceased spouse on the day of the spouse's death; and

(e)   where the applicant is a spouse within the meaning of clause (b), the other party to the void marriage; (« *conjoint* »)

Figure A2. Definition of Spouse in the Family Maintenance Act. Chapter F-6-3. (Saskatchewan, 1990)

(l)   "**spouse**" means a wife or husband and includes:

(i)   a party to a marriage that is voidable and has not been voided by a judgment of nullity or dissolution of marriage;

(ii)   for the purpose of proceedings to enforce or vary an order, a party to a marriage with respect to which an order for divorce, dissolution of marriage or decree of nullity has been made; or

(iii)   either of a man and woman who are not married to each other and have cohabited as husband and wife:

(A)   continuously for a period of not less than three years; or

(B)   in a relationship of some permanence, if they are the birth or adoptive parents of a child.

1990-91, c.F-6.1, s.2; 1993, c.5, s.3; 1994, c.27, s.24; 1997, c.3, s.3.

B. Additional tables

Table B1. Sample size by province (men and women confounded)

	NF	PEI	NS	NB	QB	ONT	MAN	SK	ALB	BC	Total
Observations	1056	487	1733	1801	14266	5634	1269	1340	2002	2084	31672

Note: Data are from the 1993-2011 SLID panel data. The sample consists in individuals living in cohabitation for less than 10 years, aged between 18 and 50 years old in Canada. NF = Newfoundland and Labrador; PEI = Prince Edward Island; NS = Nova-Scotia; NB = New-Brunswick; QB = Quebec; ONT = Ontario; MAN = Manitoba; SK = Saskatchewan; ALB = Alberta; BC = British Columbia

Table B2. Impact of the eligibility for a protective regime of cohabitation on labour supply and labour earnings. Sample restricted to individuals with child at first observation

	Men			Women		
	Nb. of hours worked	Nb. of active weeks	Labour earnings	Nb. of hours worked	Not employed	Labour earnings
Panel A: eligibility status						
Alimony eligibility ($\widehat{\beta}_a$)	73	2.31	-742	32	-0.017	-175
	(66)	(1.07)	(868)	(44)	(0.019)	(792)
	[0.30]	[0.06]	[0.42]	[0.48]	[0.40]	[0.83]
	{0.38}	{0.06}	{0.46}	{0.72}	{0.42}	{0.79}
Marriage-like eligibility ($\widehat{\beta}_m$)	161	3.26	116	-99	0.10	-1374
	(103)	(2.08)	(1780)	(81)	(0.018)	(195)
	[0.15]	[0.15]	[0.95]	[0.26]	[0.00]	[0.00]
	{0.69}	{0.70}	{0.91}	{0.42}	{0.24}	{0.08}
$\widehat{\beta}_a + \widehat{\beta}_m$	234	5.57	-626	-66	0.086	-1548
Test p.value	[0.02]	[0.00]	[0.58]	[0.46]	[0.00]	[0.01]
	{0.20}	{0.15}	{0.86}	{0.66}	{0.01}	{0.22}
N	6315	6315	6315	7779	7779	7779

Note: Data are from the 1993-2011 SLID panel data. The sample consists in couples living in cohabitation for less than 10 years, aged between 18 and 50 years old in Canada that have a child the first time they are observed in the data. All regressions include controls for individual fixed effects, relationship duration fixed effects, year fixed effects, a dummy indicating having a child, year dummy interacted with a dummy for having a child, relationship duration fixed effects with an interaction for having a child, province fixed effects interacted with a dummy for having a child, age and age square. We use SLID longitudinal weights. Standard errors are clustered at the province level and are reported in parenthesis. Cluster p-value are reported in brackets. Wild cluster bootstrap p-values are reported in braces. *Number of active weeks* gives the number of weeks where the individual is either working or unemployed; *Number of hours worked* gives the number of hours worked during the year; *Not employed* is a binary variable indicating whether the individual had been either inactive or unemployed all year; *Labour earnings* gives fiscal labour earnings in constant Canadian dollars of 2002.

