

# Comparable Worth Comes to the Private Sector: The Case of Ontario <sup>1</sup>

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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 on a wide ranging application of pay equity implemented in the Canadian province of Ontario in the early 1990s. We find that the law fell short of its goal of reducing gender wage differentials. Firm surveys indicate that the effect of the legislation was blunted by lack of compliance, the lack of male comparators for female jobs, especially in small private firms, and the low incidence of undervalued female work in larger unionized firms. Many of these 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” (for non-unionized workers in larger establishments), any positive effects on women’s wages in female jobs, or the gender wage gap, were very modest. Any negative effect on the employment share of female jobs is similarly small. Surprisingly, our most consistently estimated effect of the law is that rather than providing sustained wage increases for all women, it suppressed wage growth for women working in male jobs.

## 1. INTRODUCTION

Pay equity/comparable worth programs remain high on the agenda of advocacy groups,<sup>2</sup> and legislative initiatives continue apace in many industrialized countries. Proponents have long viewed comparable worth legislation as **the** remedy to historical labor market discrimination against women and minorities. For example, the U.S. National Committee on Pay Equity (NCPE) argues that the “wage gap exists because most women and people of color are still segregated into a few low-paying occupations”.<sup>3</sup> Furthermore, these “jobs have historically been undervalued and continue to be underpaid because of the gender and race of the people who hold them”.

In the United States, initial enthusiasm for a nation-wide comparable worth program, and early triumphs such as the Supreme Court ruling *County of Washington v. Gunther* in 1981, have been tempered by subsequent legal interpretation of the *Equal Pay Act* and Title VII of the *Civil Rights Act* (e.g., *AFSCME v. State of Washington*, 1985). As a consequence, pay equity advocates no longer look to the courts to lead the way, and their focus has turned to legislative initiatives. In addition to a number of state and local programs, at the federal level the *Fair Pay Act* has been submitted to Congress repeatedly throughout the last decade. It would enable a more liberal interpretation of “equal value” (in the *Equal Pay Act* sense) than the courts have permitted. Other initiatives such as the *Paycheck Fairness Act* also forward this goal.<sup>4</sup>

Standard economic analysis raises a number of objections to comparable worth policies.<sup>5</sup>

<sup>2</sup>For example, in a recent AFL-CIO survey 94 percent of working women reported “equal pay” as very important (<http://www.aflcio.org/women/exec99.htm>).

<sup>3</sup>[www.feminist.com/fairpay.htm](http://www.feminist.com/fairpay.htm).

<sup>4</sup>The *Paycheck Fairness Act* would amend the *Equal Pay Act*, enhancing remedies for discrimination under the Act, providing more resources to the Equal Employment Opportunity Commission and allowing employees to freely discuss their salaries with their co-workers. This legislation has been endorsed by President Clinton, and was given special mention in his State of the Union Address of January 27, 2000.

<sup>5</sup>Killingsworth (1987) provides a discussion of many of the issues.

Comparable worth ignores market forces in the determining the “value” of a job. Comparable worth may ultimately hurt women if the higher wages mandated by pay equity adjustments lead to lower employment in female-dominated occupations. Pay equity wage setting systems may lead to inefficiency and poor performance, and harbor large administrative costs.

Further debate is generated by empirical studies of the relationship between women’s wages and gender segregation: what is the origin of wage penalties in female jobs? While most legislation focuses on occupational gender segregation and contemplates comparisons of “male” and “female” jobs within establishments, a key finding of this research is that an important component of the gender wage gap is due to wage differences across firms and industries (Johnson and Solon (1986), Blau and Kahn (1997); Carrington and Troske (1995); Reilly and Wirjanto (1999)). The implication is that comparable worth policies would have a limited impact on the gender wage differential in the private sector.

Analyses of past comparable worth initiatives do not fully reconcile these different points of view. Many U.S. studies (O’Neill, Brien and Cunningham (1989); Kahn (1992); Killingsworth (1990); Sorensen (1994); Ames (1995) among others) have examined the impact of comparable worth legislation passed in state and local public services, providing evidence of the dollar adjustments for particular female jobs, and estimates of any consequent effects on employment. Another strand of the literature (Ehrenberg and Smith (1987); Hundley (1992), Beider, Bernheim, Fuchs and Shoven (1988)) simulates the impact of economy wide comparable worth. For example, average pay equity awards observed in state and local public sectors (10 to 20 percent) are combined with sector specific demand elasticities to simulate employment adjustment.

Evaluations of the **actual** effects of the more comprehensive legislation advocated by pay equity activists are available for Australia and certain countries in Europe (see, for example, Chiplin, Curran and Parsley (1980), Gregory and Duncan (1981), Tzannatos (1987)). While some studies argue that pay equity can narrow the gender wage gap with

relatively little disruption or adverse employment effects, there is dissent (McGavin (1983), Killingsworth (1985)).

Any of these research programs provide a contentious basis for assessing the impact of wide-ranging comparable worth legislation. First, differences between the public and private sectors render the experiences of state and local governments a problematic source. Second, the results of simulations can be overwhelmed by debate over their underlying assumptions. Third, the structure of European and the Australian labor markets is very different than their North American counterparts, due to, for example, greater government regulation, central wage councils and nation-wide bargaining by strong central unions. Fourth, as stressed by Killingsworth (1990) it is important to construct the appropriate counterfactual when evaluating the impact of comparable worth, but this can be very difficult for national implementations of the policy. Finally, compliance is often a forgotten issue: implementation of pay equity across firms in a decentralized labor market may be a very different project than its application within a single “model” employer such as a state government, or in a centralized labor market.

What we lack, therefore, is a study of how comprehensive comparable worth legislation, covering both the public and private sectors, affects wages, employment and the gender wage gap in a **decentralized** labor market. This is precisely what we propose in this paper. The origin of our study is a legislative initiative 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 pay equity. 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 begin with a summary of the Ontario legislation and a review of compliance with the Act. Compliance is an important element of the overall evaluation, because comparable worth is a distinctly more complicated labor market regulation than, say, minimum wages or overtime rates. The Act provides precise deadlines for completion of the various steps of pay equity, which act as benchmarks to gauge compliance.

Our empirical analysis focuses on the effects of the legislation on labor market outcomes. Our first goal is to evaluate the legislation on its own terms: the two specific targets of most comparable worth initiatives are the gender wage gap and wages in female jobs. We also provide evidence of some, perhaps, unintended effects of the Act on wages in male jobs, as well as the distribution of employment across job types.

We take advantage of the fact that the Ontario legislation did not apply in 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. We therefore have a better chance of constructing an appropriate counterfactual, a problem that has plagued the evaluation of national pay equity programs in other countries.

In conducting the evaluation it is important to consider whether any lapses in compliance with the Act or other obstacles to its implementation undermine the inference. We argue that the effective impact of the law is of first order interest. We do focus our analysis on those sectors of the labor market where the legislation had the greatest effect. An equally important part of the story, however, is why the law may have failed to have the intended “bite” in other sectors. While some will certainly find important lessons in this episode for improving future initiatives, the analysis will reveal that pay equity is a complicated regulation that precipitated considerable confusion among firms, and appears

to have imposed substantial time and resource costs. Furthermore, it is not clear that many of the suggested improvements to the Act, which would lead to a more centralized labor market, are consistent with prevailing labor market norms.

In section 2, we describe the Ontario legislation, as well as the legal environment prevailing in the province of Quebec, our control jurisdiction. We next review existing surveys of compliance with the Act. This information, along with commentary on the legislation, both highlight the difficulties of applying pay equity in a decentralized labor market and help frame the empirical analysis. In section 3, we review the potential impacts of comparable worth in a model of the labor market with heterogeneous jobs and tastes. In section 4, we review our data and empirical framework. The results and their interpretation are presented in section 5. Finally, we conclude in section 6.

## 2. THE LEGAL ENVIRONMENT

### 2.1. *The Law in Ontario*

The Ontario *Pay Equity Act* of 1987 covers both the public sector and firms in the private sector with 10 or more employees.<sup>6</sup> 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. It also guides implementation of comparable worth defining male and female job classes, acceptable methods

<sup>6</sup>The Act received Royal Assent in June 1987 and was proclaimed on January 1, 1988.

of wage comparison and establishes the Pay Equity Commission as a overseer and arbiter of the legislation.

Women make up approximately 45 percent of the workforce; thus jobs comprising from (45-15=) 30 percent to (45+15=) 60 percent of women are called integrated. Female job classes are those with 60 percent or more females and male job classes are at most 30 percent female. 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. Later, the more common “wage-line” method (called proportionate value) was allowed to accommodate situations where direct job-to-job comparisons are not possible.<sup>7</sup> In addition, a proxy comparator method, restricted to the broader public sector, was implemented allowing male comparators to be found outside the establishment in cases that job-to-job or proportionate value comparisons failed.<sup>8</sup> 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

<sup>7</sup>In 1993 the Act was amended to permit both proportional value comparisons and the proxy method of locating comparators outside an organization. These amendments were announced by the Ontario Minister of Labor in December 1990. Employers were directed to use these new methods for all female job classes that were without a male comparator under the job-to-job method.

<sup>8</sup>Its use is governed by rules outlined in the legislation. They 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”.

2) the initiation of any wage adjustments.<sup>9</sup> Pay equity plans were to be negotiated in establishments with bargaining units. In other establishments, the employer prepared and posted the plan which was then subject to review and possible appeal by employees. In either case, if the process ended in stalemate the Pay Equity Commission decided all outstanding issues. Firms were required to commit up to one percent of the previous year's payroll to pay equity awards, as needed.<sup>10</sup> Payment of awards was to continue until equity was achieved.

The deadlines for different sectors and firms of different sizes are reported in Table 1. The strictest timetable was for the public sector. Both the plan and initial adjustments were required by January 1990. 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.<sup>11</sup> Note that firms of less than 100 employees had 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 subsequent introduction of proportionate value and proxy comparators was also according to a deadline. Firms were required to both post a plan for implementation and

<sup>9</sup>A 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.

<sup>10</sup>The method of adjustment is to be “bottom up” in the sense that the most severely underpaid female jobs are to receive larger increases.

<sup>11</sup>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.

make any initial awards by January 1, 1994.<sup>12</sup>

The initial pro-active stage defined by the deadlines in table 1 has been followed by a complaints stage in which firms are directed to maintain pay equity in the workplace. Changes in compensation that widen any differences in compensation between male and female jobs are prohibited. There are special rules governing the continuation of a pay equity plan on the sale of a business. Finally, firms are directed to continue paying any outstanding awards until pay equity is achieved.

## *2.2. The Law in Quebec*

The comparison group for our analysis is the province of Quebec. While Quebec enacted pay equity legislation with many similarities to the Ontario Act—most importantly the extension of pay equity to the private sector—in 1996, many of its provisions did not come into force until the following year, and more importantly employers are allowed up to four years to develop a pay equity plan. During the period we examine, 1987-1998, Quebec's pay equity provisions were contained in its human rights code.<sup>13</sup> The resulting system was complaint based and in principle covered all workers outside the federal jurisdiction. Enforcement was the responsibility of the Quebec Human Rights Commission. Despite the seemingly wide-ranging jurisdiction 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

<sup>12</sup>Firms with 50 or more employees were required to make awards retroactive to January 1, 1993.

<sup>13</sup>The concept of pay equity was introduced to the code in 1977.

typical for a complaint based system, and are bases for arguments often forwarded in favor of pro-active policies.<sup>14</sup>

The message here, therefore, 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.

### *2.3. Enforcement and Compliance*

While rich in detail on the meaning and implementation of comparable worth, the Ontario legislation is less precise about enforcement and compliance. This is left in the hands of the Pay Equity Commission, which has two constituent parts. The first is the Pay Equity Office (PEO) charged with educating employers and employees about pay equity, monitoring compliance, providing dispute resolution services and issuing orders to resolve disputes. The second is the Pay Equity Hearings Tribunal, which rules on disputes that arise under the Act, typically on reference from the PEO. The legislation specifies fines for both individuals and firms that ignore Tribunal orders, impede a review officer, or coerce or penalize anyone acting under the legislation. To the dismay of some there is no requirement that employers file their pay equity plans with the Commission. Firms are required, however, to inform the PEO of any female job classes that are ineligible for pay equity evaluation due to the lack of a male comparator, either on a job-to-job or proportional value basis.<sup>15</sup> More generally, the system is intended to be “self-monitoring”,

<sup>14</sup>Symes (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.

<sup>15</sup>The cases are then referred to a Review Officer. The dispute resolution services of the PEO appear to be widely used, with between 1400 and 1700 open cases in a given month between January 1990 and December 1995 ((Read 1996)). Monthly inflows and outflows averaged 50-100 cases during this period.

much like other labour market regulations such as minimum wages.

Direct documentation on early compliance with the Act is provided by surveys commissioned by the PEO (SPR Associates (1991); Canadian Facts (1992, 1993); Institute for Social Research (1994)).<sup>16</sup> Each survey focuses on establishments of a specific size, and was conducted roughly 6-12 months after the relevant deadline for posting a pay equity plan.<sup>17</sup> Unfortunately, it is difficult to compare the results across surveys due to differences in sample design and questionnaires. The information collected on compliance with the posting deadlines, however, appears to have a common basis.

