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More or less unmarried. The impact of legal settings of cohabitation on labour market outcomes☆

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ABSTRACT

We study how different levels of protection upon separation affect the labour market behaviour of unmarried cohabiting partners. In Canada, unmarried cohabitation becomes a legal status after one year of relationship. Most provinces automatically expand couples' rights and responsibilities after several years of cohabitation: some provinces allow cohabiting partners to claim for alimony upon separation, while others consider cohabiting couples to be equal to married couples. Using cross-province variations in legal settings and minimum eligibility duration, we find that eligibility for a regime making cohabiting partners equal to married partners increases men's labour supply and earnings and decreases women's while eligibility for a regime allowing for post-separation transfers between ex-partners decreases women's earnings only. We find that the effect is stronger for couples directly eligible at the time of the reform than for couples who are eligible after the reform and may have anticipated changes in the legal settings. Our results show that eligibility affects within-household allocation of earnings and hours of work, and reinforces existing inequality. Our results contribute to the ongoing public debate regarding the legal recognition and level of protection that should be given to unmarried cohabiting partners.

1. Introduction

Women experience greater financial loss than men upon divorce (Bonnet et al., 2021; Leopold, 2018). Courts aim at compensating the gender gap in living conditions between ex-spouses after divorce by sharing the household's assets and implementing alimony. Cohabiting couples are typically not eligible for alimony upon separation, although cohabitation is also associated with a large gender gap after separation (Avellar and Smock, 2005; Fisher and Low, 2015). Facing an increasing number of separations from cohabitation, some countries have changed their family law to allow some protection for cohabitants, or are planning to do so. National debates usually focus on the level of protection that should be given to ex-cohabiting partners but they largely ignore that unmarried couples may adjust their behaviour to the level of protection induced by the family law. Yet, for married couples,

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it is widely acknowledged in the literature that they are responsive to outside factors such as divorce laws. Changing outside factors induce a redistribution of bargaining power between the spouses which affects labour outcomes (Lundberg and Pollak, 1996; Chiappori et al., 2002). In particular, increasing support to women at separation may decrease the labour supply of women in couples either through an income effect or through a specialization effect. This decrease in women labour supply and women contribution to the household income may in turn influence the balance of power in the long run (Basu, 2006). As a result, adjustment in the labour market behaviour could offset the protection induced by a protective cohabitation regime.

Despite its relevance, the empirical literature on the effects of post-marital maintenance and marital property regime on household labour supply is scarce because those regimes have changed little over the last fifty years. In this paper, we study how unmarried cohabiting partners adjust their labour market outcomes when they become eligible for a more protective cohabitation regime. Do cohabiting couples react to a change in the legal settings of cohabitation? And do they react similarly when they are granted the exact same legal protection as married couples and when they are only granted the rights to claim for alimony? Canada provides a unique case for observing cohabiting partners' behaviour.[1] In Canada, cohabiting couples are easily identifiable in the data because the federal state considers that unmarried cohabitation becomes a legal status after one year of cohabitation and cohabiting partners have to declare their cohabitation status on their tax return. Between 1972 and 1999, all provinces except for Quebec have entitled cohabiting partners to the rights to make claims for alimony or compensatory grants at separation. In addition, four provinces have given cohabiting couples the exact same rights and responsibilities as married couples. Partners are automatically entitled to these rights after a certain duration of unmarried cohabitation.

We identify the effect of eligibility for a protective regime of cohabitation by exploiting variations across Canadian provinces in: (a) the different levels of protection; (b) the year in which these reforms took place; and (c) the minimum duration required to be eligible for cohabitation rights. We use longitudinal data from the Survey on Labour Income Dynamic (SLID), which is representative of the Canadian population over the years 1993–2011 and we implement a difference-in-differences estimation strategy combined with individual fixed effects and duration of the relationship fixed effects. As we observe labour market outcomes of both partners, we are able to identify effects on the within-household allocation of time and earnings. We are able to directly test whether partners' adjustments on the labour market affect women's position within the household.

In our setting, couples formed long enough before a reform become directly eligible for a protective regime at the time of the reform, while couples formed after a reform start their relationship in a non-protective regime, and become eligible for a protective regime in the course of their relationship. This rich (and unique) setting allows us to differentiate the impact of eligibility on couples who cannot anticipate their eligibility (because they were directly eligible at the time of the reform) from those who can anticipate it (because they were formed after the reform, or because they were formed before the reform but not yet eligible at the time of the reform).

We provide empirical evidence suggesting that eligibility for a regime inducing property division increases men's labour supply and earnings and decreases women's while eligibility for a regime inducing alimony payments decreases women's earnings only. We find that the effect is stronger for couples who are directly eligible at the time of the reform than for couples who are eligible after the reform and who may have anticipated the changes in the legal framework. Our results show that eligibility affects within-household allocation of earnings and worked hours by reinforcing existing inequalities. We find a stronger negative effect on labour supply and earnings of women in couples where the female partner earns a small share of the total household income. Finally, we present some evidence that enhancing the protection level at separation has an effect on the selection of couples into cohabitation. We find that couples are more likely to marry when they become eligible for the new protection level.

Our results are then in line with the theoretical framework of the collective family models. In those models, partners do not perfectly pool their income but bargain over resources and each partner chooses its labour supply accordingly. When bargaining, they take into account their outside option, i.e., what would happen in the event of separation. Thus, the introduction of a post-separation transfers from the high-income partner to the low-income partner should increase the bargaining power of the latter and decrease that of the former. With leisure as a normal good, one would expect the introduction of the alimony regime to decrease the labour supply and earnings of low-income partners. Our results are also consistent with the competing mechanism of specialization: the right to alimony rights and the equal division of assets provide insurance against a drop in financial resources in the event of divorce, which encourages women to invest more in marriage-specific capital and to devote more time to childcare and housework.

This paper contributes to various strands of the literature. First, we contribute to the literature that assesses the effect of policies of supports to low-wage earners at separation through the regulation of alimony rights or equitable property division. As there have been few changes in marital property regimes, very few papers have studied the effect of post-marital payments or equitable division of property on household labour market outcomes.[2] An alternative is to resort to observing the introduction of property rights and post-marital transfers for cohabiting couples.[3] (Rangel, 2006) analyses the effect of the introduction of alimony laws in Brazil for unmarried cohabiting couples. He finds that it decreases the labour supply of women in cohabitation and increases

[1] In the rest of the paper, we will refer to unmarried cohabitation as "cohabitation" or "unmarried cohabitation" interchangeably. We will refer to partners as "cohabiting partners", "common-law partners" or "partners".

[2] Previous economic papers study the links between women's labour supply and laws regarding division of marital property by looking at the interactions between these laws and the introduction of the unilateral divorce in the United States. Voena (2015) shows that the introduction of unilateral divorce in states that imposed an equal division of property is associated with higher household savings and lower female employment. On the contrary, Stevenson (2007) shows that unilateral divorce is associated with higher labour supply of married women after the reform, regardless of the property-division laws.

[3] Another way is to build and estimate of a dynamic structural model of married and divorced couples decision-making as in Foerster (2019). Using Danish register and survey data, he finds that child support and alimony payments after divorce come with strong labour supply disincentives.

the school enrolment rate of girls who live with unmarried parents. In Canada, Chiappori et al. (2017) find that the introduction of alimony laws for unmarried cohabiting couples increases men labour force participation and decreases women participation for existing couples at the time of the reform. In Australia, Chigavazira et al. (2019) show that cohabiting couples are more likely to make relationship-specific investment after being exposed to laws that make them equal to married couples. To our knowledge, we are the first paper that estimates in a unified framework the separate effects of alimony and equal property division at separation for cohabiting couples.

Second, we contribute to the literature which highlights that reforms may have different effects on couples formed at the time of the reform and couples formed after. Standard estimates are based on the behaviour of existing couples at the time of the reform. However, in the long run, the reform may affect couples differently as couples can renegotiate (Chiappori et al., 2017; Goussé, 2021) and as couples' composition may change through couple dissolution, match formation and changes in partnership choices (Reynoso, 2018; Goussé, 2021). Chiappori et al. (2017) propose a theoretical analysis indicating that being granted alimony rights increases women's bargaining power for couples formed before the reform but it reallocates women's bargaining power over time for couples formed after the reform: their bargaining power is lower before they are eligible for the protective regime but stronger after being eligible. It predicts different effects of a family law reform for already formed couples and for couples to be formed. As in their paper, we distinguish the impact of the reform on existing couples from the impact of eligibility status on couples eligible after the reform. We show that couples eligible after the reform react less when they become eligible for the new protection than couples who were eligible directly at the time of the reform. This result indicates that standard estimates of the impact of a reform of family laws may not be indicative of what happens in the long-run. By anticipating eligibility, couples have two ways to adapt: they can change their labour supply behaviour or change their relationship contract. The differences between our estimates for eligible couples before and after the reform can therefore be explained by these two sources of variation.

Thus, we also contribute to the literature that shows that welfare reforms and redistribution towards single low earners may have an effect on separation for existing couples (Bitler et al., 2004; Francesconi et al., 2009) and on incentives to marry (Tannenbaum, 2020). We show that cohabiting couples are more likely to get married when they become eligible for more protective rights.[4] More generally, our paper is related to the literature on measuring the impact of the marriage and divorce policies on divorce (Wolfers, 2006), and partnership choice (Rasul, 2006; Matouschek and Rasul, 2008; Leturcq, 2012; Reynoso, 2018; Blasutto and Kozlov, 2020). We show that couples are less likely to enter cohabitation after the reform.

The next section presents the Canadian institutional context. We detail the empirical strategy in Section 3. Data are presented in Section 4. We describe the results in Section 5 and Section 6 concludes.

2. Canadian institutional context

In Canada, cohabiting union is increasingly seen as substitute to marriage for childbearing and raising a family (Kerr et al., 2006; Kiernan, 2004; Le Bourdais and Lapierre-Adamcyk, 2004).[5] As cohabiting unions are being more unstable than marriage, a growing part of the population is experiencing a dissolution, including children (Musick and Michelmore, 2015; Bohnert, 2012). Ex-cohabiting partners experience a larger drop in income and a higher risk of poverty at separation than ex-married spouses (Avellar and Smock, 2005; Tach and Eads, 2015; Le Bourdais et al., 2016). The provincial governments decided to make policy decisions about the appropriate legal framework for resolving property disputes between partners in non-traditional relationships. These policy decisions were mostly unexpected at the moment they were adopted. Reforms took place at different points in time and took different directions between provinces (Bala and Bromwich, 2002; Robitaille and Otis, 2003). In this paper, we sort the existing common-law couples laws into three different regimes and we label them as the *federal regime*, the *alimony regime* and the *marriage-like regime*.

Implemented in 1993, the *federal regime* is the regime of cohabiting partners ensured by the federal state—it applies everywhere in Canada. After one year of unmarried cohabitation, couples have to indicate that they are living in a common-law relationship on their tax return.[6] They also become eligible for their partner's car insurance and their partner's pension plan. The federal regime is a minimum legal framework and is complemented by provincial legislation.

The *alimony regime* allows common-law partners to claim for alimony in the event of relationship breakdown. Although matrimonial property legislation applies only to legally married couples, the courts have applied the doctrines of resulting and constructive trust to award a share of one common-law spouse's property to the other in cases in which it would be *unjust* not to take spousal contribution to acquisition of property into account (Bala and Bromwich, 2002). The general principles of trust law can prevent injustice in some cases, but it is limited in its scope. Partners can claim for alimony rights upon separation, but being granted these rights is quite uncertain. Reforms introducing the alimony regime were passed between 1972 and 1999. As of 2013, all Canadian provinces – except Quebec – applied the principles of trust laws for cohabiting partners.[7]

The *marriage-like regime* considers all couples in a marriage-like relationship as equal to married couples. Couples are treated like married couples in all matters (health insurance, government benefits including retirement, inheritance, dividing property at separation, spouse alimony, etc.). The marriage-like regime considers a separation of a common-law couple as a divorce, thus

[4] Lafortune and Low (2017, 2020) suggest that as marriage and cohabitation become more alike, marriage gains are lower which could explain the declining trend in marriage rates.

[5] The share of common-law partners among couples has increased from 6.3% in 1981 to 20.8% in 2019 (Statistics Canada, 2021).