TABLE B3. Type of relationship at couple formation: probability of being in cohabitation vs. married

	(1)	(2)	(3)	(4)
Alimony reform ($\widehat{\alpha}_a$)	-0.074	-0.024	-0.068	-0.036
	(0.008)	(0.018)	(0.012)	(0.016)
	[0.00]	[0.22]	[0.00]	[0.06]
	{0.21}	{0.38}	{0.40}	{0.27}
Marriage-like reform ($\widehat{\alpha}_m$)	-0.018	-0.017	-0.011	-0.021
	(0.025)	(0.020)	(0.026)	(0.018)
	[0.50]	[0.44]	[0.68]	[0.27]
	{0.71}	{0.67}	{0.78}	{0.47}
N	16188	16188	12660	12660
R^2	0.191	0.191	0.076	0.076
Linear trend by province	No	Yes	No	Yes
Includes Quebec	Yes	Yes	No	No

Note: Data are from the 1993-2011 SLID panel data. The sample consists in couples in 0 or 1 year after couple formation, aged between 18 and 50 years old in Canada. All regressions include controls for sex of the respondents, dummy for having a child, sex of the respondent interacted with dummy for having a child, year fixed effect, province fixed effect, educational attainment, age of respondent. We use SLID longitudinal weights. Standard errors are clustered at the province level and are reported in parenthesis. Cluster p-value are reported in brackets. Wild cluster bootstrap p-values are reported in braces.

C. Common trend tests

Our estimation strategy relies on the common trends assumption. To test if the common trend assumption is likely to hold true, we test whether the treated group behaves differently from the control group before treatment in an event study approach.

This method is not straightforward to implement in our setting, for two reasons. First, we estimate simultaneously the impact of two different reforms. Second, there are several ways to become eligible for a protective regime: some couples become eligible because of the introduction of a new regime (in the paper, we call this group "couples eligible at the moment of the reform") and some couples become eligible when they reach the required number of years (in the paper, we call this group "couples eligible after the reform"). Notice that these groups are exclusive within regimes (the same couple is either eligible at the moment of the reform or after the reform) but not between regimes. For instance, in Manitoba and Saskatchewan, couples eligible after the introduction of the marriage-like regime are also formed after the introduction of the alimony regime but some couples formed after the introduction of the alimony regime are directly eligible at the introduction of the marriage-like regime.

For the event-study analysis, we calculated two variables: one variable measures time to the reform, the other measures time to eligibility for the regime. For both, we cannot observe many periods before the reform or before eligibility. For couples eligible at the moment of the reform, time to eligibility corresponds to the time to the reform. The maximum number of periods observed depends on the year of the reform but also on the beginning and end years of the rotating panels. As we observe five 6-years panels and one 4-years panel (1993–1998; 1996–2001; 1999–2004; 2002–2007; 2005–2010; 2007–2011), individuals are observed for a maximum of 6 years. It means couples affected by a reform occurring in 1997 are observed 4 years before the reform maximum in panel 1993–1998 and one year maximum in panel 1996–2001. For couples eligible after the reform, time to eligibility corresponds to the duration of the couple minus the minimal duration to be eligible. Couples are eligible after 2 or 3 years of cohabitation, which means that they are observed a maximum of 2 or 3 periods before eligibility. Despite the small number of periods observed before eligibility, we think this method remains the most convincing way to test the common trends assumption.

