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Preliminary draft

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Comparable Worth Comes to the Private Sector: The Case of Ontario ¹

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Abstract

We investigate the effect of pro-active comparable worth legislation, covering both the public and private sectors, on wages, employment and the gender gap. Our focus is the pay equity initiative adopted by the Canadian province of Ontario in the early 1990s. Our preliminary finding is that the law fell short of its goal of reducing gender based wage differentials. Firm surveys indicate that the effect of the legislation was blunted by lack of compliance in small private firms, the low incidence of undervalued female work in larger firms, and more generally the lack of male comparators for female jobs. These sorts of problems would appear endemic to any attempt to extend comparable worth to the private sector of a decentralized labor market. Our analysis of individual level data suggests that even in those sectors where the legislation had “bite” (among non-unionized workers in larger establishments), any positive effects on the wages of females in female jobs were very modest. Our most consistently estimated effects of the law on wages are negative: slower wage growth for females in male jobs and for males in female jobs.

1. INTRODUCTION

Previous studies suggest there are “natural limits” to the effect of comparable worth/pay equity legislation on the gender pay gap.² For example, the fact that in most legislation comparisons of “male” and “female” jobs are made within establishments, while an important component of the gender wage gap is due to wage differences across firms and industries (Carrington and Troske (1995), Reilly and Wirjanto (1995)).³ That said, the impact of widely applied comparable worth remains a matter for speculation. Many studies (O’Neill, Brien and Cunningham (1989); Kahn (1992); Killingsworth (1990); Sorensen (1994), Ames (1995) among others) have looked at the impact of comparable worth legislation passed in state and local public services. Others (Ehrenberg and Smith (1987); Hundley (1992); Johnson and Solon (1986)), have used simulations to assess its wider impact. But as yet, there has been no examination of how comprehensive, pro-active comparable worth legislation, covering both the public and private sectors, affects wages and employment, and the gender wage gap. This is precisely what we propose in this paper.

Comparable worth in most North American jurisdictions is relegated to small sectors of the labor force. Despite pessimistic predictions of the impacts of any more ambitious initiatives, pay equity remains a popular objective, high on the agenda of many advocacy groups. While the benefits of wider application may turn out to be small, these policies are administratively costly to implement and they affect the pay practices of thousands of organizations, and possibly their productivity (Gibbs and Hendricks (1997)). It is therefore important to empirically assess whether these laws effectively reduce the gender wage gap

²Pay equity is seen by its proponents, such as the National Committee on Pay Equity, as a means of eliminating sex and race discrimination in the wage setting system. For the Committee, sex discrimination is measured by the wage gap and the gender wage gap is understood to be caused by occupational gender segregation (www.feminist.com/fairpay.htm).

³As explained below, some legislation may allow limited comparisons across establishments/employers.

by raising the wages of women.⁴

The origins of our study are legislative initiatives of the Canadian province of Ontario in 1987. Through *Pay Equity Act*, Ontario embarked on an ambitious extension of comparable worth/pay equity legislation to the private sector. This episode provides a unique opportunity to evaluate the impact of a widespread implementation of comparable worth. The legislation is comprehensive: it covers all public sector employers and all private sector employers of 10 or more employees. The legislation is pro-active: it requires employers of 100 or more employees to post a pay-equity plan and to pay the initial installment of any resulting awards according to a strict timetable. Finally, the legislation is significant: Ontario's population is upwards of 11 million people, so this law cannot be viewed as a "test run" or preview for a more substantive initiative.

We directly examine the impact of the legislation on wages in "female jobs", defined as job classes in which 60 percent or more of the members are female.⁵ We also present results for "male jobs"—classes that are 70 percent or more male—and "integrated jobs"—the remainder. Although comparable worth legislation explicitly prohibits wage reductions to attain pay equity, it does not address the issue of wage growth. Employers could therefore reduce future pay equity adjustments by reducing wage growth in male jobs. Male jobs are thus indirectly treated by the law.

We also look for effects of the legislation in employment. Because these policies directly target workers in female jobs and indirectly workers in male jobs leaving workers in integrated jobs untreated, they may entail re-segregation effects, and negative effects on female employment. Re-segregation may occur as women find female jobs relatively more attractive than they did before the law. Re-segregation may also occur as employers

⁴It is unclear whether a reduction in the gender wage gap coming from sluggish wage growth among men should be a desired outcome, as overall family income may suffer.

⁵Jobs may also be designated male or female on the basis of gender stereotypes or historical employment.

refrain from employing women in integrated jobs that are close to 60 percent female (such as cleaning occupations), so that they remain outside the purview of the law. Likewise, employers may refrain from employing women in female jobs that are close to 60 percent female (such as certain sales occupations), so that they are reclassified as integrated jobs. The results of these actions could be supply effects on other female jobs as workers are displaced, or lower employment rates for women.⁶ More direct employment effects may result if the higher wages mandated by the law exceed the productivity of particular jobs or individuals.

Finally, because unionized women and women working in large organizations, who are better paid than other women, are likely to benefit most, these policies may exacerbate wage inequality (Smith (1988), Orazem and Mattila (1990)). It is therefore important to also evaluate the importance of these potentially perverse effects.

Our analysis takes advantage of the fact that the Ontario legislation was applied differently across firms of different sizes, and the fact it did not apply to other regions of Canada. In evaluating any effects of the Act we have access to data from the province of Quebec for purposes of comparison. This adjacent province is most comparable to Ontario in both population and economic activity. The comparison helps us control for any time effects that occurred in the period the legislation was implemented, and might otherwise be mistaken for one of its outcomes. This strategy is refined when we focus on employees in firms of different sizes.

The paper proceeds as follows. In section 2, we describe the Ontario legislation and its implementation. We also justify our choice of the province of Quebec as the control jurisdiction. In section 3, we explain how we use data from the combined 1987 and 1988 Canadian Labour Market Activity Survey (LMAS) to obtain “before” the law information,

⁶Presumably these supply effects could drive down the wages in other female jobs resulting in higher pay equity awards. This externality may be internalized by the firm depending on the types of jobs at a particular establishment.

and data from the 1997 in-going rotation group of the Canadian Labour Force Survey (LFS) to obtain the “after” the law information. We also set forth our empirical strategy for identifying the effects of the law. The results are presented in section 4. Finally, in section 5 we provide a preliminary summary of the impact of comparable worth on the Ontario labor market.

2. THE POLICY ENVIRONMENT

2.1. The Law

The Ontario *Pay Equity Act* of 1987 covers both the public sector and firms in the private sector with 10 or more employees.⁷ The legislation is pro-active, and provides a detailed timetable for employers to both post pay equity plans and to provide the initial payments of any necessary wage adjustments. As is common in comparable worth legislation, the initiative counsels a process involving four steps: 1) the identification of predominantly female and predominantly male job classes, 2) the assignment of numerical scores to job classes reflecting their levels of skill, effort, responsibility, and their working conditions, 3) the comparison of the numerical scores of female and male job classes in relation to their wage rates, and 4) pay adjustments for “undervalued” female jobs. The Act guides the implementation of pay equity at each of these steps, defining male and female job classes, acceptable methods of wage comparison and establishing the Pay Equity Commission as a overseer and arbiter of the legislation.

The “value” of a job is to be determined on a gender neutral basis, using an index of skill, effort and responsibility requirements, as well as working conditions. Initially, male/female job comparisons were to be made within establishments on a job-to-job basis, between work of equal or comparable value. In 1993 the Act was amended to permit both

⁷The Act received Royal Assent in June 1987 and was proclaimed on January 1, 1988.

proportional value comparisons and the proxy method of locating comparators outside an organization.⁸ Proportionate value comparison is essentially a “wage-line” method, designed to accommodate situations where direct job-to-job comparisons are not possible.⁹ The proxy comparator method applies when employers cannot use job-to-job and proportionate value comparisons. It permits an employer to find comparable male jobs outside of its organization. The use of the proxy method is restricted to the broader public sector, and its use is governed by rules outlined in the legislation.¹⁰

Differences in pay between jobs are tolerated on the following bases: seniority, temporary training assignments, merit pay, red-circling and skill shortages. Employers must be ready to justify any pay differences for these reasons. Finally, compensation cannot be reduced to attain pay equity.

The implementation of the Act was staggered across sectors and across private firms of different sizes. It consisted of two stages: 1) the posting of a pay equity plan, and 2) the initiation of any wage adjustments.¹¹ In establishments with bargaining units the pay equity plan was to negotiated. In other establishments, the employer prepared and posted the plan which was then subject to review and possibly appeal by employees. In either case, if the process ended in stalemate the Pay Equity Commission decided all outstanding issues. Employers were not required to make wage adjustments in a given year exceeding

⁸These amendments were announced by the Ontario Minister of labor in December 1990.

⁹An example is to plot the regression line of male wages on “value”, and then compare the wage in a female job to the compensation that would be “predicted” by the male wage line.

¹⁰These rules cover, for example, qualification requirements to use the proxy method and the identification of proxy organizations. A 1996 provincial act—The *Saving and Restructuring Act*—legislated a phase out of the proxy method starting in January 1997. In September 1997, however, the Ontario Court of Justice ruled that repealing the proxy method violated the Canadian Charter of Rights and Freedoms, and thus the repeal was “of no force or effect”.

¹¹A pay equity plan sets out the comparison system used, the job classes used, the results of the comparison, how compensation will be adjusted to compensate underpaid classes and the date of the first adjustment.

one percent of the previous year's payroll.¹² The payment of awards was to be made annually until equity was achieved.

The deadlines for different sectors and firms of different sizes are presented in Table 1. The strictest timetable was for the public sector. Both the plan and initial adjustments were required by January 1991. Large private employers of at least 500 employees faced a similar deadline for plan posting but received a one year reprieve on making the initial awards. Sequentially smaller employers—100-499, 50-99 and 10-49 employees, respectively—received further extensions for posting and implementation in one year increments. For example, employers with at least 100 employees but less than 500 employees were required to post their plans by January 1991 and begin wage adjustments by January 1992. Note that firms of less than 100 employees faced a choice of how to comply with the legislation. One option was to post a pay equity plan by January 1, 1993 or January 1, 1994 (depending on size) and to make the initial pay equity adjustments one year later. A second was to not post a plan, but to make all wage awards to achieve pay equity in a very short time frame: January 1993 for firms with 50-99 employees and January 1994 for firms with 10-49 employees. Finally, establishments with less than 10 employees were exempt from the Act.

The other province under study here is Quebec. While Quebec has recently (1996) enacted pay equity legislation with many similarities to the Ontario Act—most importantly the extension of pay equity to the private sector—many of its provisions did not come into force until November 1997, and employers are allowed up to four years to develop a pay equity plan. During the period we examine, 1987-1997, Quebec's pay equity provisions were contained in its human rights code.¹³ The resulting system was complaint based and in principle covered all workers outside the federal sector. Enforcement was the responsibility of the Quebec Human Rights Commission. Despite the seemingly wide-ranging jurisdiction

¹²The method of adjustment is to be "bottom up" in the sense that the most severely underpaid female jobs are to receive larger increases.

¹³The concept of pay equity was introduced to the code in 1977.

of these provisions, Weiner and Gunderson (1990) report that the legislation was rarely used. Likewise, Cihon (1988) reports that in the period preceding 1984 there were 77 complaints, 28 of which were either dismissed or ultimately withdrawn. Successful claims resulted in settlements which affected approximately 3500 workers. Complaints in the period 1982-1986 were even less frequent. Cihon argues that the provisions were not well publicized by the Human Rights Commission in this period, due to the limited resources available for their enforcement. These sorts of outcomes are typical for a complaint based system, and are a bases for arguments often forwarded in favor of pro-active policies.¹⁴

The message of this evidence is that over the period of analysis, the comparable worth provisions in Quebec were of little effect. This suggests that the data for this province are arguably free of any effects of a pay equity system, and therefore make a good point of comparison for an evaluation of the Ontario legislation.¹⁵

2.2. Compliance with the Ontario Legislation

While rich in detail on the meaning and implementation of comparable worth, the Ontario legislation made few provisions for monitoring compliance with the Act, save for creating and charging the Pay Equity Commission with this task. Evaluation of the legislation has been piecemeal, consisting primarily of a number of employer surveys authorized by the Commission, reviews culled from submissions from interested parties and planning reports on future directions of the law.

The story that emerges from these documents is that compliance is correlated with both sector and firm size. One of the earliest surveys was of public sector employers and private

¹⁴Symes (1990) argues that the disappointing results of enshrining pay equity provisions in the human rights codes of Quebec and the federal government (in 1978), were a prime motivation for lobby groups to seek pro-active legislation.

¹⁵At a minimum, the Ontario/Quebec comparison will provide a distinction between the effect of a pro-active and a complaint-based pay equity system.

sector firms of 500 or more employees (SPR Associates 1991). It was conducted between July and December of 1990.¹⁶ The survey reveals that 45-50 percent of these employers had posted all of their plans, and that 70-76 percent were in full or partial compliance with the law. Only 4 percent of firms in the private sector, and 10 percent of public sector organizations, had done no work on pay equity.¹⁷ Also, private sector employers that were unionized were generally slower to comply with this part of the Act. For example, in firms of 1000 or more employees, 77 percent of non-union establishments, but only 38 percent of union establishments, had posted all their plans. Each type of establishment reported roughly one-third of female job classes were excluded from wage adjustments due to the lack of a male comparator. Twenty one percent of female job classes in the private firms and 40 percent of females classes in the public firms were to receive or had received some sort of adjustment. Total adjustments were reported to be 0.7 percent of total payroll in the private sector and 2.6 percent of payroll in the public. Finally, the administrative cost of implementation was also higher in public organizations: \$173 per employee versus \$88 per employee, on average, in private firms.¹⁸

Surveys by Canadian Facts provide some details of other firms' abilities to meet the deadlines under the Act. A survey of firms of 100-499 employees (Canadian Facts 1992) in late 1991 reveals 50 to 60 percent of establishments had posted pay equity plans, this almost 12 months after they were legally required to do so. There was again some evidence that unionized firms were less likely to have complied. Seventy-three percent of non-union firms and 49 percent of union firms had posted all their plans.

¹⁶This is at least 6 months after the deadline for these employers to have posted their pay equity plans. It is also after the deadline for public employers to have made their initial wage adjustments, and just prior to the corresponding deadline for the private sector employers.

¹⁷The report suggests that the higher proportion for the public sector in this case is due to regulated employers who do not know they are in the public sector for the purposes of the legislation.

¹⁸This summary is consistent with the information in Read (1996) citing the early review in Gunderson (1995).

A similar survey of firms of 50-99 employees (Canadian Facts 1993) in late 1992 reveals that close to one-half of these firms had not yet even chosen whether to post a plan or instead opt to not post a plan, but complete all wage adjustments by January 1993. Of the firms that had made a decision, roughly 40 percent decided to post a plan. These surveys also identify clerical and blue collar jobs as the most likely to receive adjustments.

Finally a survey of employers of 10-49 employees in the Spring of 1994 by the Institute for Social Research (1994) reveals 83 percent of firms had not yet decided whether or not to post a plan, and 80 percent had not yet done any work towards developing a plan. Only 15 percent had completed some or all of their plan, and of completed plans less than half mandated pay equity adjustments.

This evidence suggests, therefore, that compliance was particularly slow or non-existent in small firms, and to a lesser extent in the union sector. This is consistent with the anecdotal evidence supplied by unions, employee organizations and pay equity advocacy groups (Read 1996). Another theme which emerges in these reports is the “high” administrative and implementation costs of the legislation. This was a position argued by many employer groups (Read 1996).¹⁹

This information can help refine our focus. Any effects of the legislation should be most clearly visible among employees of medium and large firms. The longer implementation schedules of small firms in tandem with their low rates of compliance, make it unlikely that the law had any substantive effect in this sector over the period we examine. Furthermore, among large firms distinguishing between the union and non-union sector should be useful.

Of course compliance rates are another means of evaluating the legislation, and in this instance highlight some obstacles to implementing pay equity provisions in the private sector. Enforcement was clearly an issue, especially among smaller firms. The lack of enthusiasm for the legislation in these establishments may have been related to the fixed

¹⁹The surveys by Canadian Facts suggest average administrative costs of about \$170 per employee in 100-499 employee firms.

costs of setting up job evaluation systems, and the relatively few employees that the expense could be amortized over. The evidence we review suggests that the provisions for monitoring the legislation were clearly inadequate. A much more comprehensive system was needed, perhaps with explicit penalties for violation of the law. The surveys also suggest that the lack of male comparators was not uncommon, which would in turn blunt the impact of the legislation. While the proxy comparator method eased this constraint in the public sector, it was clearly also an issue for large firms in the private sector.

