# Heterogeneity in the Gender Wage Gap in Canada

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## Abstract

There is significant heterogeneity in the male-female wage gap depending on individuals' education, income, and labour supply choices. Using data from the Canadian Census and from the Labour Force Survey, we document to what extent the gap in hourly wages gets compounded by a gender gap in hours worked, making the annual gender pay gap much larger. Within full-time full-year, full-time part year, and part-time jobs, we find much smaller gaps than the overall one, even conditional on detailed occupations. This suggests a different selection by gender into full-time and part-time jobs, with women of higher earnings potential selecting into part-time work. We document that men are more likely to be promoted than women, regardless of marital status, while women are more likely to select into part-time jobs or be absent from work if they have children in their care. Furthermore, the wage gap is very small for younger people and it increases with age, even for single individuals, providing suggestive evidence for statistical discrimination. The male-female wage gap decreases with education, at all quantiles of the income distribution, except for a glass ceiling effect observable for the top 10% of the university wage distribution. We look more deeply at this glass ceiling effect by assigning gender to the individuals on Ontario's Sunshine list of public salary disclosure for top earners. We document a gender imbalance on the list, with twice more men than women making the list, but no substantive gender wage gap. Given all these findings, we contend that wage equality in the labour market can only be achieved in conjunction with gender equality in the household, and that effective policies to target the remaining wage gap should address labour supply and child rearing channels.

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# 1　Introduction

*"It's 2015. Probably time for wage parity."*

After last year Sony hack leaked emails revealing that female stars of the Oscar-nominated American Hustle were paid less than their male counterparts, the issue has been a hot subject in Hollywood; Best Supporting Actress winner Patricia Arquette (Boyhood) concluded her acceptance speech by declaring: "It's our time to have wage equality once and for all, and equal rights for women in the United States of America." [1] Canada's newly elected Prime-Minister Justin Trudeau has appointed Canada's first gender-balanced cabinet. "Because it's 2015", Trudeau has famously said when asked why gender parity was important.[2]

The question of the male-female wage gap has persisted both in academic circles and in the public sphere. The society has evolved considerably in terms of the career expectations of women. Current university enrollment statistics show that female students make up about two thirds of the student body; labour force participation rates of women and the number of hours worked have been constantly edging closer to men's, especially at higher levels of education. Despite this, a gender wage gap still persists. The overarching question is: what can policy do to reduce or eliminate this gap? For policy to be effective, we must first understand where the gender wage gap is coming from.

This paper reviews some of the explanations provided in the literature for the gender wage gap, and provides recent estimates of the gap and relates the current gap to its evolution across time. A major contribution of this paper is its focus on the heterogeneity in the gender wage gap and its implications for policy, something that the literature has pad insufficient attention to. We provide evidence from the two major Canadian surveys, the Census and the Labour Force survey

First, we distinguish between hourly wage gap and annual income gap. Despite constant progress in participation and hours worked, women still work fewer hours than men do, on average. Even if hourly wages were the same between men and women which they are not men would have a higher annual income because they work longer hours. Our research documents the difference between hourly and annual gender wage gaps resulting from the added gender gap in hours worked.

Second, when we restrict the analysis to similar types of jobs in terms of full-time full-year versus part-time, the pay gap is smaller within each category than the overall gender pay gap. That is, the gap is lower within full-time full-year jobs, it is lower within full-time part-year jobs, and there is no gender wage gap within part-time jobs. This suggests a differential selection by gender into full-time jobs and part-time jobs, with women with high earnings potential choosing part-time jobs. Moreover, men are more likely to be promoted than women, regardless of marital status, and women are more likely to select into part-time jobs or be absent from work if they have children in their care. As suggestive evidence for statistical discrimination, where all women on average are expected to conform to average fertility and child rearing choices, we document that the gender wage gap is very small for young people, and not even present for young unmarried individuals, while it is increasing with age, even for singles.

Third, we document the heterogeneity in the gender wage gap across education and wage distribution, even conditional on very refined occupation categories. The male-female wage gap decreases with education, at all quantiles of the income distribution, except for the glass ceiling effect observable for the top 10% of the university-educated workers. At low-skill low-education levels, the male-female wage gap may be generated by the difference in working conditions between

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[1] From The Globe and Mail, February 23, 2015, Coverage of the Oscar awards ceremony by Simon Houpt.

[2] Canadian Press, November 4 2015, Jennifer Ditchburn.

"tough" male jobs in mining and forestry and "soft" female jobs in retail. At high-skill high-education levels we do find evidence of a "glass-ceiling" effect, with fewer women than men being employed at top jobs in their organizations.

To further examine the glass ceiling, we investigate the gender wage gap for workers in the Ontario public sector. Starting from 1996, all workers in Ontario establishments receiving public subsidies - such as local and provincial governments, crown corporations, utilities, schools, universities, hospitals - have their income made public if they earn more than $100,000/year.[3] By assigning gender to individuals on Ontario's Sunshine list, we document a gender imbalance on the list: twice more men than women are on the Sunshine list. Nevertheless, conditional on being on the list, we find no substantive gender wage gap, with women making form 95% to 99% of what men earn, depending on year and sector. The two sectors on the Sunshine List where a gender wage gap is present are Hospital and Universities/Colleges. In the Hospital sector this could be due to a selection by gender into different types of jobs (nurses for women and surgeons for men), while in the post-secondary sector the men may be more likely to have more advanced careers.

Given these findings, we contend that effective and efficient policies to target the remaining wage gap would have to address labour supply and child rearing channels. We further contend that full gender wage equality in the labour market can only be achieved in conjunction with gender equality in the household. Increasing educational achievement may provide a two-fold solution: women will have an incentive to capitalize more on their increased human capital and earning potential; moreover, technological progress may reduce the degree of "toughness" in jobs which can become available to women,decreasing the wage gap at lower quantiles of the income distribution. as well as encourage workers to take higher-skill higher-pay type of jobs. For women to break through the glass ceiling and to encourage female participation in top jobs, policy can achieve a lot. We already invest in educating women, and policy should make it easier for women to stay in the workforce or return soon after fertility interruptions, so that their human capital does not depreciate. Potential means through which this can be achieved is by encouraging men to partake of parental leaves as much as women do ("daddy" leaves), making sure high-quality affordable childcare is the norm  here Ontario's all day kindergarten is an excellent example - as well as ensuring a proper work-life balance in Ontario establishments.

## 2 Literature

### 2.1 Characteristics of Wage and Annual Earnings Ratio

The literature documenting the gender wage gap and its determinants is extensive. We summarize here some of it. Baker and Drolet (2010) found that on average the number of hours worked per week for women working full time was 3-4 hours less than men working full time. The authors found that this difference explained a significant amount of the annual earnings gap; specifically in 2006 the female-male annual earnings ratio for full year workers aged 25-54 was 0.72 but the wage ratio was 0.85. The authors also found that the wage ratio was much higher for younger workers, single persons and university graduates. Secondly, the academic literature shows that women are both more likely to combine periods of paid work with periods of labour force withdrawal for family reasons (Drolet 2002a), and more likely to work non-standard employment jobs such as part time or temporary jobs (Zeytinoglu and Cooke 2008). Zeytinoglu and Cooke also found that female workers employed in these precarious jobs are less likely to be promoted than regular full

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[3]Originally designed as a mechanism to "shame the fat cats" in the pubic sector, the list seems to have had the opposite effect, with public sector unions using the list when bargaining for wage increases for their membership.

time workers, but the same cannot be said of the male labour force. This is compounded by the fact that women tend to be disproportionately employed in low-wage occupations and low wage establishments and industries (Drolet 2002a, 2002b; Reilly and Wirjanto 1999). Hence while some proportion of the pay gap may be accounted for by differences in the choice of hours worked, type of employment, occupation or industry, the proportion that is not explained by this may be due to baseless discrimination against women by employers. Finally, it is also necessary to consider that there is evidence of a glass ceiling effect in Canada where a large male-female pay gap exists at the high end of the pay distribution (Baker et al. 1995; Yap and Konrad 2009). In fact, Cannings (1998a) showed that female managers are 80% as likely to be promoted as males.

## 2.2   Changes in Wage and Earnings Gap Over Time

Documenting how the male-female gap in pay has changed over time, Baker and Drolet (2010) found that women have significantly increased their levels of educational achievement and labour market participation since the 1970s. The authors also found that the wage ratio had increased over the past fifteen years while the earnings ratio has not moved. Drolet (2011) found that the increase in the wage ratio has been due to higher growth in women's relative wages compared to men. The author found that this has been driven by a "cohort effect" such that men and women entering today's labour market are more alike in terms of characteristics like education and wages than in the past and their wages are less likely to diverge over time than in the past which has resulted in the convergence of hourly wages. However, Baker and Drolet (2010) also find that, when controlling for gender differences in productive characteristics, females have increasingly higher levels than males. Hence, the authors argue that if females received the same returns to productive characteristics then they would receive higher wages than men. Thus as the wage gap has fallen over time the proportion of the gap that is not explained by differences in productive characteristics, specifically the returns to productive characteristics, has grown to near 100%. Finally, there is also evidence that women with conventionally unobserved traits that yield a wage premium, which are not analysed by Baker and Drolet (2010), have been increasingly drawn into the higher end of the labour market which could indicate rising returns to skill (Blau and Kahn 2006; Mulligan and Rubenstein 2008; Weinberger and Kuhn 2010; Black and Spitz-Oener 2010).

## 2.3   Explanations for Gender Gap

### 2.3.1   Job Experience and Occupational Choice

As identified above, while women in Canada have increased their levels of productive characteristics there is evidence that a significant proportion of the gender pay gap is explained by job and occupation choice within the labour market. Drolet (2002a, 2002b) found that controlling for labour market experience explained a portion of the pay gap. In addition, a number of studies have pointed to the importance of men and women working in different occupations as an explanation for the gender pay gap (Fortin and Huberman (2002), Drolet (2002a), Boudarbar and Connolly (2013). However, the extent to which occupation choice effects the gender gap varies at different points along the wage distribution. Examining the gender wage gap for workers with post-secondary education, Boudarbat and Connolly (2013) found that occupational dummies explain 37% of the gap at the mean, 112% at the 10th percentile of the wage distribution, and 17.7% at the 90th percentile. The ability of occupational choice as an explanation for the gender pay gap has also been shown to increase with the use of occupation-specific skills rather than occupation dummy variables. Specifically, Baker and Fortin (2001), looking at data from 1987 and 1988, found men are paid significantly less in female dominated occupations than in mixed or male dominated occupations but there is

no substantial penalty to women who work in male-dominated or mixed occupations. In addition, Teng (2015) in examining the Survey of Labour and Income Dynamics from 1993 to 2010 found that more of the gender gap at various points of the wage distribution was explained when using occupation-specific skills from the Dictionary of Occupational Titles (DOT) as well as workplace competitiveness and the ranking of managerial position. The author found that gender differences in DOT-skills explain up to 50% of the gender gap for high school and community college graduate and most of the university graduates. The author also found that a significant portion of the gender pay differences for workers without a high school education can be explained by men choosing to experience more unpleasant work conditions such as more physical work, exposure to contaminants and hazardous equipment, higher levels of noise, and greater variations in temperature. Finally, the author found that gender differences in workplace competitiveness and the ranking of managerial position explain 30.5% of the gender gap at the 95th percentile which serves as a partial explanation of the glass-ceiling effect in Canada. It should also be noted that the author allows that the analysis does not address whether women face barriers to entry in male-dominated jobs and cannot determine if women choose to not work in unpleasant work conditions or less competitive jobs because of discrimination or personal preference.

### 2.3.2 Attitudes towards Risk

However, there is also important evidence on women's' attitude towards competition that offers further explanation of the choice of occupations by women. In fact, Fisman and O'Neil (2009) found that women are consistently more likely to view success as a matter of luck and view competition negatively, with the likelihood increasing if the women is a member of the workforce, a supervisor or a mother, which they argue shows evidence of barriers to female's advancement in the workplace. In addition, the evidence shows that attitudes towards competition are largely socially conditioned and unwarranted. Frick (2011), in analyzing professional long distance running, found that, in contrast to biology and pre-disposition hypotheses that women are less competitive than men, financial incentives and/or reputation were the primary determinants of competition for both genders and over time competitiveness has increased among women to similar levels as men. Similarly, Gerdes and Gransmark (2010), in analyzing the strategies of high level chess players, found that women on average choose less aggressive strategies than men but that both genders increase their aggressiveness when playing women despite a resulting decrease in winning percentage, which may indicate unwarranted and negative gender stereotyping. Finally, Gneezy, Leonard and List (2009), in comparing a patriarchal Tanzanian society and a matriarchal Indian society, found that in the patriarchal society men were more competitive than women but that this was reversed in the matriarchal society. The authors concluded that this evidence supported theories of gene-culture co-evolution rather than undifferentiated innate differences in competitiveness between men and women, making attitudes towards competition strongly related to processes of socialization.

## 2.4 Impact of Policy Initiatives

By and large, empirical studies have found that the legislative policies implemented to decrease the gender pay gap have either failed to do so or had smaller than expected effects.

### 2.4.1 Equal Pay for Equal Work Policies

In Canada, equal pay for equal work policies have not been found to have any significant impact on reducing the gender pay gap. His lack of impact likely reflected the limited scope of such policies, since they could only deal with male-female wage differences within the same occupation

and establishment, and such differences are unlikely to be very large to begin with. As well reliance on a complaints procedure may deter enforcement since individuals may be reluctant to complain. Furthermore, similar policy in the United States has also been found to have little or no effect, with studies producing inconclusive results. (Benjamin et al. 2012, 377).

