# Male-Female Earnings Differentials in Canada: Where in the Earnings Distribution do they Exist? 

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#### Abstract

The gender pay gap is the topic of countless papers in the economics and social science literature. Its study can be traced back at least as far as the Old Testament (Gunderson, 2006), and debates on the issue in the media and elsewhere often generate much more heat than light. For policy purposes, it is converse that is needed most. This research will use the SLID from 1996 and 2005 to determine (1) how the average gender pay gap has evolved over this decade, (2) if there are differences in the gender pay gap at various points of the pay distribution, and (3) if there have been changes in gender pay at these points in the pay distribution over this period. We "link" this current research with the previous Canadian literature on the subject using the ubiquitous Oaxaca-Blinder decomposition, followed by an extension of this technique which explicitly addresses the explained and unexplained part of the pay gap at different points along the pay distribution. We find that the adjusted mean hourly wage gap for females has increased about one percentage point between 1996 and 2005 to about 89 per cent of the male hourly wage. The wage gap differs depending on which range of the wage distribution is being considered, and is sensitive to the choice of wage measure.

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## I. Background

One of the most studied phenomena in labour economics has been the difference in pay between men and women. ${ }^{1}$ One constantly hears media reports that women earnings are only about 70 percent of male earnings. Although this gap is narrowing over time, the gap itself persists. Generally, as data sets include a wider range of pertinent variables and empirical methodologies become more sophisticated, researchers find that they are able to explain a larger proportion of this pay gap differential on various observable characteristics. They are also able to ascertain the sources of the gap. Any unexplained proportion of the overall gap in favour of men is the result of unobservable differences in characteristics between the sexes, including possible wage discrimination against women. To date, however, we do not have an understanding of where in the earnings distribution this pay gap exists, since the usual methodologies used simply ascertain any average gap between men and women based on the mean observable characteristics of each group. As is well known to researchers, these averages can mask the size of gaps along the pay distribution. For example, it may be larger gaps at the top of the pay distribution which pull up the average, while gaps may not exist (or even favour women) at lower points in the same distribution. This makes such studies of limited use since researchers are unable to determine exactly where policy could be directed to better understand the sources of any pay differentials.

There have been a number of studies on the gender pay gap using Canadian data over the past three decades. ${ }^{2}$ Although these studies are diverse in the data sets used, the time periods studies, etc., there are a number of

[^0]commonalities between them that are worthy of noting. First, most studies of the gender pay gap use the familiar decomposition technique developed independently by Blinder (1973) and Oaxaca (1973) or one of the many variants to this technique. ${ }^{3}$ Thus, they say nothing about the pay gap at various points of the earning distribution. Second, studies on the pay gap have generally taught us that oft-quoted unadjusted pay gap of $\sim 30$ percentage points (e.g., Statistics Canada, 2006) tends to shrink as more and better controls are used to appropriately adjust the gap. For example better measures of labour market experience (Drolet, 2002b; Kidd and Shannon, 1994), unionization (Doiron and Riddell, 1994; Kidd and Shannon, 1996) and workplace characteristics (Drolet, 2002a), can shrink the gap to less than 10 percentage points. This, however, still leaves some of the pay gap unexplained.

As much as these studies have added to our knowledge, they have focused on the mean pay gap. This could potentially distort the magnitude of any gap. For example, if women are subject to a glass ceiling (i.e., prohibited from advancing through the salary ranks due to discrimination, e.g., OECD, 2007), then we may see large gaps at the right tail of the pay distribution, but perhaps no gap (or even a pay premium) for those at the mean or left tail of the same distribution. This has not been addressed in the Canadian literature. Furthermore, these studies are inherently limited and may not accurately represent what is currently happening in the Canadian labour market, especially over the past few years as the Canadian economy has expanded and unemployment rates have tumbled.

To the best of my knowledge, only two published Canadian have addressed the pay gap at different points of the earnings distribution: Drolet (2001) and Baker, et al. (1995). Drolet (2001:9) notes that there are differences between males and females at different points of the earnings distribution and that "different wage-determining characteristics at the mean [fail] to accurately

[^1]represent the differences encountered along the wage distribution." [emphasis in original].

Indeed, there are theoretical reasons to believe that the gap may be narrowing recently and thus previous studies may be dated and therefore have not captured this change. In particular, factors such as the increased importance technology that favour "brain" over "brawn," increased competition in the economy due to privatization, deregulation, and globalization, all of which have increased the power of market forces and, since the "taste" for discrimination against women is costly, its perpetrators may no longer be able (or willing) to pay this price (Gunderson, 2006).

Certainly recent evidence does suggest that the changes in the returns to education are an important factor in the pay gap over time. Frenette and Coloumbe (2007) argue that the increase in the proportion of young women holding a university degree has increased between 1981 and 2001, and this phenomenon assisted in reducing the male earnings gap among full-time, fullyear workers in the 1980s. In the 1990s, by contrast, these educated females suffered an increasing pay gap, perhaps as a result of government cutbacks in spending on health and education (female-dominated fields) while engineering and technology graduates (male-dominated fields) saw their earnings rise. Both potentially caused the earnings gap to rise. These authors, however, use census data up to 2001, a time when the economic expansion in Canada was just beginning and the government cutbacks of the previous decade were being relaxed. Furthermore, the census data utilized do not contain detailed data on a number of labour market and job characteristics which have shown to be important in addressing the gender pay gap (e.g., union status). Still, as Finnie and Wannell (1996) have shown, although the gender pay gap has generally narrowed over time, it still tends to be narrower closer to graduation compared to a few years following graduation from post-secondary education. The implication is that something is occurring in the early labour market experiences of young men and women which results in the gap increasing over time.

Still, sometimes it is argued that women are more likely to quit and be absent from work compared to their males counterparts. This is then used as an explanation for the any wage differential. Recently, however, Zhang (2007) has shown that today there is no difference between male and female quit rates, and absenteeism is only greater for females with respect to paid sick leave (only one extra day per year). Chaykowski and Powell (1999) and Finnie (2000) and Statistics Canada (2006) also find similar convergence of various female labour supply measures.

The limitations of these previous studies in terms of time period(s) analyzed, datasets utilized, and methodologies employed will be addressed in this research. We compare two datasets almost 10 years apart, which will also allow us to see if changes occurred over this period. Since these two data sets are cross-sections, they do not allow us to address potentially important factors such as occupational segregation (Robb, 1987; Baker and Fortin, 2001) or the returns to job mobility (Simpson, 1990).

## II. Methodology

The most common methodology for determining pay differentials was independently developed by Blinder (1973) and Oaxaca (1973). Formally, the difference in the mean log wage between males and females is:

$$
\begin{equation*}
\overline{\ln w_{m}}-\overline{\ln w_{f}}=\sum b_{m}\left(\overline{X_{m}}-\overline{X_{f}}\right)+\sum\left(b_{m}-b_{f}\right) \overline{X_{f}} \tag{1}
\end{equation*}
$$

where $\overline{\ln w_{i}}$ is the mean natural logarithm of the wage of gender $i, b_{i}$ is a vector of estimated coefficients for gender $i$, and $\overline{X_{i}}$ is a vector of average characteristics of workers of gender $i$, and $i=m$, $f$ denotes males and females, respectively.

The first term on the right hand side of equation (1) shows the component of the log wage differential that is due to the difference in mean endowments between males and females. This is often referred to as the justifiable pay
differential since it is due to differences in endowments. The second term on the right hand side of equation (1) shows the component of the wage differential that is due to differences in the way that various characteristics are rewarded for males and females. This is usually referred to as the surplus or rent payment that is granted to males (if positive) and is the component that is commonly referred to as "discrimination" since it is unexplained by any of the wage generating controls. This component may also be the result of other characteristics that are unobservable to researchers as well. Indeed, studies that do include additional explanatory variables in the estimation generally find that this unexplained portion of the gender wage differential tends to decrease. For example, Drolet (2002a,b) finds that this is the case when better measures of workplace characteristics and labour market experience are included. ${ }^{4}$

Although this methodology provides us with a simple method to answer the hypothetical question: "What if female workers were paid the same rate of compensation as their female counterparts?", it says little about the underlying wage distribution. Such decomposition may show that the average male worker is paid economic rents, when in fact rents may be larger at the bottom of the wage distribution than at the top of the same distribution, or vice versa. In order to better understand where in the pay distribution differences exist, quantile regression analysis can be used to estimate the following:

$$
\ln w_{i}=X_{i} \beta+F_{i} \delta+\varepsilon_{i},
$$

where $\ln w_{i}$ is the natural logarithm of the hourly wage of the $i^{\text {th }}$ individual, $X_{i}$ is a vector of individual characteristics, $\beta$ is the rate of return to these characteristics, $F_{i}$ is a dichotomous dummy variable that equals one if the individual is female, $\delta$

[^2]is the payment (or penalty) for being female, and $\varepsilon_{i}$ is the classical stochastic error term.

The limitation of this technique is that it does not permit us to determine the part of the total wage differential that is due to male-female differences in labour market attributes, and the part due to different rates of return to these attributes. The drawback of including a female dummy variable into this equation is that it constrains the returns to all other labour-market characteristics to be equal for both genders. In other words it constrains all variables (with the exception of the female indicator) to have the same coefficient or rate of return for both men and women, and this may bias the true extent of any gender wage differentials. We can, however, combine the decomposition technique with quantile regressions to determine the rent component at various points in the wage distribution. This method was introduced by Mueller (1998).

The difference in the log wage between the males and females is:

$$
\begin{equation*}
\overline{\ln w_{m}^{j}}-\overline{\ln w_{f}^{j}}=\sum b_{m}^{j}\left(\overline{X_{m}}-\overline{X_{f}}\right)+\sum\left(b_{m}^{j}-b_{f}^{j}\right) \overline{X_{f}} \tag{2}
\end{equation*}
$$

where $\overline{\ln w_{k}^{j}}$ is the mean natural logarithm of the wage for gender $k$ evaluated at quantile $j, b_{k}^{j}$ is a vector of estimated coefficients for gender $k$ evaluated at quantile $j, \overline{X_{k}}$ is a vector of average characteristics of gender $k$ evaluated the appropriate quantile $j$, and $k=f$, mdenotes females and males, respectively. Finally, $j=.10, .25, .50, .75$, and .90 . The first term on the right hand side is the component of the log wage differential due to differences in endowments between males and females, and is referred to as the justifiable wage or characteristics differential. The second term shows the component due to gender differences in returns to these endowments, and is called the surplus or rent payment. It is this amount that is often attributed to labour market discrimination, although it could be due to other factors such as omitted variable bias.

Since this research has the objective of determining: (1) where in the distribution of pay any gap between genders exists, and (2) how this gap has
changed over time, equations (1) and (2) will be estimated using the Survey of Income and Labour Dynamics (SLID) for the years 1996 and 2005 (the latest year available when this research commenced). The estimation of equation (1) will permit this research to be compared with previous research using the standard decomposition (e.g., Drolet, 2002b), while the estimation of equation (2) will ascertain any gender wage differentials at various points in the wage distribution. The use of two data sets will allow the determination of any changes over this nine-year period. Since gender wage comparisons can be sensitive to model specification (Gunderson, 2006) as well as the choice of dependent variable (e.g., hourly wages, weekly earnings, or annual earnings), different models will be estimated to check for robustness of the results. ${ }^{5}$

## III. Data

The data utilized are the Survey of Labour and Income Dynamics (SLID) from 1996 and 2005 (the latest year available at the time of writing). The SLID is a household survey that annually collects data on some 60,000 individuals, excluding residents of the three territories, residents of institutions, and those living on Indian reserves. These exclusions amount to less than 3 per cent of the overall population (1996 SLID Guide).

The sample is limited to include only those between the ages of 16 and 64 who held a paid job at any time during the reference year. We exclude those who are not paid employees (i.e., unpaid family workers and the self-employed) as well as those who were full-time students during the year. Incomplete observations were also eliminated from the sample.

The SLID data set is rich in the background variables including highest level of education obtained, number of employees at the person's employment site, union status, marital status, province or residence, as well asdetailed industry and occupation codes. The dataset also includes a measure of full-time,

[^3]full-year work experience, a better measure of actual work experience than the familiar Mincer proxy, normally used in these types of studies (Drolet, 2002b).

The dependent variable that will be utilized is the composite hourly wage, constructed by Statistics Canada based on the implicit hourly wage for all paid jobs. ${ }^{6}$ Doiron and Riddell (1996) do note that inequality in the distribution of hours is responsible for some of the pay gap. Although studying the wage rate (i.e., earnings divided by hours worked) may give is a more accurate measure of the pay gap, these authors note that there is increasing correlation between hours and wage rates. This factor could potentially bias even the results that use the wage rate. We assume that any bias introduced using the hourly wage rate is stable across time, and thus will not affect our results.

The final sample contains 13,032 males and 11,728 females from 1996, and 11,086 and 11,250 females from 2005. In either year these observations represent approximately ten million Canadians.

## IV. Results

Table 1 presents summary statistics for males and females and for the two years, 1996 and 2005. Although these data are only means and standard deviations, they are worth analyzing briefly at this point of the exercise.