In table 1 we report measures of compliance with the posting deadline by establishment size. The story here is that public sector employers and large private sector employers were less likely to be in violation of the law. Under 10 percent of these employers, compared to 20 percent of 50-99 employee firms and 80 percent of 10-49 employee firms, reported doing “no work” on pay equity. A similar pattern is evident in the numbers for full compliance: roughly one-half of public and large private firms versus only 12-30 percent of smaller firms. Recall that smaller employers had to decide by the posting deadline whether to post a plan. At the time of the survey, 45 percent of 50-99 employee firms and 83 percent of 10-49 employee firms had not yet made this decision. The strong message here is a lack of enthusiasm for, or perhaps defiance of, the law in smaller firms.<sup>18</sup>

Compliance is also correlated with union status. Some illustrative numbers for public and large private firms are also reported in table 1. In both the private and public sectors non-union firms were more likely to have all their plans posted. One reason for this

<sup>16</sup>Overviews of some or all of these surveys are provided in Gunderson (1995), Read (1996) and MacDonald and Thornton (1998). MacDonald and Thornton conducted their own survey of 27 firms in the Toronto area in 1994. They document instances on non-compliance and manipulation of the rules, as well as some positive influences of the process.

<sup>17</sup>The survey of firms with 10-49 employees (ISR 1994) was conducted in the spring of 1994.

<sup>18</sup>Within the public sector almost all firms who had done no work on pay equity had 99 or fewer employees.

discrepancy is that pay equity plans were negotiated in union shops.<sup>19</sup>

It is clear from the surveys that confusion about the law and the resource costs of pay equity plans contributed to these lapses in compliance. First, the researchers report difficulties conducting the surveys because interviewees lacked understanding of the key requirements of the law and key dimensions of comparable worth such as “gender neutrality”. These problems were particularly severe in small firms (Institute for Social Research (1994)). Second, the surveys also include information on factors impeding progress on pay equity for firms with 50-499 employees. Twenty-five (22) percent of firms with 100-499 (50-99) employees report resource costs as a factor. Seven (10) percent report confusion about the law as a problem. Finally, 17 (15) percent report the fact that no pay equity awards are needed as a reason, a proportion that is particularly high among firms that had done no work on pay equity.

Further inference from these surveys is limited. Additional information from firms with 50-499 employees (Canadian Facts (1992) and Canadian Facts (1993)) was collected by a subsequent mail survey, and the response rate appears to be correlated with compliance.<sup>20</sup> That said, a few points are worth noting. First, compliance in the largest private firms is more impressive when weighted by female employment. For example, 91 percent of women working in establishments with 500 or more employees were employed in establishments that had posted some or all of their plans. Second, within the sample of firms with plans, clerical workers were the job group most often cited as eligible for an award. The percentage of firms (or plans) reporting this ranges from 44 percent to 75 percent. Third, within the sample of firms that had done some work on pay equity, many reported using external consultants, and new compensation systems were typically developed. The proportion of

<sup>19</sup>In firms of 100-499 employees 73 percent of non-union firms compared to 50 percent of union firms had posted all their plans. These results are from a mail survey (see below).

<sup>20</sup>For example, by the telephone survey 51 percent of 100-499 employee firms had posted all their plans (table 2) compared to 64 percent according to the mail survey.

firms reporting the latter ranges from 40-65 percent.

The surveys also document problems finding male comparators.<sup>21</sup> Not surprisingly, it appears to have been more important for smaller firms. It is also interesting to note that these problems led to amendment of the legislation to allow proportional value comparisons and proxy comparators. The surveys also report estimates of administrative costs per employee, the percentage of female job classes receiving adjustments, and the total costs of the adjustment as a percentage of total payroll. These numbers are difficult to interpret, however, due to non-response and the sample definitions.

The review of the legislation commissioned by the PEO in 1996 (Read 1996) provides interesting anecdotal evidence about compliance. Through consultation Read reports learning of “extensive non-compliance among small to medium size employers” (p. 4). A survey of 4800 members of the Canadian Federation of Independent Business (CFIB; an organization of small to medium size businesses) submitted to the review, reveals that just 20 percent of employers covered by the Act had completed any of the required steps (Read 1996, p.38). Consistent with the evidence reviewed above, however, the survey also reveals that compliance was positively correlated with firm size. The reasons for non-compliance included “lack of time and money” and the “requirements are too complicated/difficult”. Among those firms that had complied, the average administrative cost exceeded the average pay equity award.

The evidence, therefore, is that compliance was a substantial problem, especially in small firms. This, perhaps, is not surprising. The reasons are likely the same as those that exempted firms with less than 10 employees from the legislation in the first place. Pay equity comparisons work best in large samples. Small firms are more likely to have

<sup>21</sup>In public firms with a plan, 41 percent of female job classes had no comparator. In private firms with 500 employees and more it was 27 percent of female job classes. Sixty three percent of plans in firms with 100-499 employees and 55 percent of plans in firms with 50-99 employees reported some female classes with no comparators. Finally, in the small sample of 10-49 employee firms with plans, 74 percent reported lacking comparators for female job classes.

trouble finding male comparators, and wage line methods would seem to pre-suppose some minimum number of observations. The job evaluation systems necessary to carry out comparable worth evaluations can be expensive, and therefore are less burdensome when they can be amortized over a large number of employees.

Commentators appear to have also identified these problems, as well as other obstacles to pay equity in a decentralized labor market. For example, a review of pay equity practitioners in trade unions laments that the Ontario legislation restricts comparisons and negotiations over pay equity plans within establishments (Genge 1994). It favorably cites public sector applications of comparable worth in other provinces where central bargaining is the norm. The PEO proposed “external average adjustment” as yet another way of calculating awards when male comparators were not available. Female job classes in the private sector that lacked male comparators would receive the average pay equity adjustment within their industry. Finally, free collective bargaining could also lead to complications: once pay equity is achieved the legislation permits gender wage differentials to re-emerge if they result from differences in power across bargaining units. Robb (1990) argues that this provision in tandem with gender differences in union membership could serve to widen the male-female wage gap.

A common thread here is that some of the larger obstacles to the Ontario law arise from its accommodation of a decentralized labor market. First, gender segregation by establishment can limit the comparison of male and female jobs. The suggested solution is to widen the definition of an establishment and allow local or province wide bargaining in union environments. Second, free bargaining between unions and employers is viewed as potentially undermining pay equity. Third, the exceptions for compensation differences based on productivity related attributes are viewed as an escape hatch for employers. Robb (1990, p.18) identifies the tension here when she states “Clearly, allowing such exceptions is a double-edged sword. While many of these provisions are essential if the labor market is to be allowed to operate efficiently, it is also recognized that they can be used by employers

to circumvent the legislation”. Finally, pay equity was enacted as a mostly self-managed program, consistent with the operation of many other labor market regulations in North America. More stringent reporting obligations and monitoring may have led to higher rates of compliance but would also entail higher administrative costs.

### 3. THE POTENTIAL IMPACTS OF COMPARABLE WORTH

Proponents of comparable worth argue that the impact of the law should be a straightforward increase in wages in female jobs, and therefore a reduction in the gender wage gap. While we will look for this intended impact, economic models of the labor market yield quite different predictions, and we will also search for these unintended effects.

Killingsworth (1987) explores the effects of a pay equity policy in a two sector model of low wage female jobs and high wage male jobs. He illustrates that in a world of heterogeneous jobs and tastes there is no reason to expect equal pay for jobs of “comparable worth”. The wage is in part determined by the preferences of the marginal worker, whose valuation of different jobs could differ substantially from that of the representative worker (or of a job evaluation scheme) in a given occupation.

Comparable worth confuses the average and the margin and thereby prescribes wages in female jobs above the equilibrium level. Moving up along the demand curve in the low wage sector entails a decrease in employment. The direct effect, therefore, is similar to the predicted impact of minimum wages or unionization, or more generally any intervention that raises the wage above the level indicated by the intersection of supply and demand in the relevant market.

The increase in the wages of female jobs leads to substitution and scale effects. Since female and male jobs are typically defined along occupational lines the elasticity of substitution between the two job classes is arguably small. This increases the likelihood that the the negative scale effect for male jobs outweighs any positive substitution effect, leading

to a decline in demand in the high wage sector.

The initial distribution of the sexes across the two job types in this model is due to a taste for discrimination among employers of high wage jobs. Their psychic income from employing males is a concave function of the male wage bill. A decline in demand for these jobs reduces the wage bill, and thus increases the amount they “discount” male wages. Therefore, the negative scale effect increases the male/female wage differential within this sector; at least in the short run in which the supply of males and females to the two sectors are fixed.

In the longer run, the destination of individuals released from the female jobs can be important. Their subsequent movement into jobs that are not covered by the legislation will be attenuated by the re-training and qualification requirements of cross-occupational migration. In the present context an obvious destination is smaller firms where the law was largely ignored. There will be fewer impediments to this within occupation movement, and it will allow individuals to preserve any occupational specific capital. The analogy is to a two-sector model of minimum wages or unions with covered and uncovered sectors. The migration of workers results in an outward shift in the supply of labor to this sector, that will depress the wages of female jobs in smaller firms.

The net effect of the law on female wages at the aggregate level is therefore ambiguous, reflecting the countervailing impacts on wages in firms that do and do not comply. The release of workers into the “uncovered” sector will be attenuated if some individual decide to queue for the now higher paying female jobs in complying firms. In the much longer run, the supply of workers to these jobs may be further augmented by individuals in other occupations attracted to these female jobs by the higher wages.

In Killingsworth’s model the initial increase in wages in female jobs, following the implementation of comparable worth, is given exogenously. In application, comparable worth policies tie the wages in female jobs to those in male jobs. This additional constraint on the firm’s hiring decision would lead to a trade off between the cost and quality of

individuals filling male jobs. Empirically, this would turn up as a decline in the wages in male jobs as lower “quality” candidates were hired.

## 4. DATA AND EMPIRICAL STRATEGY

### *4.1. Data*

The data for our study are drawn from the Canadian Labor Force Survey (LFS), which is a monthly study of individuals’ labor force status. At the end of the 1980’s supplements, called the Labor Market Activity Survey (LMAS), were conducted collecting 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 LFS. We combine data from two different waves of the LMAS, the years 1987 and 1988, and from the 1997 and 1998 LFS. The two-year periods 1987/88 and 1997/98 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 in each year. Similarly, we use the November rotation of the 1997 and 1998 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.<sup>22</sup>

Some average characteristics of individuals in our sample are provided in Tables 2a (females) and 2b (males). The statistics reveal the many similarities of people in the two provinces. That said, an important difference is the higher unionization rate (of

<sup>22</sup>Hourly 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.

approximately 10 points) in the province of Quebec. Also, Durable Manufacturing and Business Services comprise 3 to 4 percentage points more of both women and men in Ontario. The distribution of workers across establishments of different sizes is very similar, however.

Another interesting Ontario/Quebec difference is the greater growth of educational attainment in Quebec. The percentage of workers with a university degree rises from 14 to 21 percent among women and from 15 to 19 percent for men; in Ontario the corresponding changes are 17 to 21 percent for women and 18 to 20 percent for men.<sup>23</sup> Male-female comparisons reveal that in 1997/98 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.

Identifying the groups of individuals affected by the law is not straightforward. The intent 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 a particular individual’s job, nor do we know whether s/he benefited from a pay equity adjustment. Thus, we can only identify individuals “at risk” of having received a pay equity award.

To proxy the missing information, we merge information on the percentage of occupational employment that is female (PFEM) obtained from the 1991 Canadian Census using the occupation codes available in both data sets.<sup>24</sup> These are the 1980 SOC: 4-

<sup>23</sup>While 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.

<sup>24</sup>The number of observations in our provincial sub-samples of the 1987/88 LMAS and 1997/98 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.

digit occupation codes comprising approximately 500 categories.<sup>25</sup> We therefore attribute to individuals, both in 1987/88 and in 1997/98, the proportion of employment in their occupation that is female computed at the provincial level from the 1991 Census (these percentages are reported in Table A-1). Our analysis generally abstracts from any changes in percentage female, and therefore job type, endogenous to the law.<sup>26</sup>

#### *4.2. Identifying the Targets of the Law*

The effective impact of the pay equity legislation depends on both compliance and the incidence of “undervalued” female jobs. 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.

We provide an initial description of this relationship in figure 1 where we plot kernel regressions of average occupational log wages on the femaleness of the occupations, weighting by occupation size.<sup>27</sup> The vertical line denotes the level of femaleness rate (PFEM), 0.6, at which the job classification switches from integrated to female. For all levels of femaleness rates, there are large within-occupation gender gaps evidenced by the distance

<sup>25</sup>In the 1996 Census, these occupations were coded using a totally different classification system, the 1990 NOC, which is not compatible with the previous system.

<sup>26</sup>We have examined changes in the percent female by major (2-digit) occupational groups using our LMAS87/88 and LFS97/98 data. While some occupations become more female (e.g., managerial, administrative and related occupations) and others less (e.g., clerical occupations) over the period, there were no changes in the job type—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 1997/98.