### 2.4.2 Equal Pay for Work of Equal Value

In terms of policies designed to prevent discrimination under the idea of equal pay for work of equal value there has also been limited success. Altonji and Blank (1999), and Gunderson (1995) in evaluating the application of pay equity policy in public sector jurisdictions in Canada and the United States, found that wage adjustments of $3000-$4000 were common but there was considerable variability in the adjustments. These resulted in a narrowing of the gender gap in public sector employment from 0.78 to 0.84 about one third of the earnings gap. Gunderson (1995) also found that pay adjustments were smaller on average in the private sector compared to the public sector. There have also been several papers that have looked at the impact of equal pay for work of equal value legislation specifically in Ontario. Baker and Fortin (2004) performed a comprehensive analysis of the effects of pay equity legislation on the private sector in Ontario. They found no substantial impact on women's wages in female-dominated jobs, in part because such jobs tend to be in the smaller firms where implementation and compliance is difficult; a reduction in male wages in the female-dominated jobs, leading to a slight reduction in the male-female wage gap in female-dominated jobs; a reduction of female wages and increase in male wages in male-dominated jobs, which tended to be in the larger firms where compliance was more prominent. The further documented no substantial change in the overall male-female wage gap across all occupations, because the reduction in the gap in female-dominated jobs was largely offset by the increase in the gap in the male-dominated jobs. In terms of employment, they documented a small decrease in female employment in the larger firms where compliance is more likely, as well as a small increase in female employment in the smaller firms where compliance is less likely which resulted in no substantial change in female employment as a result of these offsetting forces.

The lack of any substantial impact of the legislation can be attributed in part to the fact that compliance and enforcement is extremely difficult in the small firms that employ the majority of women. In support of these findings, McDonald and Thornton (2014) used a synthetic control method to compare the effects of the Ontario Pay Equity Act to a synthetic province which did not enact the legislation and found that "there is no indication that the act materially affected the female-male wage gap in Ontario" (McDonald and Thornton 2014, 12). The authors concluded that this was due to the ability of employers to manipulate the interpretation of the law so as to avoid substantial increases in wages.

### 2.4.3 Effects of Facilitating Policies

It is important to examine studies that look at the sustainability of pay equity policies as well as the impact of other types of policies. Specifically, Connolly et al. (2012) in evaluating the impact of equal pay for equal work policies in the province of Queensland in Australia, found that, while the system did initially increase wages for female workers, it was likely that these gains would be lost over time unless similar legislation was enacted in other provinces or at the national level. Furthermore, Baker and Milligan (2008) found that the introduction of modest job-related leave entitlements increases the proportion of mothers employed and on leave but has little effect on the length of time they're at home. The authors also found that maternity leave entitlements increase job continuity with pre-birth mother as women are more likely to come back to work. This

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supports the work of Drolet (2002a) that showed that reduced job separation probabilities increase investments in human capital and increase wages. Finally, Ransom and Oaxaca (2005) found that court mandated affirmative action requirements improved the status of female employees.

# 3  Data and Methodology

## 3.1  Data

Our current analysis uses the 1996, 2001 and 2006 waves of the Canadian Census together with the 2011 National Household Survey (which has replaced the Census data). Census data provides annual earnings, the number of weeks worked, and occupations, and industries where people worked in the past 12 months. We use people aged between 25 and 64 at the time of Census who have worked at least 1 week and had some positive earnings in the past 12 months. In the rest of the report, we use the term of Census year to refer to 1995, 2000, and 2005 Census and 2011 NHS, respectively.

The advantages of Census data are as follows. First, it has a very large sample. Each census year has more than 10 million observations, which enable us to conduct analysis by education and province groups. Second, it provides information on occupations and industries that are based on finely defined categories. Detailed occupational categories are needed to document that men and women work in different occupations and to examine how this affects the gender gap. Third, the Census provides information on major fields of study for people with post-secondary education. This is important, since men and women have preferences for different fields of study: for example, men are more likely to major in computer science and engineering, while women prefer degrees in elementary and primary education. This partly explains why men and women are employed in different occupations after they graduate from post-secondary institutions.

There are two drawbacks of using Census data. First, we cannot observe whether people work in the public sector or in the private sector. In order to deal with this issue, we grouped people by industry. We assigned to the public sector those who work in the public utilities sector, in educational services, health care and social assistance, and in public administration. We did a validation exercise using Labour Force Survey (LFS) data where we know the industry and occupation of workers and also whether they are public or private sector employees. A majority of the workers in sectors we chose as public indeed report being public sector employees, but there are a few exceptions. For instance, in education teachers and university professors are counted as public employees, but not other support workers. Likewise, only about 60% of the health sector counts as public employees, namely those associated with hospitals. For the final report we will do sensitivity analysis regarding the definition of public sector employment.

Second, we do not know how many hours people worked in a year. The Census data refers to information from the previous calendar year. For instance, the 2011 NHS will ask questions about events that had happened in 2010, including annual income for 2010 and the numbers of weeks worked in 2010. There are no questions about the average hours worked in a week last year, nor the annual hours worked. The Census does ask for the number of hours worked in the current week prior to the interview (that would be spring 2011 in our example), but not in the previous calendar year. Our current analysis uses the current hours worked information as a proxy for average hours worked per week last year in order to compute people's average hourly wage in census years. By doing this, we impose an assumption that people who worked, for example, 40 hours in the current week prior to the time of interview in 2011 also worked on average 40 hours a week in 2010. We acknowledge that this approximation could result in a substantial measurement error, and therefore our analysis on hourly wages from census data should be taken with a grain of salt.

We also use the LFS, a monthly data set which has good information on weekly wages and weekly hours worked, as well as an indicator of public or private work sector. From the LFS we get a better way to examine the gender gap in hourly wage separately for public sector and private sector employees. Moreover, in the full version of the LFS which we have accessed in the Research Data Centre (RDC), we can construct six-month panel on individuals, which we use to look at variables such as change in occupation. The information provided in the LFS supplements that in the Census data for our analysis.

Finally, for Ontario we also used the Sunshine List data - a public disclosure of employees earning more than $100,000 every year in the public sector, including government, crown corporation, utilities, school boards, universities and hospitals - to explore and understand the factors that influence the gender wage gap in the highest-paid jobs in the public sector. This complements the previous analysis using Census data because it will allow us to map the gender wage gap in the public sector by refined occupational categories. For the Sunshine Lists analysis, we have collected and clean the data for public employees earning more than $100,000 every year. One challenge of this data has been the lack of gender identifiers. We have built a probabilistic model based on name frequency lists to assign the gender for each individual in the list. We use these data to document a gender imbalance in the ratio of men to women who make it on the list, but conditional on being on the list we find almost no gender pay gap.

## 3.2   Methodology

In the first stage of our analysis, we focus on the gender gap in weekly wage and annual earnings. Weekly wage and annual earnings are evaluated at 1993 dollar values. We analyze the conditional gender pay gap: conditional on differences in people's marital status, the number of children at home, education, potential work experience (age-6-years of education), occupations, and the sector of employment. We examine the conditional gender gap in each of the census years, and compare whether the gender gap is statistically different in 2000, 2005, 2010 from the gap in 1996, to see whether and for what groups the gender pay gap has been decreasing. To better focus how the gender gap has changed in Ontario relative to other provinces, we conduct the analysis for Ontario, Canada, and Canadian provinces excluding Ontario (which we call in this report the Rest of Canada, ROC).

We examine heterogeneity in the gender gap in several dimensions. We start the analysis by examining the average gender gap separately for three types of employees, full-time full-year employees who work at least 48 weeks a year (including paid holiday) and at least 35 hours a week, full-time part-year employees who work less than 35 hours a week but at least 48 weeks a year, and part-time employees. Since women tend to work fewer hours per week and fewer weeks per year than men, part of the gender gap in annual earnings and weekly wages results from different labour supply behaviour between men and women. When we analyze the conditional gender gap by the types of employees, we can mitigate the impact of gender differences in labour supply behaviour on the gender wage gap.

Second, we examine the gender gap by educational group for each province. There are three educational groups, people who did not complete high school, whom we call "HSD" (High-school drop-outs), people who completed high school education or college education, and people who completed a four-year university degree or a postgraduate degree. We estimate the conditional gender gap by province-education group. Estimations use all workers. On top of the covariates that are used in the first step, we control for the types of workers (PT, FTPY, and FTFY) in order to account for the fact that annual earnings and weekly wage are dependent on the number of weeks and the number of hours people have worked.

The current analysis uses a person's province of residence in a census year. We acknowledge that this may not be accurate, since the province of workplace could be different than the province of residence. In our next stage, we will repeat the analysis by the province of workplace.

We explore differences in raw annual earnings between men and women at different parts of the earnings distribution by educational group. In order to do so, we estimate the earnings distribution function for men and women who are in the same education group. We then compare the earnings of men at each decile of the earnings distribution with those of women and plot the differences in annual earnings against the deciles of the earnings distribution. This is done separately for all workers and for FTFY workers, in order to see whether the gender gap would be different when we account for different labour supply behaviour between men and women. We have provided the figures for Canada and for Ontario.

In the second stage of the analysis, we use the Oaxaca-Blinder wage decomposition method., which tells us what would be the wage gap if women had the same observed productivity characteristics as men. We first control by 2-digit occupations but then proceed to refine this measure by using 4-digit occupation codes. By doing so, we expected to eliminate a large part of the gender gap that is explained by gender differences in occupations and major fields of study. While the gender wage gap decreases with more refined measures of occupation and field of study, we cannot completely eliminate it: a 10% gender wage gap persists even in the most detailed specification.

# 4    Trends in the gender pay gap in Canada

## 4.1    The evolution of the annual and hourly gender pay gap

We start by investigate the evolution of the gender wage gap by reporting the base wage gap in 1996 documenting its evolution moving forward. Table 1 looks at the evolution of the male-female pay gap in Canada for all workers from 1996 until 2011 using Census data. Table 1A reports annual earnings, Table 1B weekly wages, and Table 1C hourly wages, with the disclaimer that the hourly wage measure is noisy in the Census data. We control for standard, basic background characteristics: number of children, marital status, education, and year of reference, to capture the macroeconomic effects on the wage.

The first line reports the male coefficient in the gender wage gap. Because we are using logarithmic wages, the coefficient can be interpreted as the percentage of the male benefit on top of what women make.[4] In annual earnings, men made 49% more than women did in 1996, for all workers in Canada. The gap was a bit smaller in Ontario, 43.7% and larger in the Rest of Canada (ROC) at 52.5%.

To investigate the evolution of the gender wage gap, we focus on the interaction terms reported on lines 2, 3 and 4. The interpretation of these interaction terms is: relative to the baseline year 1996, compared to the average male premium (from line 1), how does the male premium change for each of the interaction years? We see that for Canada, relative to 1996, the gender wage gap did not change much until 2011 when it decreased by 8.5 percent relative to 1996. This decrease comes mostly from the ROC, where a 4% decrease is noticed even in the earlier years, from 1996 to 2006, with an overall decrease of 9.7% by 2011. In Ontario the gap stagnated or even increased slightly from 1996 to 2006, and it only decreased from 2006 on. By 2011 the overall wage gap in Ontario went down by 6.4% compared to 1996, a smaller decline than for the ROC.

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[4]We report the log differential in wages, which is approximately the percentage wage return for being a male. This approximation works very well for lower returns up to 10%-15% but it is a bit less precise at higher differentials, where the actual percentage is even higher. The exact percentage return is exp(coefficient)-1. To be very precise, we should refer to the reported return as "log percentage points differential" rather than "percentage differential".

The rest of the coefficients represent standard effects of human capital and background characteristics on the wage, and we will not comment on them here. From Table 2 on, we stop reporting these coefficients, although we still control by the same background characteristics, and later on also by occupation and major field of study.

The two main conclusions from Table 1A are that (i) the total annual gender wage gap is huge, at about 50%, ad that (ii) since 1996 the gender wage gap declined by about 4% at the end of the 90s and then by about 5% at the end of the 2000s for the Rest of Canada, while this decline only happened in the second period, end of the 2000s, for Ontario.

In Tables 1B and 1C we report the analysis for weekly and hourly wages, to try and remove some of the labour supply effect, by which men not only make more per hour than women do, but also work more hours per week and per year compared to women. As expected, the wage gap shrinks as we remove some of the labour supply effect, to a 36% gap in weekly wages for Canada overall (32.7% for Ontario) and down to a 15% gap in hourly wages for Canada (13.4% gap for Ontario). This labour supply effect is even more remarkable once we recognize that the log wage differential is a poor approximation of the percentage gap at higher percentages. Take the example for overall Canada numbers: the .491 log annual wages gap translates to an exact percentage difference of exp(.491)-1=63.4%. [5]

In terms of the evolution of the gender wage gap, from Table 1B we can see that the weekly wage gap has decreased in the ROC from 1996 to 2006 (by 3%) and it has increased in Ontario from 2001 to 2006. Overall there is a small decline of 2.6% in Canada in the weekly wage gap from 1996 to 2011, driven by the ROC, and no change in Ontario.

For the hourly wage gap things look completely different. For Ontario the hourly wage gap has increased by about 4% every five years, except it has no longer increased from 2006 on, and might have actually decreased a little. For Ontario the hourly wage gap is 5.7% higher in 2011 compared to 1996, and it was even higher than that, 8.6% higher in 2006 compared to 1996, from where we can infer that, while climbing steadily until 2006, it has started to decline since then. For the RC, an increase of 5% in the hourly wage gap occurred from 2001 to 2006, but the gap has not increased since and may have actually even declined a little. Combining the two, the story for all of Canada is of about 2% increase from 1996 to 2001, 4% increase from 2001 to 2006, and a small decrease of 1% to 2% since then.