[6] Married and cohabiting partners pay their tax separately in Canada, but some means-tested transfers depend on the household income.

[7] In Quebec, unmarried cohabiting couples are not granted any additional rights further than the rights stated by the federal law. Quebec have denied the rights to ex-cohabitants to claim for spousal maintenance (Eric v. Lola, QC, 2013), rejecting any move towards the alimony regime.

Table 1
Variations of unmarried cohabitation regimes between Canadian provinces.

Province	Type of regime	Year of reform	Required relationship duration (in years)	
			Without children	With children
Federal state	Federal	1993	1	1
Newfoundland and Labrador	Alimony	1990	2	1
Prince Edward Island	**Alimony**	**1995**	3	0
Nova-Scotia	Alimony	1989	2	2
New-Brunswick	Alimony	1980	3	1
Quebec	(Federal)			
Ontario	Alimony	1978	3	0
Manitoba	Alimony	1983	5	5
	Alimony	**2001**	3	1
	Marriage-like	**2004**	3	1
Saskatchewan	Alimony	1990	3	0
	Marriage-like	**1997**	2	2
Alberta	**Alimony**	**1999**	3	0
	Marriage-like	*2020*	3	0
British Columbia	Alimony	1972	2	2
	Marriage-like	*2013*	2	2

Cells in bold text indicate reforms implemented during the period of observation (1993–2011). Cells in italic indicate reforms implemented after the period of observation.

increasing the cost of separation. This regime is also more protective than the alimony regime: it gives ex-partners more rights upon separation and it is less uncertain as the rights it gives are clearly defined. The adoption of the marriage-like regime consists in a modification of the definition of married couples.[8]

The Department of Justice (federal) provides precise and updated guidelines regarding alimony. The guidelines define: eligibility to spousal support and/or child support, payment schedule, amount of payment, and how an agreement can be settled. When the couple has no dependent children[9], the guidelines provide a *without child support formula* to compute the amount of spousal support. It takes into account the income difference between spouses and the duration of the relationship.[10] Statistics regarding the number of beneficiaries and payers usually mix spousal support and child support—whichever the source, survey or fiscal data.[11] In our data based on fiscal data, among individuals who separated after a cohabitation, around 27% of female ex-cohabitants receive alimony payment over the period 1999–2011 and 27% of male ex-cohabitants pay alimony over the period 1999–2011. Among female ex-cohabitants who receive alimony, they receive 4444 CAD annually, which is 30% of their total income on average. Among male ex-cohabitants who give alimony, they give 4446 CAD annually, which corresponds to 11% of their total income on average. Using survey data, Sinha (2014) found similar estimates on the proportions of beneficiaries and payers, as well as amounts.[12]

Regarding property division over separation, the rules are more complicated. The Department of Justice publishes guidelines, but partners are advised to consult a lawyer. For married couples (and unmarried couples where the marriage-like regime applies), the general rule is that the value of any property that a spouse acquired during the marriage and that the spouse still has when the couples separate must be divided equally. Property brought by a spouse into marriage remains hers if the marriage ends. Any increase in the value of this property during marriage must be shared. There are some exceptions, and one notable exception is the family home, which has to be divided equally, whoever brought it into marriage. The ex-partners have the same right to stay in the house and must divide their property equally. In addition to this, there is a concern for continuity for the children.

Table 1 summarizes the regimes in the ten Canadian provinces.[13] The federal regime applies everywhere. The alimony regime and the marriage-like regime apply when cohabiting partners have been living together for a certain number of years which varies across provinces. This minimal amount of years can be reduced if the couple has a child.

During the period 1993–2011 that we observe in our data, four provinces reformed the regime of cohabiting partners. Prince Edward Island and Alberta respectively adopted the alimony regime in 1995 and 1999 while Saskatchewan and Manitoba have

[8] For instance, in 1997, the new Saskatchewan Family Property Act stated that couples who have lived together in a marriage-like relationship for two years were treated as married couples. We provide examples of definition of spouses in Family Law Acts for Saskatchewan in 1997 and in 1990 in the online appendix.

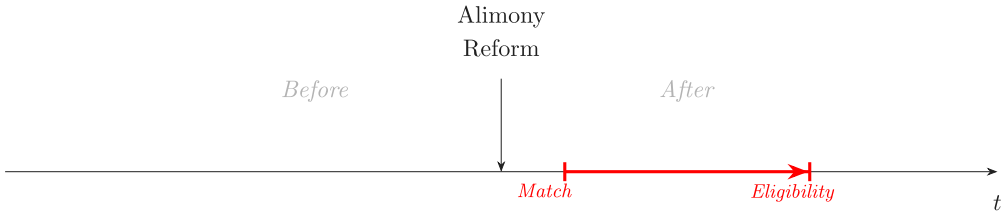
[9] Court orders for child support use the Federal Child Support Guidelines, which can be consulted online and used by parents in sought of an agreement without involving the court. The guidelines consider the living arrangements of the child, the income of the payer, the number of child beneficiaries and the province or territory where the payer lives.

[10] The guidelines can be consulted: https://www.justice.gc.ca/eng/fl-df/spousal-epoux/topic-theme/dir/wo-sans.html (visited on Jan 26, 2022).

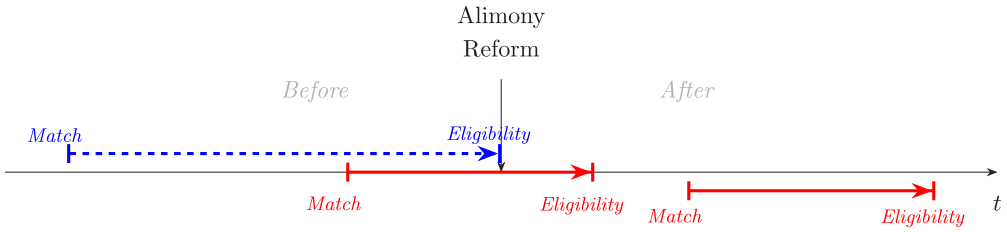
[11] Support payments for a child or a current or former spouse or common-law partner, under a court order or written agreement made before May 1997, are taxable to the recipient and deductible by the payer. After April 1997, child support payments made under a court order or written agreement are not deductible by the payer and do not have to be included the recipient's income. Spousal support payments continue to be deductible to the payer and must be included in the recipient's income. However both spousal support and children have to be reported, which is why we cannot distinguish in fiscal data.

[12] However, only regular alimony payments are reportable to taxes. Lump sum alimony payments are probably not included in those figures.

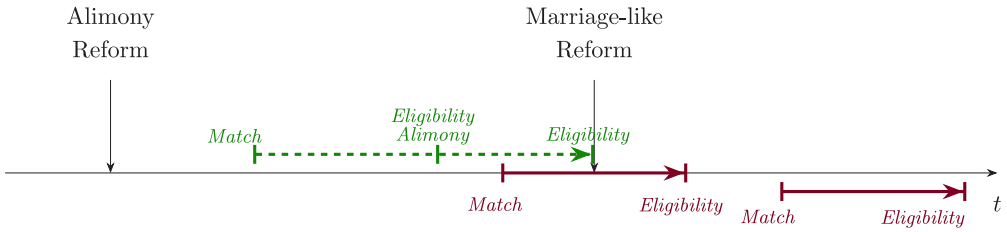
[13] We exclude the three Canadian territories (Northwest Territories, Nunavut and Yukon) from our analysis as they have very few inhabitants and they have different law with respect to cohabitation.



(A) The reform introducing the alimony regime passed before the period of observation (NF, NB, NS, ONT, BC)



(B) The reform introducing the alimony regime is observed during the period (PEI, ALB)



(C) The reform introducing the marriage-like regime is observed during the period, the reform introducing the alimony regime passed before the period of observation (MAN, SK)

Fig. 1. Diagram describing eligibility status of couples.

moved from an alimony regime to a marriage-like regime in 1997 and 2004 respectively. The federal regime was implemented just before our period of observation. Other provinces (except Quebec) had adopted the alimony regime before our period of observation. British Columbia and Alberta adopted the marriage-like regime after our period of observation, in 2013 and 2020 respectively.

3. Empirical strategy

3.1. An intuitive explanation of the identifying strategy

Our estimation strategy relies on a difference-in-differences analysis. Estimating the effect of granting rights to cohabitants is not straightforward. As cohabitants benefit from these additional rights after several years of cohabitation, we have to consider different cases depending on the date of the reform and the date when the couple was formed. Moreover, the Canadian legal setting includes two different types of reform, which complicates the design of the reforms we study. Quebec is the only province that never introduced any specific regime for cohabiting partners. To clarify the different cases we are considering, and the underlying treated-to-control comparisons, we refer the reader to Fig. 1.

Fig. 1, panel A, presents the case of provinces where the reform introducing the alimony regime took place before our period of observation and where the marriage-like regime is not implemented.[14] In this case, we observe variation in the cohabitation regime when couples become eligible for the alimony regime after a few years of cohabitation. To estimate the impact of being eligible for the alimony regime, we need to compare treated couples in these provinces to couples in Quebec or couples in provinces before they implement the alimony reform. These couples may have anticipated their eligibility status. We come back to this issue in the robustness Section 3.4. We label these couples as couples "non-caught" by the alimony reform.[15]

[14] Newfoundland and Labrador, Nova-Scotia, New-Brunswick, Ontario and British Columbia.

[15] We use the terminology of Chiappori et al. (2017).

Fig. 1, panel B, presents the case of provinces where the reform introducing the alimony regime took place during our period of observation.[16] In those provinces, we consider two types of couples: (i) couples who formed before the reform who are directly eligible at the time of the reform (the dashed blue arrow) and (ii) couples who formed just before the reform who are not yet eligible at the time of the reform, and couples who formed after the reform (the two solid red arrows) who become eligible for the alimony regime after a few years of cohabitation. The former type of couples are "caught" by the reform whereas the latter are similar to couples in panel A, and form part of the couples "non-caught" by the alimony reform.

Fig. 1, panel C, presents the case of provinces where the reform introducing the alimony regime took place *before* our period of observation and the reform introducing the marriage-like regime took place *during* our period of observation.[17] In those provinces, we consider two types of couples. Couples who formed long enough before the marriage-like reform so that they are directly eligible at the time of the reform for the marriage-like regime (the dashed green arrow). They were already eligible for the alimony regime, they are couples "caught" by the marriage-like reform. To estimate the impact of being eligible for the marriage-like regime on "caught" couples, we need to compare them to couples eligible for the alimony regime and formed after the alimony reform was passed—that is, to couples in panel A. The second type of couples considered here are couples becoming eligible for the marriage-like regime after a few years of cohabitation either because they formed after the reform or because they formed just before the reform and they were not yet eligible at the time of the reform (the two solid brown arrows). We label them couples "non-caught" by the marriage-like reform. They may behave differently than 'caught" couples when they become eligible to the marriage-like status because they could anticipate their eligibility status. To estimate the impact of being eligible for the marriage like regime for "non-caught" couples, we need to compare these couples formed after the marriage-like reform to couples in Quebec or provinces before the implementation of the alimony reform—that is, to couples who are not eligible to any type of cohabitation regime.

Making clear the way couples become eligible to a protective cohabitation regime highlights an important feature of our setting—we aim at identifying four treatment effects: (i) alimony treatment effect on the "caught" couples, (ii) alimony treatment effect on the "non-caught" couples, (iii) marriage-like treatment effect on the "caught" couples, (iv) marriage-like treatment effect on the "non-caught" couples.

Unfortunately, we were unable to estimate the alimony treatment effect on the "caught" couples because of a small number of identifying units observed in the data.[18] The identification of each treatment effects relies on different underlying treated-to-control comparisons. There are two strategies to estimate our treatment effects: either we estimate them jointly in a single regression model, or we estimate them separately by choosing the appropriate treated-to-control comparisons. In our main analysis, we estimate the treatment effects of the different regimes of cohabitation in the same regression model. In the robustness Section 3.4, we discuss the potential biases due to "forbidden comparisons" (Borusyak and Jaravel, 2017), and we propose an analysis where treatment effects are estimated separately. Having these different cases in mind, we now present our different estimation models.