We perform several series of tests (on men and women separately, and on each outcome separately), that we present in this online appendix:

(1) Effect of the marriage-like reform: we observe up to **four** periods before marriage-like reform (and three after) (fig. C1)

(2) Effect of eligibility for alimony regime on couples eligible after the reform: we observe up to **three** periods before eligibility for the alimony regime (and four after) (fig. C2)

(3) Effect of eligibility for marriage-like regime on couples eligible at the moment of the reform: we observe up to **four** periods before eligibility for the marriage-like regime (and three after) (fig. C3)

(4) Effect of eligibility for marriage-like regime on couples eligible after the reform: we observe up to **three** periods before eligibility for the marriage-like regime (and four after) (fig. C4)

We first present the results of our test for the common trends assumption in our analysis of the effect of the marriage like reform. Figure C1 shows the results. We find no difference in the labour market outcomes of men and women before the introduction of the marriage-like regime, in treated provinces compared to other provinces.
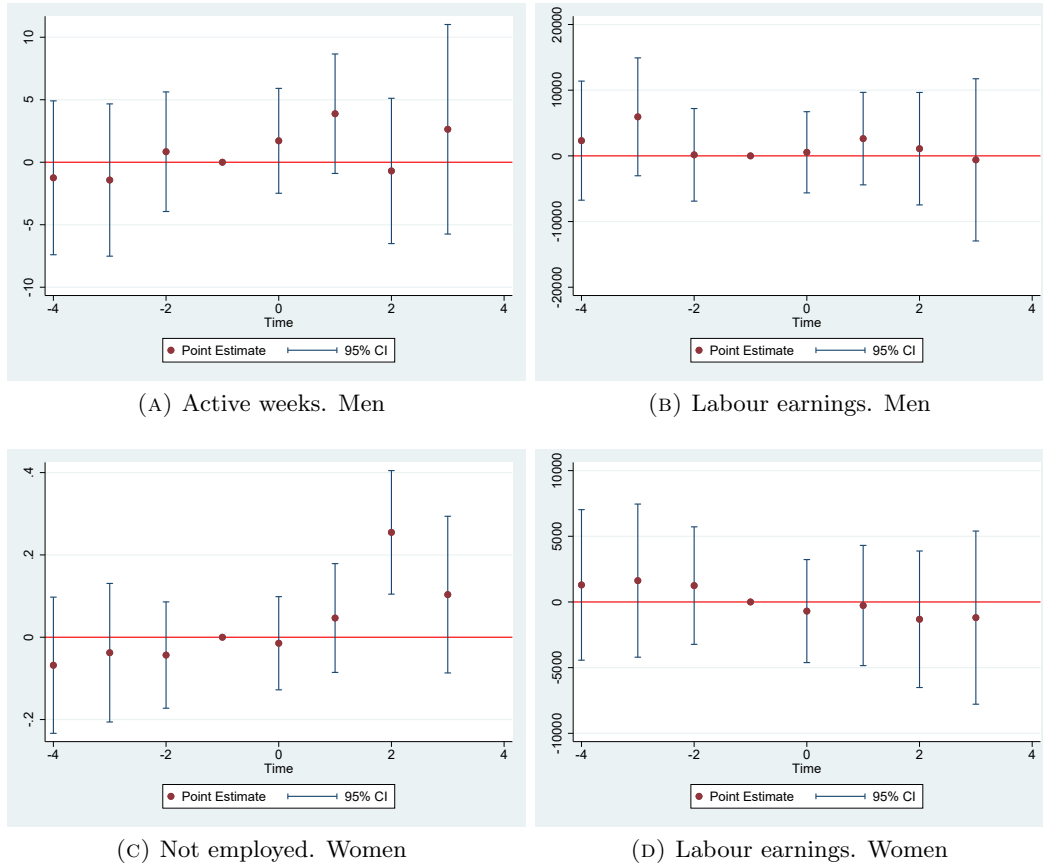

(A) Active weeks. Men

(B) Labour earnings. Men

(C) Not employed. Women

(D) Labour earnings. Women

FIGURE C1. Effect of the marriage-like reform

Note: Data are from the 1993-2011 SLID panel data. The sample consists in individuals living in cohabitation for less than 10 years, aged between 18 and 50 years old in Canada. All regressions include controls for individual fixed effects, relationship duration fixed effects, year fixed effects, a dummy indicating having a child, year dummy interacted with a dummy for having a child, relationship duration fixed effects with an interaction for having a child, province fixed effects interacted with a dummy for having a child, age and age square. We use SLID longitudinal weights. *Active weeks* gives the number of weeks where the individual is either working or unemployed; *Not employed* is a binary variable indicating whether the individual had been either inactive or unemployed all year; *Labour earnings* gives fiscal labour earnings in constant Canadian dollars of 2002.