The other lesson here is that even in larger establishments implementation of the law often lagged official deadlines. This speaks in favour of the longer run effects we seek in the 1997–1987/88 comparisons. Nineteen ninety-seven is long enough after the deadlines for the public sector and the larger private sector firms to accommodate any laggards.

3. DATA AND EMPIRICAL STRATEGY

3.1. Data

The data for this study are drawn from the Canadian Labor Force Survey (LFS), which is primarily a study of individuals' labor force status. At the end of the 1980's, however, supplements, called the Labor Market Activity Survey (LMAS), were conducted that collected information on wages, union status, number of employees in the workplace (among other variables) for a subset of individuals in the LFS. In January 1997, these questions were made part of the monthly Labor Force Survey. We combine data from two different waves of the LMAS, the years 1987 and 1988 (to obtain a larger number of observations), and data from the 1997 LFS. These years nicely bracket the introduction of the comparable worth legislation in Ontario. The LMAS is a retrospective survey covering year-round labor market activity. To mimic a point-in-time survey, we select job information as of the third week of November. Similarly, we use the November rotation of the 1997 LFS. We

sample all individuals who are 16-69 years of age. Wages are obtained from the main job at this time; they are the actual hourly wage for workers paid by the hour and the usual hourly earnings for other workers.²⁰

The means of the wage data and other explanatory variables for working individuals in the two provinces are given in Table 2a for women and Table 2b for men. The tables show that the characteristics of individuals in the two provinces are generally similar. An important difference however is the higher unionization rate (of approximately 10 points) in the province of Quebec. In terms of industrial structure, the more important differences are the shares of Durable Manufacturing and Business Services, which comprise 3 to 4 percent more women, and 2 to 5 percent more men, in Ontario than in Quebec. On the other hand, Nondurable Manufacturing comprises approximately 2 percent more workers in Quebec. Despite these differences, the two provinces are generally similar with respect to the distribution of workers across establishment sizes. The preceding discussion suggested the impact of the legislation in small firms might be negligible due to lack of compliance. In larger firms (100 or more employees) compliance was in some cases slow, but the legislation appears to have been taken more seriously. Together with the information in Tables 2a and 2b, therefore, this suggests that about 35 percent of women and 40 percent of men were directly exposed to the legislation.

Another interesting Ontario/Quebec difference is the greater progress of Quebecers, both female and male, at raising their level of education. In Quebec, the percentage of workers with a university degree rose from 14% to 22% among women and from 15% to 18% among men between the two periods considered; in Ontario the increases were from

²⁰Hourly wages are in 1997 dollars. In our analysis of wage data, we include all wage and salary workers who are not full-time students and are earning more than \$1.00 an hour. We exclude full-time students because they are excluded from the legislation, when they work in connection to their studies. We were unable to use these data to assess the impact of the law on unemployment, since the occupation codes were available only for a very small fraction of individuals currently unemployed or out of the labor force.

17% to 21% among women and from 18% to 20% among men.²¹

Male-female comparisons reveal that in 1997 working women were as old as working men, that the percentage of women with a university degree exceeded that of men, and that the average tenure of women on the job was much closer to that of men than in the earlier period.²² Given the large gains in many human capital variables made by women over the period, we might expect women to also have made greater wage gains than men. In Figure 1, we plot the average real log hourly wages of women and men in the two provinces from 1985 to 1996 using data from the Survey of Consumer Finances.²³ We also plot trends in real log hourly wages before and after the law. Despite the severe 1990 recession, the wages of women continued to grow after 1990, albeit at a slower rate than before 1990 in Ontario. On the other hand, the wages of men, most affected by real commodity prices, began on a downward trend. The figure shows that while Ontario and Quebec experienced similar trends in log wages, the levels of log wages were consistently higher in Ontario.²⁴

Identifying the groups of individuals affected by the law is not straightforward. The intent of the law is to target workers in “undervalued” female jobs, where the femaleness of the job is determined at the establishment/employer level. We do not know the femaleness of the job of a particular individual at the establishment/employer level and we do not know whether a particular individual benefited from a pay equity adjustment. Thus, we

²¹While the education classes between the two periods considered are not fully comparable, ‘university degree’ is an exception. Starting in 1989, the LFS classified individuals with a trade degree in a separate category regardless of their level of formal education. In the education recode, these are counted in the post-secondary or trade certificate category.

²²Average tenure on the job went from 5.61 years to 7.46 years among Ontario women and from 6.72 years to 8.49 years among Quebec women. Among men, the changes were from 8.21 years to 8.71 years in Ontario and from 8.33 years to 9.42 years in Quebec.

²³The reported statistics are the ratio of annual earnings in reference year to annual hours defined by the product of weeks worked in the reference year and hours worked in the reference week. Therefore, only individuals who worked both in the reference year and reference week are included in the samples for the calculations. Nominal wages were inflated to 1997 dollars using the Consumer Price Index.

²⁴This despite the greater gain in human capital characteristics made by Quebecers.

can only identify individuals “at risk” of having received a pay equity adjustment.

We attempt to proxy the missing information on the femaleness of the job by combining the occupation codes available in the LFS data with the percentage of occupational employment that is female obtained from Census data.²⁵ In both our labor market data and in the 1991 Canadian Census data, occupations are coded using the 1980 SOC; these 4-digit occupations comprise approximately 500 categories.²⁶ We thus attribute to individuals, both in 1987/88 and in 1997, the percentage female computed at the provincial level from the 1991 Census. These percentages are reported in Table A-1. Our analysis will thus generally abstract from changes in job types endogenous to the law.

In Table 3 we provide an overview of the actual changes in the percent female by major occupational groups using the LMAS87/88 and LFS97. The table also provides an overview of women’s occupational changes, along with the average log wage for these major occupational groups.²⁷ The salient occupational change among women, that has also been documented in U.S. studies (Blau, Simpson and Anderson 1998), is the sizeable increase in the percentage, from 4 to 6 percent, of the female workforce employed in managerial, administrative and related occupations.²⁸ This, in turn, led to a rise, on the order of 10 to 12 percentage points, in the femaleness of managerial occupations as a group, yet they remained integrated occupations. Another important occupational change is the 7 percentage point decrease in the female workforce employed in clerical occupations. In this case, however, there is no corresponding change in the femaleness of clerical occupations.

²⁵The number of observations in our provincial sub-samples of the 1987/88 LMAS and 1997 LFS are too limited to provide reliable estimates of the percentage female by occupation at the 4-digit level. Even in the 20 percent extract of the Census we use, there are some occupations that are not represented in each province.

²⁶In the 1996 Census, these occupations were coded using a totally different classification system, the 1990 NOC, which is not compatible with the previous system.

²⁷An increase of 0.03 corresponds to a 10 percent wage increase.

²⁸In Ontario, the percentage of women employed in managerial occupations increased from 13.7 percent in 1987/88 to 17.5 percent in 1997; in Quebec, the changes were from 8.9 percent to 14.8 percent.

More generally, there were no changes in the job types—female, integrated or male—among the major occupational groups, with the exception of artistic, literary occupations that, in Ontario, changed from female in 1987/88 to integrated in 1997.

Table 4 reports mean wages for women and men, as well as the female/male wage ratio for all jobs and by job types, for Ontario and Quebec in 1987/88 and in 1997, that is, in our “before” and “after” the law samples. The time difference for location represents the relative wage or gap growth in Ontario versus Quebec. The numbers show that the increase in mean wages for all jobs was slightly higher in Ontario than in Quebec for both women and men. For Ontario women, changes in mean wages in integrated jobs were slightly higher, while changes in male jobs lagged. For Ontario men, the growth of wages in integrated jobs were again slightly higher, while in this case it was the wage growth in female jobs that trailed. A difference-in-difference calculation reveals that the decrease in the overall gender wage gap was not greater in Ontario than in Québec over the period of interest. Differences begin to emerge, however, when we consider the gender gap change by job type. In Ontario greater progress was made in female jobs, while in Quebec greater progress was made in male jobs.

If we thought that some jobs “integrated” at the aggregate level were actually “female” jobs at the establishment level, these crude results would indicate the law produced its intended effect; that is, relatively greater progress in the gender gap in non-male jobs than in male jobs.²⁹ The specific aim of comparable worth legislation is to raise the wages of individuals in undervalued female jobs to the level of comparable male jobs. Thus a more specific gender gap targeted by the legislation in the ratio of average female wages in female jobs over average male wages in males jobs. This ratio, given in the last line of Table 4, shows that on this basis Ontario’s performance was marginally worse than Quebec’s. It is

²⁹Alternatively, the slower progress towards equality for women in male jobs could be seen as an unintended consequence of the law, since it explicitly prohibits wage reductions to attain pay equity.

interesting to note that comparable worth aims to peg wages in female jobs to wages in male jobs rather than promote a wider application of gender neutral pay systems.

3.2. Identifying the Effects of the Law

The effect of the pay equity legislation depends on both compliance with the law (discussed above), and the incidence of “undervalued” female jobs.³⁰ While we do not know the “value” of a particular job, we are able to determine whether occupational gender composition has a negative effect on wages and the relative size of the effect across sectors. The intent of the legislation is to reduce this correlation of wages with the gender composition of employment. Therefore, documenting the penalty helps us identify sectors where the law had a larger target, and thus evaluate the success of the legislation.³¹

We provide an initial description of this relationship by plotting kernel regressions of average occupational log wages on the femaleness of the occupations (from Table A-1), for both females and males, in both provinces in the two time periods, weighting by occupation size.³² The vertical line denotes the level of PFEM, 0.6, at which the occupational classification switches from integrated to female. For Ontario women in 1997, we also plot the weighted least-squares regression line of occupational wages on the femaleness rate, where occupation sizes are used as weights. It clearly identifies an important contribution of integrated occupations to the negative relationship. An important point, made in Table

³⁰An example of a female job that was deemed undervalued, both in Minnesota and in Ontario (United States (no date)), was a clerk typist. In both jurisdictions, that job was deemed comparable to a driver and compensation resulted.

³¹Note however that the negative impact of gender composition on female wages can be also attributed to the high wages of integrated jobs, as explained below.

³²Kernel regressions are easily understood with reference to moving averages. Around any femaleness rate, a moving average could be computed as the sum of average occupational wages times a rectangular weighing function of a given width. The corresponding kernel regression is computed as the sum of average occupational wages times a Gaussian weighing function, called the kernel, of given bandwidth. Here, the bandwidth used is 0.075 for both provinces.

3, is clearly evidenced in Figure 2. For all levels of femaleness rates, there are large within-occupation gender gaps illustrated by the distance between the men’s and the women’s kernel regression lines for the corresponding years.³³ That distance shrank considerably in 1997 and most substantially among integrated occupations.

Table 5 reports the estimated effect of occupational gender composition on women’s log hourly wages in both provinces.³⁴ These estimates are from a two-step procedure in which we first regress log hourly wages on the indicated socio-demographic controls and occupation fixed effects. The estimated fixed effects are then regressed on the proportion of occupational employment that is female (PFEM), weighting by the sum of the individual level LMAS or LFS supplied weights by occupation.³⁵

Among all female workers, the effects of gender composition on female wages are much smaller in either province than the ones generally found in the United States (Macpherson and Hirsch 1995).³⁶ Among unionized women in Ontario, the estimated effect of gender composition on female wages is *positive* and statistically significant. This may indicate that unions had already been promoting the use of gender neutral pay systems in their negotiations. Thus, by this criterion unionized female jobs are less likely to be “underval-

³³This results is consistent with new evidence by (Bayard, Hellerstein, Neumark and Troske 1999) to to effect that there exists sizeable within-occupation establishment gender gap in contrast with the results of previous research (Groshen 1991).

³⁴The Ontario law, by contrast with the Canadian federal law, assumes that there is gender discrimination towards employees, irrespective of gender, employed in female job classes, that is that the femaleness of occupations has a negative effect on the wages of all individuals. Here, we focus on female wages to underscore the distinction between the pure gender effect and the occupational gender composition effect. For occupational segregation to “cause” low female wages, gender composition has to have an effect on *female* wages.

³⁵See Baker and Fortin (1999a) for a complete description of the procedure.

³⁶In Baker and Fortin (1999a), we find estimates for Canada as a whole that are even smaller than for Ontario or Quebec, and that are generally not statistically significant. In Baker and Fortin (1999b), we explain U.S./Canada differences in the effect of gender composition on female wages in terms of the higher Canadian rates of unionization, and the higher occupation wage effects for certain ‘public good’ sector jobs in Canada.

ued” than other female jobs. It is perhaps not surprising, therefore, that unionized firms were reportedly (SPR Associates 1991) slower to implement pay equity plans: perhaps they were less likely to be in violation of the law. In contrast, estimates for non-unionized women are strongly negative, statistically significant, and similar to those estimated with U.S. data.

The point estimates by establishment size indicate that the penalty is generally greater in small firms than in larger establishments. This, then, suggests that the target for the law was largest in establishments where the law was largely ignored. The results for large establishments, however, reflect the counterbalancing influences of the penalties in the union and non-union sectors.³⁷ Focusing on non-unionized workers in large establishments reveals a more substantial penalty to female jobs. In Ontario the penalties were -0.202 (0.066) in 1987/88 and -0.167 (0.070) in 1997.

A further refinement of this inference is possible by examining the distribution of wages across different types of workers within a given job type. In Figure 3, we plot the kernel density estimate of female wages by job types in 1987/88 and in 1997 superimposing the Ontario and Quebec densities. In Figure 4, we perform the same exercise for men. Perhaps the most direct effect of the law should be an increase in the wages of female jobs. This should translate into a rightward shift of the distribution for female jobs in 1997 in Ontario versus Quebec in panel (d) of Figures 3 and 4. While there is a small translation for women (Figure 3), a more important feature of the comparison is the decrease in mass in

³⁷We note that in Ontario in 1987/88, 50 percent of women (57 percent of men) employed in larger establishments are unionized; in smaller establishments, 23 percent of women (31 percent of men) are unionized. In 1997, these percentages were 45 percent of women (51 percent of men) unionized in larger establishments and 19 percent of women (21 percent of men) unionized in smaller establishments. In Quebec in 1987/88, these percentages were 65 percent of women (70 percent of men) unionized in larger establishments and 31 percent of women (42 percent of men) in smaller establishments. In 1997, these percentages were 66 percent of women (70 percent of men) unionized in larger establishments and 26 percent of women (30 percent of men) unionized in smaller establishments.

the distribution of women's wages in female jobs at values just above the minimum wages. This is in contrast with the Quebec distribution of female wages in female jobs and with the Ontario distribution of male wages in female jobs. This could signal that employers refrained from employing women in low wage female jobs, such as textile occupations for example.³⁸ For males in Ontario, there is an increase in mass at values just above the minimum wage similar to one seen in Quebec's distribution of female or male wages in female jobs. There is also no rightward translation of the distribution of male wages in female jobs at the upper end of the distribution. Of course, not all workers in female jobs would necessarily receive an adjustment. One obstacle was the lack of male comparators documented above. Another was that not all female jobs were undervalued. If the changes in the distribution for females are a result of the pay equity law, this may indicate that women working in female jobs were more likely to be in undervalued positions than the men working in these jobs. As we saw in Table 4 and Figure 2, there is a substantial gender wage gap in female jobs.

Although reductions in the wages of male jobs to achieve pay equity are precluded by the legislation, slower wage growth may be a more subtle and unintended consequence of the pay equity. Again, however, not all workers in male jobs would necessarily be subject to this sort of effect. Certainly if individuals are segregated across firms by gender one can imagine predominately male firms in which wage growth would be unfettered by the demands of pay equity awards. Furthermore, if male and female jobs are incommensurate in underlying characteristics, the wages in males jobs would not need be tied down, at least for the purposes of job-to-job comparisons.³⁹ In the absence of firm specific data on gender composition and wages it is not possible to precisely make these sorts of distinctions in

³⁸We note that Table 3 shows that the percentage female in textile occupations declined from 85.2 percent in 1987/88 to 77.7 percent in 1997 in Ontario, while in Quebec it remained stable at approximately 90 percent.

³⁹Presumably in the case, however, there would be some effect for the purposes of wage line comparisons.

the data. Certainly, the wages of males in male jobs should span those instances in which wage growth is not impeded by the legislation. It is possible, however, that the wages of females in male jobs could serve as a better barometer of this effect. The key is how and why females come to be employed in male jobs, and whether the reasons are correlated with situations in which the wages in male jobs should feel the tug of the law. If they are, there is the further step of identifying these women in the data. Here a stratification of the data by firm size may again be informative. For example, in the presence of discrimination, female workers may find it more profitable to form their own firms (Carrington and Troske 1995). In these firms the wages of females in male jobs defined at the economy level, would not be constrained by the legislation because they would not be male jobs defined at the firm level. The history of female labor market participation as well as the evolution of firms suggests that female establishments are more likely small. Therefore, if the hypothesized effects on (female) wages in male jobs exist, they may be relatively greater in large firms than in small firms.