3.2. The impact of reforming legal settings of unmarried cohabitation

In a first analysis, we estimate the impact of introducing a protective regime on the labour market outcomes of unmarried cohabiting men and women using a standard difference-in-differences design. That is, we are estimating the effect of the reform on all couples formed before the introduction of the reform (eligible or not at the time a reform is passed).

Let R_{it}^m (resp. R_{it}^a) indicates if a reform introducing a marriage-like regime (resp. alimony regime) is implemented in the province where a cohabiting couple i lives at time t. Provinces introducing the marriage-like regime were already implementing the alimony regime, so that $R_{it}^a = 1$ when $R_{it}^m = 1$. Individual i, at time t lives in province $p(i,t)$ and he or she has been a cohabiting with a partner for $d(i,t)$ years. C_{it} indicates the presence of a child. We estimate the following model:

$$\begin{aligned} y_{it} = {} & \alpha + \gamma_a R_{it}^a + \gamma_m R_{it}^m + \eta_i + \delta_t + \nu_{d(i,t)} \\ & + C_{it} \times \left(\mu_0 + \mu_{p(i,t)} + \mu_{d(i,t)} + \mu_t\right) + \varepsilon_{it}, \end{aligned} \tag{3.1}$$

where y_{it} is a labour market outcome. We control for individual fixed effects (η_i) and years fixed effects (δ_t). As couples' decision concerning labour market supply may change over the couple's relationship, we control for the number of years of cohabitation ($\nu_{d(i,t)}$). We introduce a fixed effect for having a child (μ_0), which means that our results are not driven by spurious correlation due to couples becoming eligible on the year they have a child together and making labour adjustment because they had a child (and not because they become eligible to a protective regime). We also control for all shocks specific to couples with children by adding interaction terms between C_{it} with years fixed effects, province fixed effects, and duration of the relationship fixed-effects (μ_t, $\mu_{p(i,t)}$, $\mu_{d(i,t)}$). We estimate the model on men and women separately. Our parameter of interest is γ_m. It is estimated on existing couples moving from an alimony regime to the marriage-like regime.[19]

3.3. The impact of eligibility for a protective regime of cohabitation

In a second analysis, we estimate the impact of becoming eligible for a protective regime of cohabitation on labour market outcomes of men and women. Before presenting our estimation strategy, we need to introduce two variables.

[16] Prince Edward Island and Alberta.

[17] Manitoba and Saskatchewan.

[18] We come back to this issue in the Online appendix.

[19] Although γ_a is also a parameter of interest, our data do not offer enough variation to properly identify it, as few couples are observed before and after the alimony reform.

3.3.1. The eligibility status and the Eligible at reform status

Let D^r_{it} indicate whether the couple i is eligible at time t for a protective regime of cohabitation of type r, which is either the alimony ($r = a$) or the marriage-like regime ($r = m$). We denote $\bar{t}^r_p$ the year of the implementation of the reform introducing the regime r in province p and we denote $\bar{d}^r_p$ (respectively $\bar{d}^{rc}_p$), the minimal duration of the relationship required in province p to be eligible for the regime r for couples without children (resp. with children).

D^r_{it} is defined as:

$$D^r_{it} = \sum_p \mathbb{1}\{p_{it} = p\} \times \mathbb{1}\{t > \bar{t}^r_p\} \times \left(\mathbb{1}\{\bar{d}^r_p \leq d_{it}\} + C_{it} \times \mathbb{1}\{\bar{d}^{rc}_p \leq d_{it} < \bar{d}^r_p\}\right).$$

D^r_{it} is equal to one if the province where individual i lives at time t (denoted p_{it}) has introduced the regime r ($\mathbb{1}\{t > \bar{t}^r_p\}$) and if: either the length of the cohabitation (denoted d_{it}) is larger than the minimal duration of the relationship required in province p to be eligible for the regime r for couples without children ($\mathbb{1}\{\bar{d}^r_p \leq d_{it}\}$), or if: the couple has a child (C_{it}) and the length of the cohabitation is larger than a reduced threshold $\bar{d}^{rc}_p$ for couples with children ($\mathbb{1}\{\bar{d}^{rc}_p \leq d_{it} < \bar{d}^r_p\}$). We consider that couples eligible for the marriage-like regime ($D^m_{it} = 1$) are eligible for the alimony regime ($D^a_{it} = 1$), because provinces where a marriage-like regime is implemented were already implementing an alimony regime before.

Let B^a_i (resp. B^m_i) indicate if individual i belongs to the group of couples directly eligible for the alimony regime (resp. marriage-like regime) at the time of the reform. We denote t^f_i the year of formation of the couple of individual i. Then B^a_i and B^m_i are defined as:

$$B^r_i = \mathbb{1}\{C_{i\bar{t}^r_p} = 0\} \times \mathbb{1}\{t^f_i + \bar{d}^r_p \leq \bar{t}^r_p\} + \mathbb{1}\{C_{i\bar{t}^r_p} = 1\} \times \mathbb{1}\{t^f_i + \bar{d}^{rc}_p \leq \bar{t}^r_p\}$$

where $C_{i\bar{t}^r_p}$ indicates the presence of a child the year the reform was passed. Notice that all couples formed before the introduction of the marriage-like regime ($B^m_i = 1$) were formed after the introduction of the alimony regime in their province ($B^a_i = 0$).

3.3.2. Baseline specification : impact of eligibility status

In order to estimate the impact of eligibility status on labour market outcomes, we consider the following model:

$$\begin{aligned} y_{it} = {} & \alpha + \beta_a D^a_{it} + \beta_m D^m_{it} + \eta_i + \delta_t + \nu_{d(i,t)} \\ & + C_{it} \times \left(\mu_0 + \mu_{p(i,t)} + \mu_{d(i,t)} + \mu_t\right) + \varepsilon_{it}, \end{aligned} \tag{3.2}$$

using the same notations as for model (3.1).

The parameter β_a gives the impact of the eligibility for the alimony regime on the labour market outcome y_{it}. The parameter β_m indicates if being eligible for the marriage-like regime is associated with additional effect as compared to eligibility for the alimony regime. $\beta_a + \beta_m$ gives the impact of being eligible for the marriage-like regime.

3.3.3. Second specification: impact on couples eligible at the time of the reform vs. couples eligible after the reform

In a third analysis, we estimate the impact of being eligible for a protective regime of cohabitation, differentiating the impact on couples formed before the reform and directly eligible at its introduction (couples "caught" by the reform) from couples eligible after the reform. We estimate an extended version of model (3.2), replacing β_a by $[\beta^{bef}_a B^a_i + \beta^{aft}_a (1 - B^a_i)]$ and β_m by $[\beta^{bef}_m B^m_i + \beta^{aft}_m (1 - B^m_i)]$.

β^{bef}_a gives the impact of the reform on couples "caught" by the alimony regime. β^{aft}_a gives the impact of becoming eligible for the alimony regime for "non-caught" couples. In provinces where a marriage-like regime is introduced, couples "caught" by the reform were already eligible for the alimony regime, which means that β^{bef}_m measures the additional impact due to the unanticipated introduction of a more protective regime. Among couples who can anticipate eligibility for a protective regime, β^{aft}_m measures whether the marriage-like regime induces a larger adjustment on the labour market than the alimony regime. For couples eligible after the reform introducing the marriage-like regime, the total impact on labour market outcomes when they become eligible is measured by the sum $\beta^{aft}_a + \beta^{aft}_m$.

3.4. Robustness checks

3.4.1. Common trend assumption and dynamic effects

Difference-in-differences estimation method relies on important assumptions that need to be justified. The first assumption is the common trend assumption. In our setting, it amounts to assuming that changes in labour market outcomes around eligibility would have been the same for couples eligible for a protective regime of cohabitation if they did not live in a province that introduces a change in cohabitation status after a certain number of years of cohabitation, at that moment in the couple's life-cycle. As the eligibility status varies across provinces, it requires that changes in couples' behaviour are comparable across provinces. The common trend assumption cannot be tested directly, but we can test if eligible couples differ from non-eligible couples *before* eligibility. The absence of pretrends does not necessarily mean that the common trends assumption holds, but it gives some hints whether it is a reasonable assumption. A second assumption is that we assume a static and homogeneous effect across treated units. It is now widely acknowledged that traditional difference-in-differences settings yield biased estimates if the treatment effect is dynamic and heterogeneous across treated units (Roth et al., 2022; Goodman-Bacon, 2021). This is because traditional DiD analysis partly rely on "forbidden comparisons", that is using yet-treated couples as a control group for not-yet treated groups.

To support these two assumptions, we will estimate a dynamic treatment effect, using recent estimation strategies avoiding "forbidden comparisons". The goal is two-fold. First, we want to verify whether they yield similar results to our main analysis. Second, estimating a dynamic treatment effect allows us to implement a test for the existence of pre-trends.

In our setting, the treatment may be dynamic in two ways, which means that our estimation strategy partly relies on two types of "forbidden comparisons". First, the *time-since-reform* dynamic: as time since reform goes by, couples become more aware of the protection induced by the cohabitation. Couples in an early treated province may not serve as a control group for couples in a late-treated province when it passed the reform. Second, the *time-since-eligibility* dynamic: couples may adjust progressively their behaviour when they become eligible for a protective cohabitation status. Already treated couples may not serve as a control group for not-yet treated couples when they become eligible. Controlling for the number of years of cohabitation of the couple may not be sufficient to sweep away this dynamic.

Our setting is complicated by the implementation of two cohabitation regimes. When several correlated treatments are implemented, the DiD estimation of a treatment is contaminated by the other treatment (Goldsmith-Pinkham et al., 2022). No estimation strategy has been proposed in the literature to fully address this issue. We follow de Chaisemartin and D'Haultfoeuille (2022) recommendations to estimate a dynamic treatment effect in presence of multiple treatments. The general idea is to reduce the problem to a series of single treatments on well-chosen treated-to-control comparisons and, on each of them, implementing an estimation strategy robust to the dynamic of the treatment effect.[20] For each treated-to-control comparison, we implement four estimation methods: a classic static DiD estimation, a classic event-study estimator (labelled ES), the De Chaisemartin and d'Haultfoeuille (2020) estimator (labelled DCDH), and the Callaway and Sant'Anna (2021) estimator (labelled CS). The classic event-study estimation is the dynamic version of our main analysis, which is a static DiD analysis. It is subject to the "forbidden comparison" issue presented above. Comparing the event-study estimates to the Callaway and Sant'Anna (2021) and De Chaisemartin and d'Haultfoeuille (2020) estimates, which are robust to the "forbidden comparison" issue, allows us to verify if the "forbidden comparison" issue is serious in our setting.

The estimation of dynamic treatments also allows us to test the existence of pre-trends. To do so, we focus on the pre-eligibility period, and test whether estimates for periods before eligibility were statistically different from zero. A statistically different from zero estimate indicates that eligible couples were in a different dynamic than non-eligible couples before being eligible.

3.4.2. Few clusters

In a second important robustness check, we analyse the robustness of our test of statistical significance. In our main analysis, we report classic cluster robust standard errors (CRVE). A limitation of our analysis is that there are only 10 provinces in Canada. We cluster our error terms at the province level, which leads to a convergence problem in our standard error estimates. We may over-reject the null hypothesis. A standard solution to this problem is to compute p-values using wild cluster restricted (WCR) bootstrap (Cameron et al., 2008; Cameron and Miller, 2015). However, when the number of treated clusters is small, WCR bootstrap tends to under-reject the null hypothesis (MacKinnon et al., 2022) and the problem is even more severe when clusters are of different sizes (MacKinnon and Webb, 2017, 2018). Unfortunately, this is the case with our data where we have only two provinces treated for the marriage-like regime, only one province untreated for the alimony regime and our provinces are of different sizes. Another direction is to use effective degree of freedom corrections, which have been shown to be more accurate than conventional (i.e. standard) clustered/robust inference and the heteroskdasticity corrections thereof (Young, 2016) although with 10 clusters they are unlikely to perform well. We provide a comparison of the p-values obtained with these different methods to reassure the reader that our main conclusions are valid across different significativity tests.