On the annual wage gap we have not seen any increase since 1996, and overall compared to 1996 the annual wage gap is smaller. On the hourly wage gap we saw increases in the early 2000s and a small decline only starting from 2006, such that overall the hourly wage gap is larger than in 1996. Moreover, the gap in annual pay is more than 50% while the gap in hourly wages is about 15%. From this we can conclude that women's gains in terms of pay equity have come in the form of increased labour supply rather than pay per hour, and this can be a cause for concern.

We have repeated this analysis separately for province. For reasons of space, we do not report here this analysis, but leave it instead for a separate on-line Appendix.[6] Ontario has the smallest overall earnings gap, except for university-educated workers for whom the gap is smaller in other provinces: Northern Canada, Atlantic provinces, Quebec and Saskatchewan The highest earnings gap is documented for high-school dropouts, high-school and college graduate in Alberta and Saskatchewan, for whom the gap is more than 40 log points.

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[5]Likewise, the .363 log weekly wages gap translates to an exact percentage difference of exp(.438)-1=43.8%, while the log hourly wages gap translates to an exact percentage difference of exp(.155)-1=16.7%.

[6]Recent analysis devoted entirely to the decomposition of the gender pay gap across provinces can be found in Schirle (2015).

## 4.2 Pay gap by type of job: full-time or part-time

As already mentioned, Tables 2, 3 and 4 replicate the same analysis, except workers are separated into three categories: full-time full-year(FTFY, Table 2), full-time part-year (FTPY, Table 3) and part-time (PT, Table 4). While we use the same background controls as before in the wage regressions, we do not report all coefficients; instead we only focus on the earnings pay gap and its evolution across the 4 census years.

The first striking observation is the much smaller magnitude of the gaps for annual and weekly incomes when workers are split into groups according to full-time or part-time status. When all workers were considered together, the gap (log differentials) was about 50%, while it is between 20% and 30% when workers are split into the three groups, with the smallest gap coming from the part-time workers, for whom the gap actually disappears after 2005. This implies a clear selection of workers by gender into the three groups. More women are in the part-time group, so that when these women are compared only with part-time men (Table 4), they show a smaller gap than when they are compared to all men, who on average are more likely to be in the better paid full-time groups.

The second observation is that the hourly wage gap disappears for the part-time workers (except in 2001), but not for the full-time ones. Here we can speculate that women who select into part-time work do so because of preference over work/family time balance, while men select into part-time work because they do not have the best work skills, some of which are not observable in the census data (such as motivation or attitude). This is also consistent with the annual wage gap having disappeared for part-time workers since 2005.

The third observation is that the pattern for full-time workers across time gets preserved, and we notice an increase in the wage gap from 1996 to 2006 and a decrease afterward. This is also noticeable in the first set of graphs, Figure 1, where we plot the year coefficients, as a summary of Table 2 to Table 4.

## 4.3 Wage gap decomposition

In Table 5 we present the evolution of the hourly gender pay gap computed from the public version of the LFS. The advantage of the pubic LFS is its ease of access and replicability of results. The disadvantage is that some variables are truncated or aggregated in the public version of the LFS; for instance, occupation codes are only available on two digits prior to 2009, age is grouped and wages maybe top coded. In Panel A of Table 5 we report the raw wage gap across years, measured as the ratio of female to male wages. The gap has been closing over the last fifteen years, from 77% in 1997 to 85% currently. In Panel B of Table 5 we add standard Mincer controls for productivity: education, age, tenure in the last job, industry and occupation. Adding these controls does not seem to make a huge difference, especially in the latter years. While in the nineties the controls would reduce the gap by 6-7 percentage points, closer to present this reduction is smaller, of about 3 percentage points, and even less than that for Ontario, where the gap shrinks from roughly 86% to 87%. Being able to control for refined occupations since 2009 also does not seem to make much of a difference in terms of reducing the conditional gender wage gap. Likewise, adding on top of these variables controls for family background (marital status, number of children) as reported in Panel C of Table 5 does not help reduce any further the gender wage gap.

To confirm that a gender wage gap persists even within narrowly defined occupation/education/ marital status groups, we perform a standard Blinder-Oaxaca parametric wage decomposition. This boils down to running two separate regressions, one for each gender, and using the coefficients from one of the lines  say, male  and the productivity characteristics of the other group  female in this

case to predict the counterfactual of what would have been the wages of women, had women's productivity characteristics been rewarded at the same rate as those of men. The difference between the male wage and the predicted counterfactual would represent the explained part of the wage gap (that is, the part of the wage gap arising from differences in productivity). The actual mechanism is slightly more elaborate than this, computing a weighted average from both counterfactuals, of women's predicted wages if their characteristics were rewarded at men's rate, but also the men's predicted wages if their characteristics were rewarded at the female rate.

Table 6 reports the results of the Oaxaca-Blinder wage gap decomposition using the full version of the LFS (accessed at a Research Data Centre) from 1997-2013. In this sample the total wage gap is about 20% for the hourly wage and 40% for the weekly wage. Note once again that the hourly wage gap gets amplified by the gap in hours worked between men and women, to the extent that in weekly wages the gap is more than double. The difference between columns (1) and (2) for both hourly and weekly wage gaps is that we use 2-digit occupational codes in columns (1), and respectively 4-digit occupation codes in columns (2).

The only variable that can consistently explain part of the gender gap is full-time versus part-time work. Being a FT worker explains about 35% of the gender gap for weekly wages and 5% to 7.5% for hourly wage. This means that men are more likely to be full-time workers, and being a full-time worker is associated with higher hourly wages, and even more so with higher weekly wages.

Most of the other variables cannot explain the gender wage gap, quite the opposite. Take for instance education. Women tend to be more educated than men, and higher education is associated with higher wages. Due to education alone, women should earn higher wages than men, so education will not help explain anything from the wage gap, quite the contrary. Likewise, women are more likely to be in the public sector or in a union, and since these characteristics are associated with higher wages, due to these alone, women should earn more not less than men.

Other than FT status, the other two variables which can explain a bit from the gender wage gap are tenure and occupation. Tenure refers to months spent in the current job, not overall market tenure, and as such is a noisy measure of actual tenure. Still, tenure tends to explain a little bit from the wage gap, up to at most 4%. What makes a bigger difference for explaining the gap are occupational characteristics. When we condition on aggregated occupations, they either explain nothing (column 1 for the weekly wage gap), or work in the opposite direction, suggesting that women should have a higher wage given their occupation (column 1 for the hourly wage gap). When we condition instead on four-digit occupations, 17% to 20% of the gap gets explained. In other words, the wage gap narrows quite a bit within a narrowly defined occupation, although a large unexplained part still remains.

# 5   Heterogeneity in the pay gap by income and education

For all provinces and for both annual earnings and hourly wages, the pay gap decreases with education. As expected, the pay gap is much smaller for the hourly wage measure than for the annual earnings measure, with a difference of magnitudes around five or ten percentage points, and occasionally higher.

This is further confirmed by the non-parametric analysis reported in Figure 2 and Figure 3. We plot the smoothed raw wage gap across deciles of the income distribution for annual earnings (Figure 2) and hourly wages (Figure 3). We group education into three categories: (1) high-school drop-outs (HSD), (2) high-school and college graduates (HS+College), and (3) university including Bachelor's and above (University). We have grouped high-school and college together because of

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previous evidence that the human capital and returns to education for college graduates is closer to that of high-school, and even more importantly for this analysis, past research (Teng, 2015) documents a similar gender gap along all parts of the income distribution for high-school as for college graduates.

First, the gender gap decreases with education. The gap is highest for high-school drop-outs, followed by high-school and college, while the university group experiences the lowest gender gap.Second, we observe an increase in the gender wage gap at the highest part of the earnings distribution for individuals with university education. We refer to this phenomenon as the glass ceiling. We return to document the glass ceiling for Ontario when we do the analysis on the Sunshine list in Section 7.

Third, the annual pay gender gap within education is slightly decreasing as income goes up, and it is mostly flat and smaller in magnitude when only full-time workers are considered. It is possible that women working part-time are more likely to be better educated and earn less, thus increasing the university wage gap when all workers are considered. It is also possible that, within the low educated group, part-time men still earn more than part-time women, and thus the wage gap for the low educated can be larger when part-time workers are also considered. Since this difference is more pronounced for the annual pay gap than for the hourly wage gap, it is possible that these adjustments occur on the labour supply avenue rather than on the pay gap itself.

# 6  Possible explanations for the remaining gender wage gap

## 6.1  The gender wage gap by age, marital status, and children

In the previous analysis, we could not get the hourly gender gap lower than 10%, even controlling by very refined occupations and field of study for post-secondary educated workers. Here we look instead at the heterogeneity in the gender wage gap separately by marital status and education. Table 7 reports the heterogeneity in the gender wage gap by marital status and age, from regressions also controlling for other productivity-related characteristics such as education, FT jobs, public sector, using the public LFS, 1997 to 2014. For brevity, we only report here the mean gender wage gap within each age and marital status groups, and not the other interaction terms.

This table confirms that the gender gap is higher for married women, and it decreases with education and for the public sector. Most interestingly, the wage gap increases with age, at it is not present for single women until mid-thirties. The fact that it increases with age for all marital groups, including single women, can be indicative of statistical discrimination. In other words, if married women start losing ground relative to men as fertility choices start interfering with, say, tenure, this disadvantage will also affect single women, who get painted in terms of productivity expectations with the same brush as married women.

A related analysis regarding the heterogeneity in the gender wage gap is reported in Table 8, using Census data and looking at the differential impact of marital status, public sector, education and number of children on the gender wage gap. Similar conclusions from the LFS analysis carry forward, both for the aggregate wage gap decomposition, and also when decomposing the smaller gender pay gaps for FTFY, FTPY and PT jobs. Being married is the biggest contributor to a relatively higher gender wage gap. Having children increases the gender pay gap, with the one exception coming from FTPY workers with one child, for whom the hourly wage gap seems smaller than for workers without children; this could be potentially due to the noise in our construction of hourly wage data, especially for part-year workers.

## 6.2 The gender wage gap by public/private sectors

As reported in Table 8, workers in the public sector experience a relatively smaller wage gap. [7] Public sector jobs are typically more likely to be unionized, and are also at the forefront of implementing equal pay and other non-discrimination measures, and a smaller gender wage gap is reflective of that.

This is confirmed by Figures 4 and 5 where we look at the gender pay gap in the public and private sectors using the hourly wage measure from the LFS, overall and also separately by education, along quantiles of the wage distribution. Interestingly enough, we see the gender wage gap declining at the highest wage quantiles in the private sector, but increasing in the public sector. This is also true when examining separately the gender wage gap by education levels, except for workers with high-school education in Ontario for whom the gender wage gap seems to increase both in the public and the private sector at high wage levels.

Because the glass ceiling effect − higher wage gaps at high income levels − appears more evident in the public sector, this further motivates our gender pay gap analysis for the incomes on the Sunshine List in section 7; the Sunshine List discloses public sector incomes above a nominal $100,000 threshold.

## 6.3 Promotions and family/career balance

We investigate here whether any facts consistent with statistical discrimination can be documented. In Table 9 we analyze the probability of promotion defined as a switch into a managerial type of occupation. (We use the monthly panel feature of the LFS to be able to identify switches into managerial occupations). Men are more likely to be promoted into managerial occupations compared to women, but, at maximum 1.5 percentage point difference, the magnitude of this effect is not that large. It is nevertheless present in both the public and private sectors, and a bit more pronounced in the private sector.

In Table 10 we document the probability of being employed in part-time work, while in Table 11 we look at the probability of being absent from work within the sub-population of employed workers. Women are more likely to be employed part-time than men are. The largest difference comes from reasons related to caring for own children or other family. Women are 10 times more likely to give childcare as a reason for part-time and 6 times more likely to quit a job because of childcare. Being single decreases the probability in both cases. Being in the public sector increases the probability of part-time and decreases the probability of quitting for family reasons, possibly indicating a more family-friendly environment in the public sector.

To summarize, the labour supply channel plays a very important role in the gender pay gap, and so does the type of job (sector) and the education category. The gender wage gap increases with age as fertility choice and career interruptions start affecting tenure and career advancement possibilities. There is no gender wage gap for young single people, but the gap appears from the thirties onward even for single childless individuals, as possible indication of the presence of statistical discrimination.

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[7]A similar analysis is reported in the on-line Appendix with the separate analysis by province. The gender pay gap between the public and private sectors is given by the interaction coefficient "male*public". The gap is about 10% smaller on average in the public sector for annual income, and less than that for hourly wages.

# 7 The Gender Gap and the Sunshine List

"Some believe that disclosure creates an upward salary spiral. It's the Lake Wobegon effect. Everybody wants to be above average. Employees comb through the salary disclosure lists, comparing their pay to that of their peers, and seeking redress for any perceived inequities. Employers trying to attract above average workers, especially for senior management positions, offer above-average compensation packages, further fueling salary growth." Frances Wooley for the Globe and Mail, March 27 2015.

The public sector salary disclosure data, better known as Ontario's "Sunshine List", was introduced in Ontario in 1997 by then-government of Mike Harris. It was designed as a mechanism to keep public salary expenditures in check, by a "public shaming of the fat cats" type of effect, by making public the names of all public sector workers earning more than $100,000 in any given year. To economists it is not entirely clear what sort of mechanism the government had in mind. Public knowledge of wages and salaries is something that workers and employers alike dislike, because it restricts the ability of the two contractual parties to agree on remuneration reflecting the productivity of a given worker. Indeed, while rigorous evidence is not available, anecdotal evidence seems to indicate that the Sunshine List has had a contrary effect, of "race to the top", because workers, and in particular their unions, have used the Sunshine List to negotiate better pay for their members, in a "keeping up with the Jones' " fashion.