On one hand, these results, along with reviews of the implementation of the law, suggest that individuals most likely to have benefited from the legislation are non-unionized workers employed in larger establishments employing at least 100 employees. Within this sample, the wages of females in female and male jobs appear the most likely candidates to reveal any impact. On the other hand, we find in Baker and Fortin (1999b) that the relatively higher pay of “integrated” jobs (e.g. managerial occupations, computer programmers) helps account for the larger negative effect of gender composition on women’s wages in the United States.⁴⁰ Similarly here, as Figure 2 indicates, the increase in the negative effect of gender composition over time in both provinces may also be linked to the increase in the relative importance and pay of integrated occupations, in particular of managerial occupations and scientific occupations, such as computer programmers. This in turn would

⁴⁰In fact, when we omit women who work in integrated occupations, the estimated penalty to PFEM in the United States is much smaller and no longer statistically significant.

suggest that comparing “female” and “male” jobs in larger non-unionized establishments may not necessarily reveal that female jobs are undervalued and thus yield pay equity awards.

Another dimension in which the pay equity law could have affected labor market outcomes is employment. In Figure 5, we plot the employment rates of women and men in the two provinces (the solid lines for Ontario and the dashed lines for Quebec) from 1986 to 1997 again using data from the Survey of Consumer Finances.⁴¹ The implied trends before and after the law (the dotted lines) are also presented. For men, employment rates after the law display similar trends in both provinces. The negative trend of the 1990s testifies to the severity of the recession in 1990/92. Consistent with the stylized facts, in the earlier period women’s employment rates, fueled by the higher labor market participation of young women, show a positive trend.⁴² However, after the law in Ontario, the trend in women’s employment rates is actually negative but no more negative than that of Ontario men. This is in contrast with Quebec where women’s employment rates stabilize in the 1990s. Since we do not know the occupations of a large enough number of individuals unemployed or out of the labor force in our survey data, we will simply provide difference-in-difference estimates of the female share of total employment by establishment size.

3.3. *Empirical Framework*

Our empirical strategy is to isolate the effects of pay equity legislation on Ontario’s workers, by comparing different measures of wages and employment before and after the law was implemented.⁴³ To control for other changes in the economic environment that affect

⁴¹The reported statistics are employment rates in the reference week for individuals 16-69.

⁴²As female labor market participation reaches an “upper bound”, the upward trend may begin to abate as it did in the 1990s in the United States.

⁴³See Meyer (1995) and Angrist and Krueger (1998) for good summaries of our empirical strategy.

these sorts of labor market outcomes and were co-incident with the implementation of the law we initially use the experiences of workers in the province of Quebec. The primary assumptions underlying this approach are that 1) the introduction of the pay equity legislation provides exogenous variation in this policy instrument, 2) any secular trends in labor market behaviour are common to individuals in the two provinces, and 3) there is no Ontario specific shock to behavior co-incident with the implementation of the legislation.

The base specification is a model of the log wage, $\ln w_i^{tp}$, of individual i at time t in province p

$$(1) \quad \ln w_i^{tp} = \alpha_t A_t + \alpha_p L_p + \alpha_{tp} A_t * L_p + X_i \beta + \varepsilon_i,$$

where “(A)fter” the law is represented by $A_t = 1$ if $t = 1997$ and 0 otherwise, the jurisdiction where the (L)aw was applied is represented by $L_p = 1$ if $p = \text{Ontario}$ and 0 otherwise, and the X_i are individual characteristics. The primary coefficient of interest is α_{tp} on the first order interaction $A_t * L_p$. This provides an estimate of the difference in the changes in log wages in Ontario and Quebec between 1987/88 and 1997, conditioning on the demographic variables: a quartic in age, six education classes, dummies for metropolitan area, industry(10), employment in the federal, provincial, and local public service, part time work, married, visible minority, tenure, union status, and firm size (4), where appropriate. Following the preceding discussion, equation (1) is estimated focusing on workers in large firms where compliance with the law was relatively strict. Separate estimates are provided for workers in female, male and integrated jobs, as well as by job type in the union and non-union sectors.

As noted above, province specific labor market trends and/or shocks can potentially undermine the identification strategy implicit in equation (1). If these are important, workers in Quebec will not provide the appropriate counterfactual. One way to address this issue, is to try to identify sectors in Ontario where the legislation can be expected to have had little “bite”. If we make the assumption that firms in these sectors are untreated

by the law, they can help control for jurisdiction specific shocks. Furthermore, if more than one untreated group can be identified, we can compare results across various divisions of the data as a sort of over-identification test.

These considerations suggest the specification of the log wage, $\ln w_i^{tpj}$, of individual i at time t in province p working in affected job type j :

$$(2) \quad \ln w_i^{tpj} = \alpha_t A_t + \alpha_p L_p + \alpha_j T_j + \alpha_{tp} * A_t * L_p + \alpha_{tj} * A_t * T_j + \\ + \alpha_{pj} * L_p * T_j + \alpha_{tpj} * A_t * L_p * T_j + X_i \beta + \varepsilon_i,$$

where A_t and L_p are defined above, and, where $T_j = 1$ for workers employed in a (T)reated job type j and 0 otherwise; where $A_t * L_p$, $A_t * T_j$, $L_p * T_j$ are the three possible interactions of two factors (the first-order interactions); where $A_t * L_p * T_j = 1$ if $A_t = 1$, $L_p = 1$ and $T_j = 1$, is the interaction of all three factors (the second-order interaction). The coefficient of interest α_{tpj} indicates the relative change in the Ontario/Quebec difference in the wage differential between workers for which the legislation is assumed to have had some effect and those for which it would not.

A literal interpretation of the law suggests that workers in male and integrated jobs were unaffected by the legislation. For example, if we assume only workers in “female” jobs were affected by the law, we seek it’s intended consequence: faster wage growth in female jobs relative to other jobs in Ontario than in Quebec. Alternatively, if we thought that some integrated jobs at the aggregate level were actually female jobs at the establishment level, we could look for slower wage growth in “male” jobs versus other jobs in Ontario than in Quebec; that is, $T_j = 1$ for male jobs and an expected negative coefficient on $\hat{\alpha}_{tpj}$. We could also seek unintended consequences of the law. Because the law indirectly pegs wages in female jobs to wages in male jobs, firms could reduce pay equity adjustments by reducing wage growth in male jobs, and in turn in female jobs. Thus the unintended consequences of the law would be to foster relatively greater wage growth in “integrated

jobs” in Ontario than in Quebec; here we look for a positive coefficient when $T_j = 1$ for “integrated” jobs. The identification strategy in these three approaches is problematic, however, since the legislation could have direct or indirect effects on all three job classes.

The discussion of the implementation of the legislation suggests an alternative application of this strategy distinguishing individuals on the basis of the size of the establishment in which they are employed. Therefore, we can estimate equation (2) for female, integrated or male jobs, pooling across firms of different sizes and assuming that individuals in smaller establishments (< 100 employees) were unaffected by the legislation due to lack of compliance. Of course, a criticism of the working assumption here is that workers in small and large firms are subject to different economic cycles.

Another useful distinction should be between unionized and non-unionized individuals. Not only were unionized firms slow to comply with the legislation, but there is evidence that the legislation was superfluous in this sector (Table 5). There is a wage *premium* to gender composition among unionized women. Therefore, we can next estimate equation (2) for samples of larger establishment employees in female, integrated or male jobs, assuming that union workers were untreated by the legislation. A criticism of this approach could be based on the belief that changes in union status are coincident with the law or with other policy changes. For example, in Ontario in our 1987/88 sample, 20 percent of registered nurses (approximately 4 percent of the female workforce) were non-unionized; in our 1997 sample, that percentage had increased to 32 percent. This change could be linked to the increase privatization of health care services and would increase average female wages among highly feminized occupations in the non-union sector.

Finally, we can also examine an intersection of these last two approaches. The samples in this case would be of non-union workers, pooling across establishments of different sizes and again assuming that the legislation had no impact in small establishments.

4. RESULTS

4.1. Effects on Wages

In Table 6 we report estimates of equation (1) for various samples. The results in panel A are for the full sample of workers in each job type. The estimates for “all jobs” indicate that between 1987/88 and 1997 the wage growth of both men and women in Ontario was about a 5 percent higher than their counterparts in Quebec. The results by job type in the next three rows indicate this advantage was widespread, although consistent with Figure 2 workers in integrated jobs did particularly well. This common advantage of Ontario workers, across job types that were nominally affected and unaffected by the law, suggests the presence of some sort of Ontario specific trend.

In panel B we focus on workers in larger establishments. Recall that these are the employers who paid the greatest heed to the new law. The relative advantage of Ontario’s workers is still evident although we do observe more heterogeneity across job types. In particular, the relatively higher wage growth of women in integrated jobs is now more pronounced, and there is some evidence that women in male jobs in Ontario had relatively slower wage growth.

In panels C and D the workers in large establishments are separated on the basis of union status. In the union sector it is women in integrated jobs and men in male jobs who display strong relative wage growth. In the non-union sector we see an advantage for females in Ontario who work in both female and integrated jobs and a large disadvantage for those who work in male jobs. The results for males in this sector display fewer extremes.

Do any of the estimates indicate that the comparable worth legislation had the expected effects? The most straightforward consequence of the law should be on the wages of female jobs. While the only sample to provide confirmation of this prediction is the one that most accurately isolates the individuals affected by the law (non-union workers in larger

establishments), the more general message of this table is that there are Ontario specific wage effects that must be accommodated. For example, women in integrated jobs would appear to have shared this estimated “effect” of the legislation.

We next exploit variation in compliance with the legislation, and in the expected impact and nominal application of the law across job type, establishment size and sector, in an attempt to account for these possibilities. The intuition for this exercise can be gained by comparing the estimates for the union and non-union sectors in Table 6. Assume that unionized workers were unaffected by the legislation both because of slow compliance and because there is no penalty to working in female jobs in this sector. The estimates for the non-union sector suggest that females in both female and integrated jobs benefited from pay equity. Using the union sector as a benchmark, however, we see that Ontario women in integrated jobs there also enjoyed relatively higher wage growth. This common effect, therefore, is not attributable to comparable worth. In contrast the relatively higher wage growth of Ontario women in female jobs is unique to the non-union sector and thus by this identification strategy more likely an effect of the law.

In Table 7 we use variation in the nominal application of the law across job types. In these regressions $T_j = 1$ for jobs of the indicated type and 0 otherwise, and the estimation samples pool individuals across job types. For example, the estimate of $-0.033(0.021)$ in the first row of panel A is the relative effect on female wages of working in female jobs in Ontario in 1997, and is estimated from a sample of all female workers in both provinces. The wages of individuals in integrated and male jobs are used to control for province specific trends on the assumption they were not affected by the legislation.

First notice that the almost uniform advantage of Ontario’s workers, seen in Table 6, is not apparent in these results. As suggested above, part of this higher wage growth was experienced by workers in most types of jobs in this province.

In Panel A there is little evidence that males or females in female jobs enjoyed faster wage growth as a result of the law. Relative to workers in other types of jobs, wage growth

was typically marginally negative and not significantly different from zero. One reason for this result is the relatively faster wage growth in integrated jobs. This is most clearly evident in the results for women. One exception to this conclusion, however, is the results using the sample of non-union workers in larger establishments. Although still statistically insignificant, the point estimates suggest relatively faster wage growth for females in female jobs and slower growth for males in female jobs. There is also evidence of relatively slower wage growth for females in male jobs.

In panel B we add the assumption that workers in small establishments were unaffected by the legislation, so that they now provide additional control for jurisdiction specific trends. The general pattern of the results for non-union workers matches that in panel A, although the disadvantage of females in male jobs is smaller here. Adding workers in small establishments as additional controls also has the effect of netting out some of the higher wage growth in integrated jobs. Yet among non-union workers, most likely to have been affected by the law, the positive effect of working in integrated jobs is still statistically significant. Figure 5 more clearly documents the wage growth in integrated jobs among non-unionized women in Ontario. Panel (a) reproduces the kernel regressions of panel (a) of Figure 2, this time for the subsample of non-union workers. The negative slope of the kernel regressions is now more prominent, especially for men. Panel (b) illustrates the time difference between these curves for women and men; it shows the larger gains of women in integrated occupations. Given the increased female presence in managerial occupations over the period, and that we observe femaleness rates only at the aggregate level, it not possible to know if the law influenced this change. For example, has the law fostered reclassifications of formerly clerical female jobs into integrated administrative jobs, such as a level 5 secretary becoming an administrative assistant?⁴⁴ Alternatively, Orazem

⁴⁴In our 1987/88 sample in Ontario, 9 percent of women were classified in occupation 4111 “Secretaries and stenographers”; in our 1997 sample, that percentage was down to 5 percent. However, during that period, the change in Quebec was from 14 percent to 10 percent.

and Mattila (1990) argue that the process of comparable worth favours supervisors and professionals, more likely integrated occupations.

There are biases in the preceding results if the law affected workers in different job types simultaneously. While nominally applied to female jobs, the legislation could have had indirect effects, for example on wage growth in male jobs. If so, the working assumptions in Table 7 are invalid: any negative effect of the law on wage growth in male jobs leads to overestimates of any positive effects of the law on the wages in female jobs.

In Table 8 we exploit variation in compliance with, and the expected effect of, the law within job types in an attempt to counter this criticism. In panel A we pool workers across firms of different sizes and assume only those in large firms were subject to pay equity. First note that we no longer observe any advantage for Ontario workers in integrated jobs at large firms. As is clear in tables 6 and 7, these individuals had higher wage growth than their counterparts in Quebec or in other job types. Relative to Ontario workers in integrated jobs at small firms, however, the advantage disappears. By controlling for wage trends within job type, therefore, we can conclude that the relative prosperity of integrated jobs had little to do with comparable worth.

Second, while most of the remaining estimates are also small and statistically insignificant, we find that Ontario women in male jobs at large establishments experienced relatively slower wage growth. This is consistent with the results for non-union workers in large establishments in tables 6 and 7. Whether measured against their counterparts in Quebec, in different job types, or against females in male jobs at small firms, we obtain a negative estimate for these workers.

In panel B we sample workers in large establishments and assume the legislation was superfluous in the union sector. The estimates for females now bear some semblance to expectations. In Ontario, wage growth is relatively higher in female jobs. We also again observe relatively slower growth for females in male jobs. The results for males are largely consistent with the estimates for non-union workers in tables 6 and 7. In particular, males

in female jobs experienced relatively lower wage growth.

In panel C we continue to focus on non-union workers but use workers in small firms to control for Ontario specific trends instead of workers in the union sector. The results here mostly mirror those in panel B. In Ontario we see relatively slower wage growth for females in male jobs and for males in female jobs (again the latter result is statistically insignificant). The relative advantage of females in female jobs, however, is smaller.

On the assumptions that the legislation had no bite in small establishments due to lack of compliance, and in the union sector due to the intersection of poor compliance and the lower incidence of undervalued female jobs, our analysis indicates that Ontario's pay equity initiatives had very modest direct effects on the wages of females working in female jobs. The more substantial and consistently retrieved estimates are of indirect, and perhaps unintended, effects of the law. First, the wage growth of males in female jobs appears to have been negatively affected. This result is obtained when males in these jobs at large firms are compared to their counterparts in Quebec, in unionized female jobs and in non-unionized female jobs at small firms. While in most cases statistically insignificant, the point estimates from these different comparisons lie in a tight band between -0.135 and -0.167. One explanation of this finding is that under gender neutral pay systems any advantage that men employed in female jobs enjoyed before the new law came into effect would be reduced.⁴⁵ As shown in table 2 there is a gender wage gap in female jobs. Another possibility is that although the legislation applies to both women and men, following popular opinion of the "comparable worth problem", firms concentrated their efforts on female workers in female jobs. Second, we also observe a negative impact of the law on the wage growth of females in male jobs, which in turn led to a relative increase in the gender wage gap for this job type in Ontario. Again this result is evident in comparisons of non-unionized females in male jobs at large firms to a number of different control groups.

⁴⁵Interestingly, Rapaport (1995) find that even under gender neutral pay systems, some gender wage gaps remain difficult to explain.