4. Data and descriptive statistics

4.1. Data

We use longitudinal data from the Survey on Labour Income Dynamic (SLID) provided by Statistics Canada, which is a household survey, with a rotating panel design, representative of the Canadian population. The SLID covers each year a sample of 17000 households of the population of the ten Canadian provinces with the exception of Indian reserves, residents of institutions and military barracks (less than 3% of the population). Data have been collected each year from 1993 to 2011 from January to March. Five 6-years panels were collected (1993–1998; 1996–2001; 1999–2004; 2002–2007; 2005–2010), the sixth panel was terminated after 4 years (2007–2011). Interviewers collect information on the labour market status and family status of all individuals. Respondents have the option of answering income questions during the interview, or of giving Statistics Canada permission to access their income tax records (which dramatically lower the duration of the interview). Over 80% of respondents gave their permission to consult their income tax file. One or two respondents per household are included in the SLID. They provide information on the personal relationships between all members of the household and their own labour market status (and income if permission to access income tax records was not given). When only one respondent per household is included in the SLID, he or she provides information on the labour market status (and income) of all other members of the household, if he or she is knowledgeable and he or she agrees to do so. We have information on both partners for one third of unmarried couples who have been living together for less than 10 years.

[20] We present in details our methodology on the online appendix, section C.

Our variables of interest describe the labour force supply and labour earnings. For each gender, we consider two variables describing labour force supply. For men, we consider the number of hours worked during the year and the number of active weeks during the year (weeks when the individual is either employed or unemployed). For women, we consider the number of hours worked during the year and a dummy indicating that she has not earned any labour income during the whole year. For both gender, we also consider annual labour earnings. All monetary values have been deflated using the province Consumer Price Index, and are expressed in constant Canadian dollars (CAD) of 2002. To avoid potential large measurement errors, we attributed to all observation above the top 1% percentile the value of the 1% percentile (winsorization). It is important to note that whereas labour earnings come from fiscal data (for most respondents), labour force supply variables are self-reported an may suffer from reporting bias (respondents have to list all the jobs they had during the year and for each of them, how many weeks and hours they have worked). In some cases, they convey contradictory information: some individuals are observed with zero working hours but positive labour earnings.[21]

4.2. Sample restriction

We restricted our sample to people aged 18 to 50 in an unmarried cohabiting couple. We pooled all years of the survey. In order to observe similar couples in the control and treated groups, we restricted our sample to people in a relationship which is shorter than 10 years, because couples become eligible for a protective regime at the beginning of their relationship. We excluded couples that had moved across provinces. For them, both labour outcomes and the type of regime they are eligible to are potentially varying simultaneously, thus introducing spurious correlation between cohabitation regimes and labour market outcomes. Moving across provinces is rather rare and approximately 3% of all observations were excluded. We dropped individuals with missing information on the required information in the model. Our main sample is then composed of 15,214 observations for men (5820 distinct men) and 16,456 observations for women (6328 distinct women).

We built another sample composed of couples for whom we observe information on both partners, to estimate the effect of eligibility on within-household allocation. We kept couples where both partners report the same information on the status on the relationship each year, the relationship duration and the presence of a child. This second sample contains 6575 observations (2376 distinct couples). Finally, we decomposed this sample into two groups depending on the female partner's share of total income. To do this, we calculated the ratio of female labour income to the sum of the labour income of both partners, based on the first observation of the couple.[22] We selected a sample where this ratio is lower than 40% and the complement sample where this ratio is strictly more than 40%. These two samples contain respectively 3962 and 2613 observations (resp. 1434 and 912 distinct couples).

4.3. Descriptive statistics

We present descriptive statistics in Table 2. All statistics are weighted using SLID longitudinal weights. In our main sample (Table 2, panel A), women are on average 33.6 years old and men are 35.2 years old. Women work on average 1330 h per year and earn CAD 21k per year.[23] 15% of them do not earn any labour income during the year. Men work on average 1835 h per year and earn roughly CAD 37k. 7% of them have no earnings. 59% of women and 54% or men have a child.[24] The average duration of the cohabiting relationship is 4.4 years. Table 2, panel B presents statistics on men and women in couples where we observe both partners. It shows that they are very similar in age, earnings, and number of hours worked than men and women in the main sample. However, they are living in more stable relationships (the average duration is 5.1 years versus 4.4 in the main sample), and are more likely to have children (62%). In those couples, women earns around 36% of the total labour income of the couple, and work 39% of the total number of hours worked by the couple. Table 2, panels C and D show that in couples where the women earns less than 40% of the total labour income, partners are younger but are more likely to have children than in couples where the female partner earns more than 40% of the total labour income. In the former, women earn 24% of the total household income and work 33% of the total hours worked whereas in the latter, women earn 53% of the total household income and work 49% of the total hours worked by the couple.

5. Results

5.1. Main results

5.1.1. Impact of reforms introducing protective regimes of cohabitation

Did the introduction of more protective regimes of cohabitation impact the labour market outcomes of men and women? Table 3 presents the results of the estimation of model (3.1). It indicates that the introduction of the marriage-like regime had opposite effects

[21] We decided to keep the data as is for the estimation. However, the results obtained on a sample where we set the hours to zero when income was equal to zero were very similar.

[22] If a couple is formed over the period, we consider the first observation where both partners are observed. We constructed a similar ratio based on permanent labour income (computed as his or her average of all labour earnings that she or he earned during the period of observation). Our results are not affected by this alternative definition.

[23] Labour earnings are set to zero if the individual does not receive any labour earnings.

[24] Statistics Canada states that the information on the presence of children is inaccurate for men between 1993 and 1999. When we have information on both partners, we impute the child presence according the declaration of their female partner for those years.

Table 2
Descriptive statistics.

	Men		Women		Couple	
	Mean	s.d.	Mean	s.d.	Mean	s.d.
Panel A: Main sample						
Number of hours worked	1835	(812)	1330	(834)		
Share without earnings	0.07	(0.25)	0.15	(0.35)		
Number of active weeks	48.3	(12.0)	43.1	(18.1)		
Annual labour earnings	36752	(28018)	21003	(19085)		
Age	35.2	(7.8)	33.6	(8.1)		
Has child(ren)	0.54	(0.50)	0.59	(0.49)		
Length of cohabitation	4.5	(3.1)	4.4	(3.1)		
Number of observations	15214		16456			
Panel B: Couple sample [All]						
Number of hours worked	1896	(732)	1327	(822)	3223	(1134)
Annual labour earnings (CAD)	37708	(26219)	20761	(18196)	58469	(35446)
Female's share of hours					0.39	(0.24)
Female's share of earnings					0.36	(0.26)
Age	34.8	(7.3)	33.0	(7.6)		
Has child(ren)					0.62	(0.48)
Length of cohabitation					5.1	(2.8)
Number of observations = 6575						
Panel C: Couple sample [Women earn less than 40% of total income]						
Number of hours worked	1960	(705)	1098	(847)	3057	(1141)
Annual labour earnings (CAD)	42466	(27930)	14422	(15416)	56888	(36466)
Female's share of hours					0.33	(0.24)
Female's share of earnings					0.24	(0.22)
Age	34.7	(7.3)	32.6	(7.7)		
Has child(ren)					0.67	(0.47)
Length of cohabitation					5.1	(2.8)
Number of observations = 3962						
Panel D: Couple sample [Women earn more than 40% of total income]						
Number of hours worked	1801	(760)	1671	(645)	3471	(1077)
Annual labour earnings (CAD)	30571	(21536)	30270	(17907)	60840	(33728)
Female's share of hours					0.49	(0.20)
Female's share of earnings					0.53	(0.21)
Age	35.1	(7.2)	33.5	(7.4)		
Has child(ren)					0.55	(0.50)
Length of cohabitation					5.2	(2.8)
Number of observations = 2613						

Data: Statistics Canada. Survey of Labour and Income Dynamics (SLID) 1993–2011.
Sample: men and women in an unmarried cohabitation relationship for less than 10 years, aged between 18 and 50 years old in Canada, with no missing information.
Notes: *Number of hours worked* gives the number of hours worked during the year (set to zero for non-working people); *No earnings* is a binary variable indicating whether the individual has not earned any labour income the whole year; *Number of active weeks* gives the number of weeks in which the individual is in activity. *Labour earnings* gives the fiscal labour earnings in constant Canadian dollars of 2002. We use SLID longitudinal weights.

on men and women labour outcomes as predicted by the theory. Coefficients showed a 9.3% increase in men labour earnings. When the marriage-like regime was introduced, active women in affected provinces decreased their labour earnings by 20%. The share of women having no earnings per year increased by 4.5pp and the number of hours of work for active women decreased by 6.9%. These estimates are statistically significant at conventional levels when standard errors are clustered at the province level, but not when they are computed using effective degree of freedom corrections or wild cluster restricted bootstrap, suggesting that the small number of clusters limits power.[25] These effects are estimated on all unmarried cohabiting couples, whether they are eligible or not. We will now examine the effect of the regime on individuals when they become eligible.

5.1.2. Impact of being eligible for a protective regime of cohabitation

Do men and women adjust their labour market outcomes when they become eligible for a protective regime of cohabitation? Panel A of Table 4, presents the estimation results of model (3.2). It shows that men do not adjust their labour market outcomes when they become eligible for an alimony regime but they increase their number of working hours and their number of active weeks

[25] The wild cluster bootstrap is computed using the `boottest` command in stata (Roodman, 2015; Roodman et al., 2019). We use conventional WCR bootstrap, with transformation of the residuals using the Webb (2014) 6-points distribution, 9999 replications. We estimate EDF corrections using the `edfreg` command in Stata (Young, 2021, 2016).

Table 3
Impact of the reform on labour supply and labour earnings.

	Men			Women		
	Log of Nb. of hours worked	Nb. of active weeks	Log of Labour earnings	Log Nb. of hours worked	No earnings	Log Labour earnings
Marriage-like reform ($\widehat{\gamma}_m$)	0.132	1.95	0.093	−0.069	0.045	−0.203
	(0.100)	(1.39)	(0.021)	(0.036)	(0.006)	(0.064)
	[0.22/0.50/0.75]	[0.19/0.48/0.67]	[0.00/0.18/0.19]	[0.08/0.38/0.29]	[0.00/0.11/0.16]	[0.01/0.25/0.23]
N	14281	15214	14350	13951	16456	14117

Data: Statistics Canada. Survey of Labour and Income Dynamics (SLID) 1993–2011.
Sample: men and women in an unmarried cohabitation relationship for less than 10 years, aged between 18 and 50 years old in Canada, with no missing information.
Notes: Standard errors are clustered at the province level and are reported in parenthesis. *p*-value reported in brackets, in order: (1) *p*-value based on clustered-robust variance estimation; (2) Effective degree of freedom correction; (3) wild cluster restricted bootstrap (9999 reps). All regressions include controls for the implementation of alimony regime; individual fixed effects; relationship duration fixed effects; year fixed effects; a dummy indicating if the couple has a child; the dummy indicating if the couple has a child interacted with year fixed effect, with relationship duration fixed effects, and with province fixed effects. *Log of Nb. of hours worked* gives the logarithm of the number of hours worked during the year (set to zero for non-working people); *No earnings* is a binary variable indicating whether the individual has not earned any labour income the whole year; *Number of active weeks* gives the number of weeks in which the individual is in activity. *Log Labour earnings* gives the logarithm of fiscal labour earnings in constant Canadian dollars of 2002. We use SLID longitudinal weights.

Table 4
Impact of the eligibility for a protective regime of cohabitation on labour supply and labour earnings.