For our study the Sunshine List offers a unique opportunity of a glimpse at the entire population of public sector earners in Ontario whose salaries are above the $100,000 threshold. The main challenge of the analysis has been identifying the gender of each respondent: while the names of the workers are public, their genders are not. We detail in the following section the algorithms used in order to assign gender to each given names.

## 7.1 Data collection and gender assignment

The Sunshine List data used for this study was pulled from the Ontario Government public sector salary disclosure website (http://www.fin.gov.on.ca/en/publications/salarydisclosure/pssd/). The gender variable is not provided in the original data, but we know what the names of individuals are. In order to write computer algorithms to infer gender from first name information, we used a compiled list of names from U.S.A. Social Security data from 1950-1980 inclusive (http://www.ssa.gov/OACT/babynames/limits.html). This data provides names and gender frequency for all babies born in the U.S.A. in any given decade. For example, the name Lindsay had a male frequency of 5 whereas it had a female frequency of 26132; this would imply that someone named Lindsay had a probability of being male of 5/26134 and a probability of being female of 26132/26134.

We used the information from the U.S.A. Social Security records, combined with heuristic algorithms that decompose the characters of the first name, in order to assign a gender probability to each observation. We set the male threshold at an identified probability larger than .95 for the first name to belong to a male, and likewise for the female names.[8] Given this constraint, we identify a total of 197184 females and a total of 406390 males in our database, while dropping 49,230 observations (7% of the original Sunshine List database of 652,804 records)when gender is assigned less precisely.

Note that this is the first attempt at processing the Sunshine List in a way that identifies gender, even in a probabilistic way. In future research we will provide sensitivity analysis to using the probabilities themselves, rather than a dichotomous gender variable constructed by imposing

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[8]More details on how the data was parsed and processed are available from the Sunshine list Appendix.

a threshold on the probabilities. Note though that in some of the analysis we performed so far, we experimented with various thresholds and the results did not change substantively.

## 7.2 The evolution of gender shares in the Sunshine List across time

We present here some summary statistics and analysis of wages for the data on Sunshine list from 1997 to 2014. Note that in our analysis, the year corresponds to the year the Sunshine List was released, not the year of the reported income, which would be the previous calendar year (i.e., the year 1997 on the list refers to income from 1996). Also note that the minimum salary remained at $100,000 since the Sunshine List was introduced. We report results from two types of analysis: one taking into account all the records in the Sunshine List, with a nominal income threshold of $100,000 which does not change across this entire period, and a separate analysis where we account for inflation and we impose a threshold in real dollars, by deflating the nominal $100,000 by the Consumer Price Index in Ontario for each year in our data. By doing so, the income cutoff increases over this period up to $139,456 in 2014 (referring to salary information from 2013).

There are 652,804 records in the Sunshine List to which we have assigned gender. A yearly breakdown of the number of records is shown in Table 12, both for the actual number of records using the nominal cut-off at $100,000, as well as using a real dollar cut-off income reported in column 4 of that table. Figure 6 and Figure 7 report this information in a graphical way. From Figure 6 we can see that the number of individuals on the Sunshine List has increased tremendously over the last 15 years. The majority of the increase is due to the value of the nominal threshold becoming smaller and smaller relative to the average salary in the economy. Put differently, part of the gap is due to inflation, and we capture that by plotting the number of records above the inflation-adjusted threshold. Even then, while there is some growth in the Sunshine List, we contend that it matches the growth in the real income in the economy, and not a relative growth in the public sector per se.

A striking point of the analysis so far is the small fraction of women relative to men who make it on the Sunshine List. Table 12 reports in columns 3 and 6 the fraction of women on the Sunshine List, and Figure 7 plots this information. The bad news is that less than a third of observations in the Sunshine List are women. The good news is that this fraction has been increasing, from 22% females when the list was first introduced in 1997, to 36% in the 2014 list. This increase is slightly smaller if we focus only on the subset of the Sunshine List earners who would have been on the list even if the threshold had been moved at the pace of inflation; in that case, the percentage of women increases from 22% to 31%.

This evidence seems to indicate that, as the threshold to be nominated on the Sunshine List keeps decreasing in real dollar terms, more women relative to men make their way on the list. We investigate this further by analyzing separately the information by sector. Table 13 reports the number of observations per sector for all of the original 12 sectors that can be identified on the Sunshine List. On average, over all sectors, there are three times more observations when the threshold is kept at nominal $100,000 year after year. The sectors where lowering the threshold in real terms across time makes the most difference are: the School board, Municipal sector, and Colleges, where using the nominal threshold leads to an eight- or six-fold increase in the number of records relative to the real threshold. By contrast, the size of what the Sunshine list refers to as "Ontario Public Sector" is relatively unchanged when a real threshold is imposed, as an indication that nominal incomes did not increase by more than inflation in this sector.

Because some of these sectors get introduced in later years, in order to try and be consistent with relative shares of sectors across time  and also to simplify the exposition  in the remaining analysis we group the sectors into five main ones: University (including College), Utilities, Hospital, School board, and Government and Judicial. Table 14 lists the percentage of women in each of these

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sectors and across time, both for the Sunshine List using a nominal cut-off at $100,000 every year, as well as the inflation-adjusted cut-off in real dollars. The Hospital and School board sectors are the two sectors in which women have the highest representation; since early- to mid- 2000, women actually outnumber men in these two sectors. At the other end, women are underrepresented to a huge extent in the Utilities sector, and this proportion has not been increasing over time.[9]

The main conclusion from this analysis has been that, while the percentage of women increases over time, they are still underrepresented among the top earners in the public sector.

## 7.3   The gender pay gap in the Sunshine List

Figure 8 plots the male-female pay gap from the observations on the Sunshine List  both using the nominal threshold of $100,000 and imposing the real dollar threshold on the list. The only way to interpret these numbers is that, overall, the male-finale pay gap on the sunshine list is tiny at best. Using the nominal threshold, the gap increases from zero in the late nineties to about 3% or 4% in current times.Although there is an increasing trend in the wage gap from 1997 to 2014, however, the wage gap is still small. When we adjust the sunshine list income threshold to account for inflation, the gap disappears completely. We think that the main gender gap story here comes from the percentage of women, rather than their earnings: only one third of people on the list are female, but those women who make it on the list get paid almost as much as men do  and exactly as much as men if we restrict the list to those who would have qualified under the original terms.

The slight increase in the gender pay gap under the nominal threshold, compared to no gap under the real threshold, is consistent with the finding that individuals between the nominal and real thresholds  that is, those who wou non't have made the list if the threshold income was adjusted for inflation  are more likely to be female. This is nevertheless not the case in all sectors, and is not the only motivation behind the slight increase in the average pay gap on the Sunshine List.

The bottom half of Figure 8 lists the gender pay gap across the five sectors identified in the analysis. Most of the average pay gap is coming from the Hospital sector, not only in the list using the nominal threshold, but also in the list using the real threshold. Women who have made it onto the Sunshine list tend to get paid, on average, as much as men do, with the exception of the Hospital sector. We will need to continue our research to identify where the pay gap of 20% is coming from in the Hospital sector. Another future research avenue involves the University and College sectors, where the trend shows an increasing pay gap.

## 7.4   The gender pay gap by quantiles of the income distribution

To better document glass ceiling phenomena and pay gap at the very top, we analyze differences at quantiles of the earnings distributions for men and women respectively. Figure 9 shows the evolution of the gender pay gap at five quantiles of the earnings distribution; this way the salaries of the bottom 20% females on the Sunshine List can be compared to the salaries of the bottom 20% males, and so on until the top 20%. Indeed, most of the pay gap is coming from the top 20%, consistent with the glass ceiling story where women simply don't make it into the corner office. It is interesting to notice though that in recent years the gap is also increasing for those at the 40th to 60th to 80th percentile of the wage distribution. Restricting the analysis to what would amount

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[9]One interesting observation refers to the sector where we have grouped the former government and judiciary sectors. Here, the fraction of women is higher in the real-income threshold sublist, indicating that in the mid-2000s the women in this sector were relatively more likely to have incomes above the real threshold compared to men with incomes between the nominal and real thresholds.

to the same original circumstances, there was a small gap in the top quintile, but even this has become smaller.

Our analysis of the Sunshine List so far supports four main conclusions. First, women are underrepresented on the Sunshine List by a ratio of two to one. Second, those women who do make it onto the sunshine list earn, by and large, comparable incomes with those of men. Third, while, in general, the gender pay gap does not seem to be an issue, some sectors on the Sunshine List, such as the Hospital sector, still show a substantive pay gap. Fourth, the analysis across the wage distribution of men and women seems to indicate a glass-ceiling type of gap at the higher end of the respective earning distributions of men and women, consistent with our previous results.

# 8    Conclusion

The pay gap is a complex issue, and policy addressing it should tackle the causes of gender imbalances, and not merely attempt to fix the outcome, because that may introduce inefficiencies. Women are getting increasingly more educated and participate in record numbers in the labour force. Current national graduation rates show that about 66% of recent post-secondary graduates are female. Still, women are underrepresented in top occupations: two-thirds of individuals who made it to Ontario's Sunshine List are male.

When we discuss the gender pay gap, we must be careful in how we define this gap. The hourly wage gap is smaller than the annual wage gap. Even if the hourly wage gap were zero (which is not) we would still observe an average gender earnings gap because women work, on average, fewer hours than men do. Subsequently, there could be two types of policies that attempt to redress the gender pay gap: one group of policies would target the difference in hours worked, while the other would target the remaining gap in hourly wages.

Policies that reduce the male-female gap in hours worked would be related to the availability of high-quality daycare and incentives for women to return faster to work following a leave episode, in order to minimize human capital loss.

A further cultural shift in the traditional roles of men vs. women, both in the household and in the workplace, would be a big step towards reducing gender imbalances. We have already seen the huge transformation following the increased labour force participation of women in the seventies and onward. We would need a similar change of perspective in the society to even out the responsibilities, as well as the benefits, of women and men likewise, in terms of working in the labor market and in the household. Such a change would also help address the statistical discrimination channel, whereby employers would no longer feel it is in their best interest to promote and encourage work from men rather than from women.

An equal society is a society where everyone has equal opportunity, and where productivity is compensated accordingly and without discrimination. Some gender pay gap will persist even in an equal society, as long as women and men make different life-work-fertility choices. Policy can make sure that women do not get penalized because of gender stereotypes in the work place. Any remaining gender discrimination should go away as the society becomes fully accepting of men and women having an equal role in child rearing and household activities. Such decisions cannot be legislated with a heavy hand, but they can be incentivized.

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Table 1: Evolution of the Gender Pay Gap, Census 1996-2011, all jobs
A. Log Annual Earnings

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | 0.491*** | 0.525*** | 0.437*** |
| (base 1996) | (0.01) | (0.01) | (0.01) |
| males*2001 | −0.019 | −0.036** | 0.007 |
|  | (0.01) | (0.01) | (0.02) |
| males*2006 | −0.019** | −0.042*** | 0.021 |
|  | (0.01) | (0.01) | (0.01) |
| males*2011 | −0.084** | −0.097*** | −0.064*** |
|  | (0.01) | (0.01) | (0.01) |
| Intercept | 123** | 129*** | 233*** |
|  | (0.01) | (0.01) | (0.02) |

B. Log Weekly Wage

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | 0.363*** | 0.385*** | 0.327*** |
| (base 1996) | (0.01) | (0.01) | (0.01) |
| males*2001 | −0.017* | −0.033** | 0.007 |
|  | (0.01) | (0.01) | (0.01) |
| males*2006 | 0.021*** | 0.005 | 0.049*** |
|  | (0.01) | (0.01) | (0.01) |
| males*2011 | −0.026*** | −0.033*** | −0.014 |
|  | (0.01) | (0.01) | (0.01) |
| Intercept | 4.383*** | 4.389*** | 4.468*** |
|  | (0.01) | (0.01) | (0.02) |

C. Log Hourly Wage

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | 0.155*** | 0.169*** | 0.134*** |
| (base 1996) | (0.01) | (0.01) | (0.01) |
| males*2001 | 0.023** | 0.008 | 0.045** |
|  | (0.01) | (0.01) | (0.01) |
| males*2006 | 0.064*** | 0.050*** | 0.086*** |
|  | (0.01) | (0.01) | (0.01) |
| males*2011 | 0.048*** | 0.042*** | 0.057*** |
|  | (0.01) | (0.01) | (0.01) |
| Intercept | 1.123*** | 1.129*** | 1.233*** |
|  | (0.01) | (0.01) | (0.02) |

Standard errors in parentheses.