Worthy of note is that mean unadjusted hourly wage difference in favour of males has decreased from about .22 log points to .20 log points, or about 2 percentage points. Men continue to have an experience advantage of about four years in both 1996 and 2005. Recall, this is not potential experience, but a better measure of full-time, full-year experience as outlined above. In terms of education, a larger proportion of males than females hold graduate degrees, but males are also more likely to have less than high school. In both years, males are less likely to have completed either a college diploma or a university degree; in

[^4]the former case the gap has narrowed, but has widened dramatically in the latter case.

In terms of job characteristics, males on average have longer tenure at their current jobs and are less likely to hold part-time jobs, but both of these gaps have been closing. Similarly, the proportion of males being covered by collective agreements is higher in both years, but this proportion has narrowed considerably. This is owing to the fact that men were less likely to be covered in 2005 compared to 1996, while female coverage rates have remained practically unchanged. Men are also less likely to work for small firms with less than 20 employees.

Males in our sample are less likely to be married or divorced or separated, and therefore more apt to be single compared to females. Regionally, there are no noticeable differences between the males and females in our sample, nor have they changed over time, both of which are to be expected in nationally representative samples.

Regarding the gender distribution in various occupations, there has been very little change. Somewhat surprisingly, female-dominated occupations such as clerical occupations saw a growth in the number of females in the nine-year period, further increasing the concentration of females. Gaps in participation rates in the trades have also been decreasing, but these have been modest and these occupations have remained largely male-dominated.

Some industries too have become more traditional in regard to gender, with an industry such as construction becoming more male-dominated, and traditional female-dominated industries such as education and health increasing their proportion of females.

Tables 2 through 4 further summarize the data presented in Table 1, looking more closely at gender differences at various quantile levels. To do this, the male and female samples are stacked according to their percentile wage rank, and then divided into groups at +/- 5 percentiles from the percentile (or quantile) of interest. For example, those at the median (i.e., $q=.50$ ) include all
those at the $45^{\text {th }}$ through $55^{\text {th }}$ percentiles of wages in the appropriate male or female wage distribution. ${ }^{7}$

Here we find some interesting differences between males and females at various ranges of the overall wage distribution, although we find very few important differences when we compare the 1996 and 2005 results, Table 2 shows that in both years the log wage differential is higher when we compare the middle ranges of the two distributions, in contrast to when the tails are compared. In the 1996 data, for example, the differential is 0.20 for those around the $10^{\text {th }}$ quantile and 0.17 for those around the $90^{\text {th }}$ quantile, but about 0.25 for those at the $25^{\text {th }}$ and $50^{\text {th }}$ quantiles. In 2005 , the differences at the $10^{\text {th }}$ and $90^{\text {th }}$ quantiles are 0.18 and 0.17 , respectively; lower than the differences in the $0.21-0.24$ range at the middle quantiles. These initial results are consistent with the 2003 data provided by the OECD (reference here!!!) which show a wage gap in the low-20 per cent range at the $20^{\text {th }}$ and $80^{\text {th }}$ percentiles.

These data show that the gap has closed the most for those women at or beneath the median income level. The final row in Table 2 shows the evolution of the differences at each quantile (or the difference-in-differences). Here the gap at the median has closed by about three percentage points and by about two percentage points at the $10^{\text {th }}$ and $25^{\text {th }}$ quantiles, compared less than one percentage point at both the $75^{\text {th }}$ and $90^{\text {th }}$ quantiles. To view this in a different way, almost all of the closure of the mean gap by 0.18 over the period can be accounted for by the narrowing of the gap at the median or below.

This presentation of the data in Tables 3 and 4 also unmasks some intriguing differences in other variables. Although years of experience favour males by about two years in both tables, this increases to over five year at the $90^{\text {th }}$ quantile. In terms of education, women near the $90^{\text {th }}$ quantile range are more likely to have completed a post-secondary education (i.e., college or above) compared to males. Thus, it appears that the higher education levels of females

[^5]may be propelling them to the upper tail of the wage distribution, whereas for males it may be more years of experience.

These data also reveal some surprising results regarding the industry and occupation distribution related to the wage distribution. We do know that women dominate the health occupations, but the data here show that a large proportion of the women here are at the upper tail of the wage distribution during both years. In male-dominated industries such as construction and manufacturing, it is males that predominate at the top of the wage distribution, whereas in the health care and social assistance industry it is females who hold this position.

In sum, the data in Tables 3 and 4 show that there is heterogeneity in the male and female samples and that these differences between genders at various points of the wage distribution could be causing wages to differ in ways in which the standard OLS decompositions are not able to detect.

As a starting point it is important to link the current work with the past work that has been done on this topic. Table 5 presents the decomposition results for the 1996 data using OLS estimates of equation (1). The purpose of this exercise is to compare our results to Drolet (2002b) who uses the same SLID data, but for the year 1997. Drolet also uses the master file of the 1995 SLID whereas we are only able to access the public use microdata file (PUMF) which contains fewer variables than the master file. As a result, we cannot compare all of Drolet's results with ours. These cases are noted in the table.

Given that the SLID data used are only a year apart from those used by Drolet, we would expect the results between these two years to be very close. In fact, the results are almost identical, with differences between the two sets of estimates ranging from -0.7 to 2.0 percentage points. Again, we see the same pattern in our data where the adjusted wage differential decreases as better variables are added to the model. Using only a simple model with potential experience (i.e., the Mincer proxy), its square, education level, and annual earnings data as the dependent variable, females earn an average of 71.4 per cent of what males earn, and the addition of education and potential experience add very little (about three percentage points) in terms of understanding the
unadjusted differential. In other words, differences in education and potential experience do little to explain away the unadjusted earnings gap. Compare this to the case of the second augmented model where females now earn 87.9 per cent of average male earnings. Table 6 extends these results by using the 2005 data and comparing these to the 1996 data in Table 4. Here there is an increase in the adjusted wage differential: up to 88.9 per cent, due to a decrease in the unexplained wage differential. These results, which are quantitatively similar to those in literature, coupled with the results from these studies (e.g., Baker, et al., 1995; Kidd and Shannon, 1997, Drolet, 2002b), indicate two important phenomena. First, the adjusted and unadjusted wage gaps are narrowing over time. Second, the unexplained component of the total differential remains substantial. This latter point implies that we are not able to ascertain why this gap continues to exist using observable characteristics, rather other factors such as absenteeism, work effort, work responsibilities, or even labour-market discrimination - each of which is not included in the data-may be driving this result.

Since the results in our data are stable (i.e., similar to Drolet's), and since our main intention it to gain a better understanding of how the earnings differential has changed throughout the earnings distribution, as well as the cause of these changes, we will proceed with using the PUMF rather than the more comprehensive master data file. In other words, unless there is reason to believe that the omitted variables from the current work have a differential effect on earnings in 2005 compared to 1996, the results will not be biased using the PUMF and we will be able to compare changes across the earnings distribution over time with these data. We perform a number of decompositions to check for the robustness of the results. ${ }^{8}$

[^6]Figure 1 shows the main results of the exercise. These are obtained by using the decomposition method in equation (2) where the coefficients are estimated using quantile regressions at five levels, the $10^{\text {th }}, 25^{\text {th }}, 50^{\text {th }}$ (or median), $75^{\text {th }}$, and $90^{\text {th }}$ percentiles of the male and female earnings distributions, as well as the mean values for all males and females that fall within $+/$ - five percentiles from the reference percentile. ${ }^{9}$ Thus, for example, at the median, the two means from the male and female distributions that lie from the $45^{\text {th }}$ through the $55^{\text {th }}$ percentiles are used. The OLS estimates are included for comparison purposes. In each case, the model using the best data possible are used in estimating the model (i.e., augmented model 2 in Tables 5 and 6). The numerical results on which Figure 1 is based are contained in Tables 7 and 8. ${ }^{10}$

There are several interesting results in this chart. First, average female hourly wages as a percentage of male wages increase by one percentage point between 1996 and 2005, from 87.9 per cent to 88.9 per cent. ${ }^{11}$ Since these are mean hourly earnings, they do not change across quantiles and therefore are plotted as a horizontal line. These means, however, mask important differences in adjusted wages across the wage distribution. The general pattern is that adjusted wages decre ase as the quantile level increases. ${ }^{12}$ This holds for both years in our data. For example, in 1996 adjusted female wages at the $10^{\text {th }}$

[^7]quantile were 93.1 per cent of their male counterparts, but only 86.3 per cent at the $90^{\text {th }}$ quantile. Moreover, this pattern of declining relative hourly wages remains in the 2005 data, although the line shifts up signifying the increase in relative hourly wages, the exception being at the $10^{\text {th }}$ quantile where relative wages declined slightly to 91.3 per cent. What this gap increases only at this lowlevel of income cannot be ascertained from these data. The largest increases where at the $25^{\text {th }}$ and $90^{\text {th }}$ quantiles as relative wages increased by over 3 percentage points in each case.

Figure 2 presents these same data, but with the influences of occupation and industry removed. Here the pattern changes somewhat with females at either tail of the distribution having higher-than-average female wages, though still lagging behind there male counterparts. Also, adjusted wages are lower than those in Figure 1, suggesting that the inclusion of occupation and industry is important in ascertaining the wage gap. Figure 3 limits the sample to full-year, full-time workers. Here the pattern is almost a mirror image of the results in Figure 2: those in the middle of the distribution tend to have higher adjusted wages compared to those at the tails.

To check for the robustness of the above results, we again estimate equation (2) but this time using annual salary as the dependent variable. ${ }^{13}$ Also, since we these data show that annual hours worked tend to be higher among males, we look at the adjusted wage gap using models with and without a control for hours. These results are in Figures 4 and 5, respectively. The pattern in Figure 4 is very similar to that in Figure 3 (where we addressed only full-time and full-year workers): namely that it is generally in the tails of the distribution where the relative adjusted compensation is the lowest. The adjusted values in Figure 3 are generally higher since this sample is limited to those with the highest attachment to the labour force. These results together imply that there is something occurring regarding the annual hours of work which is influencing the

[^8]gender wage differential, yet is not be captured by these estimates. Figure 5 shows the adjusted female wage differentials using annual wages and salaries, but this time without controlling for annual hours. The results are mostly as expected; the distributions generally shift down, reflecting the fact that hours worked are an important determinant of annual salaries. The exception to this is the region around the $10^{\text {th }}$ quantile in 2005 , where the adjusted amount does not change when we control for hours worked. This implies that hours worked are not an important determinant of compensation at this part of the salary distribution.

To better ascertain the sources of these differentials, we further decompose the results into the individual factors that contribute to the explained part of the total differential. Here we will limit our result to include only those for hourly wages. This is because these tend to be the most reasonable estimatesat least theoretically - and as such tend to be utilized the most widely in the literature. ${ }^{14}$ These results are contained in Tables 7 and 8, respectively. Experience explains about 3-21 per cent of the total differential, depending on the point in the wage distribution and the year. Education level actually worsens the gap in both years (i.e., reduces the explained component), and this educational component increases (in absolute value) between 1996 and 2005 from 2.9 to 4.5 per cent. This could be due to the changing composition of fields of study over this period of time. Drolet (2002b), who uses detailed field of study variables, noted that males tended to be more likely to graduate from fields such as engineering and applied sciences where returns are higher, whereas women were more likely to be in health sciences or education were returns to education are lower. In our data, the negative explained effects of education, especially at the upper quantiles, is owing to the fact that women are more likely to have higher levels of education than males at these quantiles, especially at the bachelor's degree level. Part-time status adds a large contribution to the explained wage gap, but only for those at or below the median in 1996, and for all

[^9]quantile levels in 2005. Industry explains an average of 22 per cent of the gap in 1996 and 16 per cent in 2005, with more of the gap explained at the tails.

The negative occupational influence of the explained component is the result of women being less prevalent than men in occupations such as natural and applied sciences, as well as protective services, all of which have lower hourly wages in our estimates relative to the comparator occupation (those in wholesale, technical, insurance and real estate sales). ${ }^{15}$ The negative "explained" effect of part-time work is also due to the higher incidence of women in these occupations, along with a negative hourly wage premium (i.e., penalty) to parttime work. ${ }^{16}$

It is also worthy of note that the unexplained portion of the total wage differential fell over the period, at least in these estimates. The only exception is for those around the $10^{\text {th }}$ quantile. This continues the trend noted by Baker, et al. (1995) who observed this in their data covering the two decades between 1970 and 1990.

## V. Conclusions

We have learned several interesting things in the preceding analysis. First, there has been a modest improvement in the average adjusted female hourly wage between 1996 and 2005: an increase of one percentage point to 88.9 per cent of the mean male hourly wage. Second, the male-female wage differential is not constant across the hourly wage distribution: females at the lower end of the distribution tend to do relatively better compared to their male counterparts than those at the upper tail of the distribution. Third, the pattern is sensitive to model specification regarding the choice of full-time, full-year workers, annual salary versus hourly wage, etc. Fourth, this pattern has changed in the nine-year period analyzed. In particular, in 1996 we see that the adjusted wage differential

[^10]decreasing as we move through the wage distribution: females around the $10^{\text {th }}$ quantile earn about 93 per cent of observationally equivalent males, whereas those at the $90^{\text {th }}$ quantile earn only 86 per cent as much. By 2005, only those at the $10^{\text {th }}$ and $75^{\text {th }}$ quantiles see their relative wages fall, and then only modesty, while all other groups experience an increase relative to males. This change is most dramatic for those around the $25^{\text {th }}$ and $90^{\text {th }}$ quantiles as female wages relative to male wages increased over three percentage points in each case. Fifth, the explained component of hourly wages tends to be higher at the lower end of the wage distribution.