	Men			Women		
	Log of Nb. of hours worked	Nb. of active weeks	Log of Labour earnings	Log of Nb. of hours worked	No earning	Log of Labour earnings
Panel A: eligibility status						
Alimony eligibility ($\widehat{\beta}_a$)	−0.018	−0.60	−0.010	0.018	0.010	−0.115
	(0.044)	(0.45)	(0.072)	(0.036)	(0.009)	(0.044)
	[0.70/0.75/0.85]	[0.21/0.31/0.29]	[0.89/0.91/0.91]	[0.63/0.69/0.69]	[0.34/0.43/0.39]	[0.03/0.08/0.09]
Marriage-like eligibility ($\widehat{\beta}_m$)	0.190	2.91	0.121	−0.110	0.084	−0.080
	(0.008)	(0.23)	(0.174)	(0.018)	(0.013)	(0.083)
	[0.00/0.03/0.02]	[0.00/0.06/0.06]	[0.51/0.70/0.76]	[0.00/0.12/0.20]	[0.00/0.12/0.26]	[0.36/0.60/0.74]
$\widehat{\beta}_a + \widehat{\beta}_m$	0.172	2.31	0.11	−0.092	0.094	−0.195
test *p*-value	[0.00/0.25]	[0.00/0.16]	[0.51/0.70]	[0.04/0.19]	[0.00/0.18]	[0.04/0.18]
Panel B: eligibility status - Couples eligible at reform vs. eligible after						
Alimony*Elig. after ($\widehat{\beta}_a^{aft}$)	−0.032	−0.62	−0.007	0.018	0.016	−0.128
	(0.044)	(0.462)	(0.084)	(0.040)	(0.011)	(0.044)
	[0.49/058/0.83]	[0.21/0.32/0.37]	[0.94/0.95/0.95]	[0.67/0.36/0.73]	[0.18/0.28/0.22]	[0.02/0.06/0.10]
Marriage-like *Elig. at reform ($\widehat{\beta}_m^{bef}$)	0.183	3.20	0.103	−0.090	0.125	−0.145
	(0.116)	(2.27)	(0.044)	(0.03)	(0.035)	(0.101)
	[0.15/0.44/0.39]	[0.19/0.48/0.74]	[0.04/0.32/0.27]	[0.02/0.26/0.27]	[0.01/0.22/0.26]	[0.19/0.47/0.51]
Marriage-like *Elig. after ($\widehat{\beta}_m^{aft}$)	0.205	2.56	0.140	−0.132	0.031	0.005
	(0.157)	(2.85)	(0.435)	(0.017)	(0.008)	(0.046)
	[0.22/0.51/0.20]	[0.39/0.63/0.70]	[0.76/0.86/0.74]	[0.00/0.10/0.10]	[0.00/0.20/0.19]	[0.91/0.95/0.91]
$\widehat{\beta}_a^{aft} + \widehat{\beta}_m^{aft}$	0.173	1.94	0.132	−0.114	0.047	−0.123
test *p*-value	[0.30/0.38]	[0.54/0.76]	[0.75/0.73]	[0.01/0.20]	[0.00/0.10]	[0.02/0.23]
Test $\widehat{\beta}_m^{bef} = \widehat{\beta}_m^{aft}$						
test *p*-value	[0.91/0.88]	[0.86/0.86]	[0.93/0.83]	[0.22/0.40]	[0.01/0.24]	[0.17/0.24]
N	14281	15214	14350	13951	16456	14117

Data: Statistics Canada. Survey of Labour and Income Dynamics (SLID) 1993–2011.
Sample: men and women in an unmarried cohabitation relationship for less than 10 years, aged between 18 and 50 years old in Canada, with no missing information.
Notes: Standard errors are clustered at the province level and are reported in parenthesis. *p*-value reported in brackets, in order: (1) *p*-value based on clustered-robust variance estimation; (2) Effective degree of freedom correction; (3) wild cluster restricted bootstrap (9999 reps). test p-value: (1) *p*-value based on clustered-robust variance estimation; (2) wild cluster restricted bootstrap (9999 reps). All regressions include controls for individual fixed effects; relationship duration fixed effects; year fixed effects; a dummy indicating if the couple has a child; the dummy indicating if the couple has a child interacted with year fixed effect, with relationship duration fixed effects, and with province fixed effects. *Log of Nb. of hours worked* gives the logarithm of the number of hours worked during the year (set to zero for non-working people); *No earnings* is a binary variable indicating whether the individual has not earned any labour income the whole year; *Number of active weeks* gives the number of weeks in which the individual is in activity. *Log labour earnings* gives the logarithm of fiscal labour earnings in constant Canadian dollars of 2002. We use SLID longitudinal weights.

when they become eligible for a marriage-like regime. The additional effect of eligibility for the marriage-like regime in comparison to the alimony regime is a 19.0% increase in hours worked per year and increase of 2.91 in active weeks per year. In total, in comparison to non-eligible men, the effect of the marriage-like regime is an increase of 17.2% of hours per year and 2.31 weeks per year.

On the contrary, when eligible for the alimony regime, women's labour earnings are 11.5% smaller than labour earnings of non-eligible women, but their labour force supply is unaffected. While significant using conventional clustered standard-errors but not EDF corrections or wild bootstrap, results indicates that the effect on earnings is stronger for the marriage-like regime. When becoming eligible for the marriage-like regime, the additional effect on labour supply is a decrease of 11% in working hours and an increase of 8.4 pp in the probability to have no earning during the year. In total, when eligible for the marriage-like regime, women's labour earnings decrease by 19.5% in comparison to labour earnings of non-eligible women, active women work 9.2% hours less and women are 9.4 pp more likely to have no earnings.

5.1.3. Impact of being eligible for a protective regime of cohabitation: couples eligible at the moment of the reform vs. couples eligible after the reform.

Panel B of Table 4 presents the estimation results for couples caught and non-caught by the different regimes separately. They show no significant impact of eligibility for the alimony regime on labour outcomes for men in couples eligible after the reform, who could anticipate their eligibility status. Regarding eligibility for the marriage-like regime, for both men in couples eligible at the moment of the reform and after the reform, results show positive effects of eligibility on labour supply and earnings.[26]

Results show that when women become eligible for the alimony regime, women in a couple eligible after the reform reduced their labour earnings by 12.8% compared to non-eligible women. Their labour force supply is unaffected.[27] These results show that women adjust their labour earnings when they transition from an non-protective regime to a protective regime, even if they could anticipate the eligibility status.

When the reform introducing the marriage-like regime was passed, women in a couple eligible at the moment of the reform and directly eligible at its introduction (who were thus already eligible for the alimony regime) decreased by 9.0% their hours of work, were 12.5 pp. more likely to have no earnings and decreased by 14.5% their earnings in comparison with women in unaffected provinces. For women in couples eligible after the reform, we estimate that the additional effect of the marriage-like regime (in addition to the alimony regime) is a decrease in hours of work per year by 13.2%, an increase of 3.1 pp in the probability to have no earning but we find no impact on labour earnings. Consequently, when they become eligible for the marriage-like regime, women in a couple eligible after the reform introducing the marriage-like regime, work 11.4% less hours, and had 12.3% lower earnings than women in unaffected province. Their probability to have no earning increases by 4.7 pp. Women in a couple eligible at the moment of the reform could not anticipate eligibility for the marriage-like regime, while women in couples eligible after could. The last line of Table 4 gives the p-values of the tests of equality between the impact of eligibility for couples eligible at the moment of the reform and the impact on couples eligible after. They indicate that women in couples eligible at the moment of the reform (who could not anticipate their eligibility status) react more strongly than women in a couple eligible after the reform (who could anticipate). While estimates of the effect of the marriage-like regime are statistically significant using conventional clustered standard errors, they tend to lose statistical significance when alternative measures for inference are used. It indicates our estimates are under-powered and should be interpreted with caution.

To look at the dynamics of these effects, we perform an event study analysis. We display our results on Fig. A.2 for the effect of eligibility for alimony on couples non caught by the reform, on Fig. A.3 for the effect of eligibility for the marriage-like regime on couples caught by the reform and on Fig. A.4 for the effect of eligibility for the marriage-like regime on couples non caught by the reform.[28] These figures show the coefficients estimated with a regular event-study analysis (ES) and the coefficients estimated using the methodology of Callaway and Sant'Anna (2021) (CS) as described in the empirical strategy.[29] The estimates presented in these figures are less precise than in the static case because we estimate one coefficient per period and we do not observe all individuals in each period because of attrition and structure of the data. The further away from $t = 0$, the less precise our estimates are. On Fig. A.2, we observe a clear decrease in labour earnings for women when becoming eligible for the alimony regime whereas no other labour outcomes seem affected. On Figs. A.3 and A.4, we observe an increase in labour supply of men starting at eligibility for the marriage-like regime. Trends are less clear for women, for whom the impact is stronger at t=0. These figures also allow us to identify the presence of pre-trends. Section 5.2.2 below is dedicated to this issue.

5.1.4. Impact of eligibility status on within household outcomes

Does eligibility for a protective regime of cohabitation change intra-household outcomes? We now re-estimate model (3.2) on our subsamples of couples where we observe both partners. As the number of observations is too low to distinguish couples eligible at the reform from couples eligible after the reform, we focus on the impact of eligibility for both types of couples indistinctively.[30] Table 5 presents our estimates. A first remark is that, in average, men and women in this subsample react similarly than in the

[26] Recall that the coefficient $\hat{\beta}_m$ in panel A is an average of coefficients $\hat{\beta}_m^{bef}$ and $\hat{\beta}_m^{aft}$ in panel B. Whereas $\hat{\beta}_m$ in panel A is significant for hours and active weeks, $\hat{\beta}_m^{bef}$ are $\hat{\beta}_m^{aft}$ not separately significant probably due to a small number of identifying observations.

[27] Whereas labour earnings are collected from fiscal data, hours are self-declared and may suffer from reporting bias. This may explain why we find this inconsistency between effects on earnings and on reported labour supply. See the data section.

[28] In the online appendix, we present on figure C3, the effect of the marriage like reform, on figure C4 the effect of eligibility for alimony and on figure C5 the effect of eligibility for marriage-like regime.

[29] We used the package `csdid` in Stata (Rios-Avila et al., 2021).

[30] Pooling couples eligible at the moment of the reform and couples eligible after together amounts to form the assumption that couples eligible at the moment of the reform react similarly as couples eligible after the reform, when they become eligible. Regarding the alimony reform, we observe very few couples eligible at the moment of the reform, so our estimate are mostly based on couples eligible after the reform. Regarding the marriage-like reform, panel B of Table 4 shows that this assumption holds for men but not for women.

Table 5
Within household effects. Impact of the eligibility for a protective regime of cohabitation, heterogeneous effect across couples types.

	Men		Women		Couples	
	Log of Nb. of hours worked	Log of Labour earnings	Log of Nb. of hours worked	Log of Labour earnings	Woman's share of hours	Woman's share of labour earnings
Panel A: All couples						
Alimony eligibility ($\hat{\beta}_a$)	−0.024	0.020	0.028	−0.174	0.027	−0.016
	(0.079)	(0.122)	(0.080)	(0.083)	(0.017)	(0.017)
	[0.77/0.82/0.94]	[0.87/0.90/0.90]	[0.74/0.79/0.89]	[0.07/0.15/0.23]	[0.14/0.24/0.35]	[0.37/0.48/0.42]
Marriage-like eligibility ($\hat{\beta}_m$)	0.115	0.011	−0.120	−0.218	−0.025	−0.061
	(0.029)	(0.218)	(0.028)	(0.042)	(0.011)	(0.023)
	[0.00/0.20/0.13]	[0.96/0.98/0.93]	[0.00/0.18/0.15]	[0.00/0.14/0.19]	[0.06/0.34/0.22]	[0.00/0.14/0.23]
$\hat{\beta}_a + \hat{\beta}_m$	0.091	.032	−.092	−.392	0.00	−.077
test p-value	[0.31/0.44]	[0.88/0.89]	[0.34/0.52]	[0.00/0.23]	[0.91/0.93]	[0.00/0.00]
N	6354	6372	5631	5736	6575	6575
Panel B: couples in which women earn less than 40% of household's income						
Alimony eligibility ($\hat{\beta}_a$)	0.106	−0.033	−0.336	−0.438	−0.074	−0.061
	(0.088)	(0.074)	(0.127)	(0.089)	(0.023)	(0.036)
	[0.26/0.37/0.31]	[0.67/0.73/0.68]	[0.03/0.09/0.15]	[0.00/0.01/0.00]	[0.01/0.04/0.01]	[0.13/0.22/0.21]
Marriage-like eligibility ($\hat{\beta}_m$)	0.020	−0.326	−0.244	−0.402	−0.017	−0.058
	(0.044)	(0.302)	(0.091)	(0.143)	(0.014)	(0.014)
	[0.66/0.79/0.67]	[0.31/0.56/0.74]	[0.03/0.28/0.26]	[0.02/0.27/0.27]	[0.26/0.52/0.28]	[0.00/0.18/0.24]
$\hat{\beta}_a + \hat{\beta}_m$	0.126	−0.359	−0.579	−0.840	−0.091	−0.119
test p-value	[.26/0.37]	[.22/0.63]	[.01/0.23]	[.00/0.20]	[.03/0.24]	[.01/0.03]
N	3896	3907	3099	3165	3962	3962
Panel C: couples in which women earn more than 40% of household's income						
Alimony eligibility ($\hat{\beta}_a$)	−0.126	0.069	0.321	0.003	0.133	0.027
	(0.075)	(0.147)	(0.099)	(0.115)	(0.019)	(0.016)
	[0.13/0.24/0.40]	[0.65/0.72/0.83]	[0.01/0.05/0.09]	[0.98/0.98/0.98]	[0.00/0.00/0.01]	[0.12/0.22/0.25]
Marriage-like eligibility ($\hat{\beta}_m$)	0.293	0.525	−0.001	0.073	−0.056	−0.066
	(0.040)	(0.062)	(0.099)	(0.085)	(0.013)	(0.032)
	[0.00/0.10/0.17]	[0.00/0.08/0.19]	[0.99/0.99/0.99]	[0.42/0.63/0.70]	[0.00/0.18/0.14]	[0.07/0.35/0.27]
$\hat{\beta}_a + \hat{\beta}_m$	0.166	0.594	0.319	0.076	0.077	−0.038
test p-value	[.02/0.24]	[.00/0.20]	[.02/0.28]	[.48/0.56]	[.00/0.14]	[.20/0.36]
N	2458	2465	2532	2571	2613	2613