<sup>27</sup>We use a Gaussian weighing function and a bandwidth of 0.075 for both provinces.

between the men's and the women's regression lines for the corresponding years.<sup>28</sup> For both sexes in both provinces, wages decline with femaleness in the neighborhood of the crossover point into female jobs—a neighborhood dominated by sales clerks—and then recover to various degrees. The mapping of these mostly non-linear relationships into the widely used linear specification is shown for women in Ontario in 1997/98.<sup>29</sup> Here we see the important contribution of variation around the crossover point to the negative slope of the linear relationship.

In table 3 we report the estimated (linear) effect of occupational gender composition on women's and men's log hourly wages in both provinces.<sup>30</sup> 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.<sup>31</sup>

The estimated relationship between gender composition and wages is smaller, in either province, than corresponding estimates for the US (Macpherson and Hirsch 1995).<sup>32</sup> In both provinces the penalty is larger in the non-union sector than the union sector. Important here for determining where the Act would have its largest potential impact, is that the estimated effect of gender composition on female wages in Ontario's union sector

<sup>28</sup>This result is consistent with new evidence by (Bayard, Hellerstein, Neumark and Troske 1999) that there is a sizeable within-occupation/establishment gender gap.

<sup>29</sup>The linear regression line is from a weighted least-squares regression of occupational wages on the femaleness rate, using occupation sizes as weights.

<sup>30</sup>The 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.

<sup>31</sup>See Baker and Fortin (2000) for a complete description of the procedure.

<sup>32</sup>In Baker and Fortin (2000), 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 (1999), 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.

is **positive** and statistically significant. This may indicate that unions had already been promoting the use of gender neutral pay systems in their negotiations. By this criterion, therefore, unionized female jobs are less likely to be “undervalued” than other female jobs.

The point estimates by establishment size indicate that the penalty is generally greater in small firms than in larger establishments, at least for females. 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. Focusing on non-unionized workers in large establishments reveals a more substantial penalty to female jobs. For females in Ontario, the penalties were -0.202 (0.066) in 1987/88 and -0.167 (0.070) in 1997. Interestingly, these estimates are very similar to estimates of the penalty to female jobs in the United States over this period (Macpherson and Hirsch 1995).

A further refinement of this inference is provided by examining the distribution of wages across gender within a given job type. In Figure 2, we plot the kernel density estimate of female and male wages in Ontario by job type in 1987/88 and in 1997/98 superimposing the female and male densities. The first thing to note is that the distribution of female wages in each case lies to the left of the distribution of males wages. While these comparisons make no allowance for differences in characteristics, there is ample evidence that females hold the lower paid jobs of each type.

The comparison of the wage densities across years provides a simple view of the aggregate changes in wages for these groups, which we ultimately map into the pay equity law (see Figures A-1 and A-2). Both in Ontario and in Quebec, the women’s wage distributions all exhibit rightward shifts while men’s wage distributions are mostly unchanged, save for some fattening of the upper tail. To the eye, the rightward shift of women’s wage distribution in female jobs in Ontario is not much greater than in Quebec. Following increases in minimum wages in 1997/98, there is a fattening of all wage distributions in Quebec around the level of the minimum wage. Interesting, this does not happen in Ontario with

the exception of the male wage distribution in female jobs. Are men being substituted for women in lower paying female jobs? They are some telling examples, which may or may not be related to the law. In Ontario, cashiers and tellers (occupation 4133) went from being 94 percent female in 1987/88 to 88 percent in 1997/98, and housekeepers and servants (occupation 6142) went from 80 percent female in 1987/88 to 72 percent in 1997/98, while the femaleness of these occupations did not change in Quebec.

We therefore have several clues of where to look for the impact of the legislation. First, the information on compliance focuses our attention on public and large private sector firms, especially in the non-union sector. This is the sector where compliance was relatively good and the problem of finding male comparator was less severe. Second, the non-union sector is also highlighted by the inference from table 3. It is here that the penalty to female jobs is substantial, and, interestingly, comparable to the penalties estimated for the United States. Finally, an examination of the distributions of male and female wages by jobs type suggests that women, as evidenced by their lower wages, are more likely to be in undervalued positions.

### *4.3. Empirical Framework*

We isolate the effects of Ontario's pay equity legislation on Ontario's workers by comparing different measures of wages and employment before and after the law was implemented.<sup>33</sup> To control for other changes in the economic environment that affect 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 as a control. The primary assumptions underlying this identification strategy are that 1) the introduction of the pay equity legislation provides exogenous variation in this policy instrument, 2) any secular trends in labor market behavior are common to individuals in the two provinces, and 3) there is no

<sup>33</sup>See Meyer (1995) for good summaries of our empirical strategy.

Ontario specific shock to behavior co-incident with the implementation of the legislation.

The base specification for individual  $i$  is

$$(1) \quad y_{it} = \alpha_T T_{it} + \alpha_O ON_{it} + \alpha_{TO} T_i \cdot ON_{it} + X_{it} \beta + \varepsilon_{it},$$

where  $T_{it} = 1$  for observations from 1997 or 1998 and 0 otherwise,  $ON_{it} = 1$  if the individual  $i$  lives in Ontario and 0 otherwise, the  $X_{it}$  are controls for demographic and job/firm characteristics, and  $y_{it}$  is the logarithm of the wage or a measure of employment in a particular class of jobs. The primary coefficient of interest is  $\alpha_{TO}$  on the first order interaction  $T_i \cdot ON_i$ . This provides an estimate of the difference in the change in  $y_{it}$  in Ontario and Quebec between 1987/88 and 1997/98, conditioning on the control 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.

We start by estimating (1) (by ordinary least-squares) separately, by sex, for individuals in female jobs, male jobs and integrated jobs, respectively. The preceding discussion, however, revealed important lapses in compliance in some firms. Therefore, one way of more carefully isolating the impact of the legislation is to focus on workers in those firms where compliance was most complete. For example, we can focus on workers in large non-union firms.

Incomplete compliance can also be used to address a potential flaw in our identification strategy: the presence of province specific labor market trends and/or shocks. If these are important, workers in Quebec will not provide the appropriate counterfactual. If we assume that the legislation was of little consequence in smaller firms, we can use the experience of their workers to control for these sorts of effects. As noted above, firms with less 10 employees were exempted from the legislation. Any direct effect of the law on firms with 10-49 or 50-99 employees was clearly compromised by large gaps in compliance.

A further consideration, however, is that any disemployment effects of the law in larger firms, could cause spillovers of workers into smaller firms thereby depressing wages there. These would be most severe if the disemployment effects were large and the resulting mobility was primarily within occupation. In this case, our estimate of the direct effect of the legislation on the wages in female jobs will be biased upwards as it will also include the indirect negative effect on wages in female jobs in firms that did not comply with the legislation. Attenuating this bias will be any (greater) ability of large firms to absorb the increased wage costs mandated by the legislation due to, for example, more dominant market positions and the associated rents.

To implement this strategy we estimate the equation

$$(2) \quad y_{it} = \alpha_T T_{it} + \alpha_O ON_{it} + \alpha_L L_{it} + \alpha_{TO} \cdot T_{it} \cdot ON_{it} + \alpha_{TL} \cdot T_{it} \cdot L_{it} + \\ + \alpha_{OL} \cdot ON_{it} \cdot L_{it} + \alpha_{TOL} \cdot T_{it} \cdot ON_{it} \cdot L_{it} + X_{it}\beta + \epsilon_{it},$$

where  $T_{it}$  and  $ON_{it}$  are defined above, and, where  $L_{it} = 1$  for workers employed in a sector assumed to be affected by the law and 0 otherwise. The coefficient of interest,  $\alpha_{TOL}$ , indicates the relative change in the Ontario/Quebec difference in the  $y_{it}$  differential between workers for which the legislation is assumed to have had some effect and those for which it did not.

## 5. RESULTS

### 5.1. *Effect on Wages*

We begin in Figure 3 plotting 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.<sup>34</sup> We

<sup>34</sup>The Survey of Consumer Finances is comparable to the CPS March supplements. The reported statistics are the logarithm of the ratio of annual earnings in reference year to annual hours

also plot the implied linear trends before and after 1990, the first year in which the law might be expected to have some impact. Despite the severe 1990 recession, the wages of women continue to grow in the 1990s. In contrast, the wages of men start on a downward trend in this period. In either period men and women in Ontario earn more on average than their counterparts in Quebec.

In table 4 we report 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 1997/98. 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 growth in female jobs trailed. A difference-in-difference calculation reveals that the decrease in the overall gender wage ratio was not greater in Ontario than in Quebec over the period.

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. At the broadest level, pay equity's goal is to eliminate that part of the gender wage ratio that is due to the undervaluation of female jobs. Evaluated at the level of the aggregate gender wage ratio, the law would not appear to have had the intended effect. The increase in the ratio in Ontario over the period was matched by the increase in Quebec. A variety of factors including the lapses in compliance documented above could have led to this result. The mechanics of the policy link the wages in female jobs to the wages in male jobs. Therefore, another gender gap addressed by the policy is

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 converted to 1997 dollars using the Consumer Price Index.

the ratio of average wages in female jobs to average wages in males jobs. In the last line of table 4 we report the ratio of average female wages in female jobs to average male wages in male jobs. By this measure, Ontario's performance was marginally worse than Quebec's.

The more formal analysis begins in table 5, where we explore changes in male and female wages over the period. We estimate equation (1) separately for the two sexes, for "all jobs", and by job class. Panel a) of table 5 contains simple Ontario/Quebec comparisons. The results for all jobs indicate that between 1987/88 and 1997/98 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. This common advantage of Ontario workers, across job types that were nominally affected and unaffected by the law, suggests the presence of province specific trends. A very similar story is told by the results for workers in large firms in panel b). Most of the point estimates are comparable to the results in panel a), and again indicate some general advantage to workers in Ontario.

In panels c) and d) we break down the results for large firms by union status. This is potentially important, because union firms were relatively slow to comply with the pay equity legislation, and there is no wage penalty to female jobs in this sector. According to the surveys reviewed in table 1, large non-union firms were the most likely to comply with the legislation, and therefore, this is the sector where the law potentially had the greatest bite. Comparing the estimates in panels c) and d) to those in panel b), the uniform advantage of Ontario's workers is even clearer. The most notable difference between the two sectors is the experience of women in male jobs: in union firms they enjoyed higher wage growth than their counterparts in Quebec, while in the non-union firms they experienced significantly lower wage growth.

We next address the possibility of province specific trends, estimating equation (2) and identifying sectors where the law can be assumed to have had little effect. The general advantage of Ontario workers in table 5 is one clue that these trends are biasing inference.

Note also, that assuming the law had its greatest effect in large non-union firms, the estimates in panel d) indicate that the pay equity law had a positive effect on the wages of women in female jobs. The “problem” is, that by this identification strategy the law also had a significant positive effect on female wages in integrated jobs, jobs nominally untreated by the law. This is not impossible: some integrated jobs at the 4-digit occupational level may be female jobs at the firm level, and therefore our integrated category contains some female jobs.<sup>35</sup> However, given that the estimated effect for integrated jobs is larger than the estimated effect for female jobs, we would need to assume that our integrated category is dominated by female jobs at the firm level, or perhaps the very lowest paid female jobs that received very large pay equity awards.

Some intuition for the results we will retrieve from equation (2) is provided in table 6, where we report estimates of equation (1) for small firms (less than 100 employees) in the union and non-union sectors, respectively. There was very poor compliance among small firms and a high incidence of plans lacking male comparators. If we estimate equation (2) assuming small firms were unaffected by the law, the result will be roughly the difference between the estimates in panels c) and d) in table 5 and panels a) and b) in table 6. Since workers in small firms in Ontario mostly experienced higher wage growth than their counterparts in Quebec, the differencing will purge this province specific trend. More interesting to the case in hand, note that Ontario females in male jobs experienced at least 9 percent higher wage growth than corresponding workers in Quebec in all firms except large non-union firms. The difference in the outcome of workers at these firms from that of workers in all other firms, will be attributed to the pay equity legislation.

Table 7 contains estimates of equation (2). In panel a) we use the large/small firm comparison pooling the union and non-union sectors. The inference, therefore, is based on comparing changes in the large firm/small firm difference in wages between Ontario and

<sup>35</sup>Another possibility emerging from the firms’ experience is that pay equity plans promoted the use of administrative pay system for all types of jobs.

Quebec. This strategy will control for any province specific trends that are common to the entire labor market. For women, this purges the general advantage of Ontario workers as well as any relative, positive wage growth in both integrated and female jobs. The relative negative effect on women's wages in male jobs remains, however, suggesting it is something specific to large firms in Ontario. For men, some of the general advantage of Ontario workers remains in this triple difference, although the relative advantage of Ontario men in integrated jobs is attenuated.