The policy implications of the preceding analysis are not clear. The fact that the relative average female hourly wage has improved over the period is encouraging, especially given the fact that the male hourly wage has also increased. That adjusted relative wages tend to be lower in the upper tail of the wage distribution suggests that there is more unobserved heterogeneity here than at other parts of the distribution. This is not surprising. At the lower tail, individuals are more likely to be waged workers, with little responsibility and the protection of minimum wage laws. As we move up the distribution, there are greater adjustments to wages as the result of qualitative differences in education, experience, etc., as well as job-specific responsibilities. None of these can be controlled for in the data. Future research might delve more deeply into these factors.

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Table 1: Summary Statistics, M ales and Females, 1996 and 2005

|  | 1996 |  |  |  | 2005 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | M ales |  | Females |  | M ales |  | Females |  |
|  | Mean | SD | M ean | SD | Mean | SD | M ean | SD |
| Log of hourly wage | 2.78 | 0.47 | 2.56 | 0.48 | 2.98 | 0.48 | 2.77 | 0.48 |
| Actual experience | 17.37 | 11.37 | 13.18 | 9.38 | 17.65 | 11.94 | 13.72 | 10.498 |
| Highest level of Education |  |  |  |  |  |  |  |  |
| Less than high school | 0.193 | 0.395 | 0.140 | 0.347 | 0.145 | 0.352 | 0.096 | 0.295 |
| High school completed* | 0.184 | 0.387 | 0.211 | 0.408 | 0.170 | 0.375 | 0.164 | 0.370 |
| Some post-secondary | 0.133 | 0.340 | 0.112 | 0.316 | 0.127 | 0.333 | 0.119 | 0.324 |
| College diploma | 0.327 | 0.469 | 0.363 | 0.481 | 0.361 | 0.480 | 0.389 | 0.488 |
| Bachelor's degree completed | 0.106 | 0.308 | 0.129 | 0.335 | 0.130 | 0.337 | 0.176 | 0.381 |
| Graduate school completed | 0.056 | 0.229 | 0.044 | 0.204 | 0.065 | 0.246 | 0.052 | 0.223 |
| Don't know level of education | 0.001 | 0.030 | 0.001 | 0.027 | 0.002 | 0.046 | 0.003 | 0.055 |
| Job characteristics |  |  |  |  |  |  |  |  |
| Tenure (in weeks) | 107 | 108 | 91 | 91 | 109 | 111 | 97 | 100 |
| Part-time job | 0.049 | 0.217 | 0.238 | 0.426 | 0.048 | 0.215 | 0.196 | 0.397 |
| Union/covered by CA | 0.375 | 0.484 | 0.330 | 0.470 | 0.339 | 0.473 | 0.333 | 0.471 |
| Not unionized* | 0.618 | 0.486 | 0.664 | 0.472 | 0.649 | 0.477 | 0.660 | 0.474 |
| Don't know if covered by CA | 0.006 | 0.079 | 0.006 | 0.077 | 0.012 | 0.111 | 0.008 | 0.089 |
| <20 employees at place of work* | 0.315 | 0.465 | 0.374 | 0.484 | 0.288 | 0.453 | 0.334 | 0.472 |
| 20-99 employees | 0.305 | 0.460 | 0.296 | 0.457 | 0.302 | 0.459 | 0.308 | 0.461 |
| 100-499 employees | 0.225 | 0.418 | 0.196 | 0.397 | 0.238 | 0.426 | 0.207 | 0.405 |
| 500-999 employees | 0.063 | 0.244 | 0.060 | 0.237 | 0.050 | 0.218 | 0.049 | 0.216 |
| 1000 or greater employees | 0.073 | 0.261 | 0.061 | 0.240 | 0.082 | 0.275 | 0.073 | 0.259 |
| Don't know number of employees | 0.018 | 0.133 | 0.013 | 0.113 | 0.040 | 0.197 | 0.030 | 0.170 |
| M artial Status |  |  |  |  |  |  |  |  |
| M arried* | 0.663 | 0.473 | 0.695 | 0.460 | 0.639 | 0.480 | 0.654 | 0.476 |
| Divorced/seperated | 0.070 | 0.254 | 0.109 | 0.312 | 0.071 | 0.257 | 0.119 | 0.323 |
| Single | 0.267 | 0.442 | 0.196 | 0.397 | 0.290 | 0.454 | 0.227 | 0.419 |
| Region |  |  |  |  |  |  |  |  |
| British Columbia | 0.130 | 0.336 | 0.130 | 0.336 | 0.114 | 0.317 | 0.118 | 0.322 |
| Alberta | 0.094 | 0.292 | 0.096 | 0.295 | 0.104 | 0.305 | 0.107 | 0.309 |
| Prairies | 0.064 | 0.245 | 0.066 | 0.247 | 0.061 | 0.238 | 0.065 | 0.246 |
| Ontario* | 0.377 | 0.485 | 0.387 | 0.487 | 0.389 | 0.488 | 0.377 | 0.485 |
| Quebec | 0.254 | 0.436 | 0.246 | 0.431 | 0.246 | 0.431 | 0.243 | 0.429 |
| Atlantic provinces | 0.080 | 0.271 | 0.075 | 0.264 | 0.075 | 0.263 | 0.078 | 0.269 |
| Occupation |  |  |  |  |  |  |  |  |
| Senior M anagement | 0.011 | 0.104 | 0.003 | 0.054 | 0.007 | 0.081 | 0.002 | 0.049 |
| Other M anagement | 0.102 | 0.302 | 0.072 | 0.259 | 0.080 | 0.271 | 0.062 | 0.242 |
| Prof Occ in Business/Finance | 0.021 | 0.144 | 0.028 | 0.166 | 0.018 | 0.134 | 0.032 | 0.175 |
| Financial, Secretarial \& Admin Occ | 0.018 | 0.131 | 0.129 | 0.336 | 0.018 | 0.135 | 0.098 | 0.297 |
| Clerical Occupations | 0.062 | 0.241 | 0.151 | 0.358 | 0.071 | 0.256 | 0.182 | 0.386 |
| Natural \& Applied Science | 0.081 | 0.273 | 0.026 | 0.159 | 0.122 | 0.327 | 0.029 | 0.028 |
| Prof Occ in Health | 0.005 | 0.070 | 0.052 | 0.223 | 0.006 | 0.075 | 0.045 | 0.046 |
| Tech \& Assisting Health in Health | 0.008 | 0.091 | 0.049 | 0.217 | 0.011 | 0.102 | 0.058 | 0.057 |
| Social Science, Govt, Religion | 0.018 | 0.132 | 0.035 | 0.185 | 0.022 | 0.146 | 0.061 | 0.061 |
| Teachers/Professors | 0.032 | 0.176 | 0.060 | 0.238 | 0.032 | 0.176 | 0.059 | 0.060 |
| Art, Culture, Rec \& Sport | 0.016 | 0.124 | 0.025 | 0.156 | 0.016 | 0.126 | 0.024 | 0.152 |
| Wholesale, Technical, Ins, Real Estate* | 0.028 | 0.164 | 0.022 | 0.146 | 0.029 | 0.169 | 0.022 | 0.146 |
| Retail Salespersons | 0.026 | 0.158 | 0.083 | 0.277 | 0.040 | 0.195 | 0.078 | 0.268 |
| Chefs/Cooks \& Food \& Bev | 0.020 | 0.139 | 0.055 | 0.228 | 0.020 | 0.141 | 0.041 | 0.198 |

Table 1: Summary Statistics, Males and Females, 1996 and 2005, continued

|  | 1996 |  |  |  | 2005 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males |  | Females |  | Males |  | Females |  |
|  | Mean | SD | M ean | SD | Mean | SD | M ean | SD |
| Protective Services | 0.027 | 0.163 | 0.006 | 0.080 | 0.035 | 0.183 | 0.004 | 0.065 |
| Childcare/Home Supp | 0.001 | 0.036 | 0.035 | 0.185 | 0.000 | 0.019 | 0.027 | 0.161 |
| Sales and Service | 0.078 | 0.269 | 0.086 | 0.280 | 0.065 | 0.246 | 0.096 | 0.294 |
| Contractors/Supervisors in Trades/Trans | 0.016 | 0.127 | 0.000 | 0.016 | 0.018 | 0.133 | 0.001 | 0.024 |
| Construction Trades | 0.036 | 0.186 | 0.000 | 0.020 | 0.033 | 0.179 | 0.001 | 0.027 |
| Other Trades Occupations | 0.110 | 0.313 | 0.006 | 0.075 | 0.107 | 0.310 | 0.005 | 0.070 |
| Transport \& Equipment Operators | 0.069 | 0.254 | 0.006 | 0.075 | 0.063 | 0.242 | 0.006 | 0.077 |
| Trades Helpers, Construction | 0.045 | 0.207 | 0.003 | 0.056 | 0.043 | 0.204 | 0.006 | 0.080 |
| Unique to Primary Industry | 0.043 | 0.202 | 0.010 | 0.101 | 0.034 | 0.182 | 0.009 | 0.096 |
| M achine Ops/M anufacting | 0.100 | 0.300 | 0.037 | 0.190 | 0.096 | 0.294 | 0.040 | 0.197 |
| Processing,M anufacturing | 0.028 | 0.164 | 0.017 | 0.130 | 0.014 | 0.119 | 0.012 | 0.108 |
| Industry |  |  |  |  |  |  |  |  |
| Agriculture | 0.015 | 0.120 | 0.010 | 0.098 | 0.010 | 0.100 | 0.009 | 0.095 |
| Forestry, Fishing, M ining, O\&G | 0.042 | 0.201 | 0.008 | 0.087 | 0.031 | 0.174 | 0.007 | 0.084 |
| Utilities | 0.016 | 0.126 | 0.007 | 0.084 | 0.017 | 0.129 | 0.006 | 0.079 |
| Construction | 0.086 | 0.280 | 0.015 | 0.122 | 0.088 | 0.283 | 0.012 | 0.107 |
| M anufacturing | 0.241 | 0.427 | 0.102 | 0.303 | 0.228 | 0.420 | 0.093 | 0.291 |
| Trade* | 0.132 | 0.339 | 0.149 | 0.356 | 0.146 | 0.353 | 0.154 | 0.361 |
| Transportion \& Warehousing | 0.072 | 0.259 | 0.022 | 0.148 | 0.063 | 0.243 | 0.026 | 0.158 |
| Finance, Ins, Real Est \& Leasing | 0.044 | 0.206 | 0.078 | 0.268 | 0.040 | 0.196 | 0.081 | 0.273 |
| Prof, Scientific, and Tech Services | 0.037 | 0.190 | 0.052 | 0.222 | 0.056 | 0.229 | 0.051 | 0.220 |
| Business, Building and Support Services | 0.026 | 0.160 | 0.024 | 0.152 | 0.040 | 0.197 | 0.037 | 0.188 |
| Educational Services | 0.054 | 0.226 | 0.105 | 0.307 | 0.050 | 0.218 | 0.111 | 0.314 |
| Health Care \& Social Assistance | 0.031 | 0.174 | 0.189 | 0.392 | 0.038 | 0.190 | 0.199 | 0.399 |
| Information, Culture \& Recreation | 0.040 | 0.195 | 0.046 | 0.210 | 0.044 | 0.206 | 0.043 | 0.202 |
| Accomodation and Food Services | 0.042 | 0.200 | 0.083 | 0.275 | 0.037 | 0.189 | 0.073 | 0.261 |
| Other Services | 0.037 | 0.190 | 0.041 | 0.199 | 0.032 | 0.175 | 0.039 | 0.193 |
| Public Admin | 0.085 | 0.279 | 0.069 | 0.254 | 0.079 | 0.270 | 0.059 | 0.236 |
| Sample Size | 13032 |  | 11728 |  | 11086 |  | 11250 |  |

Table 2: Unadjusted Log Wage Differences and Growth Rates at +/- Five Percentiles, 1996 \& 2005

|  | 1996 |  |  |  |  |  |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | $\mathrm{q}=.10$ | $\mathrm{q}=.25$ | $\mathrm{q}=.50$ | $\mathrm{q}=.75$ | $\mathrm{q}=.90$ |
| Male | 2.781 | 2.123 | 2.446 | 2.814 | 3.111 | 3.355 |
| Female | 2.558 | 1.924 | 2.188 | 2.566 | 2.901 | 3.176 |
| Differential | 0.222 | 0.199 | 0.258 | 0.248 | 0.210 | 0.179 |
|  |  |  |  |  |  |  |
|  |  |  | 2005 |  |  |  |
| Mean | $\mathrm{q}=.10$ | $\mathrm{q}=25$ | $\mathrm{q}=.50$ | $\mathrm{q}=.75$ | $\mathrm{q}=.90$ |  |
| Male | 2.978 | 2.305 | 2.636 | 2.978 | 3.312 | 3.583 |
| Fifferential | 2.773 | 2.126 | 2.397 | 2.761 | 3.105 | 3.413 |
|  | 0.205 | 0.178 | 0.239 | 0.217 | 0.207 | 0.170 |


|  | Wage Growth, 1996 to 2005 |  |  |  |  |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Mean | $q=10$ | $q=25$ | $q=.50$ | $q=.75$ | $q=.90$ |
| Male | 0.197 | 0.182 | 0.190 | 0.163 | 0.201 | 0.228 |
| Female | 0.215 | 0.203 | 0.209 | 0.194 | 0.204 | 0.237 |
| Differential | -0.018 | -0.021 | -0.019 | -0.031 | -0.003 | -0.009 |