Data: Statistics Canada. Survey of Labour and Income Dynamics (SLID) 1993–2011.
Sample: couples in an unmarried cohabitation relationship for less than 10 years, aged between 18 and 50 years old in Canada, with no missing information and where both partners are observed.
Notes: Standard errors are clustered at the province level and are reported in parenthesis. p-value reported in brackets, in order: (1) p-value based on clustered-robust variance estimation; (2) Effective degree of freedom correction; (3) wild cluster restricted bootstrap (9999 reps). test p-value: (1) p-value based on clustered-robust variance estimation; (2) wild cluster restricted bootstrap (9999 reps). All regressions include controls for individual fixed effects; relationship duration fixed effects; year fixed effects; a dummy indicating if the couple has a child; the dummy indicating if the couple has a child interacted with year fixed effect, with relationship duration fixed effects, and with province fixed effects. *Log of Nb. of hours worked* gives the logarithm of the number of hours worked during the year (set to zero for non-working people); *Log labour earnings* gives the logarithm of fiscal labour earnings in constant Canadian dollars of 2002. *Woman's share of hours* gives the share of hours worked by the female partner in the total number of hours worked by the couple; *Woman's share of earnings* gives the share of labour earnings of the female partner in the total labour earnings of the couple. The threshold *40% of household income* is computed using the first observation where both partners' incomes are observed. We use SLID longitudinal weights.

main sample: women tend to decrease their labour earnings when eligible for the alimony regime and their labour supply and earnings when eligible for the marriage-like regime. Men do not adjust their labour outcome when eligible for the alimony regime and increase their labour supply when eligible for the marriage-like regime. With respect to within-household variables, Panel A shows that eligibility for the alimony regime does not impact within household allocation significantly. However, it shows that the additional effect when eligible for the marriage-like regime decreases women's share of income and hours. The additional effect is a decrease of 2.5 pp in women's share of hours and 6.1 pp in women's share of labour earnings. In total, when couples become eligible for the marriage-like regime, adjustments in the labour market outcomes of men and women lead to decrease women's share of couple's earnings by 7.7 pp. compared to non-eligible women but has no impact on women's share of hours.

Panel B and C of Table 5 show the results of the estimation of model (3.2) on the two groups of couples, based on female's share of couple's income. Do adjustments made by couples reinforce inequality in already-unequal couples? And do adjustments make equal couples unequal? Results show that the negative effect of protective regimes on women's share of income are driven by couples in which the female's share of household's income is rather low. In already unbalanced couples (where women earn less than 40% of household's income), eligibility for the alimony regime decreases women's share of total hours by 7.4 pp whereas in more balanced couples (in which women earn at least 40% of household's income) women's share of hours increases by 13.3 pp. Although

not statistically significant, estimates on income indicates similar results: women's share of income decreases by 6.1 pp in already unbalanced couples but it increases by 2.7 pp in balanced couples. In already unbalanced couples, eligibility for the marriage-like regime decreases women's share of hours by 9 pp and their share of total income by 11.9 pp whereas in balanced couples, women's share of hours increases by 7.7 pp and their share of income does not change. Protective regimes of cohabitation tend to weaken women's position in already unbalanced couples, but to strengthen women's position in balanced couples. Interestingly, this opposite mechanism is driven by the eligibility for the alimony regime. The additional effect of the marriage-like regime goes in the same direction for both types of couples, decreasing women's earnings and increasing men's labour supply and income. The marriage-like regime is likely to be more advantageous for women, irrespective the labour income of each partner, as mothers more often stay with children after separation.[31] On the contrary, the alimony regime allows the least favoured partner to petition for spousal support, and the amount of payment is proportional to income difference between partners irrespective of the gender.

5.1.5. Comparability of our estimates to the literature

In the literature, studies tend to focus on the impact of implementing a new protective regime of cohabitation, which means that they are estimated on couples formed before the reform. Rangel (2006) finds that the introduction of alimony laws decreases the number of working hours by 3.2% among all women and by 6% among low- and mid-educated women. Chiappori et al. (2017) estimate the impact of the alimony law reforms on couples formed before the reform on the extensive margin. They find that full-time participation of women decreases by 4.7% and full-time participation of men increases by 6%. We find that eligibility to the alimony regime decreases women labour earnings by 11.5% and has no impact on men. We find a stronger impact of the marriage-like reform on existing couples. We find that the introduction of the marriage-like regime increases men's number of active weeks by 1.95 (a 3% increase) and increases by 4.5 pp the probability that women have no labour earnings. It increases men's working hours by 13.2% and decrease women working hours by 6.9%. We believe that our results, while not directly comparable, are in line with what has been found previously.[32]

5.2. Robustness checks

We now perform several robustness checks as detailed in the estimation strategy section.

5.2.1. Heterogeneous and dynamics effects

As we explained in the section on estimation strategy, our estimates may be biased if the effect of eligibility for a protective regime of cohabitation is dynamic and heterogeneous across provinces. To test whether this issue affects our results in a significant way, we compare our classic static DiD estimate with three other estimates obtained with recent DiD estimators. We present all these estimates with their 90% confidence intervals in appendix, on figures C1 and C2. While we observe some differences among estimates, our main conclusions remain valid across all estimation methods. All estimates show negative effects of the alimony regime on women labour earnings, and positive effects of the marriage-like regime on men hours and men active weeks. All estimates show a clear positive impact of the effect of eligibility for the marriage-like regime on the share of women having no earnings during the entire year[33] and show a higher effect on women caught by the reform than on women eligible after the reform. Similarly, all estimates show a negative effect on hours of work.[34] Finally, almost all estimates show a negative effect of eligibility for the marriage-like regime for couples caught by the reform.

5.2.2. Common trends

As described in the estimation strategy, to support the common trend hypothesis that is not testable, we focus on the pre-eligibility period, and test whether estimates for periods before eligibility are statistically different from zero. We estimates the coefficient at period t-2 using the CS estimator (Callaway and Sant'Anna, 2021) and test if the coefficient is significant. We present in Table 7 our results. Remark that these coefficients and their 90% confidence intervals also appear in Figs. A.2, A.3, A.4 presenting the dynamics of our effects and in figures C3, C4 and C5 in appendix. It would not be surprising to observe a pre-trend before eligibility for the alimony regime as most individuals are in couples formed after the alimony reform and they may anticipate their eligibility. We do not find a significant coefficient for men two years prior to their eligibility. For women, however, we find a negative coefficient at time $t-2$ for women's hours of work and labour income (significant at the 90% level). This means that, in comparison with non-eligible women, not-yet eligible women were increasing their participation in the labour market before becoming eligible and then decreasing it after becoming eligible. This result is in line with the results of Chiappori et al. (2017) where women have low bargaining power before eligibility because their partner may threaten to leave the relationship, but have higher bargaining power after eligibility. The pre-trend analysis for eligibility for the marriage-like regime is more complex. We estimate an additional effect of eligibility for the marriage-like regime compared to the alimony regime. The couples that are caught by the reform are couples

[31] The family home has to be divided equally, whoever brought it into marriage. However, there is a concern for continuity for the children, so it is likely that when the judge gets involved, the mother will keep the house since she is more likely to get the custody of children.

[32] Our results are also consistent with other findings on labour supply elasticities of couples in Canada. Schirle (2015) finds that the introduction of a universal childcare benefit in 2006, amounting to CAD 1200 per year per child under 6, reduced mothers' participation by 1 pp and the median hours worked by 50 h per year and had also significant but smaller income effects on fathers.

[33] Except the regular Event-Study estimate that suffers from a "forbidden comparison" issue.

[34] Except the regular Event-Study estimate that suffers from a "forbidden comparison" issue.

Table 6
Effects of eligibility for a protective regime of cohabitation on entry into marriage and couple dissolution.

	Get married	Break up
Alimony*Elig. at ref. ($\widehat{\beta}_a^{bef}$)	0.007	0.008
	(0.007)	(0.015)
	[0.36/0.62/0.45]	[0.59/0.77/0.58]
Alimony*Elig. after ref. ($\widehat{\beta}_a^{aft}$)	0.024	0.015
	(0.011)	(0.012)
	[0.06/0.13/0.12]	[0.26/0.36/0.46]
Marriage-like*Elig. at ref. ($\widehat{\beta}_m^{bef}$)	0.015	0.027
	(0.004)	(0.028)
	[0.01/0.23/0.16]	[0.36/0.60/0.78]
Marriage-like*Elig. after ref. ($\widehat{\beta}_m^{aft}$)	−0.026	0.006
	(0.013)	(0.017)
	[0.08/0.36/0.24]	[0.75/0.85/0.79]
$\widehat{\beta}_a^{aft} + \widehat{\beta}_m^{aft}$	−0.002	0.020
test p-value	[0.93/0.93]	[0.37/0.66]
N	20510	19038
R^2	0.052	0.029

Data: Statistics Canada. Survey of Labour and Income Dynamics (SLID) 1993–2011.
Sample: couples in an unmarried cohabitation relationship for less than 10 years, aged between 18 and 50 years old in Canada, with no missing information and where at least one partner is observed. Model *Entry into marriage* also includes couples in their first year of marriage.
Notes: Standard errors are clustered at the province level and are reported in parenthesis. p-value reported in brackets, in order: (1) p-value based on clustered-robust variance estimation; (2) Effective degree of freedom correction; (3) wild cluster restricted bootstrap (9999 reps). test p-value: (1) p-value based on clustered-robust variance estimation; (2) wild cluster restricted bootstrap (9999 reps). All regressions include controls for province fixed effects; relationship duration fixed effects; year fixed effects; a dummy indicating if the couple has a child; the dummy indicating if the couple has a child interacted with year fixed effect, with relationship duration fixed effects, and with province fixed effects. We use SLID longitudinal weights. *Get married* is a dummy indicating a marriage during the year. *Break up* is a dummy variable indicating couple's separation in the year after.

who are already eligible for the alimony regime and who unexpectedly become eligible for the marriage-like regime. However, they were already in a specialization pattern before eligibility for the marriage-like regime compared to couples who were not eligible for any protective regime. Indeed, we observe a significant positive coefficient at period $t-2$ for the labour earnings of women caught by the marriage-like regime. Although we control for eligibility for the alimony scheme in all our estimates with a static effect, this means that our estimates for the labour income of women in couples caught by the marriage-like reform may be contaminated by the dynamics of the alimony treatment and may be slightly overestimated.[35] For individuals non-caught by the marriage-like reform, we do not observe any significant coefficients at period $t-2$.

5.3. Selection effect

Are couples more likely to get married or to break up because they are eligible for a protective regime of cohabitation? If this is the case, our results would be based on a selected sample of eligible couples. In order to test for regime-related selection into cohabitation, we pool observations of men and observations of women together, keeping one observation by couple when both members are observed. On this sample, we estimate two models to test if becoming eligibility for a protective regime changes behaviour towards marriage and separation.