$^{*}$ $p < 0.05$, $^{**}$ $p < 0.01$, $^{***}$ $p < 0.001$

Table 2: Evolution of the Gender Pay Gap, Census 1996-2011, FTFY

A. Log Annual Earnings, FTFY workers

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | 0.267*** | 0.285*** | 0.243*** |
| (base 1996) | (0.01) | (0.01) | (0.01) |
| males*2001 | 0.012 | 0.005 | 0.021 |
|  | (0.01) | (0.01) | (0.01) |
| males*2006 | 0.044*** | 0.032*** | 0.062*** |
|  | (0.01) | (0.01) | (0.01) |
| males*2011 | 0.011 | 0.006 | 0.015 |
|  | (0.01) | (0.01) | (0.01) |
| Intercept | 8.519*** | 8.529*** | 8.627*** |
|  | (0.01) | (0.01) | (0.02) |

B. Log Weekly Wage, FTFY workers

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | 0.266*** | 0.285*** | 0.242*** |
| (base 1996) | (0.01) | (0.01) | (0.01) |
| males*2001 | 0.012* | 0.005 | 0.021 |
|  | (0.01) | (0.01) | (0.01) |
| males*2006 | 0.045*** | 0.032*** | 0.062*** |
|  | (0.01) | (0.01) | (0.01) |
| males*2011 | 0.011 | 0.006 | 0.016 |
|  | (0.01) | (0.01) | (0.01) |
| Intercept | 4.587*** | 4.598*** | 4.695*** |
|  | (0.01) | (0.01) | (0.02) |

C. Log Hourly Wage, FTFY workers

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | 0.160*** | 0.173*** | 0.143*** |
| (base 1996) | (0.01) | (0.01) | (0.01) |
| males*2001 | 0.022* | 0.007 | 0.044** |
|  | (0.01) | (0.01) | (0.02) |
| males*2006 | 0.046*** | 0.055*** | 0.078*** |
|  | (0.01) | (0.01) | (0.01) |
| males*2011 | 0.051*** | 0.047*** | 0.055*** |
|  | (0.01) | (0.01) | (0.01) |
| Intercept | 1.025*** | 1.035*** | 1.130*** |
|  | (0.01) | (0.01) | (0.02) |

Standard errors in parentheses.

$^{*}$ $p < 0.05$, $^{**}$ $p < 0.01$, $^{***}$ $p < 0.001$

Table 3: Evolution of the Gender Pay Gap, Census 1996-2011, FT Part Year

A. Log Annual Earnings, FT Part Year Workers

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | 0.313*** | 0.356*** | 0.230*** |
| (base 1996) | (0.01) | (0.01) | (0.02) |
| males*2001 | 0.017 | −0.010 | 0.069* |
|  | (0.02) | (0.02) | (0.03) |
| males*2006 | 0.050*** | 0.035* | 0.088*** |
|  | (0.01) | (0.01) | (0.02) |
| males*2011 | −0.009 | −0.015 | 0.003 |
|  | (0.01) | (0.02) | (0.02) |
| Intercept | 7.280*** | 7.227*** | 7.747*** |
|  | (0.03) | (0.03) | (0.04) |

B. Log Weekly Wage, FT Part Year Workers

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | 0.275*** | 0.308*** | 0.208*** |
| (base 1996) | (0.01) | (0.01) | (0.02) |
| males*2001 | −0.010* | −0.032 | 0.030 |
|  | (0.02) | (0.02) | (0.03) |
| males*2006 | 0.006 | −0.004 | 0.033 |
|  | (0.01) | (0.01) | (0.02) |
| males*2011 | −0.024* | −0.030* | −0.011 |
|  | (0.01) | (0.01) | (0.02) |
| Intercept | 4.945*** | 4.892*** | 5.163*** |
|  | (0.02) | (0.03) | (0.04) |

C. Log Hourly Wage, FT Part Year Workers

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | 0.121*** | 0.151*** | 0.063** |
| (base 1996) | (0.01) | (0.02) | (0.02) |
| males*2001 | 0.007 | −0.007 | 0.026 |
|  | (0.02) | (0.02) | (0.03) |
| males*2006 | 0.049*** | 0.035* | 0.083*** |
|  | (0.01) | (0.02) | (0.02) |
| males*2011 | 0.045** | 0.038* | 0.061* |
|  | (0.01) | (0.02) | (0.02) |
| Intercept | 1.362*** | 1.321*** | 1.621*** |
|  | (0.03) | (0.03) | (0.05) |

Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4: Evolution of the Gender Pay Gap, Census 1996-2011, Part Time

A. Log Annual Earnings, PT Workers

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | 0.221*** | 0.244*** | 0.175*** |
| (base 1996) | (0.02) | (0.03) | (0.04) |
| males*2001 | 0.027 | 0.014 | 0.053 |
|  | (0.03) | (0.04) | (0.06) |
| males*2006 | −0.189*** | −0.194*** | −0.175*** |
|  | (0.02) | (0.03) | (0.04) |
| males*2011 | −0.179*** | −0.188*** | −0.159*** |
|  | (0.02) | (0.03) | (0.04) |
| Intercept | 6.937*** | 6.759*** | 7.441*** |
|  | (0.04) | (0.04) | (0.06) |

B. Log Weekly Wage, PT Workers

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | 0.216*** | 0.234*** | 0.176*** |
| (base 1996) | (0.02) | (0.02) | (0.03) |
| males*2001 | 0.008* | −0.016 | 0.054 |
|  | (0.03) | (0.03) | (0.05) |
| males*2006 | −0.118*** | −0.119*** | −0.111*** |
|  | (0.02) | (0.02) | (0.03) |
| males*2011 | −0.105*** | −0.111*** | −0.085* |
|  | (0.02) | (0.02) | (0.03) |
| Intercept | 4.631*** | 4.472*** | 4.887*** |
|  | (0.03) | (0.04) | (0.05) |

C. Log Hourly Wage, PT Workers

|  | (1) Canada | (2) ROC | (3) Ontario |
|---|---|---|---|
| Males | −0.002 | 0.012 | −0.033 |
| (base 1996) | (0.02) | (0.03) | (0.04) |
| males*2001 | 0.097** | 0.088* | 0.116 |
|  | (0.04) | (0.04) | (0.06) |
| males*2006 | −0.017 | −0.019 | −0.009 |
|  | (0.03) | (0.03) | (0.04) |
| males*2011 | 0.002 | −0.004 | 0.022 |
|  | (0.03) | (0.03) | (0.04) |
| Intercept | 1.604*** | 1.503*** | 1.826*** |
|  | (0.04) | (0.04) | (0.06) |

Standard errors in parentheses.

$^{*}$ $p < 0.05$, $^{**}$ $p < 0.01$, $^{***}$ $p < 0.001$

Table 5: Evolution of the Gender Pay Gap, Public LFS, Hourly Wages

A. Basic Pay Gap (unconditional)

| Year | CANADA | ONTARIO | ROC |
|------|--------|---------|-----|
| 1997 | 0.77 | 0.77 | 0.77 |
| 1998 | 0.77 | 0.77 | 0.77 |
| 1999 | 0.77 | 0.77 | 0.77 |
| 2000 | 0.77 | 0.77 | 0.77 |
| 2001 | 0.77 | 0.76 | 0.78 |
| 2002 | 0.78 | 0.78 | 0.78 |
| 2003 | 0.79 | 0.78 | 0.79 |
| 2004 | 0.80 | 0.79 | 0.80 |
| 2005 | 0.81 | 0.81 | 0.82 |
| 2006 | 0.81 | 0.81 | 0.82 |
| 2007 | 0.81 | 0.81 | 0.82 |
| 2008 | 0.82 | 0.82 | 0.82 |
| 2009 | 0.83 | 0.83 | 0.83 |
| 2010 | 0.84 | 0.85 | 0.84 |
| 2011 | 0.85 | 0.86 | 0.85 |
| 2012 | 0.84 | 0.86 | 0.84 |
| 2013 | 0.84 | 0.86 | 0.84 |
| 2014 | 0.85 | 0.86 | 0.86 |

B. Conditional Pay Gap: adding age, education, tenure, industry and occupation, and year and province indicators.

| Year | CANADA | | ONTARIO | | ROC | |
|------|--------|------|---------|------|------|------|
| 1997 | 0.83 | | 0.84 | | 0.83 | |
| 1998 | 0.83 | | 0.84 | | 0.83 | |
| 1999 | 0.84 | | 0.84 | | 0.84 | |
| 2000 | 0.83 | | 0.84 | | 0.83 | |
| 2001 | 0.83 | | 0.83 | | 0.83 | |
| 2002 | 0.84 | | 0.85 | | 0.84 | |
| 2003 | 0.84 | | 0.84 | | 0.83 | |
| 2004 | 0.85 | | 0.86 | | 0.84 | |
| 2005 | 0.86 | | 0.86 | | 0.86 | |
| 2006 | 0.86 | | 0.85 | | 0.87 | |
| 2007 | 0.86 | | 0.85 | | 0.86 | |
| 2008 | 0.86 | | 0.86 | | 0.86 | |
| 2009 | 0.87 | 0.88 | 0.86 | 0.87 | 0.87 | 0.88 |
| 2010 | 0.87 | 0.88 | 0.87 | 0.87 | 0.87 | 0.88 |
| 2011 | 0.88 | 0.89 | 0.88 | 0.89 | 0.88 | 0.90 |
| 2012 | 0.88 | 0.89 | 0.87 | 0.88 | 0.88 | 0.89 |
| 2013 | 0.88 | 0.89 | 0.87 | 0.88 | 0.88 | 0.89 |
| 2014 | 0.88 | 0.89 | 0.87 | 0.88 | 0.88 | 0.89 |

C. Conditional Pay Gap: adding Family characteristics (marital status, children) to age, education, tenure, industry, occupation, year and province indicators.

| Year | CANADA | ONTARIO | ROC |
|------|--------|---------|-----|
| 1997 | 0.84 | 0.84 | 0.83 |
| 1998 | 0.83 | 0.84 | 0.83 |
| 1999 | 0.84 | 0.84 | 0.84 |
| 2000 | 0.83 | 0.84 | 0.83 |
| 2001 | 0.83 | 0.83 | 0.83 |
| 2002 | 0.84 | 0.85 | 0.84 |
| 2003 | 0.84 | 0.84 | 0.83 |
| 2004 | 0.85 | 0.86 | 0.84 |
| 2005 | 0.86 | 0.86 | 0.86 |
| 2006 | 0.86 | 0.85 | 0.87 |
| 2007 | 0.86 | 0.85 | 0.86 |
| 2008 | 0.86 | 0.86 | 0.86 |

Table 5 (cont). Evolution of the Gender Pay Gap,
Public LFS, Hourly Wages

| Year | CANADA | | ONTARIO | | ROC | |
|------|------|------|------|------|------|------|
| 2009 | 0.87 | 0.88 | 0.86 | 0.87 | 0.87 | 0.88 |
| 2010 | 0.87 | 0.88 | 0.87 | 0.88 | 0.87 | 0.88 |
| 2011 | 0.88 | 0.89 | 0.88 | 0.89 | 0.88 | 0.90 |
| 2012 | 0.88 | 0.89 | 0.87 | 0.88 | 0.88 | 0.89 |
| 2013 | 0.88 | 0.89 | 0.87 | 0.88 | 0.88 | 0.89 |
| 2014 | 0.88 | 0.89 | 0.87 | 0.88 | 0.88 | 0.89 |

Note: After 2009 we can control for 4-digit refined
occupational codes (columns 3, 5, and 7)

Table 6: Oaxaca-Blinder Wage Gap Decomposition, LFS (RDC access) 1997-2013

|  | Hourly Wage Gap | | Weekly Wage Gap | |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (1) | (2) |
| $LogW_m$ | 2.79 | 2.79 | 6.44 | 6.44 |
|  | (0.0003) | (0.0003) | (0.0004) | (0.0004) |
| $LogW_w$ | 2.59 | 2.59 | 6.04 | 6.04 |
|  | (0.0003) | (0.0003) | (0.0004) | (0.0004) |
| Log Wage Gap | 0.20 | 0.20 | 0.40 | 0.40 |
|  | (0.0004) | (0.0004) | (0.0006) | (0.0006) |
| Fraction Explained(%) | -13 | 18.5 | 30 | 49.2 |
| Fraction Explained(%) | 113 | 81.5 | 70 | 50.8 |
| Fraction Explained(%) |  |  |  |  |
|    Public Sector | -21.5 | -13.5 | -2.5 | -2.3 |
|    Union | -0.04 | -0.05 | -0.02 | -0.03 |
|    Tenure | 4 | -0.5 | 2.3 | 1.8 |
|    Education | -4.4 | -2.5 | -2.3 | -1.25 |
|    Family | -0.5 | -0.2 | -0.25 | -0.25 |
|    Occupation | -16 | 20 | -2 | 17.5 |
|    FT Workers | 7.5 | 4.5 | 36 | 34 |

Notes: Results in (1) are conditional on 1-digit occupational code. Results in (2) are conditional on 4-digit occupational code. Family includes marital status, and whether people have children younger than 12 or older than 12. Oaxaca-Blinder controls for year dummies and province dummies.