Table 3: Summary Statistics, Mean and Various Quantiles ( $H$ - 5 percentiles), M ales and Females, 1996

|  | Mean |  | $q=10$ |  | $\mathrm{q}=25$ |  | $q=50$ |  | $\mathrm{q}=75$ |  | $\mathrm{q}=.90$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| Log of hourly wage | 2.78 | 2.56 | 2.12 | 1.92 | 2.45 | 2.19 | 2.81 | 2.57 | 3.11 | 2.90 | 3.35 | 3.18 |
| Actual experience | 17.37 | 13.18 | 10.45 | 8.70 | 13.93 | 10.83 | 18.77 | 13.42 | 20.68 | 15.44 | 22.19 | 16.81 |
| Less than high school | 0.193 | 0.140 | 0.278 | 0.274 | 0.234 | 0.222 | 0.211 | 0.106 | 0.141 | 0.063 | 0.064 | 0.029 |
| High school completed | 0.184 | 0.211 | 0.236 | 0.277 | 0.212 | 0.248 | 0.189 | 0.226 | 0.174 | 0.189 | 0.102 | 0.104 |
| Some post-secondary | 0.133 | 0.112 | 0.167 | 0.129 | 0.153 | 0.112 | 0.135 | 0.122 | 0.115 | 0.099 | 0.097 | 0.064 |
| College diploma | 0.327 | 0.363 | 0.256 | 0.266 | 0.323 | 0.372 | 0.351 | 0.408 | 0.384 | 0.468 | 0.367 | 0.378 |
| Bachelor's degree completed | 0.106 | 0.129 | 0.041 | 0.051 | 0.053 | 0.041 | 0.087 | 0.108 | 0.113 | 0.136 | 0.250 | 0.299 |
| Graduate school completed | 0.056 | 0.044 | 0.021 | 0.003 | 0.021 | 0.005 | 0.026 | 0.029 | 0.072 | 0.046 | 0.120 | 0.126 |
| Don't know level of education | 0.001 | 0.001 | 0.002 | 0.000 | 0.003 | 0.000 | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 | 0.000 |
| Tenure (in weeks) | 107 | 91 | 37 | 34 | 59 | 57 | 115 | 89 | 150 | 118 | 176 | 143 |
| Part-time job | 0.049 | 0.238 | 0.112 | 0.399 | 0.059 | 0.232 | 0.029 | 0.175 | 0.014 | 0.169 | 0.023 | 0.188 |
| Union/ covered by CA | 0.375 | 0.330 | 0.140 | 0.059 | 0.219 | 0.154 | 0.451 | 0.364 | 0.614 | 0.550 | 0.515 | 0.587 |
| Not unionized | 0.618 | 0.664 | 0.858 | 0.940 | 0.772 | 0.844 | 0.546 | 0.626 | 0.384 | 0.442 | 0.485 | 0.412 |
| Don't know if covered by CA | 0.006 | 0.006 | 0.002 | 0.001 | 0.009 | 0.002 | 0.003 | 0.010 | 0.002 | 0.008 | 0.001 | 0.001 |
| <20 employees at place of work | 0.315 | 0.374 | 0.523 | 0.604 | 0.437 | 0.473 | 0.267 | 0.341 | 0.177 | 0.247 | 0.139 | 0.168 |
| 20-99 employees | 0.305 | 0.296 | 0.289 | 0.293 | 0.340 | 0.304 | 0.358 | 0.332 | 0.272 | 0.253 | 0.267 | 0.296 |
| 100-499 employees | 0.225 | 0.196 | 0.113 | 0.079 | 0.138 | 0.185 | 0.255 | 0.226 | 0.320 | 0.257 | 0.312 | 0.259 |
| 500-999 employees | 0.063 | 0.060 | 0.027 | 0.008 | 0.038 | 0.019 | 0.049 | 0.051 | 0.092 | 0.108 | 0.121 | 0.103 |
| 1000 or greater employees | 0.073 | 0.061 | 0.022 | 0.003 | 0.028 | 0.015 | 0.057 | 0.041 | 0.119 | 0.110 | 0.150 | 0.159 |
| Don't know number of employees | 0.018 | 0.013 | 0.026 | 0.013 | 0.020 | 0.004 | 0.015 | 0.011 | 0.020 | 0.024 | 0.011 | 0.014 |
| M arried | 0.663 | 0.695 | 0.408 | 0.627 | 0.573 | 0.666 | 0.694 | 0.709 | 0.770 | 0.735 | 0.848 | 0.730 |
| Divorced/seperated | 0.070 | 0.109 | 0.050 | 0.104 | 0.064 | 0.114 | 0.078 | 0.124 | 0.075 | 0.104 | 0.053 | 0.108 |
| Single | 0.267 | 0.196 | 0.543 | 0.269 | 0.363 | 0.219 | 0.228 | 0.168 | 0.155 | 0.161 | 0.100 | 0.162 |
| British Columbia | 0.130 | 0.130 | 0.119 | 0.096 | 0.122 | 0.117 | 0.102 | 0.106 | 0.181 | 0.192 | 0.153 | 0.149 |
| Alberta | 0.094 | 0.096 | 0.094 | 0.099 | 0.096 | 0.114 | 0.090 | 0.106 | 0.090 | 0.076 | 0.077 | 0.095 |
| Prairies | 0.064 | 0.066 | 0.090 | 0.076 | 0.068 | 0.084 | 0.063 | 0.070 | 0.053 | 0.050 | 0.043 | 0.043 |
| Ontario | 0.377 | 0.387 | 0.328 | 0.335 | 0.345 | 0.371 | 0.420 | 0.365 | 0.377 | 0.427 | 0.431 | 0.443 |
| Quebec | 0.254 | 0.246 | 0.267 | 0.300 | 0.257 | 0.233 | 0.256 | 0.280 | 0.244 | 0.214 | 0.253 | 0.224 |
| Atlantic provinces | 0.080 | 0.075 | 0.101 | 0.093 | 0.112 | 0.082 | 0.070 | 0.073 | 0.054 | 0.042 | 0.043 | 0.046 |
| Senior M anagement | 0.011 | 0.003 | 0.003 | 0.002 | 0.001 | 0.001 | 0.015 | 0.002 | 0.010 | 0.002 | 0.013 | 0.005 |
| Other M anagement | 0.102 | 0.072 | 0.070 | 0.028 | 0.061 | 0.051 | 0.094 | 0.061 | 0.100 | 0.087 | 0.196 | 0.100 |
| Prof Occ in Business/Finance | 0.021 | 0.028 | 0.007 | 0.003 | 0.015 | 0.011 | 0.025 | 0.036 | 0.026 | 0.041 | 0.026 | 0.054 |
| Financial, Secretarial \& Admin Occ | 0.018 | 0.129 | 0.011 | 0.026 | 0.014 | 0.079 | 0.023 | 0.204 | 0.026 | 0.179 | 0.026 | 0.101 |
| Clerical Occupations | 0.062 | 0.151 | 0.094 | 0.043 | 0.083 | 0.162 | 0.096 | 0.267 | 0.038 | 0.169 | 0.027 | 0.060 |
| Natural \& Applied Science | 0.081 | 0.026 | 0.023 | 0.004 | 0.039 | 0.024 | 0.062 | 0.008 | 0.101 | 0.046 | 0.177 | 0.048 |
| Prof Occ in Health | 0.005 | 0.052 | 0.001 | 0.000 | 0.001 | 0.007 | 0.001 | 0.022 | 0.014 | 0.072 | 0.009 | 0.201 |
| Tech \& Assisting Health in Health | 0.008 | 0.049 | 0.003 | 0.014 | 0.006 | 0.041 | 0.007 | 0.074 | 0.010 | 0.087 | 0.010 | 0.067 |
| Social Science, Govt, Religion | 0.018 | 0.035 | 0.009 | 0.008 | 0.010 | 0.016 | 0.012 | 0.036 | 0.008 | 0.062 | 0.052 | 0.066 |
| Teachers/Professors | 0.032 | 0.060 | 0.001 | 0.006 | 0.004 | 0.012 | 0.015 | 0.023 | 0.061 | 0.067 | 0.090 | 0.174 |
| Art, Culture, Rec \& Sport | 0.016 | 0.025 | 0.006 | 0.011 | 0.019 | 0.026 | 0.007 | 0.020 | 0.024 | 0.035 | 0.017 | 0.031 |
| Wholesale, Technical, Ins, Real Estate | 0.028 | 0.022 | 0.015 | 0.009 | 0.039 | 0.014 | 0.031 | 0.030 | 0.036 | 0.022 | 0.024 | 0.022 |
| Retail Salespersons | 0.026 | 0.083 | 0.059 | 0.277 | 0.030 | 0.143 | 0.026 | 0.036 | 0.010 | 0.014 | 0.004 | 0.004 |
| Chefs/ Cooks \& Food \& Bev | 0.020 | 0.055 | 0.065 | 0.212 | 0.026 | 0.057 | 0.009 | 0.020 | 0.001 | 0.014 | 0.001 | 0.003 |
| Protective Services | 0.027 | 0.006 | 0.015 | 0.002 | 0.023 | 0.010 | 0.017 | 0.002 | 0.030 | 0.012 | 0.050 | 0.015 |
| Childcare/Home Supp | 0.001 | 0.035 | 0.001 | 0.035 | 0.001 | 0.047 | 0.002 | 0.031 | 0.000 | 0.031 | 0.000 | 0.011 |
| Sales and Service | 0.078 | 0.086 | 0.173 | 0.190 | 0.119 | 0.135 | 0.043 | 0.066 | 0.033 | 0.032 | 0.007 | 0.007 |
| Contractors/Supervisors in Trades/Trans | 0.016 | 0.000 | 0.004 | 0.001 | 0.004 | 0.000 | 0.016 | 0.000 | 0.027 | 0.001 | 0.027 | 0.001 |
| Construction Trades | 0.036 | 0.000 | 0.022 | 0.000 | 0.047 | 0.000 | 0.034 | 0.002 | 0.048 | 0.000 | 0.012 | 0.000 |
| Other Trades Occupations | 0.110 | 0.006 | 0.057 | 0.005 | 0.106 | 0.012 | 0.131 | 0.000 | 0.147 | 0.004 | 0.108 | 0.001 |
| Transport \& Equipment Operators | 0.069 | 0.006 | 0.064 | 0.003 | 0.092 | 0.013 | 0.118 | 0.006 | 0.046 | 0.007 | 0.021 | 0.002 |
| Trades Helpers, Construction | 0.045 | 0.003 | 0.084 | 0.001 | 0.050 | 0.003 | 0.040 | 0.005 | 0.035 | 0.000 | 0.010 | 0.004 |
| Unique to Primary Industry | 0.043 | 0.010 | 0.077 | 0.019 | 0.058 | 0.019 | 0.028 | 0.006 | 0.027 | 0.000 | 0.021 | 0.001 |
| M achine Ops/M anufacting | 0.100 | 0.037 | 0.094 | 0.063 | 0.116 | 0.067 | 0.110 | 0.032 | 0.125 | 0.015 | 0.058 | 0.019 |
| Processing,M anufacturing | 0.028 | 0.017 | 0.042 | 0.039 | 0.036 | 0.048 | 0.038 | 0.012 | 0.017 | 0.001 | 0.013 | 0.002 |
| Agriculture | 0.015 | 0.010 | 0.049 | 0.017 | 0.022 | 0.025 | 0.012 | 0.004 | 0.000 | 0.001 | 0.002 | 0.000 |
| Forestry, Fishing, M ining, 0 \& G | 0.042 | 0.008 | 0.019 | 0.001 | 0.032 | 0.007 | 0.033 | 0.011 | 0.059 | 0.015 | 0.050 | 0.015 |
| Utilities | 0.016 | 0.007 | 0.000 | 0.000 | 0.004 | 0.000 | 0.010 | 0.005 | 0.033 | 0.021 | 0.046 | 0.013 |
| Construction | 0.086 | 0.015 | 0.064 | 0.004 | 0.092 | 0.007 | 0.092 | 0.040 | 0.114 | 0.005 | 0.050 | 0.004 |
| M anufacturing | 0.241 | 0.102 | 0.195 | 0.100 | 0.254 | 0.155 | 0.257 | 0.107 | 0.270 | 0.076 | 0.232 | 0.060 |
| Trade | 0.132 | 0.149 | 0.238 | 0.311 | 0.156 | 0.244 | 0.147 | 0.112 | 0.067 | 0.069 | 0.054 | 0.048 |
| Transportion \& Warehousing | 0.072 | 0.022 | 0.058 | 0.007 | 0.079 | 0.031 | 0.140 | 0.025 | 0.058 | 0.039 | 0.044 | 0.016 |
| Finance, Ins, Real Est \& Leasing | 0.044 | 0.078 | 0.051 | 0.018 | 0.047 | 0.054 | 0.035 | 0.129 | 0.041 | 0.053 | 0.058 | 0.059 |
| Prof, Scientific, and Tech Services | 0.037 | 0.052 | 0.013 | 0.013 | 0.012 | 0.065 | 0.033 | 0.060 | 0.030 | 0.062 | 0.061 | 0.059 |
| Business, Building and Support Services | 0.026 | 0.024 | 0.056 | 0.041 | 0.043 | 0.018 | 0.022 | 0.026 | 0.012 | 0.013 | 0.007 | 0.011 |
| Educational Services | 0.054 | 0.105 | 0.009 | 0.019 | 0.018 | 0.030 | 0.034 | 0.070 | 0.090 | 0.148 | 0.129 | 0.207 |
| Health Care \& Social Assistance | 0.031 | 0.189 | 0.017 | 0.047 | 0.027 | 0.114 | 0.025 | 0.218 | 0.035 | 0.294 | 0.029 | 0.328 |
| Information, Culture \& Recreation | 0.040 | 0.046 | 0.025 | 0.030 | 0.047 | 0.034 | 0.029 | 0.051 | 0.042 | 0.075 | 0.058 | 0.048 |
| Accomodation and Food Services | 0.042 | 0.083 | 0.126 | 0.315 | 0.049 | 0.105 | 0.021 | 0.028 | 0.004 | 0.009 | 0.007 | 0.001 |
| Other Services | 0.037 | 0.041 | 0.052 | 0.058 | 0.070 | 0.073 | 0.028 | 0.052 | 0.026 | 0.013 | 0.011 | 0.015 |
| Public Admin | 0.085 | 0.069 | 0.029 | 0.019 | 0.048 | 0.037 | 0.083 | 0.064 | 0.117 | 0.108 | 0.161 | 0.115 |
| Sample Size (unweighted) | 13,032 | 11,728 | 1,491 | 1,391 | 1,572 | 1,317 | 1,384 | 1,217 | 1,420 | 1,119 | 1,295 | 1,094 |
| Sample Size (weighted) | 5,203,538 | 4,657,358 | 540,278 | 484,044 | 572,021 | 459,805 | 573,488 | 478,016 | 592,918 | 515,541 | 570,358 | 511,909 |
| \% of weighted sample | 52.77 | 47.23 | 52.74 | 47.26 | 55.44 | 44.56 | 54.54 | 45.46 | 53.49 | 46.51 | 52.70 | 47.30 |