The point estimates suggest a substantial growth deficit on the order of 30 percent. Certainly, the possible negative consequences of comparable worth for wages in male jobs has been pointed out before, and in this case the legislation explicitly prohibited reductions in compensation to achieve equity. Negative effects on wage growth, however, are harder to restrict. We can only speculate why this effect should be more evident for females in male jobs than for males in male jobs.

4.2. Effects on Employment: Preliminary Results

In table 9 we report the female share of total employment for all jobs and by job type, and for all establishments and by establishment size. Across all establishments, the relative growth in the female share of total employment in Ontario over the period was statistically significantly slower than in Quebec. Given the fact that female labor market participation in Quebec was still catching up with that of Ontario at this time, it is difficult to interpret this aggregate slowdown in Ontario as an effect of the law. The results by job type indicate that the lower growth was concentrated in male jobs.

As argued earlier, differences in the female share of total employment by establishment size may provide additional information. For all jobs, the relative growth in the female share of total employment in Ontario appears to be relatively slower in larger establishments, although the difference between smaller and larger establishments is not statistically significant. This difference, however, is statistically significant for female jobs.⁴⁶

⁴⁶Here, we look at the difference between the relatively higher growth of 0.012 (0.014) in female jobs in Ontario in smaller establishments versus the figure of -0.039 (0.022) in larger establishments.

5. CONCLUSIONS

We empirically investigate the introduction of comparable worth to the private sector of Ontario in the early 1990s. This was a comprehensive, pro-active, initiative that applied to public sector employers and private sector employers of 10 or more employees. While sweeping and ambitious in intent, we document factors that would have limited the impact of the legislation. First, small firms appear to have largely ignored the new rules, and in larger firms official deadlines were often missed. As a result, only 35 percent of working women and 40 percent of working men were likely subject to the legislation. Second, its effect was further dampened by the lack of male comparators for female jobs: surveys suggest up to one-third of female job classes in large firms lacked comparators. These sorts of problems would appear endemic to any attempt to extend comparable worth to the private sector of a decentralized labor market.

Even for the resulting smaller, effective target, the law did not necessarily have the bite legislators might have expected. In Ontario's union sector there is a wage premium for women in female jobs, suggesting a low incidence of undervalued female work there. We consequently focus on large non-union employers in our analysis. The most consistently estimated effects of the legislation are negative: slower wage growth for females in male jobs and males in female jobs. The former effect is a widely acknowledged potential consequence of comparable worth policies. The latter is more surprising, but is preceded by a significant gender wage gap among female jobs in Ontario. Any direct, positive effects on the wages of females working in female jobs are modest and often statistically insignificant.

What happened to more traditional measures of the labor market status of women over the period? While the gender wage gap in Ontario decreased, a similar decline is observed in Quebec. Likewise the penalty to female jobs in both provinces grew by comparable amounts as the law was introduced. This last phenomena may be related to an important occupational shift for women: the shift from clerical (female) jobs to administrative and

managerial (integrated) jobs. While it is unlikely that this occupational change is linked to comparable worth, in many of our estimates that the increasing fortune of women in integrated jobs dominates other possible effects of the law.

Previous research suggests that other labor market institutions, in particular unions and minimum wages, can affect wage dispersion and have an positive influence on the gender wage gap (Blau and Kahn (1998)). Some of our findings are consistent with these sorts of effects. For example, in Ontario we find that unions seem to blunt the well-known negative effect of occupational gender composition on female wages. Because these institutions influence general labor market costs, they may cause less distortions to female employment than policies, such as comparable worth, that raise the relative costs of employing women. Also, other types anti-discrimination initiatives such as maternity leave and child care provision, reduce women's labor supply costs. By reducing the 'family gap' (Waldfogel 1998), that is the pay gap between mothers and non-mothers, they may also reduce the gender gap and may have less of a negative effect on female employment.⁴⁷

⁴⁷That is, where the costs of maternity benefits are not shifted to the targeted group as in the case of mandated benefits (Gruber (1994)). In Canada, maternity benefits are part of the federal (un)employment benefits and the costs of maternity benefits are thus not entirely assumed by the employers of new mothers.

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TABLE 1
IMPLEMENTATION DEADLINES OF THE ONTARIO *Pay Equity Act*

Type of Employer	Deadline for Posting Pay Equity Plans		Deadline for Initial Pay Equity Award	
PUBLIC SECTOR:				
All Establishments	January 1, 1990		January 1, 1990	
PRIVATE SECTOR:				
Larger Establishments				
>499 Employees	January 1, 1990		January 1, 1991	
100-499 Employees	January 1, 1991		January 1, 1992	
Smaller Establishments	“Opt In”	“Opt Out”	“Opt In”	“Opt Out”
50-99 Employees	January 1, 1992	NA	January 1, 1993	January 1, 1993*
10-49 Employees	January 1, 1993	NA	January 1, 1994	January 1, 1994*

Notes: Source: CCH Canadian Limited (1997). NA is not applicable. Smaller firms had the option of opting in or out of the plan posting provisions of the legislation. For firms that opted out, the * indicates the date by which all pay equity awards were to be made (versus the initial award for firms that opted in).

TABLE 2A
MEANS OF SELECTED VARIABLES – WOMEN

Variable	Ontario		Québec	
	1987/88	1997	1987/88	1997
Log Wage (1997 CAN\$)	2.51	2.63	2.49	2.57
Age	36.9	38.6	36.3	38.6
Education: ^a				
Primary	.063	.031	.103	.056
Some High School	.098	.054	.119	.072
High School Grad	.365	.273	.349	.207
Some Post-Secondary	.108	.090	.083	.071
Post-Secondary or Trade (in 1997) Certificate	.197	.345	.204	.371
University Degree	.168	.208	.140	.221
Part-time	.206	.216	.214	.227
Married	.668	.689	.674	.702
Metropolitan Area	.760	.806	.703	.722
Industrial Sector:				
Agriculture, Forestry Fisheries and Mining	.012	.010	.007	.007
Construction	.017	.009	.013	.011
Manufacturing				
Nondurable	.082	.064	.109	.099
Durable	.082	.069	.037	.047
Transportation and public utilities	.047	.051	.045	.048
Trade	.152	.157	.158	.139
FIRE	.097	.086	.081	.085
Business and professional services	.073	.082	.046	.065
Consumer services	.101	.118	.123	.121
Medical, welfare, and educational services	.269	.293	.310	.304
Public administration	.066	.060	.069	.069
Federal	.019	.016	.021	.034
Provincial (State)	.019	.015	.028	.034
Local	.016	.020	.014	.012
Union coverage	.322	.286	.431	.403
Tenure	5.61	7.46	6.72	8.49
Establishment Size:				
$s < 20$	.338	.327	.364	.340
$20 \leq s < 100$	.310	.313	.307	.300
$100 \leq s < 500$	.228	.223	.208	.212
$s \geq 500$	.123	.138	.121	.147
No. of observations	7059	6889	4750	3932

Notes: ^a The classification of education changed between 1987-88 and 1997. Starting in 1989, individuals with a trade degree were classified in a separate category regardless of their level of formal education. In the education recode, these are counted in the post-secondary or trade certificate category.

TABLE 2B
MEANS OF SELECTED VARIABLES – MEN

Variable	Ontario		Québec	
	1987/88	1997	1987/88	1997
Log Wage (1997 CAN\$)	2.80	2.82	2.73	2.73
Age	37.0	38.6	37.1	38.9
Education: ^a				
Primary	.096	.045	.149	.082
Some High School	.125	.070	.153	.095
High School Grad	.348	.288	.325	.197
Some Post-Secondary	.102	.086	.076	.062
Post-Secondary or Trade (in 1997) Certificate	.147	.314	.149	.381
University Degree	.183	.197	.147	.183
Part-time	.032	.051	.045	.056
Married	.695	.679	.713	.686
Metropolitan Area	.746	.797	.622	.701
Industrial Sector:				
Agriculture, Forestry Fisheries and Mining	.027	.021	.035	.031
Construction	.083	.075	.083	.056
Manufacturing				
Nondurable	.109	.098	.128	.123
Durable	.213	.211	.165	.171
Transportation and public utilities	.107	.104	.104	.108
Trade	.144	.156	.152	.159
FIRE	.047	.051	.041	.041
Business and professional services	.050	.068	.035	.051
Consumer services	.050	.067	.063	.082
Medical, welfare, and educational services	.084	.080	.104	.108
Public administration	.083	.066	.088	.069
Federal	.039	.065	.042	.057
Provincial (State)	.017	.013	.030	.023
Local	.034	.030	.036	.029
Union coverage	.420	.341	.531	.450
Tenure	8.21	8.71	8.33	9.42
Establishment Size:				
$s < 20$	.263	.270	.280	.285
$20 \leq s < 100$	.321	.300	.330	.314
$100 \leq s < 500$	.256	.240	.258	.233
$s \geq 500$	.159	.190	.132	.168
No. of observations	8318	7649	6216	4605

Notes: ^a The classification of education changed between 1987-88 and 1997. Starting in 1989, individuals with a trade degree were classified in a separate category regardless of their level of formal education. In the education recode, these are counted in the post-secondary or trade certificate category.

TABLE 3

WOMEN'S OCCUPATIONAL CHANGES, PERCENT FEMALE (LMAS 87/88 AND LFS97)
AND AVERAGE FEMALE LOG WAGES BY MAJOR OCCUPATIONAL GROUPS
IN ONTARIO AND IN QUEBEC

Occupation Title	1987/88			1997		
	Percent of Workforce	Percent Female	Average Log Wage	Percent of Workforce	Percent Female	Average Log Wage
ONTARIO						
Managerial, Administrative and Related Occ.	.137	.467	2.86	.175	.574	2.89
Occ. in Natural Sciences, Engineering and Mathematics	.019	.280	2.97	.023	.266	2.99
Occ. in Social Sciences and Related Fields	.024	.693	2.89	.038	.808	2.85
Teaching and Related Occ.	.068	.721	3.04	.077	.755	3.03
Occ. in Medicine and Health	.094	.928	2.89	.103	.902	2.85
Artistic, Literary and Related Occ.	.016	.645	2.66	.014	.524	2.64
Clerical and Related Occupations	.322	.861	2.54	.249	.861	2.54
Sales Occupations	.082	.572	2.35	.090	.582	2.40
Service Occupations	.117	.705	2.22	.117	.675	2.23
Farming, Fishing, Forestry and Mining and Related Occupations	.005	.378	2.24	.004	.337	2.25
Processing and Machining Occupations	.023	.360	2.45	.020	.446	2.46
Product Fabricating Occ., other than Textile	.035	.367	2.44	.043	.361	2.47
Textile Related Occupations	.022	.852	2.22	.013	.777	2.20
Construction trades occupations	.003	.096	2.37	.001	.063	2.58
Transport operating occupations	.008	.253	2.40	.009	.347	2.40
Material handling occupations	.018	.548	2.34	.017	.442	2.33
Equipment operationg occupations	.008	.486	2.46	.006	.427	2.46
QUEBEC						
Managerial, Administrative and Related Occ.	.089	.398	2.86	.148	.531	2.84
Occ. in Natural Sciences, Engineering and Mathematics	.020	.350	2.90	.030	.311	2.91
Occ. in Social Sciences and Related Fields	.023	.695	2.83	.028	.652	2.86
Teaching and Related Occ.	.078	.697	2.96	.093	.683	2.99
Occ. in Medicine and Health	.104	.856	2.87	.104	.865	2.85
Artistic, Literary and Related Occ.	.010	.467	2.62	.017	.509	2.54
Clerical and Related Occupations	.347	.863	2.49	.280	.886	2.50
Sales Occupations	.079	.537	2.24	.076	.541	2.28
Service Occupations	.141	.691	2.20	.123	.652	2.20
Farming, Fishing, Forestry and Mining and Related Occupations	.004	.232	1.97	.003	.363	2.03
Processing and Machining Occupations	.021	.396	2.28	.021	.423	2.24
Product Fabricating Occ., other than Textile	.015	.294	2.32	.020	.460	2.33
Textile Related Occupations	.047	.900	2.15	.031	.905	2.15
Construction trades occupations	.002	.065	2.71	.002	.372	2.49
Transport operating occupations	.004	.145	2.37	.007	.218	2.58
Material handling occupations	.011	.355	2.19	.012	.336	2.20
Equipment operationg occupations	.007	.515	2.24	.005	.442	2.29

Notes: The percentage of female workforce is computed as the sum of individual weights, supplied in the LMAS87/88 and LFS97, in an occupation group over the total sum of weights of working women. The percent female is computed as the sum of individual weights in an occupation group over the total sum of weights of all workers in that occupation group. Log wages are in 1997 dollars.

TABLE 4
MEAN HOURLY WAGES AND FEMALE/MALE WAGE RATIO
BY JOB TYPES

	Ontario			Quebec			% Time Diff. for Location
	Before law	After law	% Time Diff.	Before law	After law	% Time Diff.	
WOMEN'S WAGES:							
All jobs	13.87	15.34	.106	13.39	14.66	.095	.011
Female jobs	13.64	15.03	.102	13.12	14.47	.103	-.001
Integrated jobs	14.05	15.76	.122	13.95	15.08	.081	.041
Male jobs	14.74	15.45	.048	13.18	14.21	.078	-.030
MEN'S WAGES:							
All jobs	18.42	18.66	.013	17.14	17.19	.003	.010
Female jobs	16.42	16.59	.010	16.81	17.36	.033	-.022
Integrated jobs	18.79	19.37	.031	17.68	17.98	.017	.014
Male jobs	18.51	18.58	.004	16.91	16.69	-.013	.017
FEMALE/MALE WAGE RATIO:							
All jobs	.752	.822	.093	.781	.853	.092	.001
Female jobs	.831	.906	.090	.780	.834	.069	.021
Integrated jobs	.747	.814	.087	.790	.839	.062	.028
Male jobs	.796	.832	.045	.779	.851	.092	-.047
Women in female jobs/ men in male jobs	.737	.809	.072	.776	.867	.091	-.019

Note: In 1997 Canadian dollars. Before the law corresponds to 1987-88, after the law to 1997. Female jobs are defined as jobs with a femaleness rate of 60 percent or higher; male jobs are defined as jobs with a femaleness rate of at most 30 percent. Other jobs are called integrated.

TABLE 5
CHANGES IN THE EFFECT OF GENDER COMPOSITION ON FEMALE LOG WAGES

Specification	Ontario			Quebec			Time Diff. for Location
	Before law	After law	Time Diff.	Before law	After law	Time Diff.	
ALL WORKERS:							
No Controls	-.040 (.062)	-.059 (.074)	-.019 (.097)	-.051 (.075)	-.070 (.081)	-.019 (.110)	0 (.147)
Human Capital	-.040 (.047)	-.071 (.063)	-.031 (.079)	-.056 (.058)	-.072 (.064)	-.016 (.086)	-.015 (.117)
Sectoral Controls	-.080** (.037)	-.092* (.049)	-.012 (.061)	-.082* (.045)	-.105** (.053)	-.023 (.069)	.011 (.093)
No. of observations	7059	6889		4750	3932		
UNION WORKERS:							
No Controls	.118 (.067)	.125* (.075)	.007 (.101)	.025 (.081)	.023 (.088)	-.002 (.120)	.009 (.156)
Human Capital	.068 (.051)	.082 (.059)	.014 (.078)	-.012 (.062)	-.017 (.070)	-.005 (.094)	.019 (.122)
Sectoral Controls	.100** (.049)	.127** (.050)	.027 (.070)	-.014 (.058)	-.021 (.065)	-.007 (.087)	.034 (.112)
No. of observations	2369	2142		2122	1672		
NON-UNION WORKERS:							
No Controls	-.201** (.064)	-.235** (.077)	-.034 (.100)	-.189** (.076)	-.272** (.079)	-.083 (.110)	.049 (.148)
Human Capital	-.161** (.051)	-.220** (.068)	-.059 (.085)	-.149** (.063)	-.228** (.066)	-.079 (.091)	.020 (.125)
Sectoral Controls	-.168** (.042)	-.186** (.056)	-.018 (.070)	-.126** (.054)	-.180** (.057)	-.054 (.079)	.036 (.105)
No. of observations	4690	4747		2628	2260		
WORKERS IN LARGER ESTABLISHMENTS ($s \geq 100$):							
No Controls	.006 (.062)	.035 (.073)	.029 (.06)	.024 (.080)	.004 (.088)	-.020 (.119)	.049 (.153)
Human Capital	-.013 (.051)	.013 (.061)	.026 (.080)	.001 (.065)	-.032 (.073)	-.033 (.098)	.059 (.126)
Sectoral Controls	-.039 (.048)	-.047 (.052)	-.008 (.071)	-.037 (.061)	-.097 (.068)	-.006 (.091)	.052 (.116)
No. of observations	2339	2463		1470	1336		
WORKERS IN SMALLER ESTABLISHMENTS ($s < 100$):							
No Controls	-.050 (.071)	-.044 (.086)	.006 (.112)	-.073 (.082)	-.097 (.086)	-.024 (.119)	.030 (.163)
Human Capital	-.041 (.053)	-.066 (.074)	-.025 (.091)	-.065 (.063)	-.088 (.069)	-.023 (.093)	-.002 (.130)
Sectoral Controls	-.096** (.042)	-.124** (.058)	-.028 (.072)	-.114** (.051)	-.129** (.058)	-.015 (.077)	-.013 (.105)
No. of observations	4720	4426		3280	2596		

Notes: Before the law corresponds to 1987/88, after the law to 1997. Human capital conditions on a quartic in age and on six education classes. Sectoral controls add dummies metropolitan area, industry(10), employment in the federal, provincial and local public service, union status, part time work, married, tenure, and firm size (4). The estimates presented are from a feasible GLS strategy where the sum of the individual level (i.e., LMAS or LFS) weights (by occupation) are used as weights in the second stage). Estimated standard errors are in parentheses. Double asterik (**) indicates significance at the 5% level. single asterik (*) indicates significance at the 10% level.