Table 7: Heterogeneity in the wage gap by marital status and age groups, controlling by education and job type. Public LFS, 1997 to 2014

| | MARRIED | | DIVORCED, WIDOWED | | SINGLE | |
|---|---|---|---|---|---|---|
| | Coef. | Std. Err. | Coef. | Std. Err. | Coef. | Std. Err. |
| Overall No Interaction | **-0.178** | 0.001 | **-0.150** | 0.002 | -0.072 | 0.001 |
| Overall w/ Interaction Gender Gap | **-0.136** | 0.002 | **-0.124** | 0.006 | **-0.048** | 0.005 |
| Age 25 to 26 Gender gap | -0.015 | 0.015 | -0.07 | 0.079 | **0.037** | 0.013 |
| Age 27 to 29 Gender gap | **-0.035** | 0.012 | **-0.154** | 0.043 | **0.027** | 0.013 |
| Age 30 to 34 Gender gap | **-0.075** | 0.008 | -0.010 | 0.026 | **-0.033** | 0.012 |
| Age 35 to 39 Gender gap | **-0.094** | 0.008 | **-0.132** | 0.020 | **-0.041** | 0.013 |
| Age 40 to 44 Gender gap | -0.121 | 0.007 | -0.121 | 0.016 | -0.120 | 0.014 |
| Age 45 to 49 Gender gap | -0.186 | 0.007 | -0.136 | 0.015 | -0.093 | 0.016 |
| Age 50 to 54 Gender gap | -0.175 | 0.006 | -0.178 | 0.015 | -0.119 | 0.019 |
| Age 55 to 59 Gender gap | -0.135 | 0.006 | -0.099 | 0.015 | -0.012 | 0.023 |
| Age 60 to 64 Gender gap | -0.121 | 0.008 | -0.085 | 0.017 | -0.138 | 0.032 |

Table 8: Relative Gender Wage Gap, Census

| | Weekly | | | Hourly | | |
|---|---|---|---|---|---|---|
| | Canada | Ontario | ROC | Canada | Ontario | ROC |
| **Panel A: All Workers** | | | | | | |
| Relative to Single | | | | | | |
| Married | 0.125*** | 0.134*** | 0.128*** | 0.076*** | 0.084*** | 0.074*** |
| Other | 0.063*** | 0.070*** | 0.065*** | 0.057*** | 0.057*** | 0.059*** |
| Relative to Private Sector | | | | | | |
| Public Sector | −0.089*** | −0.088** | −0.092*** | −0.056*** | −0.057*** | −0.056*** |
| Relative to HS | | | | | | |
| College | −0.022*** | −0.012** | −0.026*** | −0.020*** | −0.022*** | −0.019*** |
| University | −0.101*** | −0.082*** | −0.109*** | −0.088*** | −0.084*** | −0.091*** |
| Relative to without Children | | | | | | |
| with one child | 0.049*** | 0.040*** | 0.055*** | 0.038*** | 0.032*** | 0.041*** |
| with 2+ children | 0.079*** | 0.078*** | 0.081*** | 0.049*** | 0.051*** | 0.047*** |
| **Panel B: Full Time Part Year Workers** | | | | | | |
| Relative to Single | | | | | | |
| Relative to Single | | | | | | |
| Married | 0.111*** | 0.108*** | 0.126*** | 0.066*** | 0.063*** | 0.076*** |
| Other | 0.058*** | 0.049*** | 0.070*** | 0.042*** | 0.032** | 0.053*** |
| Relative to Private Sector | | | | | | |
| Public Sector | −0.050*** | −0.032** | −0.060*** | −0.025*** | −0.008 | −0.035*** |
| Relative to HS | | | | | | |
| College | −0.053*** | −0.045** | −0.053*** | −0.055*** | −0.053*** | −0.057*** |
| University | −0.232*** | −0.234*** | −0.219*** | −0.208*** | −0.216*** | −0.199*** |
| Relative to without Children | | | | | | |
| with one child | −0.015*** | −0.017 | −0.009 | −0.035*** | −0.040*** | −0.030*** |
| with 2+ children | 0.036*** | 0.031*** | 0.043*** | 0.022*** | 0.019* | 0.26*** |
| **Panel C: Full Time Full Year Workers** | | | | | | |
| Relative to Single | | | | | | |
| Married | 0.120*** | 0.136*** | 0.119*** | 0.094*** | 0.103*** | 0.092*** |
| Other | 0.047*** | 0.058*** | 0.045*** | 0.050*** | 0.054*** | 0.050*** |
| Relative to Private Sector | | | | | | |
| Public Sector | −0.087*** | −0.088*** | −0.089*** | −0.058*** | −0.061*** | −0.058*** |
| Relative to HS | | | | | | |
| College | −0.028*** | −0.026*** | −0.028*** | −0.026*** | −0.033*** | −0.023*** |
| University | −0.098*** | −0.083*** | −0.106*** | −0.081*** | −0.077*** | −0.084*** |
| Relative to without Children | | | | | | |
| with one child | 0.067*** | 0.056*** | 0.074*** | 0.050*** | 0.043*** | 0.054*** |
| with 2+ children | 0.085*** | 0.085*** | 0.086*** | 0.055*** | 0.057*** | 0.055*** |
| **Panel D: Part Time Workers** | | | | | | |
| Relative to Single | | | | | | |
| Married | 0.059*** | 0.031** | 0.081*** | −0.073*** | −0.113*** | −0.048*** |
| Other | 0.070*** | 0.040* | 0.875*** | 0.047*** | −0.016 | 0.081*** |
| Relative to Private Sector | | | | | | |
| Public Sector | −0.050*** | −0.060** | −0.050*** | −0.027** | 0.035* | 0.017 |
| Relative to HS | | | | | | |
| College | −0.009 | 0.065*** | −0.042*** | −0.019 | 0.031 | −0.043** |
| University | −0.118*** | −0.023 | −0.161*** | −0.151*** | −0.106*** | −0.171*** |

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| Relative to without Children | | | | | | |
|---|---|---|---|---|---|---|
| with one child | 0.045*** | 0.021 | 0.061*** | −0.008 | −0.019 | 0.001 |
| with 2+ children | 0.049*** | 0.045*** | 0.054*** | −0.049*** | −0.050*** | −0.048*** |

Standard errors in parentheses.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 9: Probability of promotion by gender

| | All Workers | All Workers | | Single | | Not Single | | | Women | Men |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Public | Private | Public | Private | Public | Private | | | |
| Male | 0.012*** | 0.009*** | 0.012*** | 0.008*** | 0.006*** | 0.009*** | 0.015*** | Public | −0.005*** | −0.082*** |
| | (0.0004) | (0.001) | (0.0005) | (0.002) | (0.001) | (0.001) | (0.0006) | | (0.0007) | (0.0009) |
| Age | 0.003*** | 0.002*** | 0.003*** | 0.005*** | 0.004*** | −0.0007* | 0.003*** | Age | 0.003*** | 0.004*** |
| | (0.0002) | (0.0003) | (0.0002) | (0.0006) | (0.0003) | (0.0004) | (0.0003) | | (0.0003) | (0.0002) |
| Age$^2$ | −0.00004*** | −0.00002*** | −0.00004*** | −0.00006*** | −0.00006*** | 0.000007 | −0.00003*** | Age$^2$ | −0.00004*** | −0.00004*** |
| | (0.000001) | (0.000003) | (0.000001) | (0.000003) | (0.000003) | (0.000005) | (0.000003) | | (0.000003) | (0.000002) |
| Married | −0.001*** | −0.003*** | −0.0005 | | | −0.006*** | −0.003*** | Married | −0.004*** | 0.001 |
| | (0.0006) | (0.001) | (0.0006) | | | (0.002) | (0.001) | | (0.0007) | (0.001) |
| Divorced/ | 0.002** | 0.0005 | 0.002** | | | | | Divorced/ | 0.0002 | 0.004** |
| Widowed | (0.001) | (0.002) | (0.001) | | | | | Widowed | (0.001) | (0.001) |
| HS | 0.008*** | 0.01*** | 0.009*** | 0.005 | 0.004*** | 0.009*** | 0.009*** | HS | 0.007*** | 0.009*** |
| | (0.0007) | (0.003) | (0.0007) | (0.001) | (0.001) | (0.003) | (0.001) | | (0.0008) | (0.001) |
| College | 0.008*** | −0.003 | 0.009*** | −0.006 | 0.009*** | −0.005 | 0.008*** | College | 0.008*** | 0.009*** |
| | (0.0007) | (0.003) | (0.0007) | (0.003) | (0.003) | (0.003) | (0.001) | | (0.0008) | (0.001) |
| University | 0.01*** | −0.004 | 0.02*** | −0.01** | 0.020*** | −0.006* | 0.02*** | University | 0.014*** | 0.02*** |
| | (0.0008) | (0.003) | (0.0008) | (0.005) | (0.001) | (0.003) | (0.001) | | (0.0009) | (0.001) |
| _cons | −0.04*** | −0.009 | −0.04*** | −0.06*** | −0.06*** | 0.05*** | −0.03 | _cons | −0.03*** | −0.04*** |
| | (0.002) | (0.001) | (0.002) | (0.01) | (0.003) | (0.009) | (0.004) | | (0.002) | (0.002) |
| # of obs. | 737516 | 133577 | 603939 | 28146 | 194737 | 105431 | 409202 | # of obs. | 374398 | 363118 |

Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 10: Probability of Working Part-time and Probability of Leaving Job Due to Children and Family Obligations. Source: 2013 public LFS

A. Tabulations from the data

| Reason for part-time | % for Males | % for Females | Reason why left job | % for Males | % for Females |
|---|---|---|---|---|---|
| Other reasons | 2.64 | 2.11 | Left job-other reasons | 9.99 | 12.85 |
| Own illness/disability | 4.35 | 4.14 | Left job-illness/disab | 5.34 | 5.99 |
| Care for own children | 1.39 | 12.67 | Left job-person/family | 1.40 | 7.61 |
| Other family | 1.32 | 3.58 | | | |
| Going to school | 34.72 | 23.36 | Left job-school | 20.25 | 20.15 |
| Personal preference | 7.78 | 27.82 | | | |
| Couldn't find FT/look | 10.54 | 9.02 | Lost job: laid off | 53.41 | 42.76 |
| Couldn't find FT/didn't | 17.26 | 17.31 | Left job: retired | 9.61 | 10.65 |
| Total | 46881 | 97602 | Total | 52639 | 47872 |

B. Regression Coefficients for the Probability of Part-time/Probability of Leaving Job Due to Children and Family Obligations

| Probability (PART-TIME) | | Probability (LEAVING JOB) | |
|---|---|---|---|
| Women | 0.135 | Women | 0.062 |
| Intercept | 0.02 | Intercept | 0.014 |

No regressors included.

| | | | |
|---|---|---|---|
| Women | 0.119 | Women | 0.075 |
| Public Sector | 0.001 | Public Sector | 0.007 |
| Women*Public | 0.009 | Women*Public | -0.029 |
| Single | -0.072 | Single | -0.047 |
| Women*Single | -0.101 | Women*Single | -0.048 |
| Union | -0.015 | | |

Also included are age, education, province, industry, and occupation.

Table 11: Probability of Being Employed Absent from Work

Sample average

| | |
|---|---|
| Male | 0.073 |
| Female | 0.104 |

| | Coef. | Std. Err. | | Coef. | Std. Err. |
|---|---|---|---|---|---|
| FEMALE | 0.032 | 0.0002 | FEMALE | 0.003 | 0.0002 |
| age 27-30 | 0.015 | 0.0005 | younger 3 | 0.003 | 0.0004 |
| age 30-34 | 0.021 | 0.0005 | younger 5 | -0.003 | 0.0005 |
| age 35-39 | 0.006 | 0.0005 | younger 12 | -0.002 | 0.0004 |
| age 40-44 | -0.000 | 0.0005 | younger 15 | -0.002 | 0.0004 |
| age 45-49 | 0.005 | 0.0005 | mom younger 3 | 0.222 | 0.0006 |
| age 50-54 | 0.013 | 0.0005 | mom younger 5 | 0.014 | 0.0007 |
| age 55-59 | 0.020 | 0.0005 | mom younger 12 | 0.005 | 0.0005 |
| age 60-65 | 0.027 | 0.0006 | public | 0.029 | 0.0003 |
| intercept | 0.029 | 0.0005 | public*FEMALE | 0.017 | 0.0004 |
| | | | age 27-30 | 0.006 | 0.0005 |
| | | | age 30-34 | 0.008 | 0.0005 |
| | | | age 35-39 | 0.008 | 0.0005 |
| | | | age 40-44 | 0.013 | 0.0005 |
| | | | age 45-49 | 0.020 | 0.0005 |
| | Coef. | Std. Err. | age 50-54 | 0.028 | 0.0005 |
| FEMALE | 0.26 | 00002. | age 55-59 | 0.036 | 0.0005 |
| public | 0.040 | 0.0002 | age 60-65 | 0.043 | 0.0006 |
| intercept | 0.040 | 0.0003 | intercept | 0.050 | 0.0004 |

Table 12: Number of Records on Sunshine List (Nominal and Real Thresholds)

| Year | Nominal $ Threshold | | | Real $ Threshold | |
| | Nb. Records | % female | Constant $ Cut-off | Nb. Records | % female |
| --- | --- | --- | --- | --- | --- |
| 1997 | 4307 | 0.22 | $100,000 | 4307 | 0.22 |
| 1998 | 4866 | 0.24 | $101,814 | 4445 | 0.24 |
| 1999 | 6210 | 0.23 | $102,721 | 5332 | 0.23 |
| 2000 | 8008 | 0.20 | $104,762 | 6168 | 0.21 |
| 2001 | 10331 | 0.21 | $107,823 | 6751 | 0.21 |
| 2002 | 12973 | 0.24 | $111,111 | 7873 | 0.24 |
| 2003 | 16237 | 0.24 | $113,379 | 9369 | 0.24 |
| 2004 | 19947 | 0.25 | $116,440 | 9404 | 0.25 |
| 2005 | 22387 | 0.26 | $118,594 | 9730 | 0.25 |
| 2006 | 26694 | 0.28 | $121,202 | 10524 | 0.26 |
| 2007 | 33618 | 0.29 | $123,356 | 12796 | 0.27 |
| 2008 | 41920 | 0.31 | $125,624 | 14505 | 0.27 |
| 2009 | 50383 | 0.32 | $128,458 | 16359 | 0.28 |
| 2010 | 61496 | 0.34 | $128,912 | 19068 | 0.29 |
| 2011 | 71052 | 0.35 | $132,086 | 18971 | 0.29 |
| 2012 | 78910 | 0.36 | $136,168 | 18564 | 0.30 |
| 2013 | 86941 | 0.37 | $138,095 | 18708 | 0.31 |
| 2014 | 96524 | 0.36 | $139,456 | 20063 | 0.31 |
| | | | | | |
| Total | 652804 | | | 212937 | |