Table 4: Summary Statistics, Mean and Various Quantiles ( $H /-5$ percentiles), M ales and Females, 2005

|  | Mean |  | $q=10$ |  | $q=25$ |  | $q=50$ |  | $q=75$ |  | $\mathrm{q}=90$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female | Male | Female |
| Log of hourly wage | 2.98 | 2.77 | 2.30 | 2.13 | 2.64 | 2.40 | 2.98 | 2.76 | 3.31 | 3.10 | 3.58 | 3.41 |
| Actual experience | 17.65 | 13.72 | 10.84 | 8.64 | 14.84 | 10.94 | 18.57 | 13.67 | 20.39 | 16.68 | 21.98 | 16.93 |
| Less than high school | 0.145 | 0.096 | 0.275 | 0.238 | 0.205 | 0.151 | 0.126 | 0.067 | 0.063 | 0.029 | 0.035 | 0.011 |
| High school completed | 0.170 | 0.164 | 0.220 | 0.233 | 0.249 | 0.212 | 0.186 | 0.157 | 0.133 | 0.136 | 0.086 | 0.059 |
| Some post-secondary | 0.127 | 0.119 | 0.163 | 0.179 | 0.137 | 0.154 | 0.132 | 0.116 | 0.085 | 0.108 | 0.094 | 0.069 |
| College diploma | 0.361 | 0.389 | 0.267 | 0.291 | 0.311 | 0.370 | 0.405 | 0.460 | 0.477 | 0.442 | 0.356 | 0.364 |
| Bachelor's degree completed | 0.130 | 0.176 | 0.059 | 0.045 | 0.070 | 0.075 | 0.112 | 0.169 | 0.171 | 0.231 | 0.268 | 0.368 |
| Graduate school completed | 0.065 | 0.052 | 0.015 | 0.009 | 0.024 | 0.031 | 0.037 | 0.028 | 0.070 | 0.053 | 0.160 | 0.126 |
| Don't know level of education | 0.002 | 0.003 | 0.001 | 0.004 | 0.004 | 0.007 | 0.002 | 0.002 | 0.001 | 0.001 | 0.001 | 0.003 |
| Tenure (in weeks) | 109 | 97 | 47 | 39 | 71 | 66 | 117 | 98 | 141 | 124 | 161 | 144 |
| Part-time job | 0.048 | 0.196 | 0.111 | 0.311 | 0.042 | 0.244 | 0.028 | 0.217 | 0.008 | 0.120 | 0.018 | 0.131 |
| Union/ covered by CA | 0.339 | 0.333 | 0.149 | 0.105 | 0.221 | 0.171 | 0.383 | 0.382 | 0.463 | 0.494 | 0.436 | 0.576 |
| Not unionized | 0.649 | 0.660 | 0.837 | 0.883 | 0.772 | 0.824 | 0.595 | 0.610 | 0.530 | 0.492 | 0.555 | 0.421 |
| Don't know if covered by CA | 0.012 | 0.008 | 0.014 | 0.012 | 0.007 | 0.004 | 0.023 | 0.008 | 0.007 | 0.013 | 0.009 | 0.003 |
| <20 employees at place of work | 0.288 | 0.334 | 0.462 | 0.482 | 0.364 | 0.424 | 0.279 | 0.312 | 0.208 | 0.258 | 0.173 | 0.136 |
| 20-99 employees | 0.302 | 0.308 | 0.313 | 0.305 | 0.350 | 0.333 | 0.314 | 0.349 | 0.300 | 0.297 | 0.272 | 0.277 |
| 100-499 employees | 0.238 | 0.207 | 0.147 | 0.159 | 0.193 | 0.192 | 0.253 | 0.215 | 0.261 | 0.244 | 0.267 | 0.233 |
| 500-999 employees | 0.050 | 0.049 | 0.026 | 0.013 | 0.030 | 0.013 | 0.043 | 0.052 | 0.062 | 0.061 | 0.091 | 0.114 |
| 1000 or greater employees | 0.082 | 0.073 | 0.014 | 0.007 | 0.028 | 0.016 | 0.060 | 0.043 | 0.118 | 0.106 | 0.158 | 0.199 |
| Don't know number of employees | 0.040 | 0.030 | 0.039 | 0.035 | 0.035 | 0.022 | 0.051 | 0.027 | 0.051 | 0.034 | 0.038 | 0.040 |
| Married | 0.639 | 0.654 | 0.394 | 0.553 | 0.517 | 0.567 | 0.702 | 0.688 | 0.734 | 0.707 | 0.794 | 0.695 |
| Divorced/seperated | 0.639 | 0.654 | 0.046 | 0.101 | 0.086 | 0.168 | 0.070 | 0.109 | 0.072 | 0.113 | 0.081 | 0.113 |
| Single | 0.071 | 0.119 | 0.560 | 0.346 | 0.397 | 0.265 | 0.228 | 0.203 | 0.194 | 0.180 | 0.124 | 0.191 |
| British Columbia | 0.114 | 0.118 | 0.117 | 0.146 | 0.097 | 0.145 | 0.118 | 0.126 | 0.137 | 0.120 | 0.119 | 0.111 |
| Alberta | 0.104 | 0.107 | 0.097 | 0.086 | 0.105 | 0.112 | 0.103 | 0.098 | 0.118 | 0.111 | 0.100 | 0.119 |
| Prairies | 0.061 | 0.065 | 0.076 | 0.073 | 0.060 | 0.072 | 0.063 | 0.070 | 0.053 | 0.056 | 0.045 | 0.060 |
| Ontario | 0.389 | 0.377 | 0.332 | 0.318 | 0.344 | 0.317 | 0.400 | 0.376 | 0.438 | 0.398 | 0.471 | 0.416 |
| Quebec | 0.246 | 0.243 | 0.254 | 0.268 | 0.290 | 0.252 | 0.250 | 0.258 | 0.189 | 0.251 | 0.193 | 0.205 |
| Atlantic provinces | 0.075 | 0.078 | 0.119 | 0.100 | 0.097 | 0.089 | 0.064 | 0.064 | 0.053 | 0.048 | 0.047 | 0.067 |
| Senior M anagement | 0.007 | 0.002 | 0.002 | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 | 0.004 | 0.002 | 0.015 | 0.006 |
| Other M anagement | 0.080 | 0.062 | 0.028 | 0.019 | 0.039 | 0.031 | 0.044 | 0.056 | 0.081 | 0.065 | 0.201 | 0.121 |
| Prof Occ in Business/Finance | 0.018 | 0.032 | 0.009 | 0.001 | 0.003 | 0.005 | 0.013 | 0.023 | 0.028 | 0.065 | 0.041 | 0.075 |
| Financial, Secretarial \& Admin Occ | 0.018 | 0.098 | 0.006 | 0.027 | 0.011 | 0.061 | 0.019 | 0.144 | 0.025 | 0.151 | 0.026 | 0.045 |
| Clerical Occupations | 0.071 | 0.182 | 0.085 | 0.088 | 0.082 | 0.196 | 0.086 | 0.287 | 0.049 | 0.200 | 0.021 | 0.067 |
| Natural \& Applied Science | 0.122 | 0.029 | 0.032 | 0.001 | 0.058 | 0.009 | 0.090 | 0.015 | 0.203 | 0.052 | 0.235 | 0.066 |
| Prof Occ in Health | 0.006 | 0.045 | 0.000 | 0.001 | 0.001 | 0.001 | 0.008 | 0.014 | 0.012 | 0.049 | 0.006 | 0.222 |
| Tech \& Assisting Health in Health | 0.011 | 0.058 | 0.002 | 0.015 | 0.016 | 0.048 | 0.015 | 0.082 | 0.008 | 0.054 | 0.001 | 0.063 |
| Social Science, Govt, Religion | 0.022 | 0.061 | 0.013 | 0.013 | 0.005 | 0.045 | 0.021 | 0.074 | 0.038 | 0.092 | 0.035 | 0.088 |
| Teachers/Professors | 0.032 | 0.059 | 0.004 | 0.005 | 0.017 | 0.013 | 0.029 | 0.047 | 0.047 | 0.097 | 0.085 | 0.129 |
| Art, Culture, Rec \& Sport | 0.016 | 0.024 | 0.013 | 0.010 | 0.010 | 0.019 | 0.012 | 0.018 | 0.020 | 0.036 | 0.022 | 0.036 |
| Wholesale, Technical, Ins, Real Estate | 0.029 | 0.022 | 0.018 | 0.009 | 0.015 | 0.026 | 0.053 | 0.026 | 0.040 | 0.021 | 0.031 | 0.037 |
| Retail Salespersons | 0.040 | 0.078 | 0.106 | 0.277 | 0.038 | 0.147 | 0.039 | 0.019 | 0.012 | 0.014 | 0.010 | 0.002 |
| Chefs/ Cooks \& Food \& Bev | 0.020 | 0.041 | 0.057 | 0.109 | 0.026 | 0.062 | 0.012 | 0.013 | 0.006 | 0.008 | 0.002 | 0.001 |
| Protective Services | 0.035 | 0.004 | 0.039 | 0.006 | 0.032 | 0.004 | 0.023 | 0.004 | 0.052 | 0.005 | 0.059 | 0.006 |
| Childcare/Home Supp | 0.000 | 0.027 | 0.000 | 0.035 | 0.001 | 0.025 | 0.000 | 0.051 | 0.000 | 0.024 | 0.000 | 0.005 |
| Sales and Service | 0.065 | 0.096 | 0.155 | 0.248 | 0.089 | 0.158 | 0.050 | 0.065 | 0.006 | 0.017 | 0.007 | 0.013 |
| Contractors/Supervisors in Trades/Trans | 0.018 | 0.001 | 0.003 | 0.000 | 0.006 | 0.001 | 0.017 | 0.000 | 0.027 | 0.002 | 0.045 | 0.000 |
| Construction Trades | 0.033 | 0.001 | 0.028 | 0.000 | 0.046 | 0.001 | 0.037 | 0.001 | 0.029 | 0.001 | 0.013 | 0.001 |
| Other Trades Occupations | 0.107 | 0.005 | 0.073 | 0.005 | 0.101 | 0.013 | 0.145 | 0.002 | 0.167 | 0.005 | 0.066 | 0.001 |
| Transport \& Equipment Operators | 0.063 | 0.006 | 0.054 | 0.004 | 0.106 | 0.012 | 0.079 | 0.012 | 0.026 | 0.004 | 0.011 | 0.001 |
| Trades Helpers, Construction | 0.043 | 0.006 | 0.085 | 0.011 | 0.081 | 0.018 | 0.046 | 0.007 | 0.013 | 0.004 | 0.004 | 0.000 |
| Unique to Primary Industry | 0.034 | 0.009 | 0.066 | 0.025 | 0.046 | 0.023 | 0.032 | 0.002 | 0.021 | 0.000 | 0.014 | 0.000 |
| M achine Ops/M anufacting | 0.096 | 0.040 | 0.091 | 0.056 | 0.154 | 0.066 | 0.108 | 0.031 | 0.080 | 0.028 | 0.048 | 0.014 |
| Processing,M anufacturing | 0.014 | 0.012 | 0.030 | 0.035 | 0.016 | 0.016 | 0.020 | 0.006 | 0.004 | 0.003 | 0.000 | 0.002 |
| Agriculture | 0.010 | 0.009 | 0.037 | 0.029 | 0.016 | 0.018 | 0.007 | 0.005 | 0.000 | 0.000 | 0.002 | 0.000 |
| Forestry, Fishing, M ining, 0 \& G | 0.031 | 0.007 | 0.011 | 0.001 | 0.025 | 0.010 | 0.032 | 0.006 | 0.038 | 0.008 | 0.035 | 0.008 |
| Utilities | 0.017 | 0.006 | 0.001 | 0.000 | 0.001 | 0.000 | 0.012 | 0.005 | 0.021 | 0.015 | 0.060 | 0.014 |
| Construction | 0.088 | 0.012 | 0.078 | 0.002 | 0.109 | 0.017 | 0.110 | 0.022 | 0.095 | 0.007 | 0.055 | 0.004 |
| M anufacturing | 0.228 | 0.093 | 0.152 | 0.096 | 0.277 | 0.106 | 0.264 | 0.094 | 0.235 | 0.089 | 0.174 | 0.047 |
| Trade | 0.146 | 0.154 | 0.289 | 0.360 | 0.188 | 0.270 | 0.123 | 0.119 | 0.081 | 0.067 | 0.082 | 0.037 |
| Transportion \& Warehousing | 0.063 | 0.026 | 0.044 | 0.011 | 0.055 | 0.016 | 0.084 | 0.037 | 0.035 | 0.052 | 0.045 | 0.019 |
| Finance, Ins, Real Est \& Leasing | 0.040 | 0.081 | 0.029 | 0.018 | 0.025 | 0.068 | 0.038 | 0.118 | 0.042 | 0.089 | 0.049 | 0.084 |
| Prof, Scientific, and Tech Services | 0.056 | 0.051 | 0.027 | 0.006 | 0.029 | 0.033 | 0.042 | 0.055 | 0.100 | 0.068 | 0.079 | 0.064 |
| Business, Building and Support Services | 0.040 | 0.037 | 0.117 | 0.050 | 0.053 | 0.066 | 0.029 | 0.019 | 0.010 | 0.017 | 0.013 | 0.008 |
| Educational Services | 0.050 | 0.111 | 0.008 | 0.027 | 0.027 | 0.044 | 0.043 | 0.135 | 0.056 | 0.165 | 0.113 | 0.172 |
| Health Care \& Social Assistance | 0.038 | 0.199 | 0.008 | 0.070 | 0.032 | 0.125 | 0.057 | 0.255 | 0.031 | 0.198 | 0.024 | 0.348 |
| Information, Culture \& Recreation | 0.044 | 0.043 | 0.032 | 0.044 | 0.032 | 0.048 | 0.049 | 0.031 | 0.045 | 0.057 | 0.065 | 0.057 |
| Accomodation and Food Services | 0.037 | 0.073 | 0.112 | 0.234 | 0.064 | 0.099 | 0.017 | 0.034 | 0.007 | 0.016 | 0.006 | 0.003 |
| Other Services | 0.032 | 0.039 | 0.049 | 0.051 | 0.040 | 0.064 | 0.042 | 0.033 | 0.031 | 0.028 | 0.016 | 0.007 |
| Public Admin | 0.079 | 0.059 | 0.007 | 0.002 | 0.028 | 0.013 | 0.053 | 0.034 | 0.173 | 0.124 | 0.184 | 0.128 |
| Sample Size (unweighted) | 11,086 | 11,250 | 1,316 | 1,242 | 1,280 | 1,160 | 1,220 | 1,181 | 1,141 | 1,165 | 1,156 | 1,218 |
| Sample Size (weighted) | 5,419,622 | 5,095,744 | 598,197 | 553,326 | 597,281 | 511,738 | 594,931 | 559,867 | 594,109 | 561,982 | 596,654 | 560,829 |
| \% of weighted sample | 51.54 | 48.46 | 51.95 | 48.05 | 53.86 | 46.14 | 51.52 | 48.48 | 51.39 | 48.61 | 51.55 | 48.45 |