First, we estimate if couples are more (or less) likely to get married when they become eligible for a protective regime of cohabitation. To do so, we keep observations on cohabiting couples and on married couples during their first year of marriage, and we construct an indicator for getting married during the current year ($getmarried_{it}$). We estimate the same model as in Section 3, using $getmarried_{it}$ as the left-hand side variable and replacing individual fixed effects by province fixed effects because marriage is an absorbing state. The coefficients can be interpreted as hazard rates: conditional of not being married at time $t-1$, what is the probability of getting married at time t? Our coefficients of interest measure if eligibility for a protective regime of cohabitation changes the baseline hazard rates, which is given by our set of dummies for the duration of the couple.

[35] We elaborate in the appendix on how we best deal with multiple treatments in a DID setting.

Table 7
Tests for the existence of pretrends.

	Men			Women		
	Log of Nb. of hours worked	Nb. of active weeks	Log of Labour earnings	Log Nb. of hours worked	No earnings	Log Labour earnings
Table 3						
Marriage-like reform ($\hat{\gamma}_m$)	−.125	1.91	−.032	.101	.036	.138
	(.076)	(2.33)	(.143)	(.112)	(.033)	(.092)
Table 4 - Panel A						
Eligibility alimony ($\hat{\beta}_a$)	−.003	.621	.023	−.123	.007	−.146
	(.038)	(.550)	(.057)	(.067)	(.020)	(.088)
Eligibility marriage-like ($\hat{\beta}_m$)	−.136	1.492	−.034	.065	.032	.078
	(.079)	(2.370)	(.143)	(.114)	(.033)	(.095)
Table 4 - Panel B						
Alimony*Elig. after ($\hat{\beta}_a^{aft}$)	−.014	.799	.021	−.143	.010	−.137
	(.039)	(.559)	(.062)	(.075)	(.022)	(.100)
Marriage-like*Elig. at reform ($\hat{\beta}_m^{bef}$)	−.184	−1.55	.080	.225	.065	.290
	(.131)	(2.21)	(.270)	(.184)	(.062)	(.154)
Marriage-like*Elig. after ($\hat{\beta}_m^{aft}$)	−.113	5.19	−.088	.004	.005	.008
	(.115)	(4.11)	(.123)	(.163)	(.031)	(.134)

Data: Statistics Canada. Survey of Labour and Income Dynamics (SLID) 1993–2011.
Sample: men and women in an unmarried cohabitation relationship for less than 10 years, aged between 18 and 50 years old in Canada, with no missing information.
Notes: Coefficients on variable for period $t-2$ to event computed with the Callaway and Sant'Anna (2021) estimator. Standard errors are clustered at the province level. All regressions include controls for individual fixed effects; relationship duration fixed effects; year fixed effects; a dummy indicating if the couple has a child; the dummy indicating if the couple has a child interacted with year fixed effect, with relationship duration fixed effects, and with province fixed effects. *Log of Nb. of hours worked* gives the logarithm of the number of hours worked during the year (set to zero for non-working people); *No earnings* is a binary variable indicating whether the individual has not earned any labour income the whole year; *Number of active weeks* gives the number of weeks in which the individual is in activity. *Log of labour earnings* gives the logarithm of fiscal labour earnings in constant Canadian dollars of 2002. We use SLID longitudinal weights.

Second, we estimate if couples are more (or less) likely to break up when they become eligible for a protective regime. We keep observations on cohabiting couples and we construct a variable indicating if the couple breaks up during the current year ($breakup_{it}$). We estimate the same model as in Section 3, using $breakup_{it}$ as the left-hand side variable and replacing individual fixed effects by province fixed effects because separation is an absorbing state. As for the previous analysis on marriage, our coefficients of interest indicate if eligibility to a protective regime increases the instantaneous probability of separation, conditional on not being separated at that moment.

For both estimation, we distinguish the effects on couples who have not anticipated their eligibility (couples eligible at the time of the reform), and couples who have anticipated it (couples eligible after the reform) as in Section 3. We present our estimates in Table 6.

For couples eligible after the introduction of the alimony reform, we find that when they become eligible, they are slightly more likely to marry than non-eligible couples (+2.4 pp) but they do not have a different behaviour towards dissolution as compared to non-eligible couples. Regarding the marriage-like regime, we find that couples eligible at the moment of the reform are more likely to get married after the reform (+1.5 pp). However for couples eligible after the reform, eligibility do not impact their behaviour regarding marriage or dissolution. The results show that both the alimony regime and the marriage-like regime imply some selection out of cohabitation and into marriage among couples. Then, a part of the difference between our estimates for eligible couples before and after the marriage-like reform can therefore be explained by a change of composition of couples. However, this selection is too small to explain the observed changes in labour supply.

Finally, to better understand our results, we also test if reforms introducing the alimony regime or the marriage-like regime have affected the type of union – marriage or cohabitation – couples choose when they start a new relationship. We test whether the introduction of the reform has changed partnership choice at match formation. We consider all newly formed couples, both married and cohabiting. Following Blasutto and Kozlov (2020), we regress a binary variable indicating if the couple is cohabiting on two binary variables indicating if a reform introducing an alimony regime and a reform introducing the marriage-like regime are implemented in the province. Our results (presented in the online appendix) show that after the introduction of the alimony regime, the probability of being cohabiting among newly formed couples decreased and it decreased furthermore after the introduction of the marriage-like regime. This results indicates that making cohabitation similar to marriage has decreased its attractiveness.

5.4. Specialization

The introduction of the protection regime could increase specialization within the couple through increased investment in children if the more protective regime induces childless couples to have a child. In order to test this mechanism, we re-estimate

model (3.2) on a sample restricted to couples who already had a child *before* becoming eligible for a protective regime. Results are presented in the online appendix. The results on this subsample are similar to the main results for the marriage-like regime, but weaker for the alimony regime (only men are affected by eligibility to the alimony regime, by increasing their number of active weeks per year). These results suggest eligibility for a protective regime has a direct impact on labour market behaviour that is not solely explained by increased specialization due to increased fertility.

6. Conclusion

We investigate to what extent becoming automatically eligible for a protective regime of unmarried cohabitation affects men and women's labour market outcomes. We provide empirical evidence suggesting that more protective regimes lead to increase men's labour supply and earnings and decrease those of women's. The impact of the marriage-like regime is stronger. We find that the impact is similar across men, whether they could anticipate the impact of not, but we find a larger impact among women who could not anticipate their eligibility status. Our results show that eligibility affects within-household allocation of earnings and work by reinforcing existing inequalities. Finally, we present some evidence that enhancing protection level at separation has an effect on the selection of couples out of cohabitation and into marriage.

Our paper contributes to the public debate related to granting rights to cohabiting couples. It shows that couples adjust their behaviour on the labour market according to the level of protection induced by a cohabitation regime and the adjustment varies across gender. The alimony regime, which gives the right to the low-wage earner to petition for spousal support in the event of separation, has a symmetric impact on men on women—what matters is the relative position of partners, not the gender. The marriage-like regime induces a gendered impact—it decreases the labour force supply or earnings of women, whatever her relative position within the household. The regime induces property division in the event of separation and give partners equal right to stay in the family home. It tends to protect the position of women regarding family home: women are more likely to get the custody of children and the custodial parent is more likely to stay in the family home.

Granting rights to cohabiting couples has unclear consequences on welfare within the household. In the absence of behavioural response, both alimony payment and property division strengthen the economic situation of the low-wage earner in the event of separation. Increasing economic security of the low-wage earner makes separation more attractive and thus induce a shift of resources towards the low-wage earner (usually women) within the household. In contrast, a protective regime weakens the high-earner's (in general, men) position within the household. This induce the low-wage earner to work less and earn less on the labour market and the high-wage earner to work more and earn more. Since couples cannot commit to a particular share of resources, renegotiation later in life may reduce the low-wage earner bargaining power over time if his or her contribution to the household income falls. Behavioural response could offset the protection induced by the regime of cohabitation.

We believe our results are important in the current debate regarding the legal status that should be given to unmarried cohabiting partners. Facing increasing rates of unmarried cohabitation among couples, most countries have initiated a public debate on the protection that should be given to unmarried couples. Provinces in Canada, Australia or some States in the USA have expanded automatically some rights to cohabiting partners, thus reducing the number of options couples have to form partnership. Other – mostly European – countries have created opt-in cohabitation regimes such as registered partnerships, which has increased the number of options to form partnership. More research is needed to understand how these reforms affect the dynamics of couple formation and dissolution and to assess their impact on welfare.

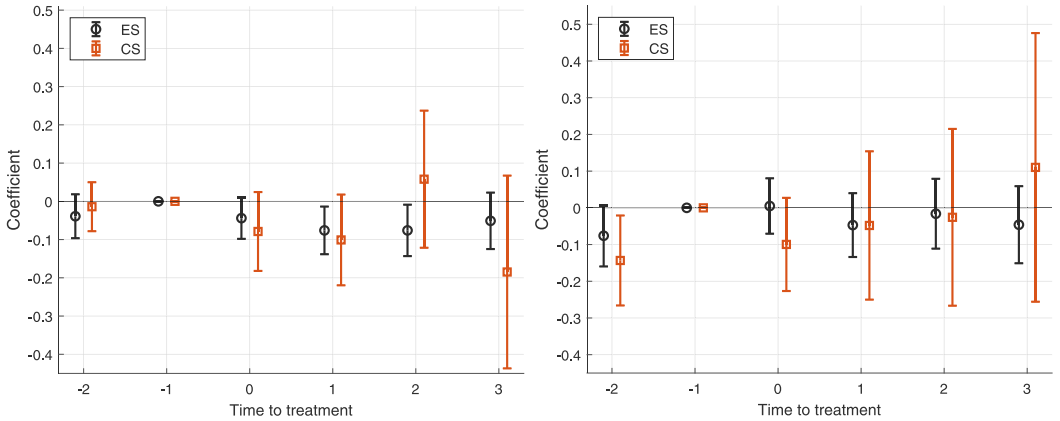
Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

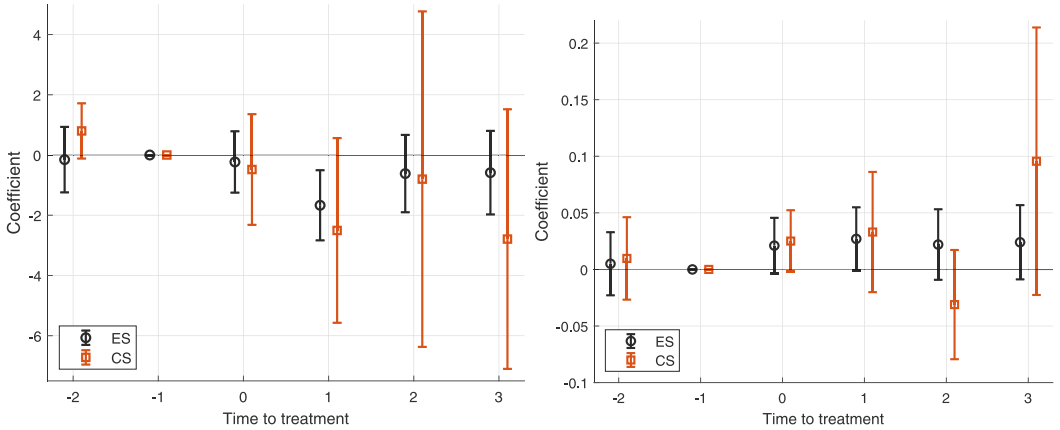
Data availability

The data that has been used is confidential.