Table 13: Number of Records on Sunshine List by Sector (Nominal and Real Thresholds)

| Sector | Nominal $ Threshold # Records | Real $ Threshold # Records | Ratio |
|---|---|---|---|
| **College** | **19853** | **3093** | **6.4** |
| Crown | 31215 | 15301 | 2.0 |
| Electric | 110565 | 45706 | 2.4 |
| Hospital | 65131 | 24305 | 2.7 |
| Judiciary | 2869 | 1216 | 2.4 |
| Legisl.Assembly | 1930 | 853 | 2.3 |
| Ministries | 68145 | 18260 | 3.7 |
| **Municipal** | **123537** | **19280** | **6.4** |
| OntarioPublic | 11282 | 8922 | 1.3 |
| Other | 23102 | 8380 | 2.8 |
| **Schoolboard** | **68488** | **8226** | **8.3** |
| University | 126687 | 59395 | 2.1 |

Table 14: Percent women across time and (aggregated) sectors

A. Nominal income threshold ($100,000)

| year | Univ&College | Utilities | Hospital | GVT&Judicial | Schlboard | overall |
|------|-------------|-----------|----------|--------------|-----------|---------|
| 1997 | 0.11 | 0.25 | 0.29 | 0.26 | 0.20 | 0.21 |
| 1998 | 0.13 | 0.20 | 0.33 | 0.29 | 0.25 | 0.24 |
| 1999 | 0.13 | 0.19 | 0.32 | 0.28 | 0.29 | 0.22 |
| 2000 | 0.14 | 0.12 | 0.32 | 0.30 | 0.33 | 0.20 |
| 2001 | 0.15 | 0.13 | 0.38 | 0.29 | 0.38 | 0.21 |
| 2002 | 0.18 | 0.13 | 0.43 | 0.33 | 0.37 | 0.23 |
| 2003 | 0.20 | 0.13 | 0.45 | 0.30 | 0.40 | 0.24 |
| 2004 | 0.23 | 0.12 | 0.50 | 0.29 | 0.41 | 0.24 |
| 2005 | 0.25 | 0.12 | 0.51 | 0.29 | 0.47 | 0.26 |
| 2006 | 0.27 | 0.12 | 0.53 | 0.28 | 0.50 | 0.28 |
| 2007 | 0.30 | 0.13 | 0.57 | 0.27 | 0.52 | 0.29 |
| 2008 | 0.32 | 0.13 | 0.62 | 0.27 | 0.55 | 0.31 |
| 2009 | 0.33 | 0.15 | 0.67 | 0.26 | 0.56 | 0.32 |
| 2010 | 0.35 | 0.17 | 0.67 | 0.27 | 0.57 | 0.34 |
| 2011 | 0.36 | 0.17 | 0.67 | 0.27 | 0.57 | 0.35 |
| 2012 | 0.38 | 0.18 | 0.69 | 0.28 | 0.57 | 0.36 |
| 2013 | 0.39 | 0.16 | 0.70 | 0.28 | 0.57 | 0.37 |
| 2014 | 0.40 | 0.19 | 0.69 | 0.27 | 0.57 | 0.36 |
| Total | 0.33 | 0.15 | 0.63 | 0.28 | 0.55 | 0.33 |

B. Real $ Income Threshold

| year | Univ&College | Utilities | Hospital | GVT&Judicial | Schlboard | overall |
|------|-------------|-----------|----------|--------------|-----------|---------|
| 1997 | 0.11 | 0.25 | 0.29 | 0.26 | 0.20 | 0.21 |
| 1998 | 0.13 | 0.20 | 0.32 | 0.29 | 0.25 | 0.24 |
| 1999 | 0.13 | 0.19 | 0.32 | 0.28 | 0.30 | 0.23 |
| 2000 | 0.14 | 0.11 | 0.31 | 0.30 | 0.33 | 0.21 |
| 2001 | 0.16 | 0.13 | 0.35 | 0.29 | 0.37 | 0.21 |
| 2002 | 0.17 | 0.13 | 0.39 | 0.33 | 0.34 | 0.23 |
| 2003 | 0.19 | 0.14 | 0.40 | 0.30 | 0.34 | 0.24 |
| 2004 | 0.20 | 0.13 | 0.42 | 0.32 | 0.39 | 0.24 |
| 2005 | 0.21 | 0.12 | 0.42 | 0.32 | 0.43 | 0.25 |
| 2006 | 0.22 | 0.13 | 0.42 | 0.31 | 0.46 | 0.25 |
| 2007 | 0.25 | 0.13 | 0.46 | 0.32 | 0.47 | 0.27 |
| 2008 | 0.25 | 0.13 | 0.49 | 0.33 | 0.46 | 0.27 |
| 2009 | 0.27 | 0.14 | 0.52 | 0.33 | 0.46 | 0.28 |
| 2010 | 0.28 | 0.14 | 0.51 | 0.34 | 0.51 | 0.29 |
| 2011 | 0.29 | 0.14 | 0.50 | 0.34 | 0.52 | 0.29 |
| 2012 | 0.29 | 0.15 | 0.50 | 0.35 | 0.52 | 0.30 |
| 2013 | 0.31 | 0.13 | 0.51 | 0.36 | 0.49 | 0.31 |
| 2014 | 0.32 | 0.15 | 0.50 | 0.35 | 0.48 | 0.31 |
| Total | 0.25 | 0.14 | 0.45 | 0.33 | 0.43 | 0.27 |

Figure 1: Evolution of the Gender Wage Gap, Canada (Census).
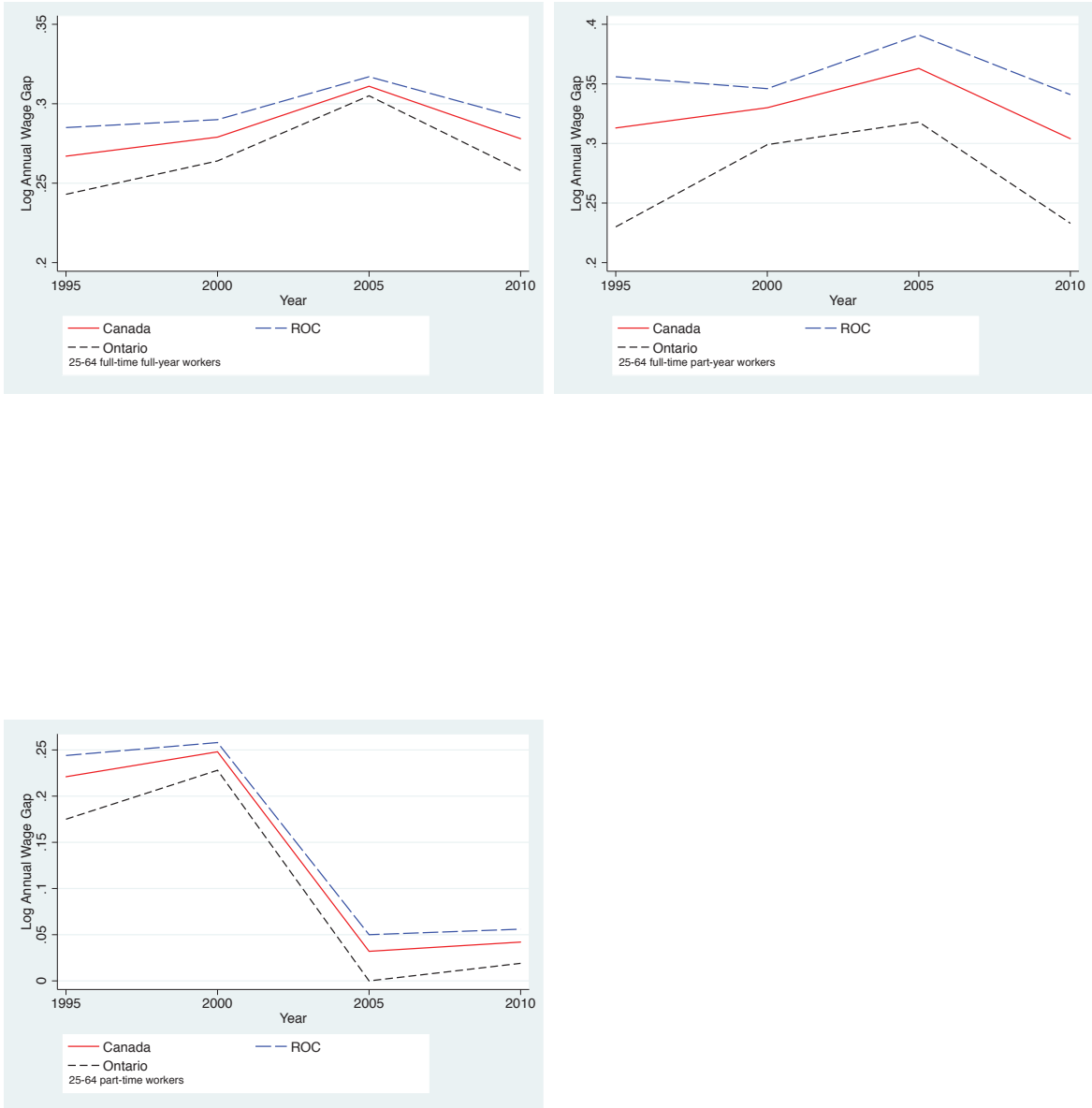
Figure 2: Gender Wage Gap Across the Income Distribution, Census Annual Earnings.
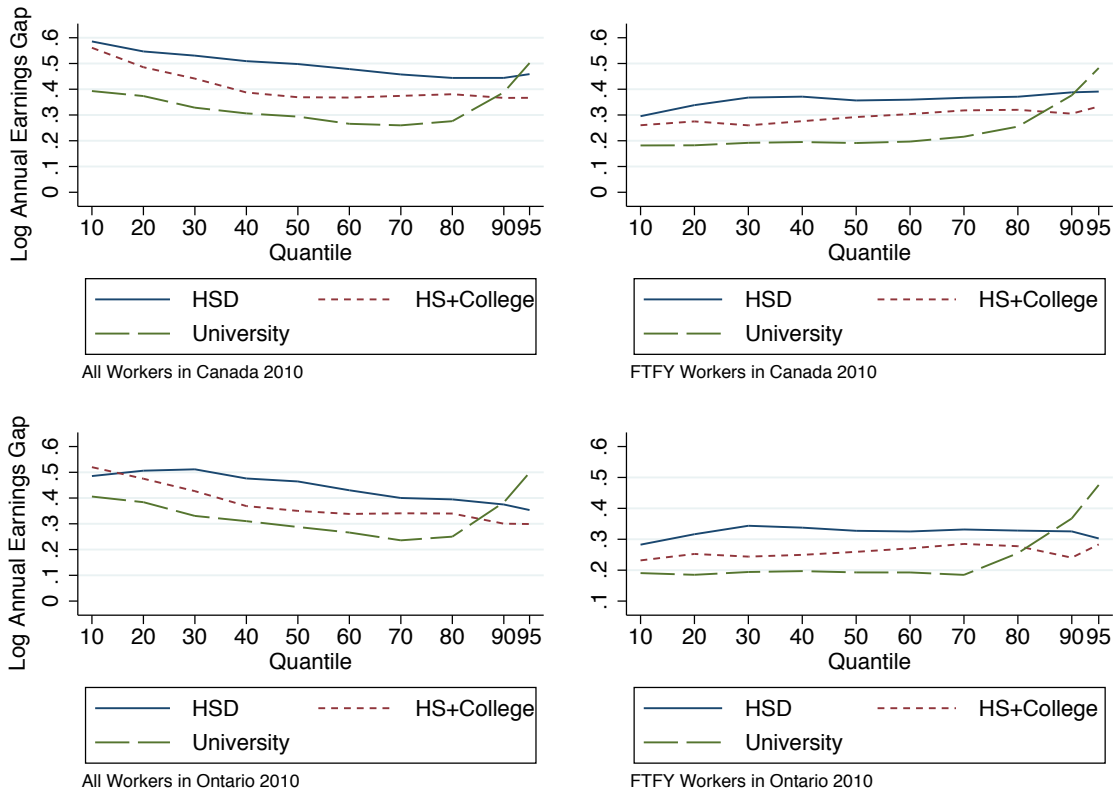


All Workers in Canada 2010

FTFY Workers in Canada 2010

All Workers in Ontario 2010

FTFY Workers in Ontario 2010

Figure 3: Gender Wage Gap Across the Income Distribution, Census (imputed) Hourly Earnings.