We now present the results of our tests of common trend assumptions in our analysis of the effect of the eligibility status, separating couples formed before the introduction of the reform from couples formed after the introduction of the reform. We find no differences in

the labour market outcomes of individuals before eligibility between treated and untreated individuals, except for the labour income of men—before becoming eligible for the alimony regime, men in a relationship formed after the reform tend to have higher labour earnings than men who are in the same duration of cohabitation but who are not about to become eligible for the alimony regime. However, we do not find any significant effect of eligibility on men's labour income after the period.
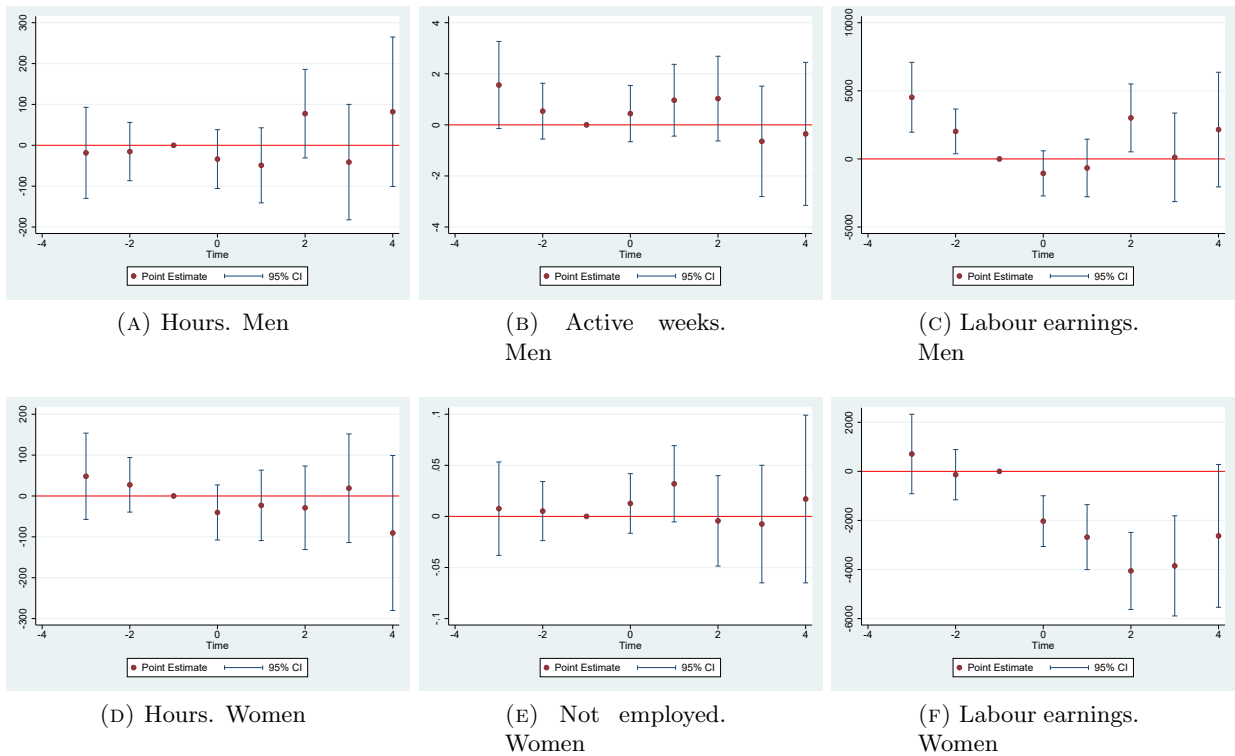