TABLE 6
ESTIMATED EFFECT ON LOG HOURLY WAGES OF WORKING
IN ONTARIO VS. QUÉBEC IN 1997 VS. 1987-88

Sample	Women			Men		
	Ontario * 1997	Std. error	No. of obs.	Ontario * 1997	Std. error	No. of obs.
A) ALL WORKERS IN						
All Jobs	.053**	(.010)	22630	.047**	(.010)	26788
Female Jobs	.040**	(.013)	13193	.050	(.033)	2181
Integrated Jobs	.096**	(.018)	7533	.066**	(.019)	8253
Male Jobs	.033	(.038)	1904	.041**	(.012)	16354
B) WORKERS IN LARGER ESTABLISHMENTS IN						
All Jobs	.051**	(.017)	7608	.069**	(.014)	10950
Female Jobs	.046**	(.020)	4438	.047	(.045)	935
Integrated Jobs	.110**	(.018)	2271	.067**	(.029)	3065
Male Jobs	-.045	(.055)	899	.076**	(.017)	6950
C) UNION WORKERS IN LARGER ESTABLISHMENTS IN						
All Jobs	.031	(.019)	4543	.080**	(.014)	7000
Female Jobs	.023	(.023)	3041	.081	(.052)	654
Integrated Jobs	.086*	(.046)	1015	.053	(.034)	1592
Male Jobs	.072	(.062)	487	.090**	(.017)	4754
D) NON-UNION WORKERS IN LARGER ESTABLISHMENTS IN						
All Jobs	.071**	(.031)	3065	.039	(.028)	3950
Female Jobs	.103**	(.044)	1397	-.072	(.106)	281
Integrated Jobs	.133**	(.046)	1256	.087*	(.046)	1473
Male Jobs	-.190*	(.048)	412	.044	(.038)	2196

Note: Calculations are from the LMAS for 1987 and 1988 and from the Ingoing Rotation Group of the LFS for 1997. Larger establishments employ at least 100 employees. Other explanatory variables include dummies for Ontario and for 1997, a quartic in age, six education classes, dummies for metropolitan area, industry(10), employment in the federal, provincial, and local public service, union status, part time work, married, visible minority, tenure, and firm size (4), where appropriate. Double asterik (**) indicates significance at the 5% level. single asterik (*) indicates significance at the 10% level.

TABLE 7
ESTIMATED EFFECT ON LOG HOURLY WAGES OF WORKING
IN SPECIFIED JOB TYPE IN ONTARIO VS. QUÉBEC IN 1997 VS. 1987-88

Sample		Women			Men		
A)	Job Type:	Female	Integrated	Male	Female	Integrated	Male
	All Workers	-.033 (.021)	.056** (.021)	-.046 (.037)	-.008 (.034)	.023 (.021)	-.016 (.020)
	Union Workers ^a	-.025 (.030)	.033 (.033)	.011 (.051)	-.017 (.039)	-.011 (.027)	.016 (.024)
	Non-union Workers	-.031 (.028)	.060** (.046)	-.074 (.049)	-.039 (.057)	.059** (.030)	-.048 (.029)
	All Workers in Larger Establishments	.005 (.034)	.059* (.036)	-.128** (.050)	-.041 (.054)	.003 (.031)	.013 (.029)
	Union Workers in Larger Establishments	-.018 (.040)	.039 (.045)	-.005 (.064)	-.007 (.050)	-.032 (.034)	.027 (.031)
	Non-union Workers in Larger Establishments	.083 (.063)	.067 (.063)	-.303** (.092)	-.158 (.114)	.080 (.058)	-.028 (.057)
B)	Job Type:	Female in LE ^b	Integrated in LE	Male in LE	Female in LE	Integrated in LE	Male in LE
	All Workers	-.006 (.026)	.044 (.032)	-.130** (.052)	-.020 (.052)	.038 (.029)	.031 (.023)
	Union Workers	-.025 (.030)	.034 (.033)	-.015 (.032)	.007 (.051)	-.017 (.027)	.018 (.025)
	Non-union Workers	.063 (.050)	.063* (.029)	-.069 (.050)	-.179 (.113)	.055* (.031)	-.050* (.030)

Note: The estimates presented are those of a dummy for job type*Ontario*1997. Standard errors are in parentheses. Other explanatory variables include dummies for job type, for Ontario and for 1997, dummies for the first order interactions (job type*1997, job type*Ontario, Ontario*1997), a quartic in age, six education classes, dummies for metropolitan area, industry(10), employment in the federal, provincial, and local public service, part time work, married, visible minority, tenure, union status and firm size (4), where appropriate. Double asterik (**) indicates significance at the 5% level, single asterik (*) indicates significance at the 10% level.

^a The sample sizes among union workers are 8305 for women and 12260 for men. The other sample sizes are reported in table 6 and 8.

^b LE denotes larger establishments employing at least 100 employees.

TABLE 8
ESTIMATED EFFECT ON LOG HOURLY WAGES OF WORKING
IN TREATED SECTOR IN ONTARIO VS. QUÉBEC IN 1997 VS. 1987-88

Sample	Women			Men		
	Ontario * 1997 * Treated Sector	Std. error	No. of obs.	Ontario * 1997 * Treated Sector	Std. error	No. of obs.
A) Treated Sector: Larger Establishments						
ALL WORKERS IN						
All Jobs	-.007	(.021)	22630	.035*	(.020)	26788
Female Jobs	.007	(.027)	13193	-.042	(.067)	2181
Integrated Jobs	.012	(.040)	7533	.034	(.039)	8253
Male Jobs	-.174**	(.076)	1904	.047*	(.024)	16354
B) Treated Sector: Non-Union						
WORKERS IN LARGER ESTABLISHMENTS IN						
All Jobs	.034	(.035)	7608	-.051*	(.030)	10950
Female Jobs	.104**	(.045)	4438	-.167	(.106)	935
Integrated Jobs	.024	(.066)	2271	.034	(.058)	3065
Male Jobs	-.324**	(.112)	899	-.052	(.037)	6950
C) Treated Sector: Larger Establishments						
NON-UNION WORKERS IN						
All Jobs	.003	(.022)	14325	.011	(.033)	14528
Female Jobs	.063	(.049)	7601	-.135	(.127)	985
Integrated Jobs	.026	(.054)	5519	.040	(.056)	5302
Male Jobs	-.364**	(.113)	1205	.018	(.043)	8241

Notes: Calculations are from the LMAS for 1987 and 1988 and from the Ingoing Rotation Group of the LFS for 1997. Larger establishments employ at least 100 employees. Other explanatory variables include dummies for Ontario and for 1997, a quartic in age, six education classes, dummies for metropolitan area, industry(10), employment in the federal, provincial, and local public service, union status, part time work, married, visible minority, tenure, and firm size (4), where appropriate. Double asterik (**) indicates significance at the 5% level. single asterik (*) indicates significance at the 10% level.

TABLE 9
FEMALE EMPLOYMENT SHARE BY JOB TYPES

	Ontario			Quebec			
	Before law	After law	Time Diff.	Before law	After law	Time Diff.	Time Diff. for Location
ALL ESTABLISHMENTS							
All Jobs	.459 (.004)	.468 (.004)	.009 (.006)	.433 (.005)	.463 (.005)	.030 (.007)	-.021 (.009)
Female Jobs	.854 (.005)	.842 (.006)	-.012 (.008)	.852 (.006)	.845 (.007)	-.007 (.009)	-.005 (.012)
Mixed Jobs	.463 (.005)	.492 (.006)	.029 (.008)	.427 (.006)	.471 (.007)	.044 (.009)	-.015 (.012)
Male Jobs	.119 (.004)	.128 (.005)	.009 (.006)	.079 (.004)	.122 (.006)	.043 (.007)	-.034 (.010)
SMALLER ESTABLISHMENTS ($s < 100$)							
All Jobs	.485 (.005)	.497 (.005)	.012 (.007)	.458 (.006)	.479 (.007)	.022 (.007)	-.010 (.012)
Female Jobs	.863 (.006)	.854 (.007)	-.009 (.009)	.882 (.007)	.860 (.009)	-.022 (.011)	.012 (.014)
Mixed Jobs	.488 (.009)	.513 (.009)	.026 (.013)	.453 (.010)	.486 (.011)	.033 (.016)	-.008 (.020)
Male Jobs	.105 (.006)	.111 (.006)	.007 (.008)	.074 (.005)	.118 (.008)	.044 (.009)	-.037 (.012)
LARGER ESTABLISHMENTS ($s \geq 100$)							
All Jobs	.417 (.006)	.425 (.007)	.008 (.009)	.393 (.008)	.436 (.009)	.042 (.012)	-.034 (.015)
Female Jobs	.836 (.009)	.819 (.010)	-.017 (.013)	.797 (.011)	.819 (.012)	.022 (.017)	-.039 (.022)
Mixed Jobs	.417 (.012)	.459 (.011)	.042 (.016)	.378 (.014)	.445 (.015)	.067 (.021)	-.025 (.026)
Male Jobs	.121 (.007)	.149 (.007)	.027 (.010)	.086 (.007)	.127 (.009)	.041 (.012)	-.014 (.015)

Note: The female share of the workforce is computed as the sum of female weights, supplied in the LMAS87-88 and LFS97, over the total sum of weights of individuals in the sample of interest. Standard errors are in parentheses. The jobs type classification uses the Census information (Table A-1) and does not vary before and after the law.

TABLE A-1
LIST OF OCCUPATIONS (1980 SOC) AND PERCENT FEMALE (CENSUS 1990)

SOC Number	Occupation Title	Percent Female	
		Ontario	Québec
	<i>Managerial, Administrative and Related Occupations</i>		
1111	Members of legislative bodies	.4116	.3528
1113	Government administrators	.4053	.3245
1115	Post office management occupations	.5128	.606
1116	Inspectors and regulatory officers, government	.3099	.2767
1119	Officials and administrators, government	.4813	.4531
1130	General managers and other senior officials	.2413	.184
1131	Management occs, natural sciences and engineering	.1741	.1415
1132	Management occs, social sciences and related fields	.62	.5985
1133	Administrators in teaching and related fields	.4219	.3779
1134	Administrators in medicine and health	.6998	.522
1135	Financial management occupations	.4732	.4077
1136	Personnel and industrial relations management occ.	.4547	.3903
1137	Sales and advertising management occupations	.3473	.3296
1141	Purchasing management occupations	.3346	.2092
1142	Services management occupations	.4132	.379
1143	Production management occupations	.163	.1679
1145	Management occupations, construction operations	.0611	.0544
1146	Farm management occupations	.3197	.3133
1147	Management occs, transport and communications	.2523	.234
1149	Others managers	.4154	.5513
1171	Accountants, auditors and other financial officers	.4779	.4653
1173	Organization and methods analysts	.3085	.3046
1174	Personnel and related officers	.5388	.5639
1175	Purchasing officers and buyers, except trade	.4668	.3041
1176	Inspectors and regulatory officers, n.e.c	.3631	.2175
1179	Occs related to management and administration, n.e.c	.5575	.4574
	<i>Occupations in Natural Sciences, Engineering and Mathematics</i>		
2111	Chemists	.2869	.3247
2112	Geologists	.1034	.0868
2113	Physicists	.1335	.2003
2114	Meteorologists	.1242	.151
2117	Physical sciences technologists and technicians	.2678	.325
2119	Occupations in physical sciences, n.e.c.	.1741	.24
2131	Agriculturists and related scientists	.2395	.3024
2133	Biologists and related scientists	.3919	.4093
2135	Life sciences technologists and technicians	.4279	.2944
2139	Occupations in life sciences, n.e.c.	.1929	.3225
2141	Architects	.176	.2398
2142	Chemical engineers	.1284	.1701
2143	Civil engineers	.0834	.0911
2144	Electrical engineers	.0976	.1071
2145	Industrial engineers	.1668	.2432
2146	Agricultural engineers	.1939	.2247
2147	Mechanical engineers	.0548	.0822
2151	Metallurgical engineers	.0304	.0537
2153	Mining engineers	.0449	.0534
2154	Petroleum engineers	.0521	.0353
2155	Aerospace engineers	.0363	.0586
2156	Nuclear engineers	.0813	.2247
2157	Community planners	.3226	.2716
2159	Professional engineers, n.e.c.	.1038	.0702

TABLE A-1 (CONTINUED)

LIST OF OCCUPATIONS (1980 SOC) AND PERCENT FEMALE (CENSUS 1990)

SOC Number	Occupation Title	Percent Female	
		Ontario	Québec
2160	Supervisors: other engineering occ.	.0988	.1159
2161	Surveyors	.0909	.0769
2163	Draughting occupations	.2058	.1857
2164	Architectural technologists and technicians	.192	.2573
2165	Engineering technologists and technicians	.1588	.0911
2169	Other occupations in arch. and engineer.	.1833	.1568
2181	Mathematicians, statisticians and actuaries	.4241	.3034
2183	Systems analysts, computer programmers	.3041	.3104
2189	Occupations in mathematics, statistics, etc.	.4217	.3684
	<i>Occupations in Social Sciences and Related Fields</i>		
2311	Economists	.3475	.3659
2313	Sociologists, anthropologists and related social	.4742	.5116
2315	Psychologists	.6645	.6305
2319	Occupations in social sciences, n.e.c.	.5902	.5033
2331	Social workers	.7431	.7164
2333	Occupations in welfare and community services	.7736	.66
2339	Occupations in social work and related fields, n.e.c.	.6936	.5804
2341	Judges and magistrates	.1934	.1483
2343	Lawyers and notaries	.2721	.3369
2349	Occupations in law and jurisprudence, n.e.c.	.7	.6882
2350	Supervisors:Library, museum and archival science	.6884	.6662
2351	Librarians, archivists and conservators	.8227	.7842
2353	Technicians in library, museum and archival scie	.6053	.7418
2359	Library, museum and archival science, n.e.c.	.6227	.824
2391	Educational and vocational counsellors	.6832	.5196
2399	Other occs in social science and related fields	.6845	.5053
	<i>Occupations in Religion</i>		
2511	Ministers of religion	.1325	.0708
2513	Nuns and brothers	.6723	.6371
2519	Occupations in religion, n.e.c.	.4754	.3363
	<i>Teaching and Related Occupations</i>		
2711	University teachers	.282	.3113
2719	University teaching and related occupations, n.e.c	.4719	.5042
2731	Elementary and kindergarten teachers	.7999	.8487
2733	Secondary school teachers	.4828	.4871
2739	Elem. and secondary school teaching, related occ.	.8411	.6923
2791	Community college and vocational school teachers	.4682	.4305
2792	Fine arts teachers, n.e.c.	.714	.6763
2793	Post-secondary school teachers, n.e.c.	.6385	.7088
2795	Teachers of exceptional students, n.e.c.	.8026	.721
2797	Instructors and training officers, n.e.c.	.4438	.363
2799	Other teaching and related occupations, n.e.c.	.6166	.5246
	<i>Occupations in Medicine and Health</i>		
3111	Physicians and surgeons	.2678	.2908
3113	Dentists	.1591	.1925
3115	Veterinarians	.3291	.3635
3117	Osteopaths and chiropractors	.2679	.2909
3119	Health diagnosing and treating occupations, n.e.c.	.6425	.6035
3130	Supervisors:Nursing, therapy and related assist.	.9177	.8646
3131	Nurses, registered, graduate and nurses-in-training	.964	.9109
3132	Orderlies	.2025	.1529