In panels b) and c) we further isolate workers in large non-union firms. In panel b) we use the sample of workers in large firms and assume that the law had little effect in the union sector. In this comparison we control for a provincial trend that is specific to large firms. The results for women are broadly consistent with those panel a). First, there is no evidence of a general advantage for workers in Ontario: the estimate for all jobs is small and insignificant. Second, while we do obtain a larger, significant, positive estimate of relative wage growth for female jobs, the point estimate for integrated jobs is also larger than in panel a). The fact that the estimates for these two job types are both larger here, makes it unlikely that the result for female jobs captures the impact of the legislation. Third, there is a negative effect on the wages of women in male jobs at large non-union firms in Ontario, consistent with the intuition established through the comparison of tables 5 and 6. For men, the general advantage of Ontario workers disappears. There is some evidence of lower growth for men in female jobs although the estimate is not significant. Finally, the estimates for integrated and male jobs are (in tandem) lower in these results.

In panel c) we restrict our attention to non-union workers and again assume small firms are unaffected by the law. The structure here should control for provincial trends that are specific to the non-union sector. The estimates are consistent with those in panel b). First there is little evidence of a general advantage for Ontario's workers. Second, the estimates for women in female and integrated jobs, and for men in integrated and male jobs change in tandem from the results in panel b) suggesting some common factor. Third, what is

again uniquely attributed to the law is lower wage growth for women in male jobs.

The message, therefore, is that the legislation had little effect on the overall stature of women in Ontario. This is consistent with evidence of important lapses in compliance with the law, rather than providing evidence that pay equity, per se, is ineffective. When we focus on the sector of the labor market where law had its greatest effect, however, we are hard pressed to find an advantage to women in female jobs. Some women in female jobs did receive a relative benefit, but women in male jobs would appear to have been hurt by the legislation, by some estimates quite substantially. Men in female jobs would also appear to have lost some of the advantage they previously enjoyed.

One objection to this inference is that the data are simply uninformative about the pay equity legislation. On one hand, certainly most of the wage effects we attribute to the law are negative rather than positive, and we lack direct evidence that specific workers received pay equity adjustments. On the other, commentators such as Read (1996) provide specific examples of pay equity awards to female jobs. Of course any increases in wages resulting from specific awards could have come at the cost of lower wage growth from other sources, or have been counterbalanced by lower wage growth in subsequent years. Over the 10 year period that we examine, any positive effects on wages in female jobs may have been undone by future developments.

We provide two complementary pieces of evidence to address this criticism. First, as noted above, the surveys indicate that clerical workers were the most likely to receive awards in firms that had developed a plan. We therefore, re-estimate the regressions in tables 5 and 7 for wages in female jobs adding a dummy variable for clerical jobs and a full set of interactions with the other effects. In each case, therefore, we attempt to discover an Ontario specific effect on the wage growth in clerical jobs. The results are reported in table 8. In the simple Ontario/Quebec comparisons there is evidence that for women wage growth was indeed higher in clerical jobs than in other female jobs. In fact, the effect for female clerical workers in larger establishments, 0.113 (.032), is the largest estimated

impact on female jobs thus far. Once, we take account of Ontario specific trends, however, the results are less decisive: the point estimates for clerical jobs in Ontario are small with large standard errors.<sup>36</sup> For men, the point estimates are mostly small, consistently statistically insignificant and all negative.

Our second exercise is to focus on very female occupations: those in which the percentage female is 0.9 or higher. Here the attempt is to focus on a group of individuals most likely to be in female jobs at the firm level and thus candidate for an award. We add a dummy variable for these occupations, and a full set of interactions, and again re-estimate the regressions in tables 5 and 7. The results are also reported in table 8. Again there is modest evidence of higher wage growth in highly female jobs. Many of the point estimates have large standard errors, however, reflecting in part the very small sample of workers in these jobs, especially for males.

Another objection is that our identification strategy does not effectively isolate workers in firms where the law had bite. It is certainly true that some union workers received pay equity awards. Likewise, some smaller firms (by our definition) did develop pay equity plans. Therefore, our control groups in table 7 will contain workers affected by the law. To determine the sensitivity of our results on this margin we have re-estimated equation (2) defining small firms as those with less than 20 employees.<sup>37</sup> Recall that workers in firms of fewer than 10 employees were explicitly excluded from the legislation. The resulting estimates, reported in Appendix table A-2, are remarkably similar to those in panels a) and c) of table 7.

Still another objection is that there is little intuition for our most consistently significant

<sup>36</sup>Another difficulty in interpreting wage changes for clerical workers is that as a broad occupational category, clerical work declined from 32 percent of the female workforce in 1987/88 to 24 percent in 1997/98. A similar decline has been observed in the United States, and may be related to technological change.

<sup>37</sup>The information on establishment/firm size is categorical, as defined in tables 3a and 3b. We therefore cannot isolate workers in firms of 10 or fewer employees,

result: the relatively lower wage growth for women in male jobs. While we take up the interpretation of this result below, it is worth noting here that this effect is not confined to a specific group of male occupations that women work in. We have re-estimated equation (2) restricting the sample to professionals (codes 2000-4000) and non-professionals (codes 4000+).<sup>38</sup> The estimates are remarkably similar to those reported in table 7. For example, for women in male occupations coded 2000-4000, the estimate using the identification strategy of table 7, panel c) is -0.301 (0.094). This can be compared with the result for all occupations of -0.316 (0.088). For women in male occupations coded 4000+ the estimate is -0.305 (0.099). Therefore, there is little heterogeneity in the effect: this is something that affected all females in male jobs in non-union large firms, but not their male counterparts, nor females in male jobs in unionized large firms (table 5) or in small firms (table 6).

How do these changes in wages map into changes in the male/female wage gap? In tables 9 we report estimates of equation (1) pooling males and females, and adding a dummy variable for sex, along with a full set of interactions with  $ON_{it}$  and  $T_{it}$ . In panel a) we present simple Ontario/Quebec comparisons analogous to the comparisons in table 4. Consistent with the results there, the refined inference here is no statistically significant difference in the reduction of the gender wage gap in the two provinces. The general advantage of both men and women in Ontario nets out. At this very broad level, therefore, the course of the gender wage differential in Ontario was not changed by the pay equity legislation.

In panel b) we use the sample of workers in larger establishments. This leads to different results. In particular, the reduction in the wage gap is now marginally *smaller* in Ontario. The results by job class reveal the source. The wage gap in male jobs in Quebec fell over the period while in Ontario it stayed roughly constant. Recall that an increase in the male/female wage gap in male jobs is one of the predicted consequences of comparable

<sup>38</sup>See table A-1 for a description of the occupation codes.

worth in Killingworth's model. In panels c) and d) we explore any differences between workers at large firms in the union and non-union sectors. At the aggregate level (all jobs) the wage gap grows in Ontario's union sector. Breaking this result down by job class, however, the estimates are small and statistically insignificant. There are much larger provincial differences in large firms in the non-union sector. Women in female and integrated jobs fared better in Ontario than in Quebec, while women in Ontario in male jobs fared relatively worse. The result for male jobs is striking. The point estimates suggest that again the wage gap in Ontario was relatively constant over the sample period.

Estimates of equation (2) are reported in table 10. Assuming that workers in small firms are untreated by the law, women in Ontario in large firms are at a statistically significant disadvantage relative to their counterparts in Quebec. In all jobs, there was a larger relative increase in wage gap in the control province. Breaking this down by job type, it is the relative fall in the stature of Ontario women in male jobs that drives this result. Consistent with the inference from table 7, the lower wage growth for women in these jobs led to a relative increase in the wage gap. In the estimates in panels b) and c), we find a similar result along with an estimated increase in the stature of women in female jobs at large non-union firms in Ontario. A check with table 7 reveals this is due to the relatively lower wage growth for men in these jobs. Overall, the message of tables 9 and 10 is that pay equity did not bring any general advantage to women working in sectors where the law was followed. There is some indication of a relative decrease in the gender wage gap in female jobs, but this must be balanced against the relative increase in the gap in male jobs.

### *5.2. Effects on Employment: Preliminary Results*

In Figure 4, 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.<sup>39</sup> The implied trends before and after the law (the dotted lines) are also presented. Consistent with the stylized facts, in the earlier period women's employment rates, fueled by the higher labor market participation of young women, shows a positive trend.<sup>40</sup> Following the severe recession of 1990/92, many groups exhibit negative employment rates in the 1990s. The trend in women's employment rates in Ontario after the law is however, the only one which is statistically significantly negative.<sup>41</sup> This is in contrast to Quebec where women's employment rates stabilize in the 1990s. For men, employment rates after the law display similar trends in both provinces.

One way to determine the employment effects of the legislation is to examine the flows of workers out of female jobs over the period the law came into effect, using the experiences of other provinces or other types of jobs as a control. This sort of analysis is not possible with the cross-section data we use here, and panel data spanning the period is not available. Examining the overall employment rates of males and females is not necessarily appropriate, as individuals released from now higher paying female jobs may find employment in other types of jobs where markets clear.

What we examine here is the share of employment represented by female jobs. One reason this might decline in response to comparable worth legislation for a given sex is completely administrative. Firms may alter their hiring practices to integrate jobs and thus remove them from the purview of the law. Any more general reductions in the share of employment for both males and females would result from the disemployment effects of pay equity awards to female jobs dominating the net substitution and scale effects on other types of jobs.

<sup>39</sup>The reported statistics are employment rates in the reference week for individuals 16-69.

<sup>40</sup>As 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.

<sup>41</sup>Regressing the employment rates on a constant plus a time trend gives a coefficient of -0.0048 (0.0020) for Ontario women and of -0.0020 (0.0035) for Ontario men. Admittedly, these coefficient are not statistically different.

In the first panel of table 11 we report estimates of equations (1) using a dummy variable for working in female jobs as the dependent variable, for workers in large and small establishments respectively. For women, the estimate for all workers in large establishments is negative but not significant. Breaking this down between the union and non-union sectors, it is the decline in the former that drives the aggregate result. In smaller establishments the share of female jobs increases uniformly in the two sectors. For males, there is little to distinguish the estimates for the large and small establishments. The share of female jobs in either case displays no substantive change.

In the second panel are the estimates using the identification strategy of equation (2). Both estimates using small firms as an additional control group indicate small reductions in the share of employment in female jobs for women. For men, the estimates are consistently small and statistically insignificant, again indicating no strong relative changes in the share in female jobs.

Put together, the results of both panels indicate that there might have been a shift in women's employment in female jobs from larger establishments, the covered establishment to the smaller ones, the uncovered ones. More generally though, the inference is that the impact of pay equity awards on employment in female jobs were very small from the perspective of a 10 year period.

### *5.3. Interpretation*

Our analysis uncovers little evidence that Ontario's experiment with comparable worth yielded large gains for workers in female jobs, or general benefit to the overall status of women. This is at odds with previous studies of pay equity in state and local governments or in Australia (but see Killingsworth 1990). Whether positive or negative, much previous research maintains that comparable worth has some impact. Our results also contrast with the findings of simulations of the impact of economy wide applications of this type of

regulation. The distinguishing feature of the Ontario case is clearly compliance, or the lack thereof. Implementation of comparable worth is relatively straightforward within a single “model” employer, such as a local government. Likewise, compliance in countries, such as Australia, can be easily monitored by central wage councils or nationwide bargaining with large unions. Finally, full compliance is a standard assumption in simulation exercises.

The evidence here is that compliance is a much more difficult problem within a decentralized labor market. We document significant lapses in observance of the requirements of the legislation, particularly among smaller firms. Other labor market regulations are relatively simple: minimum wage legislation prescribes a single wage, with perhaps an exemption based on age and/or tenure with the firm. Comparable worth proposes a multifaceted evaluation of all jobs within a firm, and interjob comparisons based on statistical analysis. In response, firms turned to external consultants, or simply ignored the law.

The observations and prescriptions of commentators recognized this tension. As noted above, most suggestions to improve the legislation would have also led to a more centralized labor market, whether through centralized bargaining for unions or using male comparators that were external to the firm. We should also note that our analysis does not touch on any manipulation of pay equity plans by firms to avoid awards (McDonald and Thornton 1998); a charge for which there is anecdotal evidence but no objective documentation of which we are aware. Again a proposed solution to this problem—a standardized job evaluation system for all firms in the province—would undermine the flexibility of the labor market.

Focusing on the sector of the labor market where the law had its greatest bite, we find that the pay equity awards documented in PEO literature and reviews of the law did not lead to relative growth in the wages of female jobs over a longer time span. For example, in Ontario relative wage growth for women in female jobs over the sample period was comparable to relative wage growth for women in integrated jobs. We would need to make a strong assumption about mismeasurement of female jobs at the firm level to view this as evidence that the legislation had a positive effect. In fact, the effects that we attribute

to the legislation are negative: lower wage growth for women in male jobs and to a lesser extent for men in female jobs. This former effect is quite substantial and the consistently identified. It affects women in a variety of occupations working in large non-union firms. It contributed to a substantial relative increase in the male/female wage gap in male jobs in Ontario over the sample period. Killingsworth (1987)'s model identifies this as a result of comparable worth if any pay equity awards lead to scale effects on male jobs and the psychic income employers of male jobs get from employing males is concave in the male wage bill.