(A) Hours. Men   (B) Active weeks. Men   (C) Labour earnings. Men

(D) Hours. Women   (E) Not employed. Women   (F) Labour earnings. Women

FIGURE C2. Effect of eligibility for the alimony regime on couples formed after the reform

Note: Data are from the 1993-2011 SLID panel data. The sample consists in individuals living in cohabitation for less than 10 years, aged between 18 and 50 years old in Canada. All regressions include controls for individual fixed effects, relationship duration fixed effects, year fixed effects, a dummy indicating having a child, year dummy interacted with a dummy for having a child, relationship duration fixed effects with an interaction for having a child, province fixed effects interacted with a dummy for having a child, age and age square. We use SLID longitudinal weights. *Hours* gives the number of working hours per year; *Active weeks* gives the number of weeks where the individual is either working or unemployed; *Not employed* is a binary variable indicating whether the individual had been either inactive or unemployed all year; *Labour earnings* gives fiscal labour earnings in constant Canadian dollars of 2002.

(A) Hours. Men

(B) Active weeks. Men

(C) Labour earnings. Men

(D) Hours. Women

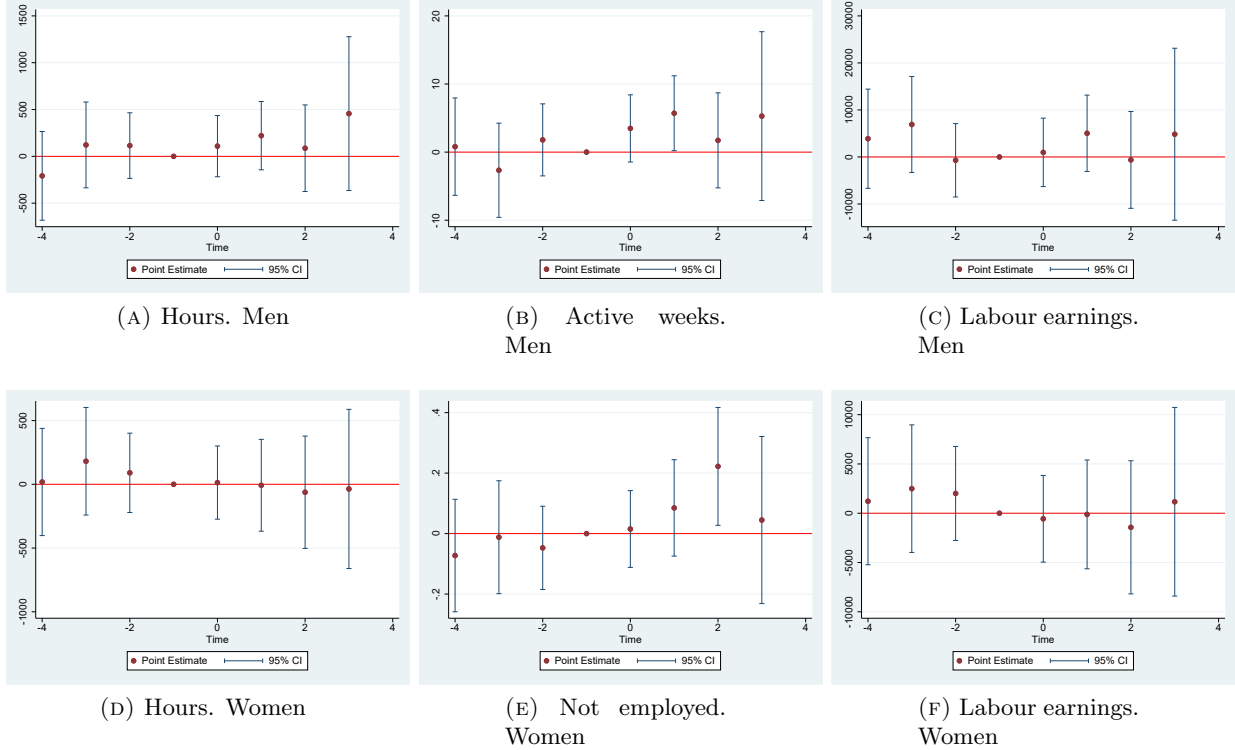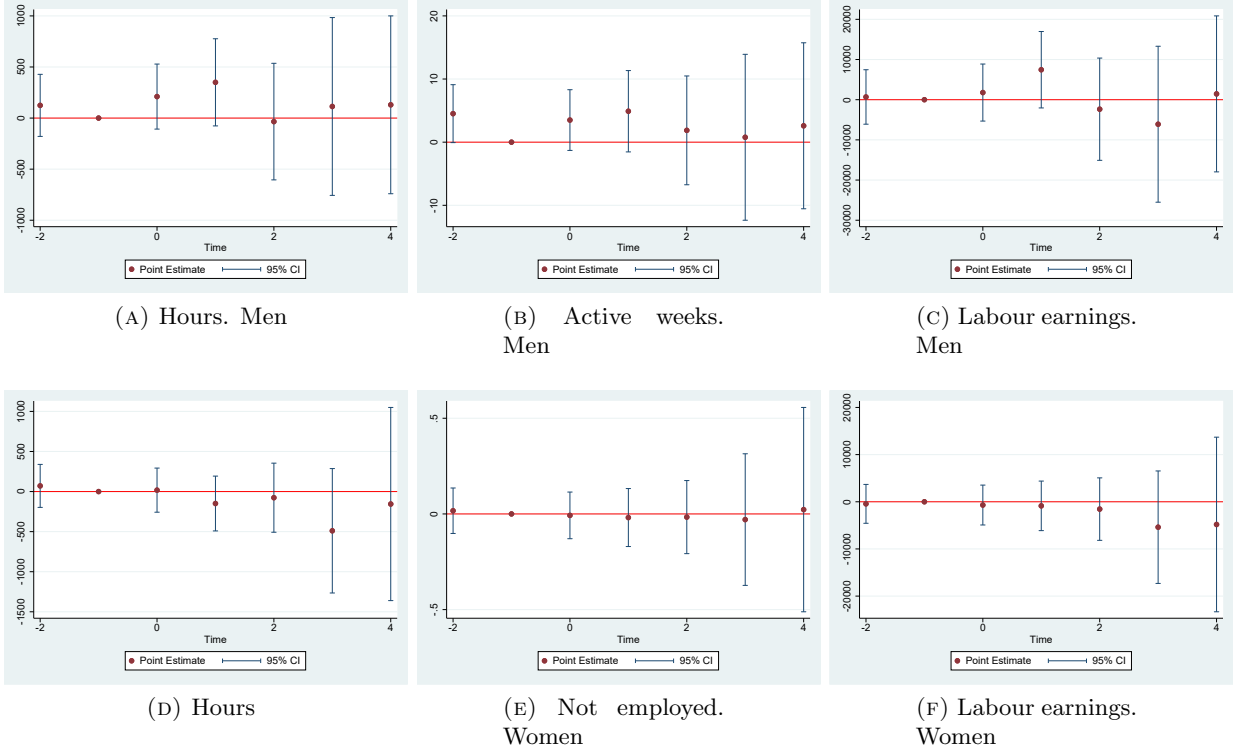(E) Not employed. Women

(F) Labour earnings. Women

FIGURE C3. Effect of eligibility for the marriage-like regime on couples formed before the reform

Note: Data are from the 1993-2011 SLID panel data. The sample consists in individuals living in cohabitation for less than 10 years, aged between 18 and 50 years old in Canada. All regressions include controls for individual fixed effects, relationship duration fixed effects, year fixed effects, a dummy indicating having a child, year dummy interacted with a dummy for having a child, relationship duration fixed effects with an interaction for having a child, province fixed effects interacted with a dummy for having a child, age and age square. We use SLID longitudinal weights. *Active weeks* gives the number of weeks where the individual is either working or unemployed; *Not employed* is a binary variable indicating whether the individual had been either inactive or unemployed all year; *Labour earnings* gives fiscal labour earnings in constant Canadian dollars of 2002.