Table 5: Comparison of 1996 Estimates with Drolet

| Model | Sample | Earnings | Experience | Unadjusted Differential | Explained | Unexplained | Adjusted Earnings |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | (A) | Drolet (B) | Difference |
| Base Model |  |  |  | $(\mathrm{log})$ | (log) | (log) | (F \% of M) | (\%) | ( $\mathrm{A}-\mathrm{B}$ ) |
| 1 | FTFY | annual | potential | 0.342 | 0.005 | 0.337 | 71.4 | 70.4 | 1.0 |
|  | all | hourly | potential | 0.222 | 0.000 | 0.222 | 80.1 | 79.4 | 0.7 |
| 2 | FYFT | annual | actual | 0.342 | 0.051 | 0.291 | 74.8 | 74.1 | 0.7 |
|  | all | hourly | actual | 0.222 | 0.062 | 0.160 | 85.2 | 83.2 | 2.0 |
| 3 | FYFT | annual | actual | 0.342 | -- | -- | -- | 75.4 |  |
|  | all | hourly | actual | 0.222 | -- | -- | -- | 84.9 |  |
| Conventional Model |  |  |  |  |  |  |  |  |  |
| 1 | all | hourly | potential | 0.222 | 0.040 | 0.182 | 83.4 | 82.0 | 1.4 |
| 2 | all | hourly | potential | 0.222 | 0.073 | 0.149 | 86.2 | 86.2 | 0.0 |
| 3 | all | hourly | potential | 0.222 | -- | -- | -- | 87.1 |  |
| Augmented Model |  |  |  |  |  |  |  |  |  |
| 1 | all | hourly | actual | 0.222 | 0.063 | 0.159 | 85.3 | 85.6 | -0.3 |
| 2 | all | hourly | actual | 0.222 | 0.094 | 0.129 | 87.9 | 88.6 | -0.7 |
| 3 | all | hourly | actual | 0.222 | -- | -- | -- | 89.4 |  |

Notes:"--" denotes that the data cannot be calculated using the SLID PUM F. The methodology followed here is almost identical to that of Drolet (2002b), with the exception that the detailed variables for major field of study, work responsibilities, age of youngest family member, and urban size are not included. The base models 1 and 2 include experience (whether potential or actual) and level of education; base model 3 adds major field of study. The conventional models all use potential experience and its square, education level, job tenure, marital status, union and part-time status, firm size and region. Conventional model 2 adds occupation ( 25 groups) and industry ( 16 groups). M odel 3 further included work responsiblities. All augmented models identical to the corresponding conventional model but use actual experience (not potential) and field of study (in place of education level). The adjusted difference in column 8 is obtained by using the formula $e^{-x *} 100$ where x is the unexplained $\log$ difference in column 7 .

Table 6: Comparison of 2005 Estimates with 1996 Estimates

| Model | Sample | Earnings | Experience | Unadjusted Differential | Explained | Unexplained | Adjusted Differential |  | Difference |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | 2005 (A) | 1996 (B) |  |
| Base Model |  |  |  | (log) | (log) | (log) | (F \% of M) | (\%) | ( $\mathrm{A}-\mathrm{B}$ ) |
| 1 | FTFY | annual | potential | 0.332 | 0.005 | 0.327 | 72.1 | 71.1 | 1.0 |
|  | all | hourly | potential | 0.205 | 0.001 | 0.204 | 81.5 | 80.1 | 1.5 |
| 2 | FYFT | annual | actual | 0.332 | 0.048 | 0.283 | 75.4 | 74.8 | 0.6 |
|  | all | hourly | actual | 0.205 | 0.053 | 0.151 | 86.0 | 85.2 | 0.8 |
| Conventional M odel |  |  |  |  |  |  |  |  |  |
| 1 | all | hourly | potential | 0.205 | 0.026 | 0.178 | 83.7 | 83.4 | 0.3 |
| 2 | all | hourly | potential | 0.205 | 0.071 | 0.134 | 87.5 | 86.2 | 1.3 |
| Augmented M odel |  |  |  |  |  |  |  |  |  |
| 1 | all | hourly | actual | 0.205 | 0.050 | 0.154 | 85.7 | 85.3 | 0.4 |
| 2 | all | hourly | actual | 0.205 | 0.087 | 0.118 | 88.9 | 87.9 | 0.9 |

Table 7: Detailed Decomposition Results, OLS and Quantile Regressions, 1996

|  | Absolute differential |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | OLS |  |  |  |  |  |
| Explained | $\mathrm{q}=10$ |  |  |  |  |  |
| $\mathrm{q}=.25$ | $\mathrm{q}=.50$ | $\mathrm{q}=.75$ | $\mathrm{q}=.90$ |  |  |  |
| Experience | 0.026 | 0.007 | 0.017 | 0.041 | 0.036 | 0.035 |
| Education | -0.006 | 0.002 | 0.003 | -0.014 | -0.008 | -0.014 |
| Tenure | 0.010 | 0.003 | 0.001 | 0.015 | 0.015 | 0.015 |
| Part-time | 0.007 | 0.031 | 0.017 | 0.008 | -0.001 | -0.021 |
| Union coverage | 0.004 | 0.010 | 0.008 | 0.008 | 0.004 | -0.002 |
| No. employees | 0.009 | 0.012 | 0.003 | 0.010 | 0.009 | 0.008 |
| Marital | -0.002 | -0.010 | -0.008 | 0.000 | 0.003 | 0.008 |
| Region/province | -0.001 | 0.001 | -0.004 | 0.003 | -0.005 | -0.001 |
| Occupation | -0.003 | 0.013 | 0.012 | -0.005 | -0.013 | -0.062 |
| Industry | 0.050 | 0.074 | 0.043 | 0.042 | 0.064 | 0.056 |
| $\quad$ Total Explained (A) | 0.094 | 0.144 | 0.091 | 0.110 | 0.103 | 0.022 |
| $\quad$ Total Unexplained (B) | 0.129 | 0.071 | 0.143 | 0.118 | 0.120 | 0.147 |
| $\quad$ Total Difference (A +B) | 0.222 | 0.215 | 0.234 | 0.228 | 0.223 | 0.170 |
| $\quad$ |  |  |  |  |  |  |
| $\quad$ Adjusted female wage | 87.9 | 93.1 | 86.7 | 88.9 | 88.7 | 86.3 |

Notes: With the exception of part-time status, the components listed in this table are aggregates of invidual variables in Table 1. The experience aggregate includes experience and its square. The regression results used to generate these fiqures are contained in Appendix Tables 1 and 2.

Table 8: Detailed Decomposition Results, OLS and Quantile Regressions, 2005

|  | Absolute differential |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | OLS | $\mathrm{q}=.10$ | $\mathrm{q}=.25$ | $\mathrm{q}=.50$ | $\mathrm{q}=.75$ | $\mathrm{q}=.90$ |
| Explained |  |  |  |  |  |  |
| Experience | 0.026 | 0.012 | 0.032 | 0.035 | 0.022 | 0.033 |
| Education | -0.009 | 0.000 | -0.011 | -0.016 | -0.006 | -0.005 |
| Tenure | 0.005 | 0.007 | 0.002 | 0.009 | 0.005 | 0.006 |
| Part-time | 0.012 | 0.023 | 0.026 | 0.020 | 0.008 | 0.008 |
| Union coverage | 0.001 | 0.004 | 0.004 | 0.001 | -0.002 | -0.001 |
| No. employees | 0.007 | 0.004 | 0.010 | 0.006 | 0.008 | -0.009 |
| Marital | -0.004 | -0.015 | -0.008 | -0.001 | -0.001 | 0.006 |
| Region/province | 0.001 | -0.003 | -0.004 | 0.002 | 0.006 | 0.006 |
| Occupation | 0.017 | 0.021 | 0.013 | 0.019 | 0.024 | -0.030 |
| Industry | 0.032 | 0.040 | 0.053 | 0.022 | 0.031 | 0.034 |
| $\quad$ Total Explained (A) | 0.087 | 0.092 | 0.117 | 0.096 | 0.095 | 0.047 |
| $\quad$ Total Unexplained (B) | 0.118 | 0.092 | 0.105 | 0.096 | 0.123 | 0.109 |
| $\quad$ Total Difference (A +B) | 0.205 | 0.184 | 0.222 | 0.192 | 0.219 | 0.156 |
| $\quad$ |  |  |  |  |  |  |
| $\quad$ Adjusted female wage | 88.9 | 91.2 | 90.0 | 90.8 | 88.4 | 89.6 |

Notes: With the exception of part-time status, the components listed in this table are aggregates of invidual variables in Table 1. The experience aggregate includes experience and its square. The regression results used to generate these fiqures are contained in Appendix Tables 3 and 4.