TABLE A-1 (CONTINUED)
LIST OF OCCUPATIONS (1980 SOC) AND PERCENT FEMALE (CENSUS 1990)

SOC Number	Occupation Title	Percent Female	
		Ontario	Québec
3134	Registered nursing assistants	.9255	.9039
3135	Nursing attendants	.9072	.7424
3136	Audio and speech therapists	.9002	.8969
3137	Physiotherapists	.8636	.7973
3138	Occupational therapists	.876	.8974
3139	Nursing, therapy and related assisting occs, n.e.c.	.8262	.3518
3151	Pharmacists	.5358	.5974
3152	Dietitians and nutritionists	.9464	.9437
3153	Optometrists	.4159	.5209
3154	Dispensing opticians	.4839	.5493
3155	Radiological technologists and technicians	.7823	.8276
3156	Medical laboratory technologists and technicians	.7289	.7716
3157	Denturists	.2043	.2101
3158	Dental hygienists and dental assistants	.9731	.9659
3161	Dental laboratory technicians	.3476	.4132
3162	Respiratory technicians	.624	.7577
3169	Other occupations in medicine and health, n.e.c.	.7943	.7685
	<i>Artistic, Literary and Related Occupations</i>		
3311	Painters, sculptors, and related artists	.4248	.5028
3313	Product and interior designers	.5231	.631
3314	Advertising and illustrating artists	.3895	.4129
3315	Photographers and camera operators	.1799	.2512
3319	Occs in fine and commercial art, photography	.4483	.4564
3330	Producers, directors, performing and audio-visua	.3612	.388
3331	Conductors, composers and arrangers	.1163	.2929
3332	Musicians and singers	.2867	.3199
3333	Occs related to music and musical entertainment,	.1047	.222
3334	Dancers and choreographers	.8412	.7987
3335	Actors/actresses	.4565	.3748
3337	Radio and television announcers	.3004	.1937
3339	Occupations in performing and audio-visual arts,	.2648	.3844
3351	Writers and editors	.4671	.4879
3355	Translators and interpreters	.6416	.6462
3359	Occupations in writing, n.e.c.	.7012	.4385
3360	Supervisors:Occupations in sports and recreation	.3359	.338
3370	Coaches, trainers and instructors, sports and recreation n.e.c.	.4896	.62
3371	Referees and related officials	.1642	.0769
3373	Athletes	.1857	.1013
3375	Attendants, sports and recreation	.219	.2908
3379	Occupations in sports and recreation, n.e.c.	.2259	.2083
	<i>Clerical and Related Occupations</i>		
4110	Supervisors:Stenographic and typing occupations	.9408	.9074
4111	Secretaries and stenographers	.9825	.9845
4113	Typists and clerk-typists	.9318	.9469
4130	Supervisors:Bookkeeping, account-recording occ.	.803	.7791
4131	Bookkeepers and accounting clerks	.8324	.815
4133	Cashiers and tellers	.8779	.8819
4135	Insurance, bank and other finance clerks	.8116	.8434
4137	Statistical clerks	.6752	.6619
4139	Bookkeeping, account-recording and related occs	.7115	.6653
4140	Supervisors:Office machine and EDP equipment op.	.5081	.4945

TABLE A-1 (CONTINUED)
LIST OF OCCUPATIONS (1980 SOC) AND PERCENT FEMALE (CENSUS 1990)

SOC Number	Occupation Title	Percent Female	
		Ontario	Québec
4141	Office machine operators	.613	.6217
4143	Electronic data-processing equipment operators	.7505	.7727
4150	Supers:Material recording, scheduling and distrib.	.2047	.1599
4151	Production clerks	.4141	.3802
4153	Shipping and receiving clerks	.2258	.1925
4155	Stock clerks and related occupations	.3098	.2169
4157	Weighers	.3511	.2038
4159	Material recording, scheduling and distributing occ.	.4922	.6283
4160	Supervisors: library, file and correspondence occ.	.7849	.8617
4161	Library and file clerks	.8402	.7671
4169	Library, file and correspondence clerks	.6068	.8118
4170	Supers:Reception, info, mail and message distribution	.4631	.3301
4171	Receptionists and information clerks	.9383	.8781
4172	Mail carriers	.2514	.1551
4173	Mail and postal clerks	.5599	.4406
4175	Telephone operators	.9125	.8507
4177	Messengers	.3834	.21
4179	Reception, info, mail and message distribution occ.	.6317	.3511
4190	Supervisors:Other clerical, related occs, n.e.c.	.6013	.647
4191	Collectors	.7191	.5843
4192	Claim adjusters	.6522	.6391
4193	Travel clerks, ticket, station, freight agents	.7321	.6642
4194	Hotel clerks	.653	.621
4195	Personnel clerks	.8107	.7483
4197	General office clerks	.8074	.7983
4199	Other clerical and related occupations, n.e.c.	.6478	.5687
	<i>Sales Occupations</i>		
5130	Supervisors:Sales occupations, commodities	.3943	.3187
5131	Technical sales occupations and related advisers	.1815	.1663
5133	Commercial travellers	.2569	.2073
5135	Sales clerks and salespersons, commodities, n.e.c.	.5329	.5002
5141	Street vendors and door-to-door sales occupation	.5678	.4863
5143	Newspaper carriers and vendors	.2941	.1464
5145	Service station attendants	.1901	.1549
5149	Sales occupations: commodities, n.e.c	.6166	.5327
5170	Supervisors:Sales occupations, services	.4059	.361
5171	Insurance sales occupations	.4347	.3967
5172	Real estate sales occupations	.4311	.4279
5173	Sales agents and traders, securities	.315	.3288
5174	Advertising sales occupations	.4604	.443
5177	Business services sales occupations	.3498	.3943
5179	Sales occupations:Services, n.e.c.	.3528	.3952
5190	Supervisors:Other sales occupations	.2995	.2989
5191	Buyers, wholesale and retail trade	.4894	.4459
5193	Route drivers	.0916	.038
5199	Other sales occupations, n.e.c.	.6079	.5571
	<i>Service Occupations</i>		
6111	Fire-fighting occupations	.0144	.0092
6112	Police officers and detectives, government	.1066	.0805
6113	Police agents and investigators, private service	.2499	.173
6115	Guards and related security occupations	.2229	.3023
6119	Protective service occupations, n.e.c.	.5338	.4233

TABLE A-1 (CONTINUED)
LIST OF OCCUPATIONS (1980 SOC) AND PERCENT FEMALE (CENSUS 1990)

SOC Number	Occupation Title	Percent Female	
		Ontario	Québec
6120	Supers:Food and beverage preparation	.5996	.3838
6121	Chefs and cooks	.4532	.4963
6123	Bartenders	.5008	.6541
6125	Food and beverage serving occupations	.7675	.8051
6129	Food and beverage preparation and related service occ.	.7548	.7167
6130	Supervisors:Lodging and other accommodation	.6041	.4232
6133	Lodging cleaners, except private household	.8585	.8825
6135	Sleeping -car and baggage porters	.0807	.1049
6139	Occupations in lodging and other accomodation	.4395	.1615
6141	Funeral directors, embalmers and related occs	.1506	.1604
6142	Housekeepers, servants and related occupations	.9508	.8463
6143	Barbers, hairdressers and related occupations	.7903	.8443
6144	Guides	.6046	.594
6145	Travel and related attendants, except food and b	.8016	.6748
6147	Child-care occupations	.9662	.9628
6149	Personal service occupations n.e.c.	.5216	.4936
6160	Supervisors:Apparel and furnishings service occ.	.418	.3889
6162	Laundrying and dry cleaning occupations	.7168	.6043
6165	Pressing occupations	.744	.6061
6169	Apparel and furnishings service occupations, n.e.c.	.3453	.4831
6190	Supervisors:Other service occupations	.3321	.1621
6191	Janitors, charworkers and cleaners	.4779	.3281
6193	Elevator-operating occupations	.2795	.0514
6198	Labouring and other elemental work:Other service	.4105	.2211
6199	Other service occupations n.e.c.	.2663	.1714
	<i>Farming, Horticulture and Animal Husbandry Occupations</i>		
7111	Farmers	.2365	.1676
7180	Foremn/womn:Other farming	.2304	.1194
7183	Livestock farm workers	.3389	.2788
7185	Crop farm workers	.4808	.4495
7195	Nursery and related workers	.1634	.131
7196	Inspecting, testing, grading and sampling occ.	.6862	.6698
7197	Farm machinery operators	.0783	.0799
7199	Other farming, horticultural and animal husbandry	.3726	.2653
	<i>Fishing, Trapping and Related Occupations</i>		
7311	Captains and other officers, fishing vessels	.0367	
7313	Net, trap and line fishing occupations	.1061	.087
7315	Trapping and related occupations	.0964	.1672
7319	Fishing, trapping and related occupations, n.e.c	.18	.3752
	<i>Forestry and Logging Occupations</i>		
7510	Foremen/women:Forestry and logging occupations	.0886	.0498
7511	Forestry conservation occupations	.0822	.0269
7513	Timber cutting and related occupations	.0312	.01
7516	Log inspecting, grading and related occs	.1493	.1176
7517	Log hoisting, sorting, moving and related occs	.0253	.0121
7518	Labouring and other elemental work	.3183	.1785
7519	Forestry and logging occupations, n.e.c.	.0641	.3946
	<i>Mining and Quarrying Occupations</i>		
7710	Foremen/women:Mining and quarrying inc. oil and gas	.0274	.0159
7711	Rotary well-drilling and related occupations	.0215	
7713	Rock and soil drilling occupations	.0132	

TABLE A-1 (CONTINUED)
LIST OF OCCUPATIONS (1980 SOC) AND PERCENT FEMALE (CENSUS 1990)

SOC Number	Occupation Title	Percent Female	
		Ontario	Québec
7715	Blasting occupations	.0171	
7717	Cutting, handling and loading occupations	.0151	.0072
7718	Labouring and other elemental work	.0305	.0556
7719	Mining and quarrying occupations n.e.c.	.0363	.0357
	<i>Processing Occupations</i>		
8110	Foremen/women: mineral ore treating occupations	.027	
8111	Crushing and grinding occupations, mineral ores	.0412	.0363
8113	Mixing, separating, filtering and related occs	.1111	.0144
8115	Melting and roasting occupations: mineral ores		.1328
8116	Inspecting, testing, grading, etc.: mineral ores	.1138	.0814
8118	Labouring and other elemental work: mineral ores	.0331	
8119	Mineral ores treating occupations, n.e.c.	.1028	.0437
8130	Foremen/women: metal processing and related occs	.0337	.009
8131	Metal smelting, converting and refining occs	.0479	.0206
8133	Metal heat-treating occupations	.0446	.0788
8135	Metal rolling occupations	.0654	.1431
8137	Moulding, coremaking and metal casting occupations	.0767	.0285
8141	Metal extruding and drawing occupations	.1582	.0147
8143	Plating, metal spraying and related occupations	.1109	.0567
8146	Inspecting, testing, grading and sampling occs	.1222	.1095
8148	Labouring and other elemental work: Metal process	.0963	.037
8149	Metal processing and related occupations, n.e.c.	.0525	.1208
8150	Foremen/women: clay, glass and stone processing occs	.0737	.0047
8151	Furnace and kiln workers: clay, glass and stone	.2125	
8153	Separating, grinding, crushing and mixing: clay, ...	.0489	
8155	Forming occupations: Clay, glass and stone	.1408	.101
8156	Inspecting, testing, grading and sampling: clay, ...	.4596	.2272
8158	Labouring and other elemental work: Clay, glass, ...	.1518	.1318
8159	Clay, glass and stone processing occ., n.e.c.	.1782	.0602
8160	Foremen/women: chemicals, ptrlm, rbbr and plstic	.0875	.1148
8161	Mixing and blending occs: chemicals and related mat.	.1482	.0819
8163	Filtering, straining and separating: chemicals	.2964	.1671
8165	Distilling, subliming and carbonizing occs	.0804	.1261
8167	Roasting, cooking and drying occs: chemicals	.1258	.0398
8171	Crushing and grinding occs: chemicals	.1297	.1295
8173	Coating and calendering occs: chemicals	.243	.2542
8176	Inspecting, testing, grading and sampling: chemcls	.3649	.2668
8178	Labouring and other elemental work: chemicals	.1867	.2219
8179	Chemicals and related materials processing occs, n.e.c.	.254	.2598
8210	Foremen/women: Food, beverage and related processing	.2421	.1254
8211	Flour and grain milling occupations	.1545	.0191
8213	Baking, confectionery making and related occs	.4927	.4426
8215	Slaughtering and meat cutting and related occs	.2588	.1606
8217	Fish canning, curing and packing occupations	.6299	.5829
8221	Fruit and vegetable canning, preserving occs	.5214	.47
8223	Milk processing and related occupations	.1296	.1166
8225	Sugar processing and related occupations	.1179	.3364
8226	Inspecting, testing, grading: food and beverages	.4275	.4019
8227	Beverage processing and related occupations	.1582	.093
8228	Labouring and other elemental work: food and beverages	.4032	.293
8229	Food, beverage and related processing occs, n.e.c.	.3449	.2772

TABLE A-1 (CONTINUED)
LIST OF OCCUPATIONS (1980 SOC) AND PERCENT FEMALE (CENSUS 1990)

SOC Number	Occupation Title	Percent Female	
		Ontario	Québec
8230	Foremen/women: wood processing occupations	.005	.0257
8231	Sawmill sawyers and related occupations	.0907	.0216
8233	Plywood making and related occupations	.3645	.1521
8235	Wood treating occupations	.2018	.0798
8236	Inspecting, testing, grading and sampling occs: wood	.1473	.0896
8238	Labouring and other elemental work: wood	.1389	.0408
8239	Wood processing, except pulp and papermaking, n.e.c.	.0963	.0099
8250	Foremen/women: pulp and papermaking occupations	.0459	.0239
8251	Cellulose pulp preparing occupations	.0767	.0992
8253	Papermaking and finishing occupations	.0713	.0303
8256	Inspecting, testing, grading and sampling occs: pulp	.1672	.1284
8258	Labouring and other elemental work: pulp and paper	.0746	.059
8259	Pulp and papermaking and related occs, n.e.c.	.1262	.115
8260	Foremen/women: textile processing	.1507	.2329
8261	Textile fibre preparing occupations	.4053	.2706
8263	Textile spinning and twisting occupations	.4917	.4954
8265	Textile winding and reeling occupations	.6431	.4761
8267	Textile weaving occupations	.4026	.3033
8271	Knitting occupations	.7597	.3068
8273	Textile bleaching and dyeing occupations	.1715	.0985
8275	Textile finishing and calendring occupations	.4206	.307
8276	Inspecting, testing, grading and sampling occs:textile	.626	.5531
8278	Labouring and other elemental work: textile	.3841	.4701
8279	Textile processing occupations, n.e.c.	.3964	.4964
8290	Foremen/women: other processing occupations	.3183	.2482
8293	Tobacco processing occupations	.6542	.4759
8295	Hide and pelt processing occupations	.4361	.1658
8296	Inspectng, testing, gradng and samplng occs: othr proc.	.6608	.5914
8298	Labouring and other elemental work: other proces.	.4633	.3303
8299	Other processing occupations, n.e.c.	.0608	.2482
	<i>Machining and Related Occupations</i>		
8310	Foremen/women: metal machining occupations	.0221	.0426
8311	Tool and die making occupations	.0328	.0123
8313	Machinist and machine tool setting-up occupation	.0723	.0276
8315	Machine tool operating occupations	.1426	.0708
8316	Inspectng, testing, gradng and samplng occs: metal	.2672	
8319	Metal machining occupations, n.e.c.	.2538	.0702
8330	Foremen/women: metal shaping and forming occs	.0291	.0172
8331	Forging occupations	.0864	.0108
8333	Sheet metal workers	.062	.0241
8334	Metalworking-machine operators, n.e.c.	.2075	.0796
8335	Welding and flame cutting occupations	.0551	.0173
8336	Inspectng, testing, gradng occs: metal shaping	.1547	.0919
8337	Boilermakers, platers and structural metal workers	.058	
8339	Metal shaping and forming occs, except machining	.177	.1731
8350	Foremen/women: wood machining occupations	.0517	.0327
8351	Wood patternmaking occupations	.0989	.1952
8353	Wood sawing and related occupations, n.e.c.	.1265	.0568
8355	Planing, turning and related wood machining occs	.0734	.0576
8356	Inspectng, testing, gradng occs: wood machining	.6269	.1397
8357	Wood sanding occupations	.272	.1032
8359	Wood machining occupations, n.e.c.	.1256	.1031