A more mechanical account of this finding is that pay equity ties the wages in male and female jobs. This could lead to a trade off between the cost and quality of individuals filling male jobs. Why then would this affect women in male jobs but not men in male jobs? Here the provisions of the Ontario legislation can be instructive. It directs employers to compare female jobs to the lowest paid comparable male job and/or class. That is, the wages in female jobs are tied to the wages in the lowest paid comparable male job. Who holds these lower paid male jobs? The information in figure 2 and the evidence of significant gender wage gaps by job type reveal that females are more likely to hold the lower paying jobs. Alternatively, conditioning on all the observable characteristics that might be input to a comparable worth evaluation, a gender dummy for female remains a significant predictor of lower wages.

The negative effect on the wages of males in female jobs is not a prediction of any model of comparable worth of which we are aware. Certainly, there was (and is) a gender wage gap in female occupations. The job evaluation systems developed for pay equity plans may have brought this to light. Under this scrutiny, we can speculate that employers worked towards bringing the wages of males and females in these jobs into line.

Note that the Ontario legislation explicitly prohibits any reductions in wages to accomplish pay equity. The law is silent on wage growth, however. Furthermore, it is not clear how any regulation of wage growth could be accomplished. It is exactly here, however,

that we find the largest effects.

## 6. CONCLUSIONS

We empirically investigate the introduction of comparable worth to the Ontario labor market 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, smaller firms appear to have largely ignored the new rules, and in larger firms official deadlines were often missed. As a result, only 33 percent of working women and 5 percent of working men (proportions working in female jobs at large firms) were likely directly subject to the legislation. Second, the effect of the legislation was further dampened by the lack of male comparators for female jobs. The early 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.

As a direct consequence, we find no robust evidence that the pay equity legislation transferred a general benefit to women in Ontario over a six to eight year period. Any relative increases in wages in Ontario over the period were enjoyed in all types of jobs: female, integrated and male. Furthermore, at the aggregate level the gender wage gap closed at a similar rate in Ontario and Quebec. Likewise, the penalty to female jobs in both provinces grew by comparable amounts since the law was introduced.

Even when we focus on the sector of the labor market where compliance with the law was relatively complete, we do not find that law had the "bite" intended by its proponents. Any direct, positive effects on the wages of females working in female jobs are modest and typically statistically insignificant. The pay equity awards documented in reports from the Pay Equity Office do not appear to have had a lasting effect. Our most consistently

estimated effect of the law is that it instead suppressed wage growth; for women working in male jobs and to a lesser extent males working in female jobs.

The lessons from this investigation are at least two-fold, one general, and the second perhaps more specific to the case in hand. First, comparable worth would appear to be a unwieldy and complicated regulation for a decentralized labor market. The logistics of implementing comparable worth in the private sector has not been closely examined in previous studies. This would appear to be substantial obstacle to the effectiveness of this policy. Furthermore, suggested improvements to the Ontario law to increase compliance inevitably involve centralization of wage determination or externally (to the firm) imposed evaluation/award programs. This is an important message, for pay equity is not costless to firms that do comply. If a community adopts comparable worth as a goal, any deviation from full “treatment” implies that the costs and any benefits of the program are being unfairly distributed.

Second, the evidence here is that the law was more likely to have unintended, rather than intended, consequences. Any advantage to women in female jobs might have been at the expense women in male jobs, who appear to have lost by the law. While inferences from a public policy intervention are in some sense specific to the jurisdiction where it occurred, the law in Ontario likely had it greatest effect in large non-union firms, a sector of the labor market where there is a substantial penalty to work in female jobs (comparable to estimates for the United States) and that is relatively flexible.

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TABLE 1  
IMPLEMENTATION DEADLINES AND COMPLIANCE WITH THE ONTARIO *Pay Equity Act*

Type of Employer	Deadline for Posting Plans	Deadline for Initial Awards	Proportion of Firms with <sup>a</sup>						
			All Plans Posted		Some Plans Posted	Plans in Development	No Work Done	Not Stated	
			All	Union Non-Union					
<b>PUBLIC SECTOR:</b>									
All Establishments (>1000 Employees) (500-999 Employees)	1990	1990	46	12.5	– <sup>b</sup>	24	12	10	8
			20	–					
<b>PRIVATE SECTOR:</b>									
Larger Establishments									
>499 Employees (>1000 Employees) (500-999 Employees)	1990	1991	50	38	77	26	20	4	
			51	77					
100-499 Employees	1991	1992	51	50	73	15	22	6	6
Smaller Establishments “Opt In”/“Opt Out”									
50-99 Employees	1992/NA	1993/1993 <sup>c</sup>	30			16	28	20	
10-49 Employees	1993/NA	1994/1994 <sup>c</sup>	12			3	5	80	

*Notes:* Source for deadlines: CCH Canadian Limited (1997). All deadlines were to be posted on the January 1st of the indicated year. NA is not applicable. Source for proportions: SPR (1991), Canadian Facts (1992, 1993) and ISR (1994). The information was collected by telephone survey 6-12 months after the relevant posting deadline (3-6 months for private firm with 10-49 employees) with the exception of the proportion by union status for private firms with 100-499 employees. These were collected through a subsequent mail survey, the response to which was correlated with compliance.

<sup>a</sup> The reported statistics are the proportion of the firms of the relevant type and/or size who reported the indicated level of compliance with the posting deadlines for their pay equity plans.

<sup>b</sup> Too few firms in the population to calculate a relevant proportion.

<sup>c</sup> Smaller firms that “opted out” of posting a plan had to make **all** pay equity awards by this date.

TABLE 2A  
MEANS OF SELECTED VARIABLES – WOMEN

Variable	Ontario		Québec	
	1987/88	1997/98	1987/88	1997/98
Log Wage (1997 CAN\$)	2.51	2.62	2.49	2.57
Age	36.9	38.6	36.3	38.7
Education: <sup>a</sup>				
Primary	.063	.028	.103	.052
Some High School	.098	.051	.119	.072
High School Grad	.365	.274	.349	.208
Some Post-Secondary	.108	.093	.083	.072
Post-Secondary or Trade (in 1997) Certificate	.197	.343	.204	.385
University Degree	.168	.211	.140	.211
Part-time	.206	.215	.214	.225
Married	.668	.687	.674	.703
Metropolitan Area	.760	.808	.703	.727
Industrial Sector:				
Agriculture, Forestry Fisheries and Mining	.012	.009	.007	.007
Construction	.017	.009	.013	.011
Manufacturing				
Nondurable	.082	.067	.109	.103
Durable	.082	.070	.037	.042
Transportation and public utilities	.047	.048	.045	.050
Trade	.152	.154	.158	.143
FIRE	.097	.089	.081	.084
Business and professional services	.073	.085	.046	.067
Consumer services	.101	.119	.123	.118
Medical, welfare, and educational services	.269	.292	.310	.300
Public administration	.066	.057	.069	.070
Federal	.019	.039	.021	.034
Provincial (State)	.019	.015	.028	.032
Local	.016	.019	.014	.018
Union coverage	.322	.283	.431	.402
Tenure	5.61	7.52	6.72	8.43
Establishment Size:				
$s < 20$	.338	.330	.364	.339
$20 \leq s < 100$	.310	.311	.307	.300
$100 \leq s < 500$	.228	.225	.208	.219
$s \geq 500$	.123	.134	.121	.141
No. of observations	7059	13807	4750	7792

*Notes:* <sup>a</sup> The classification of education changed between 1987/88 and 1997/98. 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	1997/98	1987/88	1997/98
Log Wage (1997 CAN\$)	2.80	2.82	2.73	2.74
Age	37.0	38.6	37.1	39.1
Education: <sup>a</sup>				
Primary	.096	.042	.149	.080
Some High School	.125	.069	.153	.100
High School Grad	.348	.287	.325	.194
Some Post-Secondary	.102	.083	.076	.064
Post-Secondary or Trade (in 1997) Certificate	.147	.317	.149	.374
University Degree	.183	.202	.147	.187
Part-time	.032	.049	.045	.056
Married	.695	.676	.713	.687
Metropolitan Area	.746	.797	.622	.701
Industrial Sector:				
Agriculture, Forestry Fisheries and Mining	.027	.023	.035	.031
Construction	.083	.075	.083	.060
Manufacturing				
Nondurable	.109	.099	.128	.124
Durable	.213	.208	.165	.172
Transportation and public utilities	.107	.105	.104	.107
Trade	.144	.158	.152	.155
FIRE	.047	.051	.041	.037
Business and professional services	.050	.067	.035	.055
Consumer services	.050	.067	.063	.078
Medical, welfare, and educational services	.084	.079	.104	.107
Public administration	.083	.065	.088	.075
Federal	.039	.059	.042	.053
Provincial (State)	.017	.013	.030	.026
Local	.034	.030	.036	.030
Union coverage	.420	.341	.531	.449
Tenure	8.21	8.71	8.33	9.32
Establishment Size:				
$s < 20$	.263	.273	.280	.284
$20 \leq s < 100$	.321	.310	.330	.320
$100 \leq s < 500$	.256	.240	.258	.240
$s \geq 500$	.159	.178	.132	.156
No. of observations	8318	15048	6216	9104

*Notes:* <sup>a</sup> The classification of education changed between 1987/88 and 1997/98. 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  
CHANGES IN THE EFFECT OF GENDER COMPOSITION ON LOG WAGES

Specification	Ontario			Quebec			
	Before law	After law	Time Diff.	Before law	After law	Time Diff.	Time Diff. for Location
<b>ALL WORKERS:</b>							
Women	-.080** (.037) [7059]	-.108** (.043) [13805]	-.028 (.057)	-.082* (.045) [4750]	-.115** (.047) [7796]	-.033 (.065)	.005 (.086)
Men	-.099** (.036) [8318]	-.052 (.045) [15045]	.047 (.058)	-.026 (.039) [6216]	-.037 (.045) [9071]	-.011 (.058)	.060 (.083)
<b>UNION WORKERS:</b>							
Women	.100** (.049) [2369]	.106** (.044) [4248]	.006 (.066)	-.014 (.058) [2122]	-.001 (.055) [3307]	.013 (.080)	-.007 (.104)
Men	-.058* (.034) [3708]	-.034 (.036) [5682]	.024 (.050)	.036 (.036) [3457]	.012 (.041) [4335]	-.024 (.055)	.048 (.074)
<b>NON-UNION WORKERS:</b>							
Women	-.168** (.042) 4690	-.208** (.049) 9557	-.040 (.065)	-.126** (.054) 2628	-.209** (.050) 4489	-.054 (.079)	.036 (.105)
Men	-.134* (.047) 4610	-.058 (.054) [9365]	.076 (.072)	-.078 (.057) [2759]	-.079 (.057) [4736]	-.001 (.081)	.077 (.108)
<b>WORKERS IN LARGER ESTABLISHMENTS (<math>s \geq 100</math>):</b>							
Women	-.039 (.048) [2339]	-.056 (.048) [4892]	-.017 (.068)	-.037 (.061) [1470]	-.105* (.058) [2612]	-.068 (.084)	.051 (.118)
Men	-.083* (.043) [3477]	-.020 (.052) [6402]	.063 (.067)	-.058 (.045) [2383]	-.053 (.050) [3497]	.005 (.067)	.058 (.095)
<b>WORKERS IN SMALLER ESTABLISHMENTS (<math>s &lt; 100</math>):</b>							
Women	-.096** (.042) [4720]	-.133** (.049) [8913]	-.037 (.065)	-.114** (.051) [3280]	-.122** (.050) [5184]	-.008 (.071)	-.029 (.096)
Men	-.094** (.042) [4841]	-.084* (.046) [8643]	.010 (.062)	.001 (.045) [3833]	-.050 (.048) [5574]	-.051 (.066)	.061 (.091)

*Notes:* Before the law corresponds to 1987/88, after the law to 1997/98. Other controls include a quartic in age, six education classes, dummies metropolitan area, industry(10), employment in the federal, provincial and local public service, part time work, married, tenure, union coverage and firm size (4) where appropriate. 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. Number of observations are in brackets. Double asterik (\*\*) indicates significance at the 5% level. single asterik (\*) indicates significance at the 10% level.

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.	
<b>WOMEN'S WAGES:</b>							
All jobs	13.87	15.34	.106	13.39	14.66	.095	.011
Female jobs	13.64	15.03	.102	13.12	14.37	.095	.007
Integrated jobs	14.05	15.62	.112	13.95	15.17	.087	.024
Male jobs	14.74	15.93	.081	13.18	14.39	.092	-.011
<b>MEN'S WAGES:</b>							
All jobs	18.42	18.77	.019	17.14	17.32	.011	.008
Female jobs	16.42	16.66	.015	16.81	17.21	.024	-.009
Integrated jobs	18.79	19.54	.040	17.68	18.36	.038	.001
Male jobs	18.51	18.66	.008	16.91	16.72	-.011	.019
<b>FEMALE/MALE WAGE RATIO:</b>							
All jobs	.753	.817	.085	.781	.846	.083	.002
Female jobs	.831	.902	.086	.780	.835	.070	.016
Integrated jobs	.748	.799	.069	.789	.826	.047	.022
Male jobs	.796	.854	.072	.779	.861	.104	-.032
Women in female jobs/ men in male jobs	.737	.805	.093	.776	.859	.108	-.015

*Note:* In 1997 Canadian dollars. Before the law corresponds to 1987/88, after the law to 1997/98. Women make up approximately 45% of the workforce. Integrated jobs comprise from (45%-15%=30% to 45%+15%=60%) of women in the occupations. Female job classes are 60% or more female and male job classes are at most 30% female.