Figure 1: Adjusted Female Wage Differentials, 1996 \& 2005
(OLS and at + - 5 percentiles from quantile)


Source: Tables 7 and 8



Figure 4: Adjusted Female Wage Differentials, 1996 \& 2005

## Annual Wages and Salary

(OLS and at + - 5 percentiles from quantile)


Source: Appendix Table 7


Appendix Table 1: OLS and Quantile Regressions, M ales, 1996


Appendix Table 1 continued

|  | OLS | $q=10$ | $q=25$ | $q=.50$ | $q=75$ | $\mathrm{q}=90$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tech \& Assisting Health in Health | -0.040 | 0.074 | 0.006 | -0.030 | -0.076*** | -0.171*** |
| Social Science, Govt, Religion | -0.023 | 0.074 | 0.036 | -0.058*** | -0.049*** | -0.083*** |
| Teachers/Professors | 0.030 | 0.232*** | 0.104*** | -0.036** | -0.020 | -0.041 |
| Art, Culture, Rec \& Sport | -0.055* | 0.037 | 0.056* | -0.122*** | -0.093*** | -0.108*** |
| Retail Salespersons | -0.198*** | -0.056 | -0.110*** | -0.256*** | -0.220*** | -0.266*** |
| Chefs/Cooks \& Food \& Bev | -0.247*** | 0.011 | -0.079** | -0.297*** | -0.326*** | -0.364*** |
| Protective Services | -0.077*** | 0.031 | 0.021 | -0.085*** | -0.087*** | -0.092*** |
| Childcare/Home Supp | -0.229*** | -0.189** | -0.135*** | -0.111*** | -0.203*** | -0.386*** |
| Sales and Service | -0.272*** | -0.082*** | -0.182*** | -0.328*** | -0.324*** | -0.349*** |
| Contractors/Supervisors in Trades/Trans | -0.008 | 0.164*** | 0.052* | -0.051*** | -0.031* | -0.068*** |
| Construction Trades | -0.114*** | 0.054 | 0.010 | -0.158*** | -0.179*** | -0.241*** |
| Other Trades Occupations | -0.072*** | 0.077** | 0.024 | -0.121*** | -0.138*** | -0.158*** |
| Transport \& Equipment Operators | -0.184*** | 0.003 | -0.074*** | -0.232*** | -0.253*** | -0.282*** |
| Trades Helpers,Construction | -0.210*** | -0.072* | -0.129*** | -0.258*** | -0.275*** | -0.275*** |
| Unique to Primary Industry | -0.214*** | -0.120*** | -0.141*** | -0.245*** | -0.212*** | -0.225*** |
| M achine Ops/M anufacting | -0.158*** | -0.056 | -0.080*** | -0.203*** | -0.178*** | -0.232*** |
| Processing,M anufacturing | -0.234*** | -0.106** | -0.118*** | -0.263*** | -0.281*** | -0.331*** |
| Agriculture | -0.136*** | -0.148*** | -0.077*** | -0.102*** | -0.217*** | -0.225*** |
| Forestry, Fishing, M ining, O \& G | 0.317*** | 0.281*** | 0.312*** | 0.317*** | 0.328*** | 0.379*** |
| Utilities | 0.289*** | 0.320*** | 0.290*** | 0.261*** | 0.281*** | 0.303*** |
| Construction | 0.217*** | 0.214*** | 0.224*** | 0.226*** | 0.240*** | 0.238*** |
| M anufacturing | 0.108*** | $0.131 * * *$ | 0.124*** | 0.114*** | 0.087*** | 0.107*** |
| Transportion \& Warehousing | 0.093*** | 0.081*** | 0.135*** | 0.087*** | 0.083*** | 0.094*** |
| Finance, Ins, Real Est \& Leasing | 0.116*** | 0.105*** | 0.168*** | 0.122*** | 0.115*** | 0.110*** |
| Prof, Scientific, and Tech Services | 0.186*** | 0.259*** | 0.239*** | 0.165*** | 0.149*** | 0.145*** |
| Business, Building and Support Services | 0.011 | -0.015 | 0.001 | 0.032*** | -0.037*** | 0.020 |
| Educational Services | 0.057*** | 0.112*** | 0.103*** | 0.045*** | 0.018 | -0.009 |
| Health Care \& Social Assistance | -0.030 | -0.050 | -0.011 | -0.066*** | -0.043*** | 0.008 |
| Information, Culture \& Recreation | 0.080*** | 0.055* | 0.053*** | 0.126*** | $0.121^{* * *}$ | 0.059*** |
| Accomodation and Food Services | -0.125*** | -0.205*** | -0.132*** | -0.109*** | -0.144*** | -0.117*** |
| Other Services | -0.034** | -0.056* | 0.012 | 0.029*** | -0.039*** | -0.058*** |
| Public Admin | 0.136*** | 0.186*** | 0.169*** | 0.153*** | 0.108*** | 0.059*** |
| Constant | $2.327 * * *$ | 1.850*** | 2.040*** | $2.328 * * *$ | $2.584 * * *$ | $2.817 * * *$ |
| $\mathrm{R}^{2} /$ Pseudo $\mathrm{R}^{2}$ | 0.5616 | 0.3644 | 0.3923 | 0.3783 | 0.3374 | 0.3095 |

Note: ***, **, and * denote statistical significance at the 1,5 , and 10 per cent levels, respectively.

Appendix Table 2: OLS and Quantile Regressions, Females, 1996

|  | OLS | $q=10$ | $q=25$ | $\mathrm{q}=.50$ | $q=75$ | $\mathrm{q}=90$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Actual experience squared | 0.012*** | 0.008*** | 0.011*** | 0.012*** | 0.012*** | 0.014*** |
| Actual experience | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** |
| Less than high school | -0.059*** | -0.077*** | -0.058*** | -0.046*** | -0.041*** | -0.035*** |
| Some post-secondary | 0.034*** | 0.019 | 0.006 | 0.029** | 0.034*** | 0.031*** |
| College diploma | 0.051*** | 0.024*** | 0.031*** | 0.042*** | 0.059*** | 0.095*** |
| Bachelor's degree completed | 0.241*** | 0.189*** | 0.184*** | 0.204*** | 0.247*** | 0.291*** |
| Graduate school completed | 0.308*** | 0.268*** | 0.257*** | 0.291*** | 0.327*** | 0.394*** |
| Don't know level of education | 0.248** | 0.348*** | 0.242*** | 0.123*** | 0.146*** | 0.312*** |
| Tenure (in weeks) | 0.002*** | 0.002*** | 0.002*** | 0.002*** | 0.002*** | 0.002*** |
| Tenure squared | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** |
| Part-time job | 0.030*** | -0.017** | -0.007 | 0.001*** | 0.028*** | 0.111*** |
| Union/ covered by CA | 0.106*** | 0.150*** | 0.154*** | 0.120*** | 0.077*** | 0.026*** |
| Don't know if covered by CA | -0.016 | -0.010 | 0.009 | 0.013 | 0.003 | -0.060 |
| 20-99 employees | 0.082*** | 0.103*** | 0.076*** | 0.065*** | 0.072*** | 0.064*** |
| 100-499 employees | 0.134*** | 0.154*** | 0.131*** | 0.133*** | 0.130*** | 0.091*** |
| 500-999 employees | 0.138*** | 0.130*** | 0.136*** | 0.124*** | 0.146*** | 0.152*** |
| 1000 or greater employees | 0.222*** | 0.236*** | 0.195*** | 0.188*** | 0.220*** | 0.190*** |
| Don't know number of employees | 0.081*** | 0.011 | 0.070*** | 0.065** | 0.121*** | 0.111*** |
| Divorced/seperated | 0.000 | 0.022** | 0.004 | 0.007 | -0.013** | -0.005 |
| Single | -0.020*** | -0.014* | 0.000 | -0.012 | -0.027*** | -0.039*** |
| British Columbia | 0.058*** | 0.070*** | 0.066*** | 0.059*** | 0.058*** | 0.028*** |
| Alberta | -0.101*** | -0.092*** | -0.122*** | -0.099*** | -0.090*** | -0.126*** |
| Prairies | -0.158*** | -0.191*** | -0.169*** | -0.164*** | -0.138*** | -0.148*** |
| Quebec | -0.111*** | -0.093*** | -0.102*** | -0.111*** | -0.114*** | -0.156*** |
| Atlantic provinces | -0.202*** | -0.198*** | -0.208*** | -0.210*** | -0.200*** | -0.242*** |
| Senior M anagement | 0.105* | -0.197*** | 0.079** | 0.246*** | 0.260*** | 0.301*** |
| Other M anagement | -0.036 | -0.025 | 0.010* | -0.017 | -0.032** | -0.051** |
| Prof Occ in Business/Finance | 0.019 | 0.040 | 0.033 | 0.030 | 0.005 | -0.081*** |
| Financial, Secretarial \& Admin Occ | -0.105*** | -0.067*** | -0.036*** | -0.102*** | -0.128*** | -0.198*** |
| Clerical Occupations | -0.217*** | -0.112*** | -0.119*** | -0.230*** | -0.273*** | -0.289*** |
| Natural \& Applied Science | 0.057** | -0.014 | 0.035 | 0.090*** | 0.115*** | 0.035 |
| Prof Occ in Health | 0.078*** | 0.143*** | 0.230*** | 0.116*** | 0.069*** | -0.017*** |
|  |  |  |  |  |  | . . . cont. |

Appendix Table 2 continued

|  | OLS | $q=10$ | $\mathrm{q}=25$ | $q=50$ | $\mathrm{q}=75$ | $\mathrm{q}=90$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tech \& Assisting Health in Health | -0.146*** | -0.148*** | -0.077*** | -0.169*** | -0.122*** | -0.145*** |
| Social Science, Govt, Religion | -0.042 | -0.020 | 0.039** | -0.025 | -0.023 | -0.060** |
| Teachers/Professors | -0.062** | -0.121*** | 0.031 | -0.011 | -0.016 | -0.002 |
| Art, Culture, Rec \& Sport | -0.100*** | -0.097*** | -0.089*** | -0.115*** | -0.092*** | -0.077*** |
| Retail Salespersons | -0.399*** | -0.217*** | -0.267*** | -0.405*** | -0.482*** | -0.540*** |
| Chefs/Cooks \& Food \& Bev | -0.333*** | -0.237*** | -0.253*** | -0.358*** | -0.376*** | -0.329*** |
| Protective Services | -0.101** | -0.140*** | -0.036*** | -0.103** | -0.054*** | -0.202*** |
| Childcare/Home Supp | -0.355*** | -0.400*** | -0.285*** | -0.287*** | -0.279*** | -0.310*** |
| Sales and Service | -0.341*** | -0.220*** | -0.233*** | $-0.351 * * *$ | -0.368*** | -0.411*** |
| Contractors/Supervisors in Trades/Trans | -0.058 | -0.238*** | -0.345*** | 0.077 | 0.201*** | -0.082** |
| Construction Trades | -0.446*** | -0.044 | -0.159*** | -0.472*** | -0.608*** | -0.868*** |
| Other Trades Occupations | -0.333*** | -0.489*** | -0.185*** | -0.334*** | -0.210*** | -0.336*** |
| Transport \& Equipment Operators | -0.379*** | -0.450*** | -0.253*** | -0.379*** | -0.337*** | -0.391*** |
| Trades Helpers,Construction | -0.175*** | -0.268*** | -0.144*** | -0.168** | -0.131*** | -0.061** |
| Unique to Primary Industry | -0.220*** | -0.271*** | -0.163*** | -0.235*** | -0.274*** | -0.270*** |
| M achine Ops/M anufacting | -0.403*** | -0.323*** | -0.376*** | -0.470*** | -0.404*** | -0.370*** |
| Processing,M anufacturing | -0.487*** | -0.395*** | -0.405*** | -0.546*** | -0.519*** | -0.463*** |
| Agriculture | -0.208*** | -0.105*** | -0.172*** | $-0.207 * * *$ | -0.166*** | $-0.237 * * *$ |
| Forestry, Fishing, M ining, O \& G | 0.290*** | 0.300*** | 0.224*** | 0.328*** | 0.269*** | 0.248*** |
| Utilities | 0.239*** | 0.269*** | 0.316*** | 0.292*** | 0.191*** | 0.208*** |
| Construction | 0.160*** | 0.150*** | 0.215*** | 0.151*** | 0.088*** | 0.052** |
| M anufacturing | 0.110*** | 0.111*** | 0.128*** | 0.150*** | 0.098*** | 0.049*** |
| Transportion \& Warehousing | 0.094*** | 0.087*** | 0.061*** | 0.108*** | 0.121*** | 0.119*** |
| Finance, Ins, Real Est \& Leasing | 0.091*** | 0.163*** | 0.148*** | 0.114*** | 0.074*** | 0.011 |
| Prof, Scientific, and Tech Services | 0.115*** | 0.165*** | 0.126*** | 0.133*** | 0.089*** | 0.081*** |
| Business, Building and Support Services | 0.050** | 0.008 | 0.029* | 0.037 | 0.104*** | 0.085*** |
| Educational Services | 0.118*** | 0.190*** | 0.158*** | 0.150*** | 0.086*** | 0.015 |
| Health Care \& Social Assistance | 0.097*** | 0.129*** | 0.116*** | 0.121*** | 0.079*** | 0.013 |
| Information, Culture \& Recreation | 0.082*** | 0.127*** | 0.120*** | 0.113*** | 0.070*** | 0.060*** |
| Accomodation and Food Services | -0.153*** | -0.080*** | -0.087*** | -0.127*** | -0.183*** | -0.247*** |
| Other Services | -0.028 | -0.036** | -0.013 | -0.002 | -0.024** | -0.052*** |
| Public Admin | 0.087*** | 0.144*** | 0.124*** | 0.139*** | 0.084*** | 0.069*** |
| Constant | $2.334^{* *}$ | 1.937*** | 2.074*** | 2.329*** | 2.524*** | $2.800^{* *}$ |
| $R^{2} /$ Pseudo $R^{2}$ | 0.5945 | 0.3488 | 0.4238 | 0.4319 | 0.3914 | 0.3390 |