TABLE A-1 (CONTINUED)
LIST OF OCCUPATIONS (1980 SOC) AND PERCENT FEMALE (CENSUS 1990)

SOC Number	Occupation Title	Percent Female	
		Ontario	Québec
8370	Foremen/women: clay, glass, stone machining occs	.1393	.0901
8371	Cutting and shaping: clay, glass, stone, etc.	.1166	.0621
8373	Abrading and polishing: clay, glass, stone, etc.	.3467	.2812
8376	Inspectng, testing, gradng occs: clay, glass, etc.	.4084	.2391
8379	Clay, glass, stone machining occupations, n.e.c.	.2667	.116
8390	Foremen/women: other machining occupations	.0507	.2058
8391	Engravers, etchers and related occs, n.e.c.	.3883	.375
8393	Filing, grinding, buffing, cleaning and polishing	.0879	.0707
8395	Patternmakers and mouldmakers, n.e.c.	.1147	.0717
8396	Inspctng, testng, gradng and smplng: other machining	.5068	.2953
8396	Other machining and related occupations, n.e.c.	.1603	.2088
	<i>Product Fabricating, Assembling and Repairing Occupations</i>		
8510	Foremn/wmn: fabricating and assembling, metal prods	.0878	.0524
8511	Engine fabricating and assembling occupations, n.e.c.	.3906	.1568
8513	Motor vehicle fabricating and assembling, n.e.c.	.2495	.0784
8515	Aircraft fabricating and assembling occs, n.e.c.	.1185	.0804
8523	Industrial, farm, cnst machines fbrctng and assmblng	.0879	.0762
8525	Business and commercl machines fbrctng and assmblng	.5572	.5149
8526	Inspctng, testng, grdng and smplng: fbrctng and asm	.2352	.1146
8527	Precision instruments fabricating and assembling	.3316	.1354
8528	Labouring and other elemental work: fabrctng and asm	.2631	.127
8529	Other fbrctng and assmblng: metal products, n.e.c.	.2858	.2182
8530	Foremn/wmn: fabricating and assembling: elec. and rlt	.1102	.1168
8531	Electrical and related equipment fbrctng and asm	.4443	.3348
8533	Electrical and related equipment installing and rep	.0277	.0157
8534	Electronic and related equipment fbrctng and asm	.6416	.4711
8535	Electronic and related equipment installing and rep	.1353	.0518
8536	Inspecting and related: Fabricating and rlted, elctrc	.3892	.4554
8537	Radio and television repairers	.0514	.026
8538	Labouring and other: fabricating and rlted, elctrc	.4834	.3734
8539	Fabricating and related: Electrical, n.e.c.	.3653	.2682
8540	Foremn/wmn: Fabricating, assemb. and repairing: wood	.1303	.0582
8541	Cabinet and wood furniture makers	.162	.0591
8546	Inspctng, testng, gradng and smplng: wood products	.533	.1208
8548	Labouring: fbrctng, assmblng and repairing: wood	.2752	.1332
8549	Fabrctng, assmblng and repring: wood prods, n.e.c.	.152	.1469
8550	Foremn/wmn: Fabricating textile, fur and leather	.473	.4806
8551	Patternmaking, marking and cutting: textile, fur, etc.	.4279	.3467
8553	Tailors and dressmakers	.7135	.8783
8555	Furriers	.5016	.3709
8557	Milliners, hat and cap makers	.9198	.6549
8561	Shoemaking and repairing occupations	.6543	.4211
8562	Upholsterers	.2128	.1265
8563	Sewing machine operators, textile materials	.9285	.9098
8566	Inspecting and rlted occs: fabricating and rlted, txtle	.7379	.7914
8568	Labouring: Fabricating, assmblng and repairng, txtle	.6993	.5801
8569	Fabricating and related: textile, fur and leather	.5929	.602
8570	Foremn/wmn: Fabricating and rlted: rubber and rlted	.1361	.1074
8571	Bonding and cementing: rubber, plastic and related	.0806	.2037
8573	Moulding: rubber, plastic and related products	.3944	.255
8575	Cutting and finishing: Rubber, plastic and related	.4196	.3951
8576	Inspecting and related: fabricating and rlted, rubber	.3388	.406

TABLE A-1 (CONTINUED)
LIST OF OCCUPATIONS (1980 SOC) AND PERCENT FEMALE (CENSUS 1990)

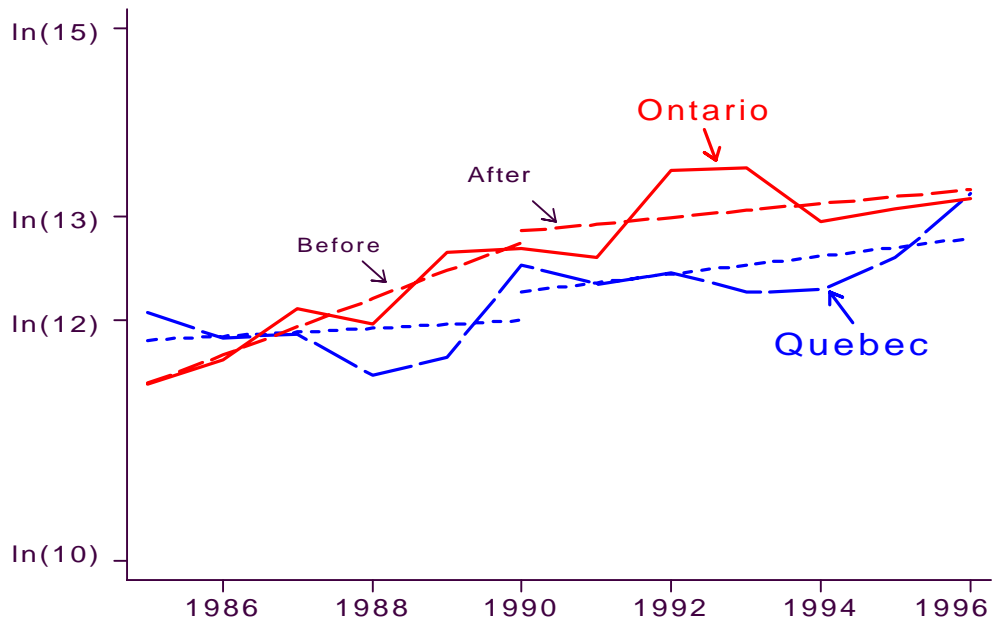
SOC Number	Occupation Title	Percent Female	
		Ontario	Québec
8578	Labouring: fabricating and rlted, rubber, plastic	.334	.2495
8579	Fabricating, assembling and repairing: Rbbr, n.e.c.	.4363	.2713
8580	Foremen/women:Mechanics and repairers, n.e.c.	.0333	.0259
8581	Motor vehicle mechanics and repairers	.0174	.0083
8582	Aircraft mechanics and repairers	.0378	.0376
8583	Rail transport equipmt mechanics and repairers	.024	.0116
8584	Industrial, farm and construction machinery mechanics	.0114	.0095
8585	Business and commercial machines machanics	.0728	.0224
8586	Inspctng, testng, gradng: equipment repairs	.1371	.0358
8587	Watch and clock repairers	.1133	.0638
8588	Precision instrument mechanics and repairers	.0329	.0308
8589	Other mechanics and repairers, n.e.c.	.0318	.019
8590	Foremn/wmn: other products	.1226	.1596
8591	Jewellery and silverware fabricating, assmbling	.3346	.2671
8592	Marine craft fabricating, assembling and repairn	.0356	.0054
8593	Paper product fabricating and assembling occupations	.3148	.241
8595	Painting and decorating occupations, n.e.c.	.1337	.0858
8596	Inspctng and rlted: other products	.6422	.391
8598	Labouring: other products	.4917	.314
8599	Other product fabricating, n.e.c.	.3106	.3517
	<i>Construction trades occupations</i>		
8710	Foremen/women: excavating, grading, paving	.0131	.0145
8711	Excavating, grading and related occupations	.0112	.006
8713	Paving, surfacing and related occupations	.0226	.0109
8715	Railway section and track workers	.0157	.0138
8718	Labouring: excavating, grading, paving activities	.0374	.0251
8713	Paving, surfacing and related occupations	.0147	.0183
8730	Foremen/women: electrical power	.0403	.0377
8731	Electrical power line workers and related occupations	.048	.0167
8733	Construction electricians and repairers	.0156	.0115
8735	Wire communications installers and repairers	.0838	.0581
8736	Inspctng, testng, gradng: electrical power	.2163	.1675
8738	Labouring: electrical power, wire communications	.0772	.2609
8739	Electrical power, wire communications occs, n.e.c.	.0333	.0658
8780	Foremen/women: other construction trades occupations	.0222	.015
8781	Carpenters and related occupations	.0192	.0074
8782	Brick and stone masons and tile setters	.013	.0094
8783	Concrete finishing and related occupations	.0108	.0149
8784	Plasterers and related occupations	.0135	.0154
8785	Painters, paperhangers and related occupations	.0925	.0932
8786	Insulating occupations, construction	.0564	.0513
8787	Roofing, waterproofing and related occupations	.0134	.0038
8791	Pipefitting, plumbing and related occupations	.0098	.0052
8793	Structural metal erectors	.0335	.0047
8795	Glaziers	.0677	.0361
8796	Inspect, testng, gradng: other construction	.0802	.0675
8798	Labouring:Other construction trades	.0201	.0236
8799	Other construction trades occupations, n.e.c.	.0394	.0281
	<i>Transport Equipment Operating Occupations</i>		
9110	Foremen/women: Air transport operating occupation	.1126	.1848
9111	Air pilots, navigators and flight engineers	.0701	.0708

TABLE A-1 (CONTINUED)
LIST OF OCCUPATIONS (1980 SOC) AND PERCENT FEMALE (CENSUS 1990)

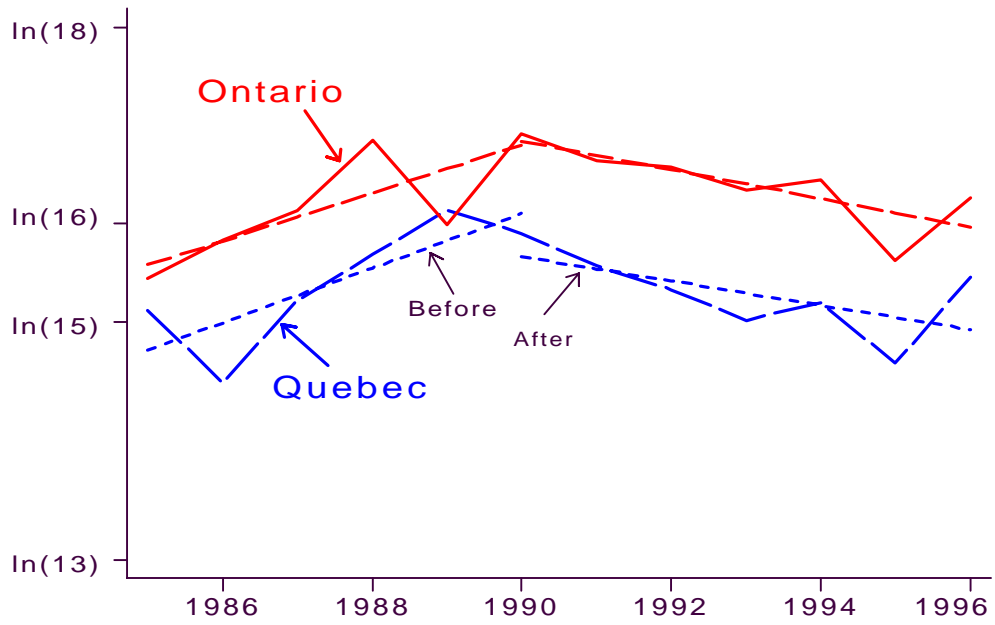
SOC Number	Occupation Title	Percent Female	
		Ontario	Québec
9113	Air transport operating support occupations	.1556	.1649
9119	Air transport operating occupations, n.e.c.	.255	.1835
9130	Foremen/women:Railway transport operating occ.	.0435	.0451
9131	Locomotive operating support occupations	.0399	.0581
9133	Conductor and brake workers railway	.0769	.0469
9135	Railway transport operating support occupations	.1336	.0475
9139	Railway transport operating occupations, n.e.c.		.0546
9151	Deck officers	.0712	.0286
9153	Engineering officers, ship	.0454	
9155	Deck crew, ship	.139	.0287
9157	Engine and boiler-room crew, ship	.1802	.0328
9159	Water transport operating occupations, n.e.c.	.1386	.0807
9170	Foremen/women:Motor transport operating occupations.	.0803	.0499
9171	Bus drivers	.4744	.2116
9173	Taxi drivers and chauffeurs	.0768	.0461
9175	Truck drivers	.0373	.0173
9179	Motor transport operating occupations, n.e.c.	.2184	.1848
9190	Foremen/women: other transport operating occs	.1206	.0547
9191	Subway and street railway operating occupations	.0959	.0675
9193	Rail vehicle operators, except rail transport	.0629	.0421
9199	Other transport equipment operating occs, n.e.c.	.0719	.0425
	<i>Material handling and related occupations, n.e.c.</i>		
9310	Foremen/women:Material handling and related, n.e.c.	.1093	.1178
9311	Hoisting occupations, n.e.c.	.0179	.0096
9313	Longshore workers, stevedores, freight handlers	.1167	.049
9314	Parcel carriers, n.e.c.	.1019	.1432
9315	Material handling equipment operators, n.e.c.	.0539	.0282
9317	Packaging occupations, n.e.c.	.6603	.4267
9318	Labouring:Material handling and related activities	.1272	.0997
9319	Other material handling occupations, n.e.c.	.1224	.1228
	<i>Other Craft and Equipment Operating Occupations</i>		
9510	Foremen/women:Printing and related occupations	.1638	.1781
9511	Typesetting and composing occupations	.5707	.4964
9512	Printing press occupations	.1241	.0919
9513	Stereotyping and electrotyping occupations	.0943	.3536
9514	Printing, engraving, except photoengraving, occs	.1273	.2128
9515	Photoengraving and related occupations	.2777	.2723
9517	Bookbinding and related occupations	.5886	.6188
9518	Labouring:Printing and related activities	.3742	.4125
9519	Printing and related occupations, n.e.c.	.3689	.3967
9530	Foremen/women: stationary engine and utilities eqp	.0636	.0083
9531	Power station operators	.0872	.0147
9539	Stationary engine and utilities equip. operators	.0468	.0579
9550	Foremen/women: communications equipment operators	.1508	.1463
9551	Radio and television equipment operators	.1813	.1181
9553	Telegraph operators	.5	.1703
9555	Sound and video recording operators	.0984	.1395
9557	Motion picture projectionists	.069	.0625
9559	Other electronic and comms equipment operating occ.	.2513	.4083

TABLE A-1 (CONTINUED)
 LIST OF OCCUPATIONS (1980 SOC) AND PERCENT FEMALE (CENSUS 1990)

SOC Number	Occupation Title	Percent Female	
		Ontario	Québec
	<i>Other crafts and equipment operating occs, n.e.c.</i>		
9590	Foremen/women: other crafts and equipment opr occs	.335	.3586
9591	Photographic processing occupations	.5096	.4327
9599	Other craft and equipment operating occupations	.3472	.5142
9910	Supervisors and foremen/women, n.e.c.	.1933	.2687
9916	Inspecting, testing, grading and sampling occs, n.e.c.	.1477	.1612
9918	Labouring: n.e.c.	.2646	.1768
9919	Other occupations, n.e.c.	.1479	.1394