All Workers in Canada 2010

FTFY Workers in Canada 2010

All Workers in Ontario 2010

FTFY Workers in Ontario 2010
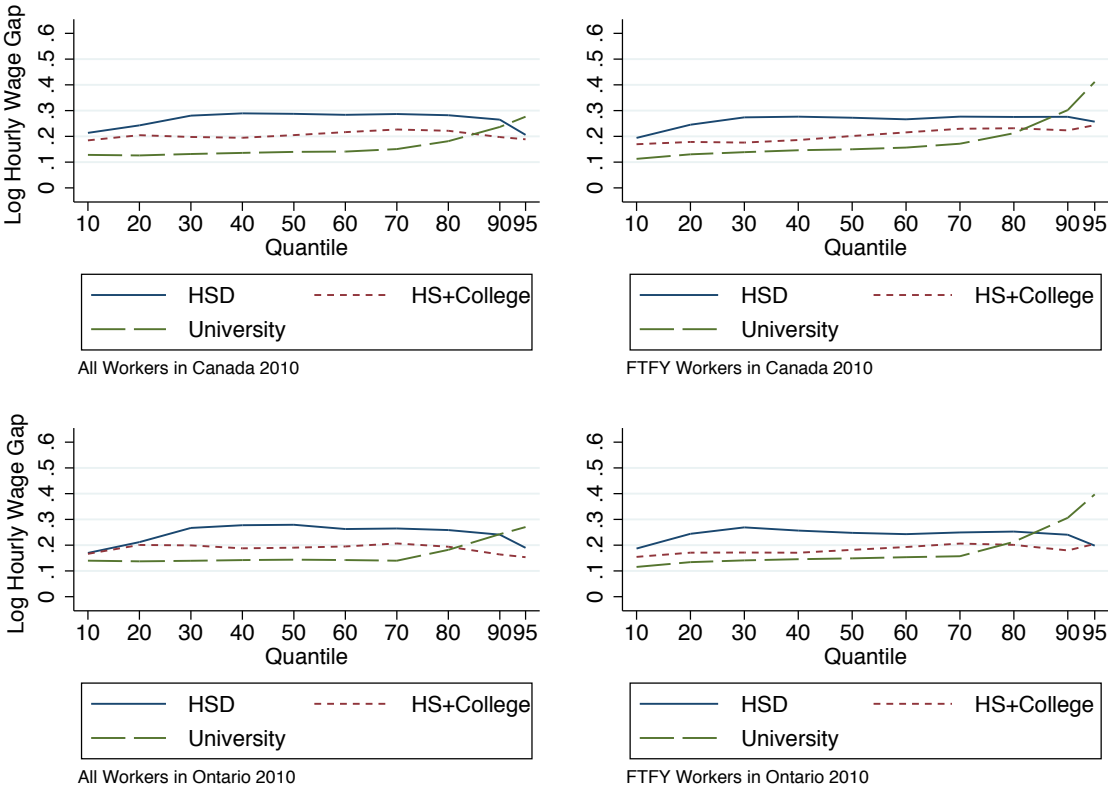
Figure 4: Wage Gap by Public/Private Sectors, LFS.
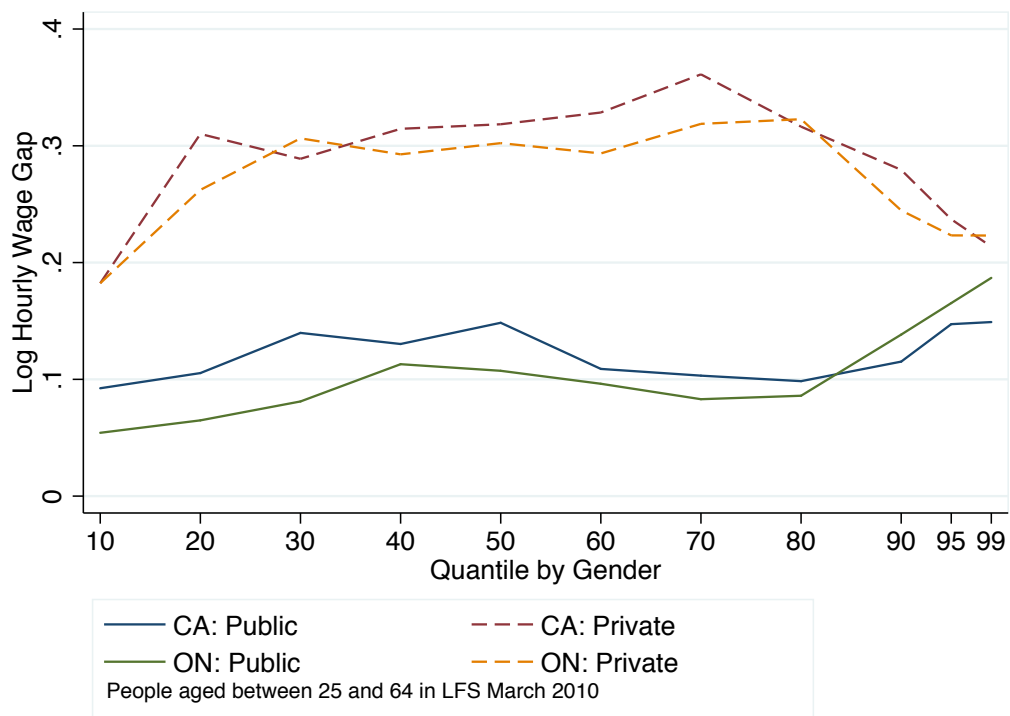
Figure 5: Wage Gap by Education and Public/Private Sectors, LFS.
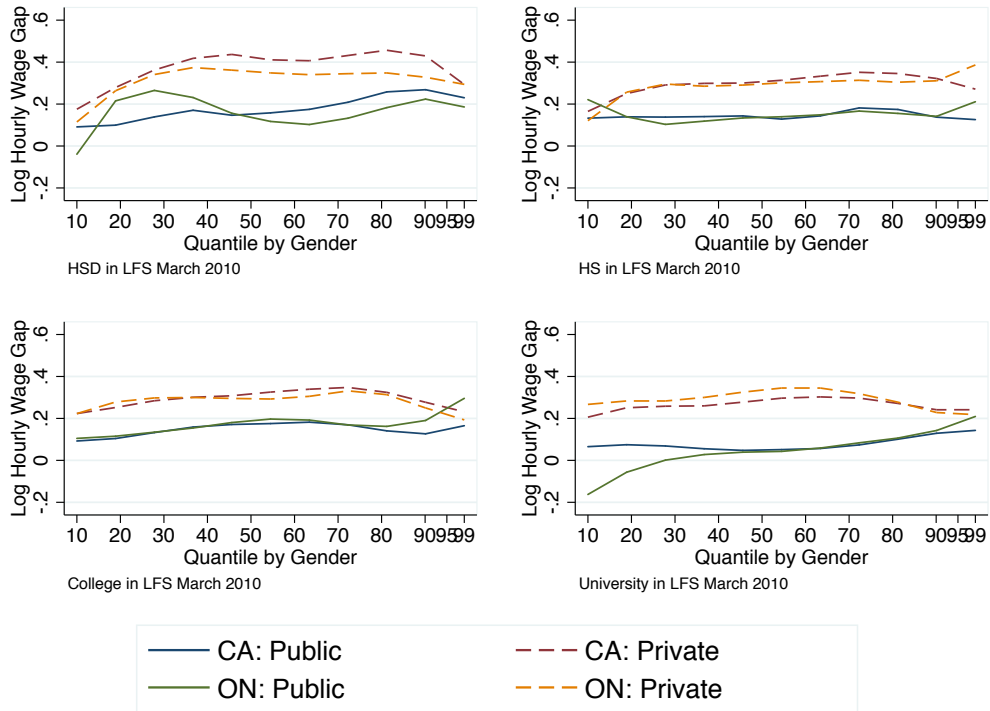


Figure 6: Number of Records in the Sunshine List (nominal $ and real $ thresholds).
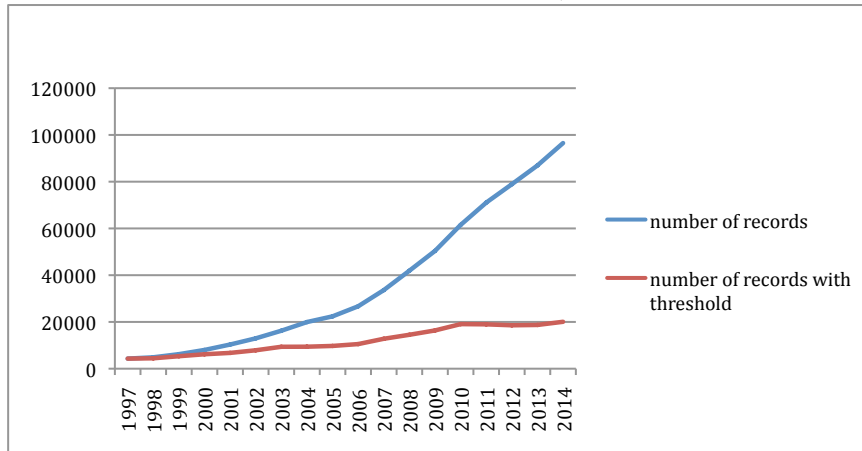
Figure 7: Evolution of the Gender Ratio in the Sunshine List (nominal $ and real $ thresholds).
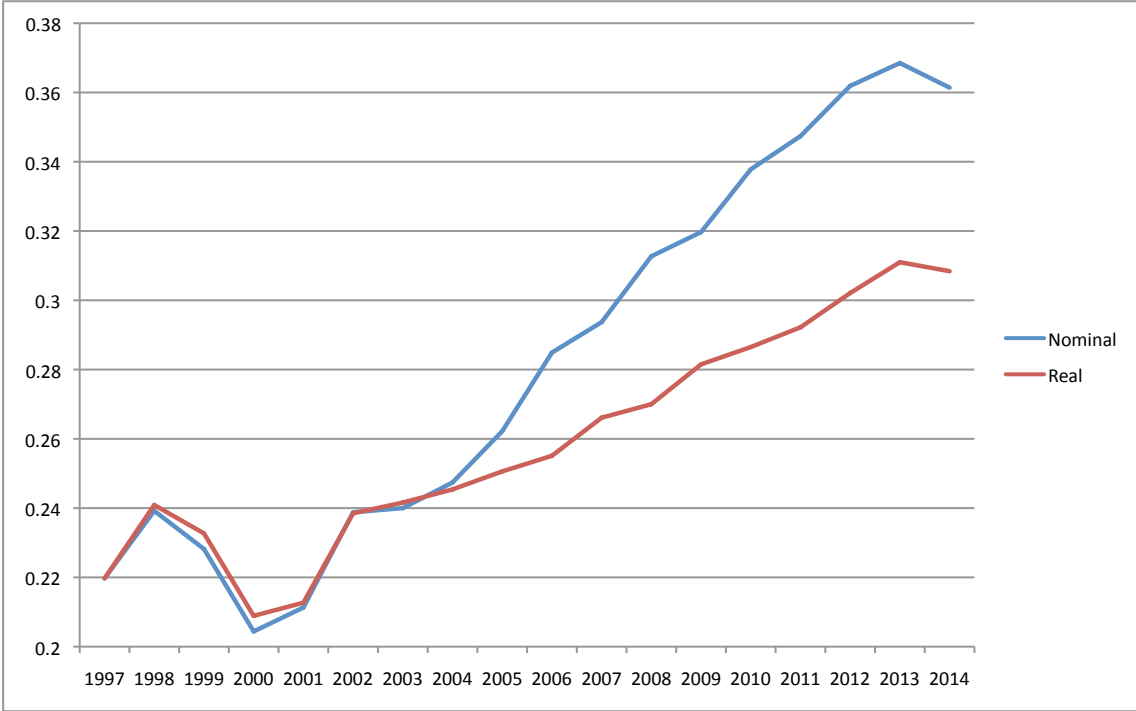
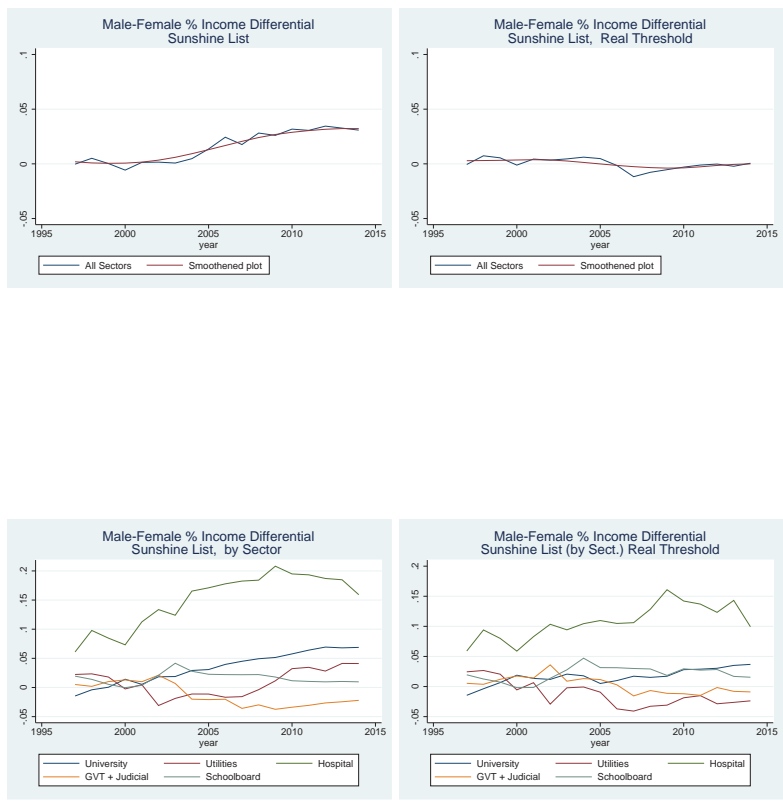Figure 8: Pay Gap between Men and Women in the Sunshine List.

Figure 9: Gender Gap at Quantiles of Earnings Distribution, Sunshine List.
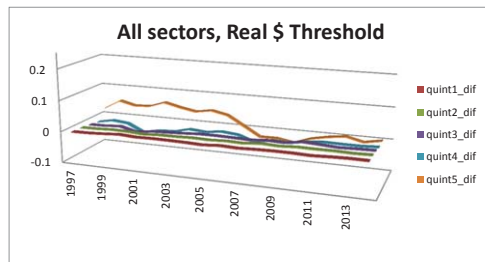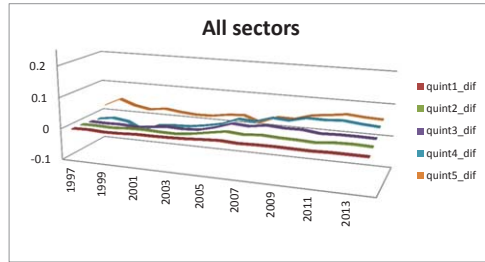
Figure 10: Gender Gap at Quantiles of Earnings Distribution by Sectors, Sunshine List.