TABLE 5  
ESTIMATED EFFECT ON LOG HOURLY WAGES OF WORKING  
IN ONTARIO VS. QUÉBEC IN 1997/98 vs. 1987/88

Sample	Women			Men		
	Ontario * 1997/98	Std. error	No. of obs.	Ontario * 1997/98	Std. error	No. of obs.
A) ALL WORKERS IN						
All Jobs	.045**	(.008)	33412	.045**	(.008)	38686
Female Jobs	.043**	(.010)	19004	.057**	(.026)	3120
Integrated Jobs	.064**	(.014)	11450	.053**	(.015)	11947
Male Jobs	.023	(.029)	2958	.040**	(.009)	23619
B) WORKERS IN LARGER ESTABLISHMENTS IN						
All Jobs	.041**	(.013)	11313	.073**	(.011)	15779
Female Jobs	.047**	(.016)	6343	.060*	(.036)	1315
Integrated Jobs	.071**	(.026)	3365	.071**	(.022)	4472
Male Jobs	-.044	(.044)	1410	.072**	(.013)	9992
C) UNION WORKERS IN LARGER ESTABLISHMENTS IN						
All Jobs	.027*	(.015)	6524	.077**	(.012)	9904
Female Jobs	.029*	(.018)	4294	.072*	(.022)	933
Integrated Jobs	.032	(.035)	1516	.058**	(.026)	2295
Male Jobs	.095**	(.048)	714	.077**	(.013)	6676
D) NON-UNION WORKERS IN LARGER ESTABLISHMENTS IN						
All Jobs	.045*	(.024)	4789	.051**	(.022)	5875
Female Jobs	.083**	(.034)	2046	-.000	(.081)	382
Integrated Jobs	.109**	(.038)	2047	.080**	(.037)	2177
Male Jobs	-.172**	(.078)	696	.062**	(.030)	3316

*Note:* Calculations are from the LMAS for 1987 and 1988 and from the Ingoing Rotation Group of the LFS for 1997 and 1998. Larger establishments employ at least 100 employees. Other explanatory variables include dummies for Ontario and for 1997/98, 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 6  
ESTIMATED EFFECT ON LOG HOURLY WAGES OF WORKING  
IN TREATED SECTOR IN ONTARIO VS. QUÉBEC IN 1997-98 VS. 1987-88

Sample	Women			Men		
	Ontario * 1997/98 * Treated Sector	Std. error	No. of obs.	Ontario * 1997/98 * Treated Sector	Std. error	No. of obs.
A)						
UNION WORKERS IN SMALLER ESTABLISHMENTS IN						
All Jobs	.044**	(.016)	5522	.038**	(.014)	7299
Female Jobs	.038*	(.020)	3732	.054	(.054)	761
Integrated Jobs	.050	(.033)	1473	.016	(.029)	1853
Male Jobs	.096	(.067)	317	.041**	(.017)	4685
B)						
NON-UNION WORKERS IN SMALLER ESTABLISHMENTS IN						
All Jobs	.048**	(.012)	16577	.010	(.013)	15608
Female Jobs	.043**	(.015)	8932	.030	(.053)	1044
Integrated Jobs	.058**	(.020)	6414	.041*	(.024)	5622
Male Jobs	.092*	(.049)	1231	-.006	(.017)	8942

*Notes:* Calculations are from the LMAS for 1987 and 1988 and from the Ingoing Rotation Group of the LFS for 1997 and 1998. Smaller establishments employ less than 100 employees. Other explanatory variables include dummies for Ontario and for 1997/98, 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. 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 TREATED SECTOR IN ONTARIO VS. QUÉBEC IN 1997-98 VS. 1987-88

Sample	Women			Men		
	Ontario * 1997/98 * Treated Sector	Std. error	No. of obs.	Ontario * 1997/98 * Treated Sector	Std. error	No. of obs.
A) Treated Sector: Larger Establishments						
ALL WORKERS IN						
All Jobs	-.011	(.017)	32412	.046**	(.016)	38686
Female Jobs	.005	(.021)	19004	-.015	(.053)	3120
Integrated Jobs	.002	(.031)	11450	.044	(.030)	11947
Male Jobs	-.150**	(.059)	2958	.050**	(.019)	23619
B) Treated Sector: Non-Union						
WORKERS IN LARGER ESTABLISHMENTS IN						
All Jobs	.015	(.028)	11313	-.033	(.023)	15779
Female Jobs	.080**	(.035)	6340	-.097	(.084)	1315
Integrated Jobs	.060	(.052)	3563	.019	(.045)	4472
Male Jobs	-.295**	(.089)	1410	-.027	(.029)	9992
C) Treated Sector: Larger Establishments						
NON-UNION WORKERS IN						
All Jobs	-.016	(.026)	21366	.036	(.026)	21483
Female Jobs	.037	(.037)	10978	-.080	(.099)	1426
Integrated Jobs	.029	(.042)	8461	.041	(.044)	7799
Male Jobs	-.316**	(.088)	1927	.054	(.033)	12258

*Notes:* Calculations are from the LMAS for 1987 and 1988 and from the Ingoing Rotation Group of the LFS for 1997 and 1998. Larger establishments employ at least 100 employees. Other explanatory variables include dummies for Ontario and for 1997/98, 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 8  
ESTIMATED EFFECT ON LOG HOURLY WAGES OF WORKING IN CLERICAL WORK  
OR ON OCCUPATIONS WITH PFEM  $\geq 0.9$  IN ONTARIO VS. QUEBEC IN 1997-98 VS. 1987-88

Sample Treatment	Clerical Work				Female Jobs with PFEM $\geq 0.9$			
	Women		Men		Women		Men	
	All Female Jobs	Inter- action for Clerical Jobs	All Female Jobs	Inter- action for Clerical Jobs	All Female Jobs	Interaction for Jobs with PFEM $\geq 0.9$	All Female Jobs	Interaction for Jobs with PFEM $\geq 0.9$
All Workers	.010 (.014)	.064 (.020)	.067 (.033)	-.011 (.056)	.028 (.012)	.044 (.021)	.064 (.027)	-.100 (.053)
Workers in Larger Establishments	-.005 (.021)	.113 (.032)	.083 (.046)	-.026 (.075)	.048 (.021)	.017 (.032)	.057 (.038)	.026 (.122)
Union Workers in Larger Establishments	-.007 (.022)	.097 (.038)	.095 (.050)	-.031 (.093)	.038 (.024)	-.001 (.036)	.082 (.045)	-.075 (.129)
Non-Union Workers in Larger Establishments	.044 (.064)	.053 (.075)	.031 (.130)	-.032 (.166)	.054 (.043)	.086 (.069)	-.029 (.084)	.438 (.348)
Treated Sector: Larger Establishments								
All Workers	-.017 (.028)	.056 (.042)	.023 (.067)	-.083 (.113)	.029 (.027)	-.050 (.042)	-.027 (.055)	.277 (.215)
Treated Sector: Non-Union								
Workers in Larger Establishments	.073 (.061)	-.035 (.078)	-.059 (.127)	-.062 (.176)	.046 (.046)	.079 (.073)	-.135 (.087)	-.262 (.254)
Treated Sector: Larger Establishments								
Non-Union Workers	.022 (.069)	.014 (.082)	-.057 (.154)	-.032 (.205)	.047 (.047)	-.014 (.077)	-.111 (.102)	.632 (.448)

*Notes:* Calculations are from the LMAS for 1987 and 1988 and from the Ingoing Rotation Group of the LFS for 1997 and 1998. Larger establishments employ at least 100 employees. Other explanatory variables include dummies for Ontario and for 1997/98, 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. Standard error are in parentheses.

TABLE 9  
ESTIMATED EFFECT ON THE GENDER WAGE GAP OF WORKING  
IN ONTARIO VS. QUÉBEC IN 1997/98 VS. 1987/88

Sample	Gender * 1997/98	Std. error	Gender * Ontario * 1997/98	Std. error	No. of obs.
A) ALL WORKERS IN					
All Jobs	.059**	(.009)	.003	(.011)	72098
Female Jobs	.049**	(.020)	-.011	(.026)	22124
Integrated Jobs	.026	(.017)	.015	(.021)	23397
Male Jobs	.058**	(.023)	-.005	(.029)	26577
B) WORKERS IN LARGER ESTABLISHMENTS IN					
All Jobs	.089**	(.014)	-.032*	(.017)	27092
Female Jobs	.079**	(.028)	.016	(.037)	7655
Integrated Jobs	.057**	(.028)	-.013	(.034)	8035
Male Jobs	.097**	(.034)	-.095**	(.040)	11402
C) UNION WORKERS IN LARGER ESTABLISHMENTS IN					
All Jobs	.100**	(.014)	-.054**	(.019)	16428
Female Jobs	.108**	(.029)	-.034	(.042)	5227
Integrated Jobs	.068**	(.032)	-.033	(.043)	3811
Male Jobs	.013	(.036)	.018	(.045)	7390
D) NON-UNION WORKERS IN LARGER ESTABLISHMENTS IN					
All Jobs	.068*	(.029)	-.002	(.026)	10664
Female Jobs	-.036	(.071)	.131	(.082)	2428
Integrated Jobs	.043	(.045)	.010	(.054)	4224
Male Jobs	.193**	(.066)	-.207**	(.077)	4012

*Note:* Calculations are from the LMAS for 1987 and 1988 and from the Ingoing Rotation Group of the LFS for 1997 and 1998. Larger establishments employ at least 100 employees. Other explanatory variables include dummies for Ontario and for 1997/98, 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 10  
ESTIMATED EFFECT ON THE GENDER WAGE GAP OF WORKING IN  
TREATED SECTOR IN ONTARIO VS. QUÉBEC IN 1997/98 VS. 1987/88

Sample	Gender * 1997/98 *Treated Sector	Std. error	Gender * Ontario * 1997/98 * Treated Sector	Std. error	No. of obs.
A) Treated Sector: Larger Establishments ALL WORKERS IN					
All Jobs	.046**	(.018)	-.060**	(.023)	72098
Female Jobs	.058	(.041)	.034	(.052)	22124
Integrated Jobs	.048	(.035)	-.050	(.044)	23397
Male Jobs	.067	(.048)	-.169**	(.058)	26577
B) Treated Sector: Non-Union WORKERS IN LARGER ESTABLISHMENTS IN					
All Jobs	-.012	(.030)	.044	(.036)	27092
Female Jobs	-.176**	(.060)	.227**	(.086)	7655
Integrated Jobs	-.013	(.055)	.033	(.070)	8035
Male Jobs	.230**	(.069)	-.262**	(.083)	11402
C) Treated Sector: Larger Establishments UNION WORKERS IN LARGER ESTABLISHMENTS IN					
All Jobs	.063*	(.032)	-.060	(.038)	42849
Female Jobs	-.051	(.082)	.167	(.096)	12404
Integrated Jobs	.039	(.051)	-.021	(.062)	16260
Male Jobs	.223**	(.076)	-.331**	(.090)	14185

*Note:* Calculations are from the LMAS for 1987 and 1988 and from the Ingoing Rotation Group of the LFS for 1997 and 1998. Larger establishments employ at least 100 employees. Other explanatory variables include dummies for Ontario and for 1997/98, 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 11  
ESTIMATED EFFECT ON SHARE OF EMPLOYMENT IN FEMALE JOBS  
IN ONTARIO VS. QUEBEC IN 1997-98 VS. 1987-88

Establishment Sample	Women		Men	
	Large	Small	Large	Small
All Workers	-.030 (.017)	.028** (.013)	-.004 (.009)	.009 (.013)
Union Workers	-.032 (.021)	.030 (.024)	-.009 (.011)	.021 (.013)
Non-Union Workers	.003 (.032)	.034** (.015)	.007 (.015)	.003 (.008)
Treated Sector: Larger Establishments				
All Workers	-.052** (.022)		-.009 (.011)	
Treated Sector: Non-Union				
Workers in Larger Establishments	.023 (.036)		.018 (.018)	
Treated Sector: Larger Establishments				
Non-Union Workers	-.027 (.034)		.008 (.017)	

*Notes:* Calculations are from the LMAS for 1987 and 1988 and from the Ingoing Rotation Group of the LFS for 1997 and 1998. Larger establishments employ at least 100 employees. Other explanatory variables include dummies for Ontario and for 1997/98, 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. Standard error are in parentheses.