(A) Hours. Men

(B) Active weeks. Men

(C) Labour earnings. Men

(D) Hours

(E) Not employed. Women

(F) Labour earnings. Women

FIGURE C4. Effect of eligibility for the marriage-like regime on couples formed after the reform

Note: Data are from the 1993-2011 SLID panel data. The sample consists in women living in cohabitation for less than 10 years, aged between 18 and 50 years old in Canada. All regressions include controls for individual fixed effects, relationship duration fixed effects, year fixed effects, a dummy indicating having a child, year dummy interacted with a dummy for having a child, relationship duration fixed effects with an interaction for having a child, province fixed effects interacted with a dummy for having a child, age and age square. We use SLID longitudinal weights. *Active weeks* gives the number of weeks where the individual is either working or unemployed; *Not employed* is a binary variable indicating whether the individual had been either inactive or unemployed all year; *Labour earnings* gives fiscal labour earnings in constant Canadian dollars of 2002.

We now focus on the specific case of the dynamic of labour earnings around eligibility for the alimony regime for men and women in couples formed after the reform. Notice that the group of couples formed after the introduction of the alimony regime is the largest group of treated individuals, as most provinces passed a reform introducing the alimony regime before our period of observation. We separate provinces where couples are eligible after two years of cohabitation from couples eligible after three years of cohabitation. Results presented in fig. C5 indicate that men in provinces where they are eligible after three years of cohabitation tend to have different dynamic in their labour market outcomes before eligibility as compared to men in untreated provinces, whereas the pre-treatment labour market outcomes of men in provinces where they are eligible after two years of cohabitation are similar to men in untreated provinces. The dynamic in males' labour earnings after eligibility is similar across the two groups of provinces and indicate an increase in labour earnings after two years in the alimony regime. Figure C6 shows no differences in pre-treatment labour market outcomes for women in provinces whether they become eligible after two or three years of cohabitation. The dynamic of labour market earnings after eligibility is similar in both group of provinces for women, and shows a decrease in earnings starting right after they become eligible for the alimony regime.
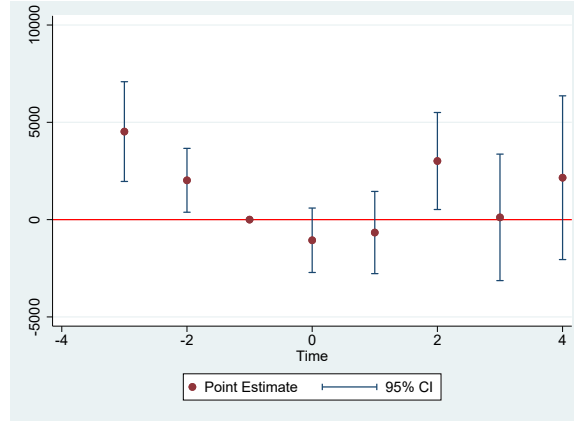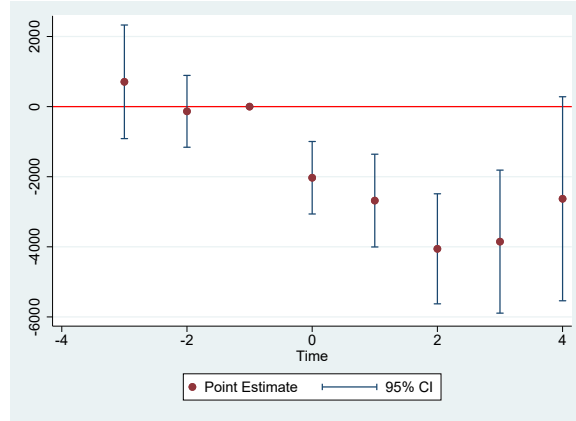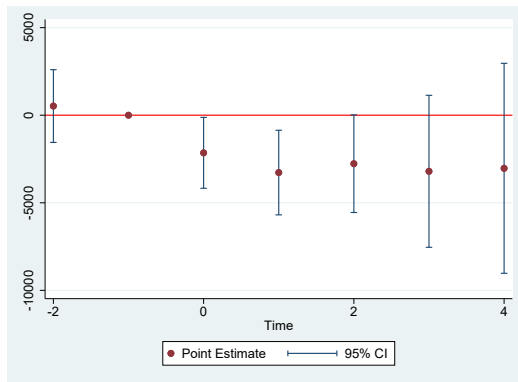
(A) All provinces
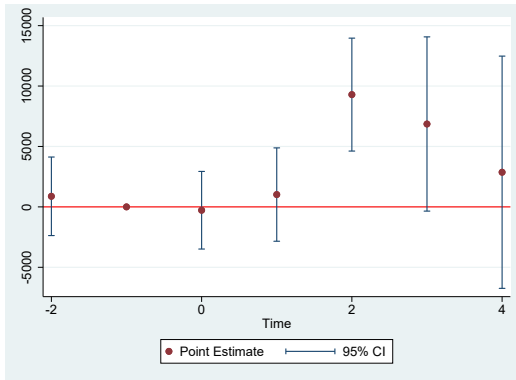
(B) Provinces (2 years)
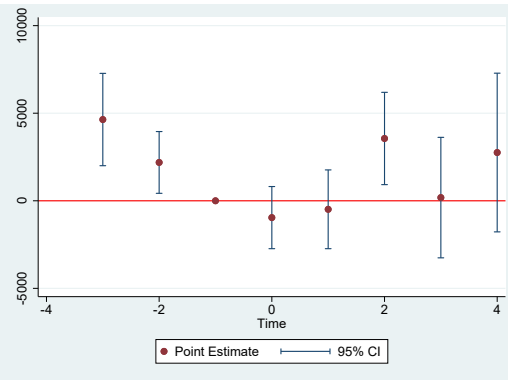
(C) Provinces (3 years)