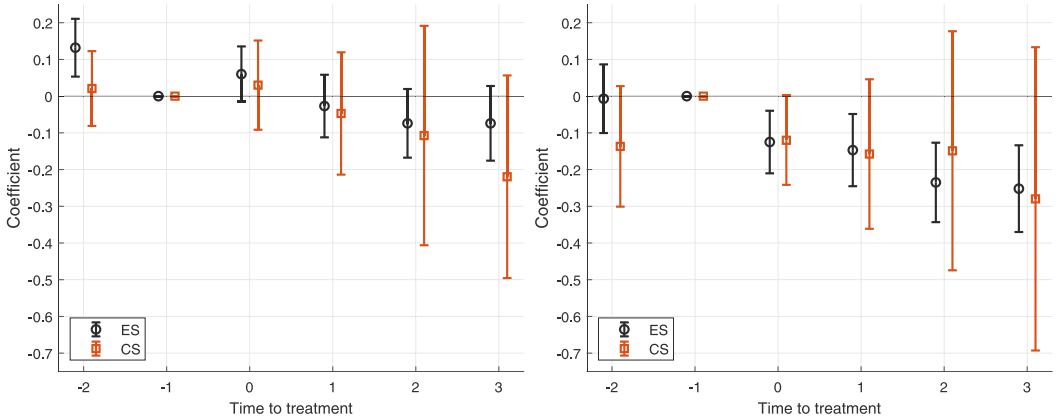
Appendix A. Additional figures



(A) Log hours men (B) Log hours women

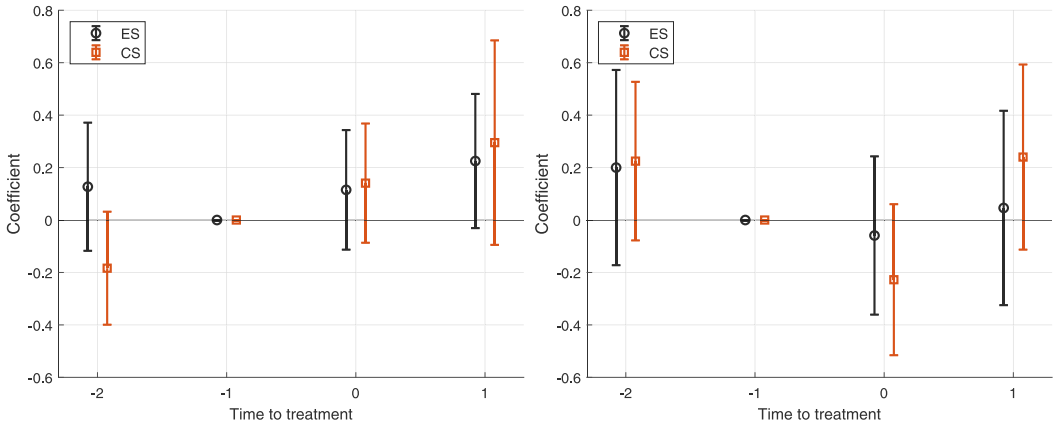


(C) Nb of active weeks men (D) No earnings women

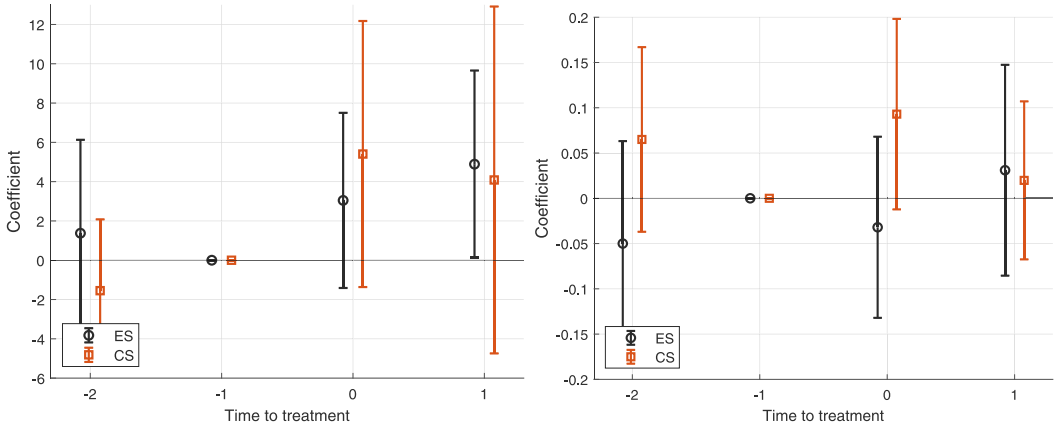


(E) Log labour earnings men (F) Log labour earnings women

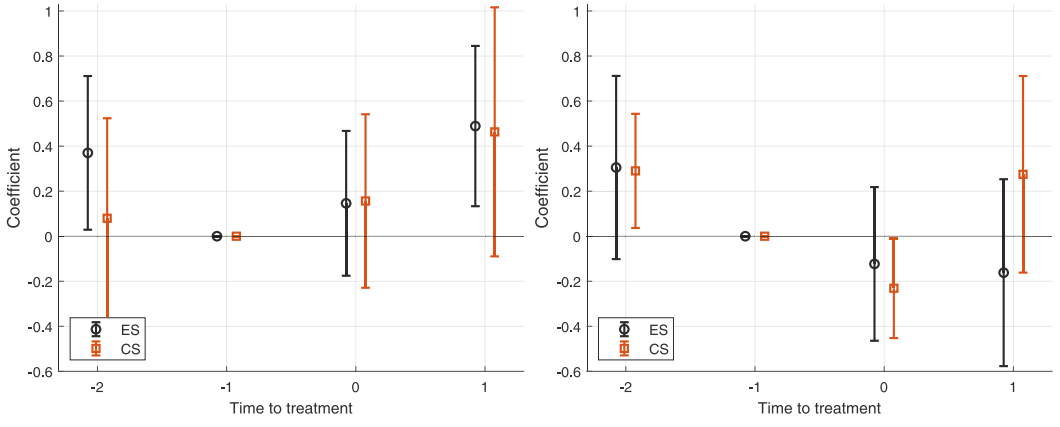
Fig. A.2. Effect of eligibility for the alimony regime for couples non caught.
Note: Data are from the 1993–2011 SLID panel data. The sample consists in individuals living in cohabitation for less than 10 years, aged between 18 and 50 years old in Canada. Coefficient estimates and 90% confidence intervals of effects computed with regular Event-Study estimation (ES), and Callaway and Sant'Anna (2021) estimation (CS). Standard errors are clustered at the province level. All regressions include individual fixed effects, relationship duration and 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. We use SLID longitudinal weights. Log hours gives the logarithm of the number of working hours per year; Active weeks gives the number of weeks where the individual is either working or unemployed; No earning is a binary variable indicating whether the individual had no labour income all year. Log labour earnings gives the logarithm of fiscal labour earnings in constant Canadian dollars of 2002.



(A) Log hours men (B) Log hours women

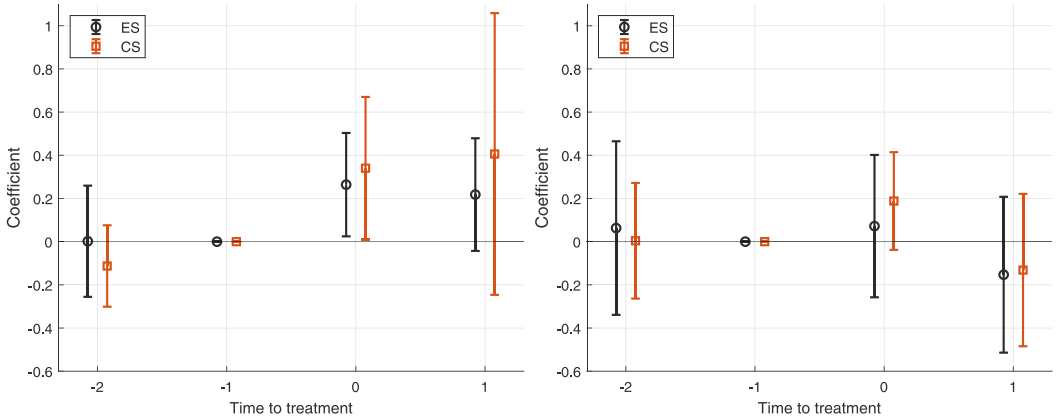


(C) Nb of active weeks men (D) No earnings women

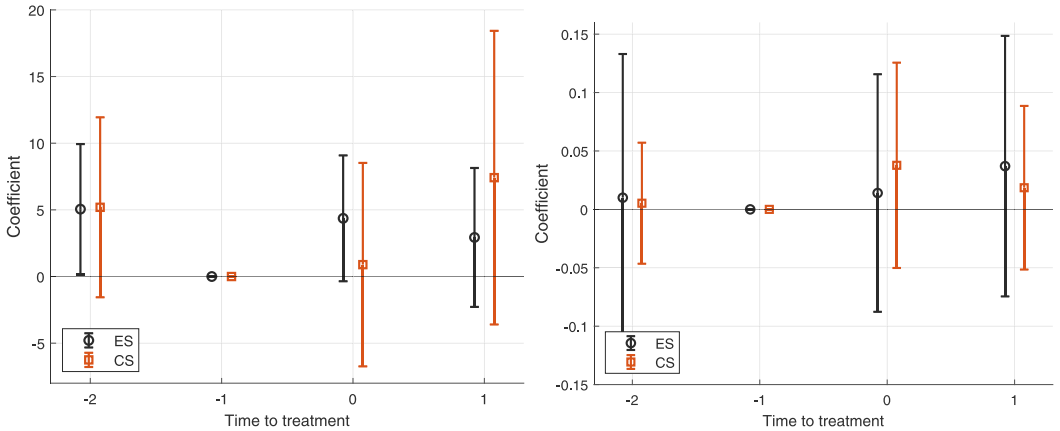


(E) Log labour earnings men (F) Log labour earnings women

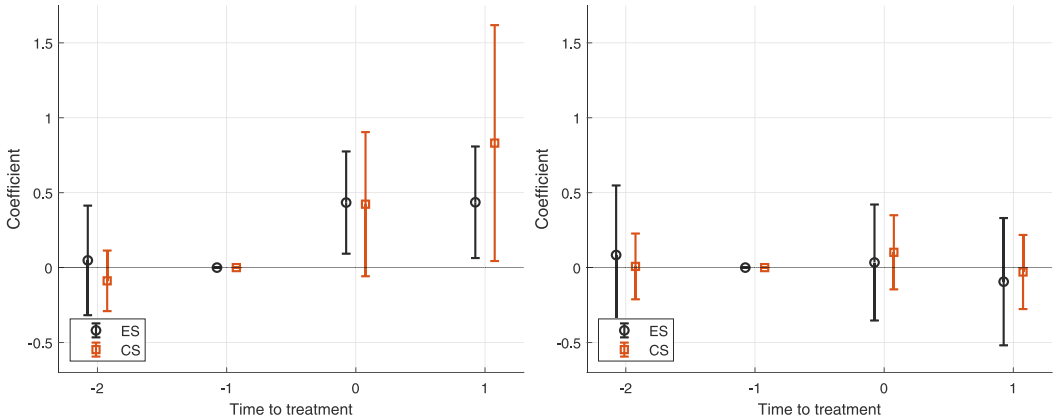
Fig. A.3. Effect of eligibility for the marriage regime for couples caught.
Note: Data are from the 1993–2011 SLID panel data. The sample consists in individuals living in cohabitation for less than 10 years, aged between 18 and 50 years old in Canada. Coefficient estimates and 90% confidence intervals of effects computed with regular Event-Study estimation (ES), and Callaway and Sant'Anna (2021) estimation (CS). Standard errors are clustered at the province level. All regressions include individual fixed effects, relationship duration and 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. We use SLID longitudinal weights. Log hours gives the logarithm of the number of working hours per year; Active weeks gives the number of weeks where the individual is either working or unemployed; No earning is a binary variable indicating whether the individual had no labour income all year. Log labour earnings gives the logarithm of fiscal labour earnings in constant Canadian dollars of 2002.



(A) Log hours men (B) Log hours women



(C) Nb of active weeks men (D) No earnings women



(E) Log labour earnings men (F) Log labour earnings women

Fig. A.4. Effect of eligibility for the marriage regime for couples non caught.
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. Coefficient estimates and 90% confidence intervals of effects computed with regular Event-Study estimation (ES), and Callaway and Sant'Anna (2021) estimation (CS). Standard errors are clustered at the province level. All regressions include individual fixed effects, relationship duration and 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. We use SLID longitudinal weights. Log hours gives the logarithm of the number of working hours per year; Active weeks gives the number of weeks where the individual is either working or unemployed; No earning is a binary variable indicating whether the individual had no labour income all year. Log labour earnings gives the logarithm of fiscal labour earnings in constant Canadian dollars of 2002.

Appendix B. Supplementary data

Supplementary material related to this article can be found online at https://doi.org/10.1016/j.euroecorev.2022.104259.

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