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 elementa 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	.472
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: fabrcng and asm	.2631	.127
8529	Other fabrcng 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 fabrcng and asm	.4443	.3348
8533	Electrical and related equipment installing and rep	.0277	.0157
8534	Electronic and related equipment fabrcng 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: fabrcng, assmblng and repairing: wood	.2752	.1332
8549	Fabrcng, 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 repairing, 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 rlt'd, 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 rlt'd: 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

TABLE A-2  
ESTIMATED EFFECT ON LOG HOURLY WAGES OF WORKING  
IN ONTARIO VS. QUÉBEC IN 1997-98 VS. 1987-88

Sample	Women			Men		
	Ontario * 1997/98 * Treated Sector	Std. error	No. of obs.	Ontario * 1997/98 * Treated Sector	Std. error	No. of obs.
A) Treated Sector: Larger Establishments						
UNION WORKERS IN SMALLER ESTABLISHMENTS IN						
All Jobs	-.030	(.019)	23272	.030	(.019)	26704
Female Jobs	-.016	(.024)	13203	-.000	(.065)	2118
Integrated Jobs	.050	(.033)	1473	.008	(.037)	8041
Male Jobs	-.141*	(.077)	2121	.044*	(.022)	16545
B) Treated Sector: Larger Establishments						
NON-UNION WORKERS IN SMALLER ESTABLISHMENTS IN						
All Jobs	-.039	(.028)	15131	.015	(.029)	14451
Female Jobs	.019	(.040)	7821	-.038	(.110)	954
Integrated Jobs	.009	(.044)	5990	-.015	(.050)	5192
Male Jobs	-.365**	(.109)	1320	.048	(.037)	8305

*Notes:* Calculations are from the LMAS for 1987 and 1988 and from the Ingoing Rotation Group of the LFS for 1997 and 1998. Smaller establishments employ less than 20 employees. Other explanatory variables include dummies for Ontario and for 1997/98, 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. Double asterik (\*\*) indicates significance at the 5% level. single asterik (\*) indicates significance at the 10% level.

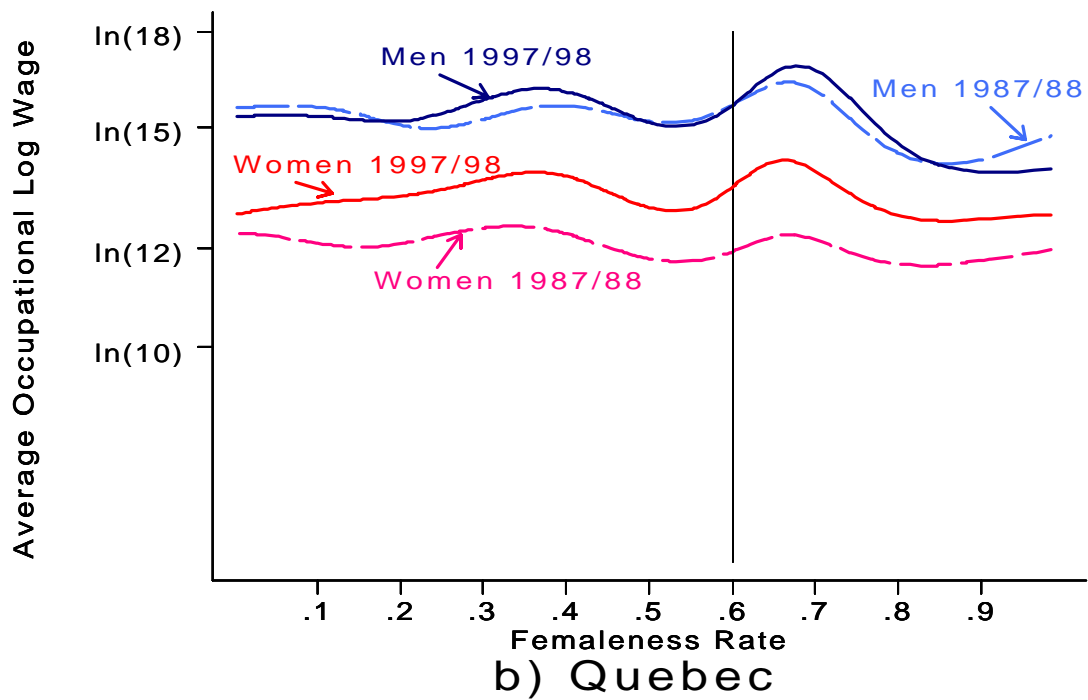
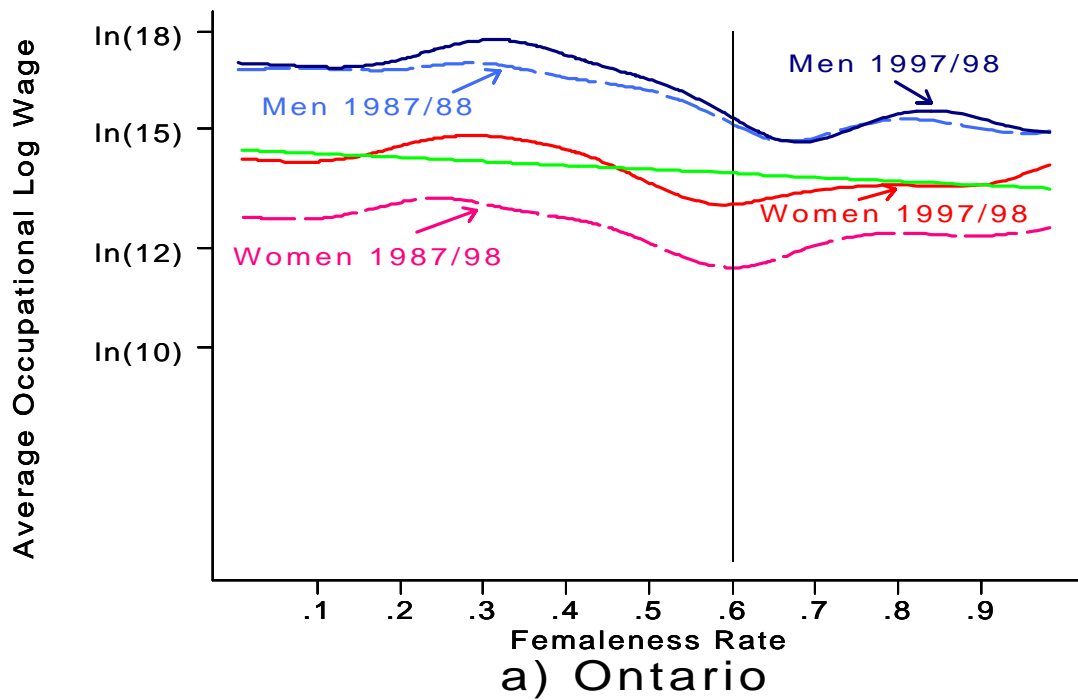


Figure 1. Weighted Kernel Regressions of Average Occupational Wages on Femaleness Rates

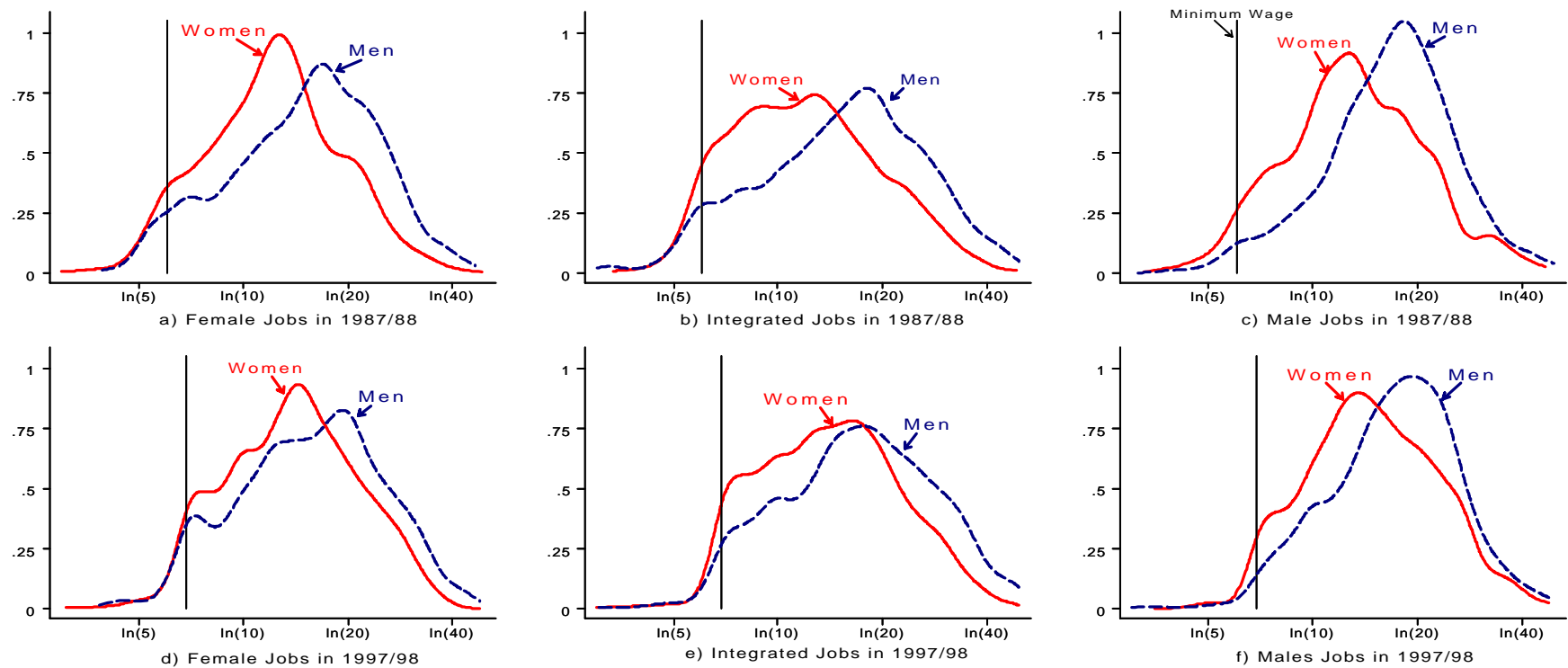


Figure 2. Differences in Women's and Men's Wage Distributions in Ontario

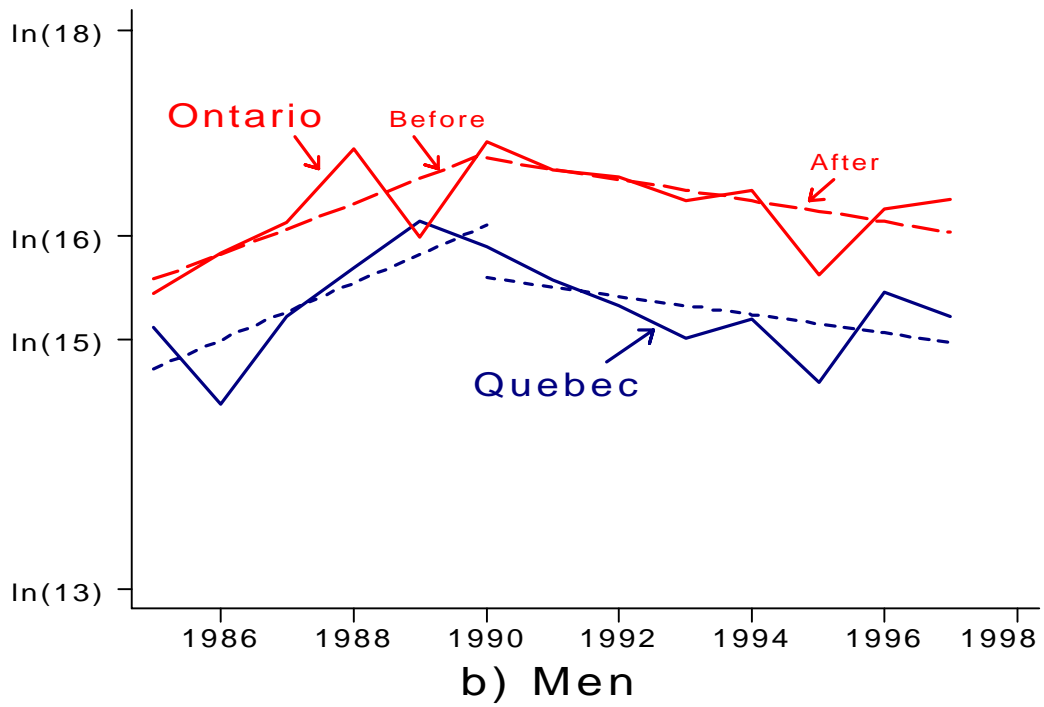
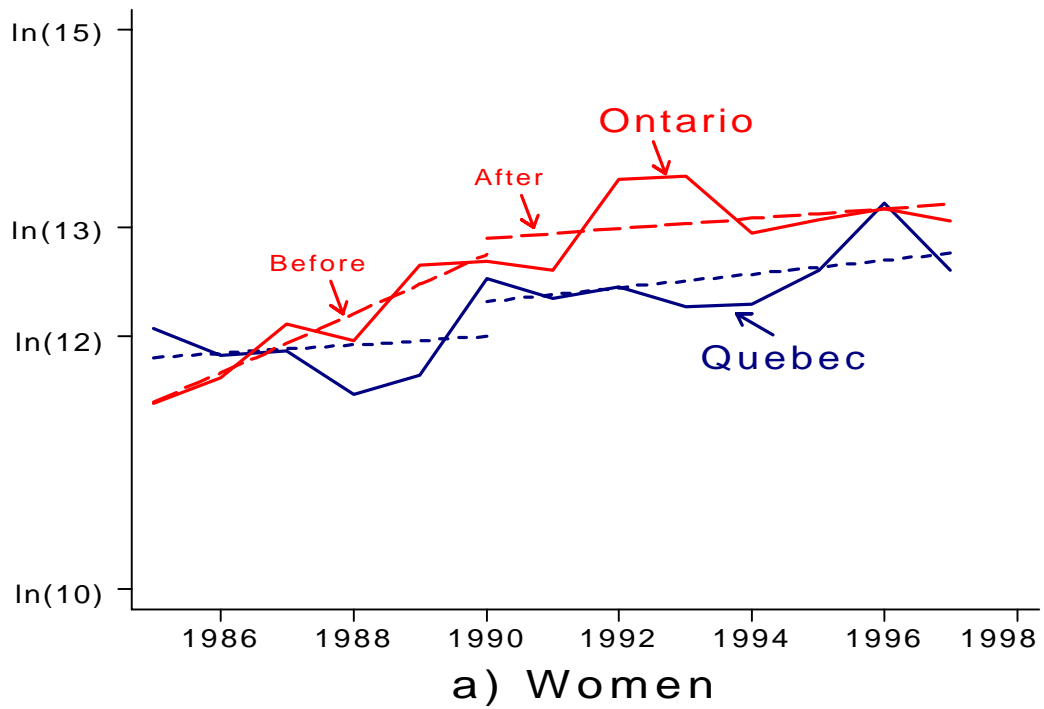