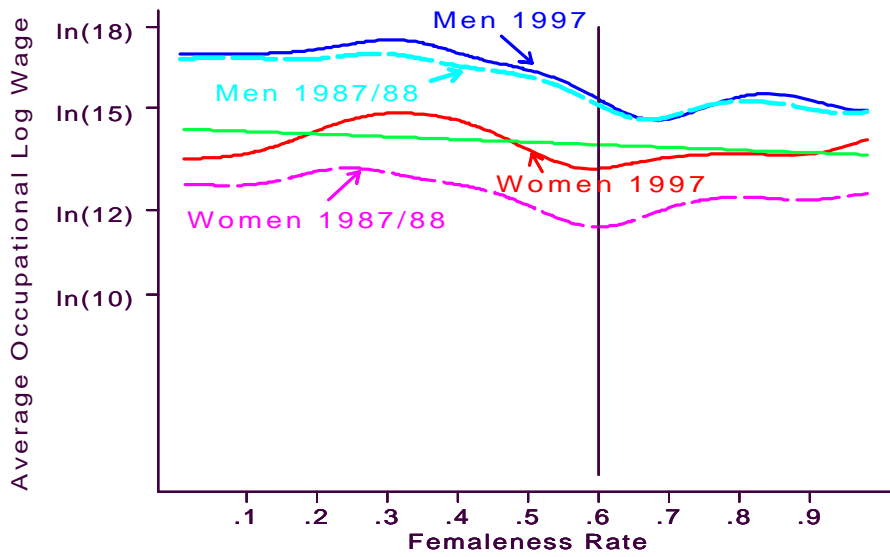


a) Women

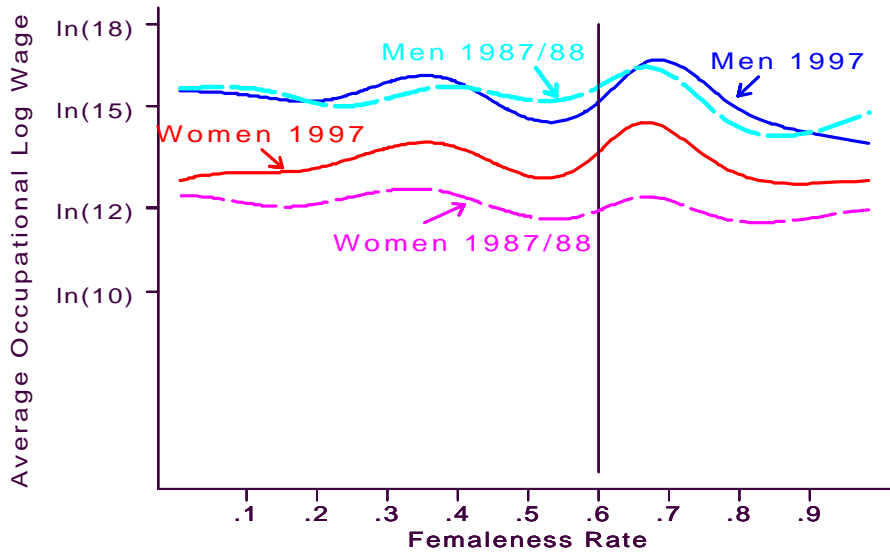


b) Men

Figure 1. Average Log Hourly Wages and Trends before and after the Law



a) Ontario



b) Quebec

Figure 2. Weighed Kernel Regressions of Average Occupational Wages on Femaleness Rates

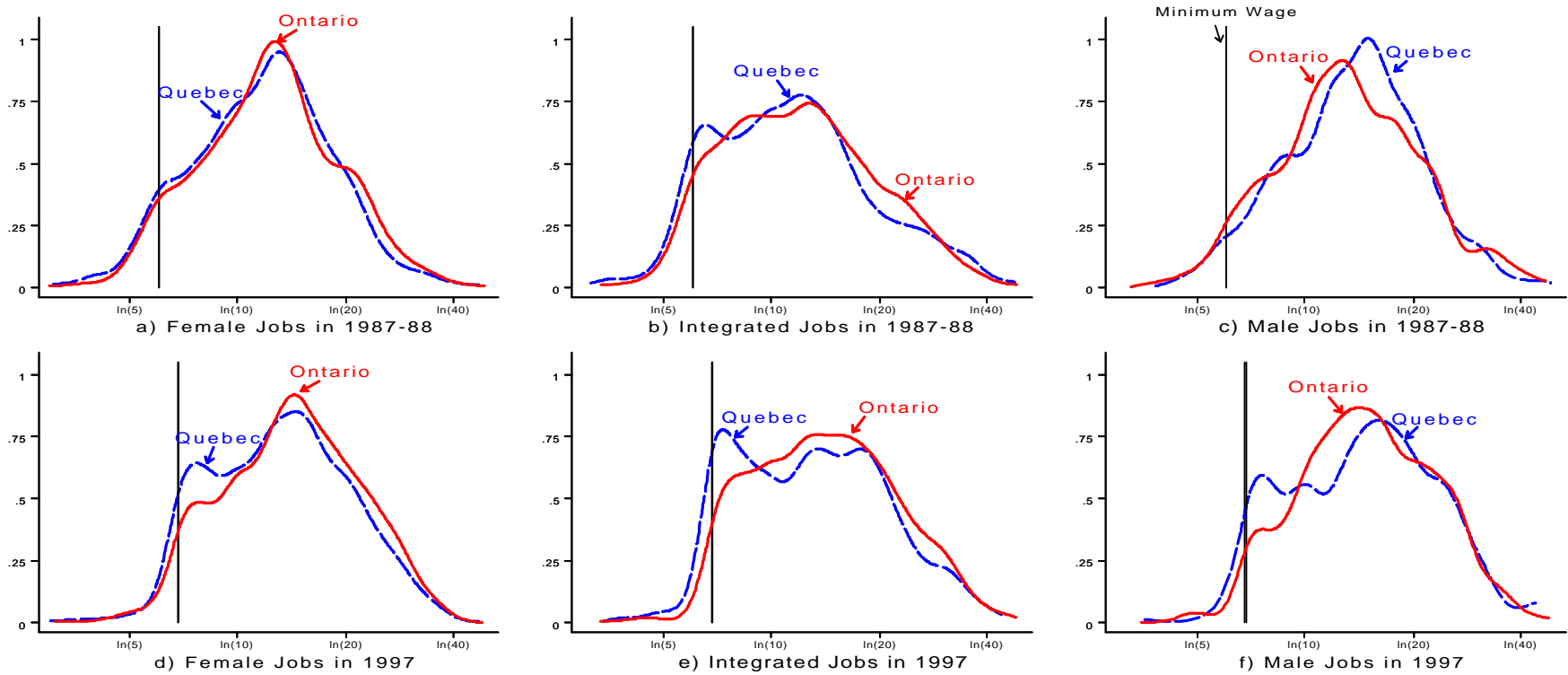


Figure 3. Provincial Differences in the Distributions of Women's Wages

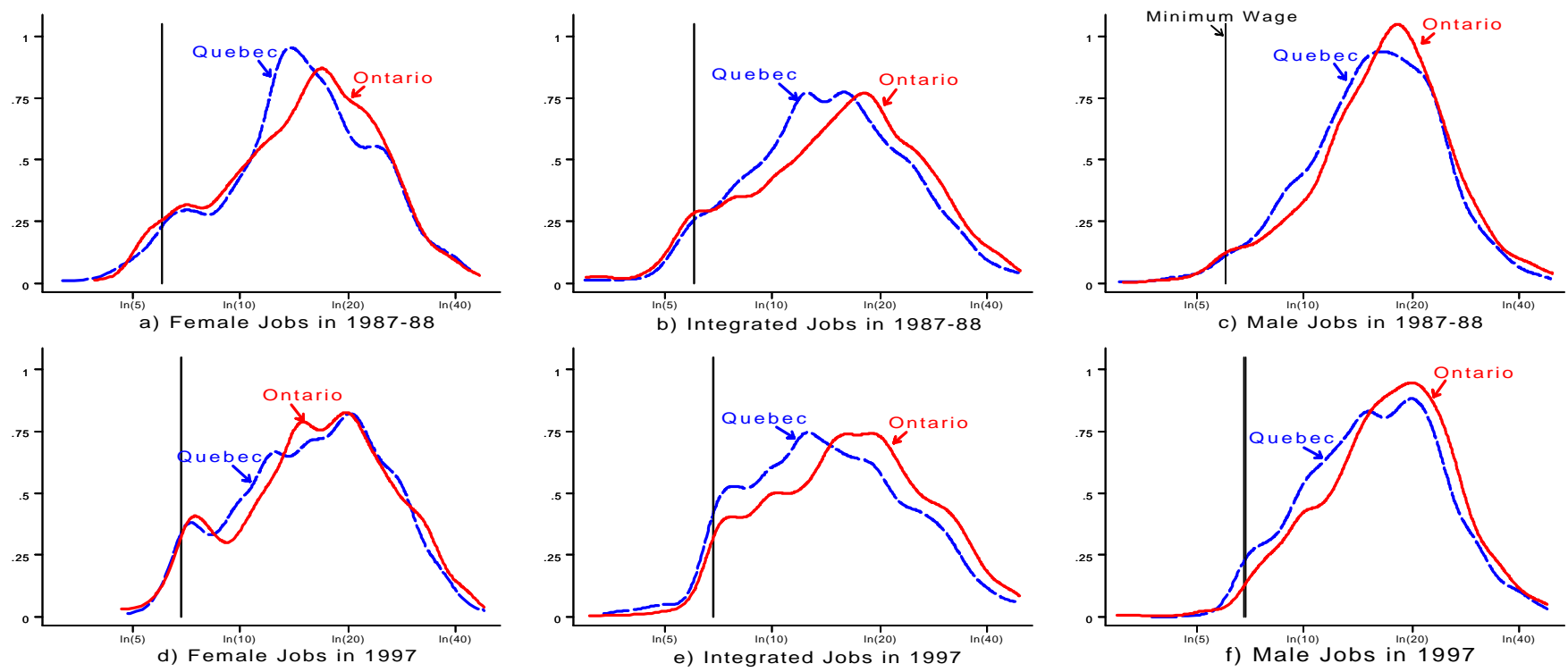
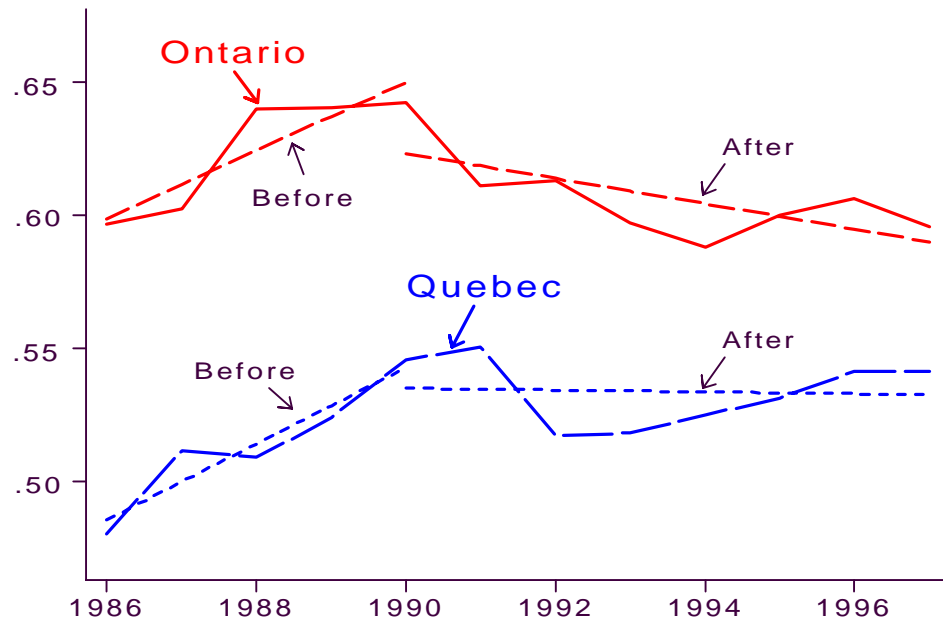
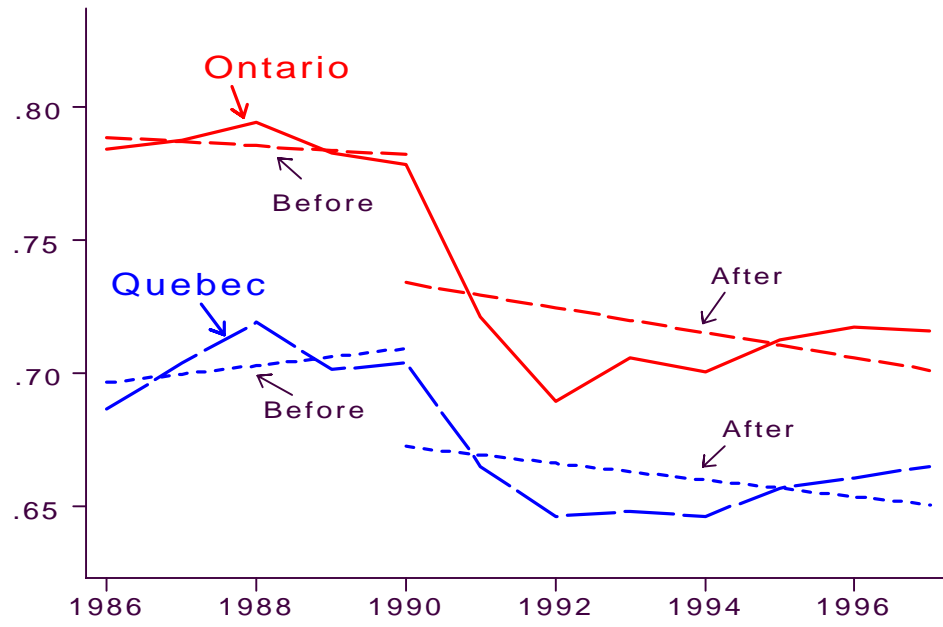


Figure 4. Provincial Differences in the Distributions of Men's Wages

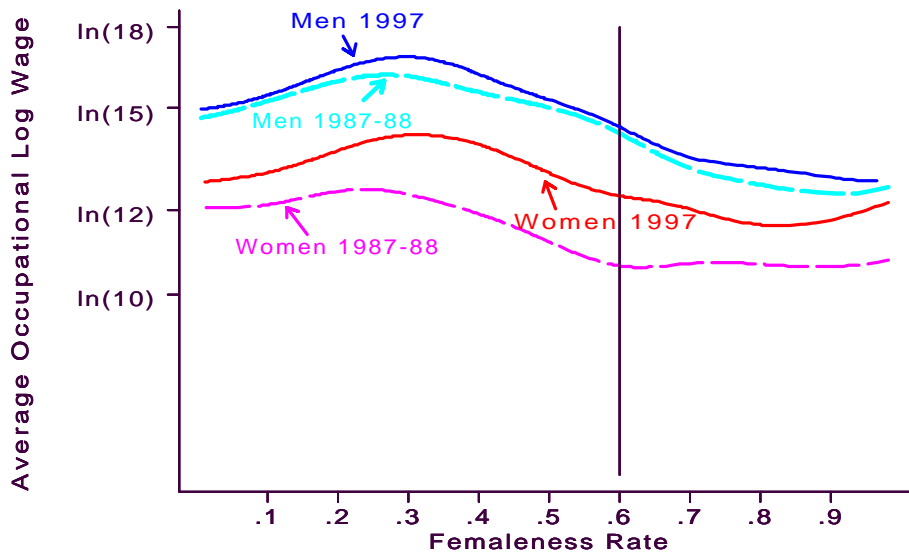


a) Women

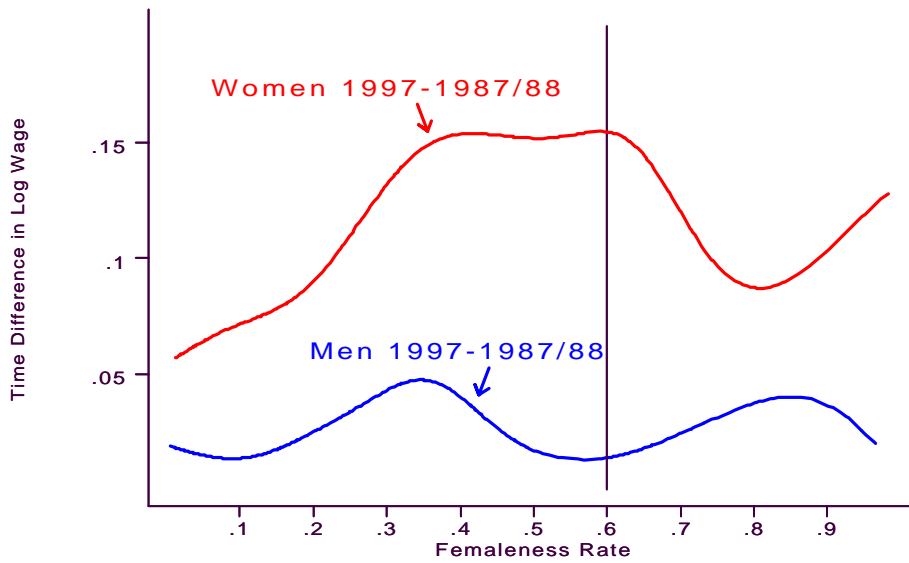


b) Men

Figure 5. Employment Rates and Trends before and after the law



a) Weighted Kernel Regressions



b) Differences in Kernel Regressions

Figure 6. Changes in Average Occupational Wages among Non-union Workers in Ontario