FIGURE C5. Effect of eligibility for the alimony regime on labour earnings
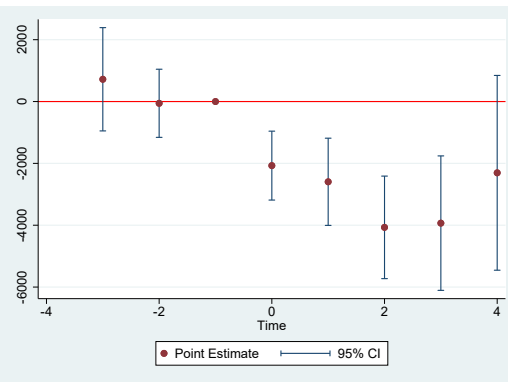of men in couples formed after the reform

Note: Data are from the 1993-2011 SLID panel data. The sample consists in men living in cohabitation for less than 10 years, aged between 18 and 50 years old in Canada. All regressions include controls for individual fixed effects, relationship duration fixed effects, year fixed effects, a dummy indicating having a child, year dummy interacted with a dummy for having a child, relationship duration fixed effects with an interaction for having a child, province fixed effects interacted with a dummy for having a child, age and age square. We use SLID longitudinal weights. *Labour earnings* gives fiscal labour earnings in constant Canadian dollars of 2002.

(A) All provinces

(B) Provinces (2 years)

(C) Provinces (3 years)

FIGURE C6. Effect of eligibility for the alimony regime on labour earnings of women in couples formed after the reform

Note: Data are from the 1993-2011 SLID panel data. The sample consists in women living in cohabitation for less than 10 years, aged between 18 and 50 years old in Canada. All regressions include controls for individual fixed effects, relationship duration fixed effects, year fixed effects, a dummy indicating having a child, year dummy interacted with a dummy for having a child, relationship duration fixed effects with an interaction for having a child, province fixed effects interacted with a dummy for having a child, age and age square. We use SLID longitudinal weights. *Labour earnings* gives fiscal labour earnings in constant Canadian dollars of 2002.