Figure 3. Average Log Hourly Wages and Trends Before and After the Law

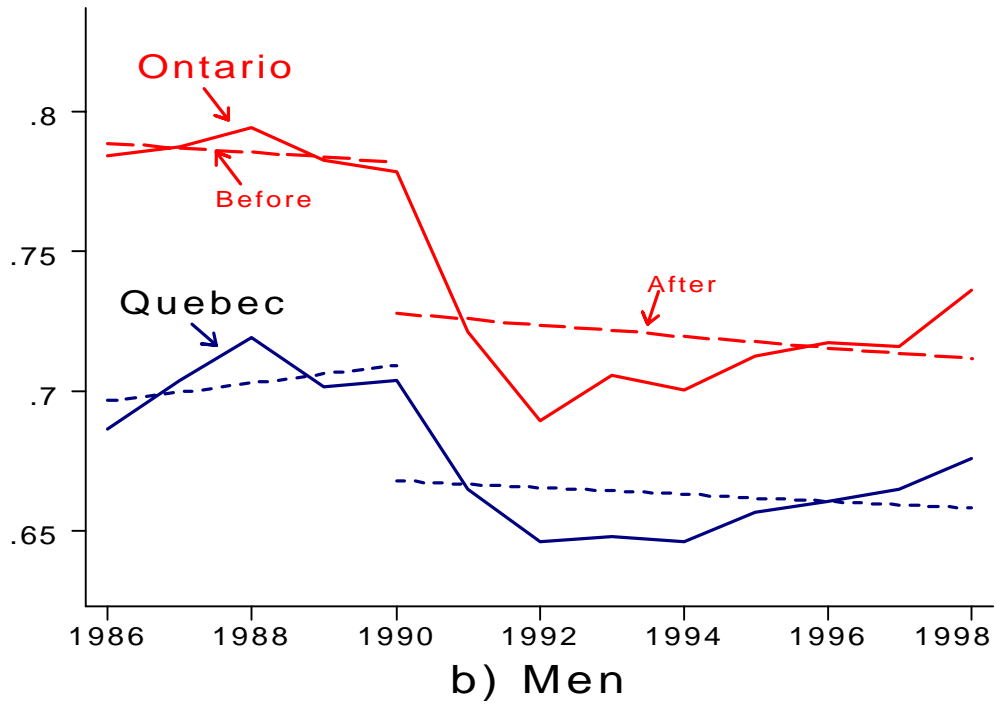
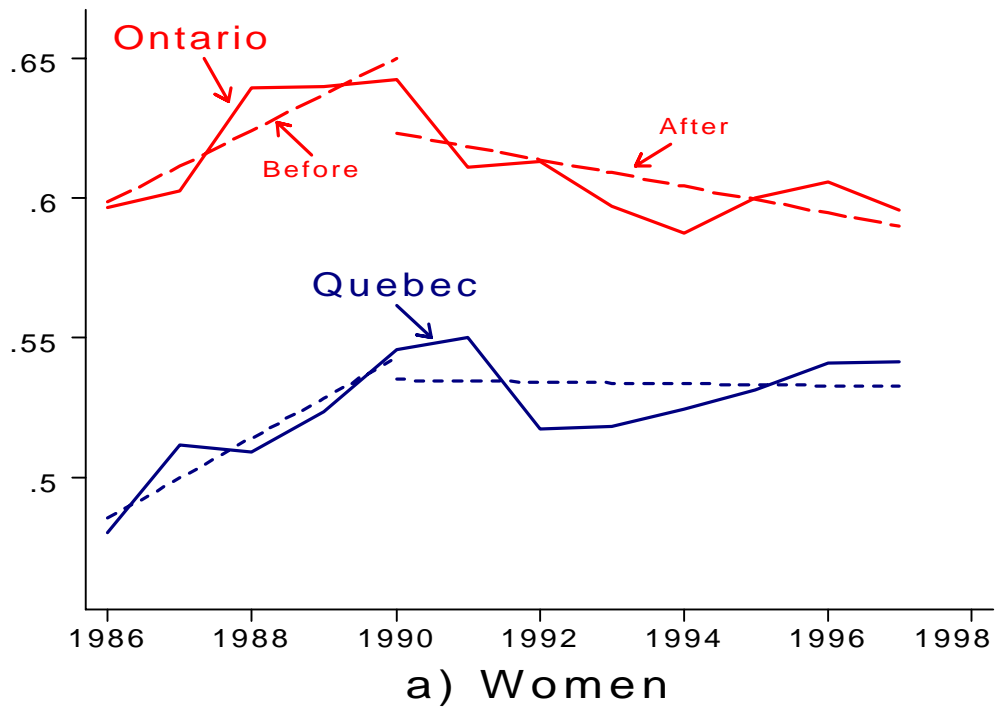


Figure 4. Employment Rates and Trends Before and After the Law

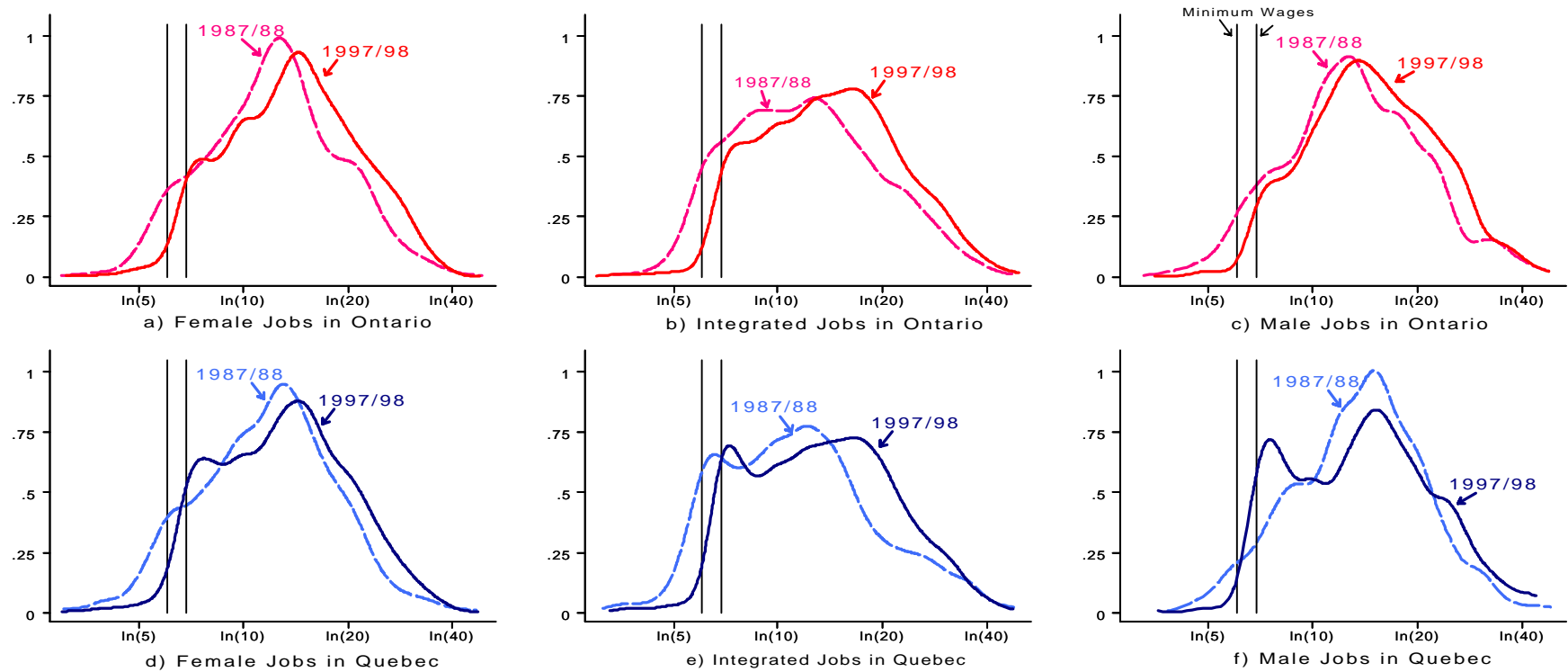


Figure A-1. Changes over Time in Women's Wage Distributions

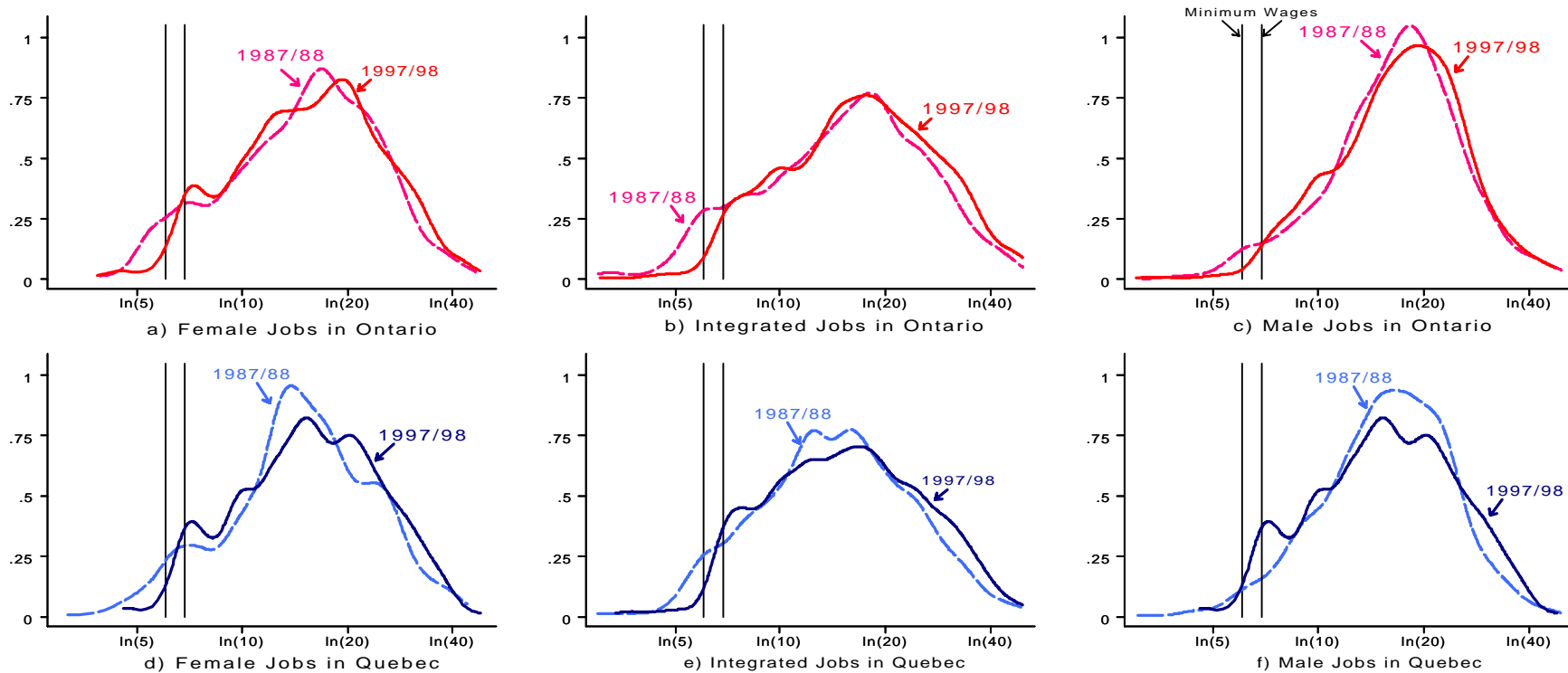


Figure A-2. Changes over Time in Men's Wage Distributions