Appendix Table 3: OLS and Quantile Regressions, Males, 2005

|  | OLS | $q=10$ | $q=25$ | $q=.50$ | $q=75$ | $q=.90$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Actual experience squared | 0.022*** | 0.016*** | 0.022*** | 0.024*** | 0.025*** | 0.018*** |
| Actual experience | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** |
| Less than high school | -0.062*** | $-0.082 * * *$ | -0.053*** | -0.043*** | -0.078*** | -0.070*** |
| Some post-secondary | 0.023 | -0.008 | 0.025 | 0.026* | 0.026*** | 0.033** |
| College diploma | 0.068*** | 0.064*** | 0.086*** | 0.089*** | 0.060*** | 0.059*** |
| Bachelor's degree completed | 0.176*** | 0.163*** | 0.217*** | 0.203*** | 0.173*** | 0.166*** |
| Graduate school completed | 0.299*** | 0.248*** | 0.302*** | 0.288*** | 0.292*** | 0.375*** |
| Don't know level of education | 0.009 | -0.156** | -0.070 | 0.145** | 0.089*** | 0.024 |
| Tenure (in weeks) | 0.001*** | 0.001*** | 0.001*** | 0.001*** | 0.001*** | 0.001*** |
| Tenure squared | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** |
| Part-time job | -0.080*** | -0.114*** | -0.129*** | -0.106*** | -0.069*** | -0.074*** |
| Union/ covered by CA | 0.060*** | 0.082*** | 0.089*** | 0.066*** | 0.042*** | 0.013*** |
| Don't know if covered by CA | 0.037 | 0.056 | -0.027 | 0.040 | 0.052** | 0.100** |
| 20-99 employees | 0.081*** | 0.097*** | 0.087*** | 0.087*** | 0.075*** | 0.051*** |
| 100-499 employees | 0.129*** | 0.154*** | 0.134*** | 0.122*** | 0.106*** | 0.117*** |
| 500-999 employees | 0.208*** | 0.216*** | 0.200*** | 0.208*** | 0.241*** | 0.219*** |
| 1000 or greater employees | 0.220*** | 0.274*** | 0.233*** | 0.211*** | 0.210*** | 0.181*** |
| Don't know number of employees | 0.119*** | 0.105*** | 0.134*** | 0.129*** | 0.168*** | 0.161*** |
| Divorced/seperated | -0.027 | -0.018 | -0.027 | -0.020 | 0.000*** | -0.005 |
| Single | -0.087*** | $-0.075 * * *$ | -0.077*** | -0.072*** | -0.088*** | -0.087*** |
| British Columbia | -0.004 | -0.001 | 0.008 | -0.007 | 0.007 | -0.002 |
| Alberta | -0.006 | -0.011 | -0.024* | -0.022* | -0.006 | 0.004 |
| Prairies | -0.115*** | $-0.112^{* *}$ | -0.109*** | -0.118*** | -0.116*** | -0.113*** |
| Quebec | -0.103*** | -0.085*** | -0.094*** | -0.113*** | -0.114*** | -0.109*** |
| Atlantic provinces | -0.189*** | -0.195*** | -0.197*** | -0.200*** | -0.182*** | -0.168*** |
| Senior M anagement | 0.339*** | 0.335*** | 0.311*** | 0.364*** | 0.458*** | 0.336*** |
| Other M anagement | 0.077*** | 0.018 | 0.043 | 0.096*** | 0.099*** | 0.011 |
| Prof Occ in Business/Finance | -0.022*** | -0.064 | -0.050 | -0.068* | -0.050** | -0.015 |
| Financial, Secretarial \& Admin Occ | -0.167*** | $-0.116^{* * *}$ | -0.114*** | -0.195*** | -0.184*** | -0.377*** |
| Clerical Occupations | -0.376*** | -0.289*** | -0.314*** | -0.378*** | -0.409*** | -0.573*** |
| Natural \& Applied Science | -0.056*** | -0.054*** | -0.038*** | -0.076*** | -0.050*** | -0.178*** |
| Prof Occ in Health | 0.008 | $-0.198 * * *$ | 0.094 | -0.006 | 0.065 | -0.032 |

Appendix Table 3 continued

|  | OLS | $\mathrm{q}=.10$ | $\mathrm{q}=.25$ | $q=50$ | $\mathrm{q}=.75$ | $\mathrm{q}=90$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tech \& Assisting Health in Health | -0.297*** | -0.296*** | -0.282*** | -0.368*** | -0.264*** | $-0.327 * * *$ |
| Social Science, Govt, Religion | -0.120*** | -0.133*** | -0.068*** | -0.101*** | -0.074*** | -0.188*** |
| Teachers/Professors | -0.087*** | -0.064* | -0.061*** | -0.078** | -0.081*** | -0.187*** |
| Art, Culture, Rec \& Sport | -0.118*** | -0.082** | -0.066 | -0.157*** | -0.163*** | -0.252*** |
| Retail Salespersons | -0.338*** | -0.266*** | -0.307*** | -0.372*** | -0.347*** | -0.396*** |
| Chefs/Cooks \& Food \& Bev | -0.284*** | -0.269*** | -0.234*** | -0.325*** | -0.338*** | -0.389*** |
| Protective Services | -0.321*** | -0.326*** | -0.303*** | -0.303*** | -0.237*** | -0.355*** |
| Childcare/Home Supp | -0.409*** | -0.198* | -0.361*** | -0.316*** | -0.498*** | -0.646*** |
| Sales and Service | -0.418*** | -0.309*** | -0.349*** | -0.446*** | -0.480*** | -0.614*** |
| Contractors/Supervisors in Trades/Trans | -0.083*** | -0.044 | -0.069* | -0.064* | -0.134*** | -0.299*** |
| Construction Trades | -0.239*** | -0.164*** | -0.227*** | -0.246*** | -0.275*** | -0.427*** |
| Other Trades Occupations | -0.211*** | -0.148*** | -0.184*** | -0.212*** | -0.243*** | -0.391*** |
| Transport \& Equipment Operators | -0.354*** | -0.269*** | -0.285*** | -0.338*** | -0.416*** | -0.565*** |
| Trades Helpers, Construction | -0.361*** | -0.286*** | -0.308*** | -0.351*** | -0.422*** | -0.571*** |
| Unique to Primary Industry | -0.308*** | -0.281*** | -0.282*** | -0.309*** | -0.269*** | -0.426*** |
| Machine Ops/M anufacting | -0.316*** | -0.306*** | -0.296*** | -0.333*** | -0.312*** | -0.406*** |
| Processing,M anufacturing | -0.440*** | -0.429*** | -0.399*** | -0.430*** | -0.471*** | -0.597*** |
| Agriculture | -0.058 | 0.010 | -0.065 | -0.062* | -0.121*** | -0.161*** |
| Forestry, Fishing, M ining, O \& G | 0.281*** | 0.290*** | 0.305*** | 0.279*** | 0.232*** | 0.222*** |
| Utilities | 0.357*** | 0.448*** | 0.427*** | 0.346*** | 0.249*** | 0.229*** |
| Construction | 0.176*** | 0.220*** | 0.245*** | 0.191*** | 0.184*** | 0.173*** |
| M anufacturing | 0.114*** | 0.210*** | 0.152*** | 0.124*** | 0.071*** | 0.041*** |
| Transportion \& Warehousing | 0.120*** | 0.139*** | 0.144*** | 0.117*** | 0.095*** | 0.127*** |
| Finance, Ins, Real Est \& Leasing | 0.183*** | 0.174*** | 0.178*** | 0.217*** | 0.168*** | 0.196*** |
| Prof, Scientific, and Tech Services | 0.185*** | 0.205*** | 0.214*** | 0.184*** | 0.162*** | 0.115*** |
| Business, Building and Support Services | -0.075*** | -0.056* | -0.096*** | -0.090*** | -0.081*** | -0.059*** |
| Educational Services | 0.084*** | 0.187*** | 0.110*** | 0.077*** | 0.050** | -0.007 |
| Health Care \& Social Assistance | 0.064*** | 0.122*** | 0.031 | 0.063** | 0.018 | 0.009 |
| Information, Culture \& Recreation | 0.094*** | 0.065** | 0.082*** | 0.150*** | 0.109*** | 0.051** |
| Accomodation and Food Services | -0.161*** | -0.094** | -0.128*** | -0.129*** | -0.160*** | -0.175*** |
| Other Services | 0.025 | -0.001 | 0.036 | 0.023 | 0.031* | 0.053** |
| Public Admin | 0.226*** | 0.314*** | 0.248*** | 0.217*** | 0.165*** | 0.140*** |
| Constant | 2.721*** | 2.283*** | 2.441*** | 2.674*** | 2.950*** | 3.342*** |
| $\mathrm{R}^{2} /$ Pseudo $\mathrm{R}^{2}$ | 0.5641 | 0.356 | 0.3836 | 0.3762 | 0.3581 | 0.3407 |

Note: ***, **, and * denote statistical significance at the 1,5 , and 10 per cent levels, respectively.

Appendix Table 4: OLS and Quantile Regressions, Females, 2005

|  | OLS | $q=10$ | $q=.25$ | $q=.50$ | $\mathrm{q}=75$ | $q=90$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Actual experience squared | 0.016*** | 0.012*** | 0.015*** | 0.016*** | 0.017*** | 0.016*** |
| Actual experience | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** |
| Less than high school | -0.060*** | -0.068*** | -0.062*** | -0.063*** | $-0.046 * * *$ | -0.051*** |
| Some post-secondary | 0.060*** | 0.020** | 0.050*** | 0.055*** | 0.081*** | 0.104*** |
| College diploma | 0.074*** | 0.049*** | 0.059*** | 0.078*** | 0.082*** | 0.093*** |
| Bachelor's degree completed | 0.247*** | 0.157*** | 0.206*** | 0.250*** | 0.266*** | 0.284*** |
| Graduate school completed | 0.340*** | 0.121*** | 0.277*** | 0.324*** | 0.373*** | 0.406*** |
| Don't know level of education | 0.024 | -0.082*** | 0.022 | 0.072*** | 0.083 | 0.114* |
| Tenure (in weeks) | 0.002*** | 0.002*** | 0.002*** | 0.002*** | 0.002*** | 0.002*** |
| Tenure squared | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** | 0.000*** |
| Part-time job | -0.017** | -0.022*** | -0.044*** | -0.036*** | -0.018* | 0.041*** |
| Union/ covered by CA | 0.080*** | 0.108*** | 0.096*** | 0.092*** | 0.057*** | 0.074*** |
| Don't know if covered by CA | 0.028 | -0.012 | -0.022 | -0.008*** | -0.003 | 0.069* |
| 20-99 employees | 0.060*** | 0.080*** | 0.068*** | 0.058*** | 0.033*** | 0.031*** |
| 100-499 employees | 0.114*** | 0.112*** | 0.113*** | 0.103*** | 0.112*** | 0.095*** |
| 500-999 employees | 0.169*** | 0.188*** | 0.176*** | 0.158*** | 0.177*** | 0.161*** |
| 1000 or greater employees | 0.210*** | 0.253*** | 0.231*** | 0.208*** | 0.188*** | 0.150*** |
| Don't know number of employees | 0.122*** | 0.133*** | 0.097*** | 0.100*** | 0.090*** | 0.164*** |
| Divorced/seperated | -0.002 | 0.007 | -0.001 | -0.005*** | -0.009 | 0.014 |
| Single | -0.034*** | -0.026*** | -0.012* | -0.022** | -0.037*** | -0.040*** |
| British Columbia | 0.002 | 0.038*** | 0.015 | 0.023** | -0.003 | -0.011 |
| Alberta | -0.022** | -0.018*** | -0.019** | -0.010*** | -0.014*** | -0.039*** |
| Prairies | -0.100*** | -0.082*** | -0.091*** | -0.099*** | -0.103*** | -0.086*** |
| Quebec | -0.077*** | -0.047*** | -0.063*** | -0.062*** | -0.091*** | -0.098*** |
| Atlantic provinces | -0.189*** | -0.160*** | -0.177*** | -0.172*** | $-0.197 * * *$ | -0.197*** |
| Senior M anagement | 0.414*** | 0.413*** | 0.280*** | 0.256*** | 0.656*** | 0.538*** |
| Other M anagement | 0.157*** | 0.130*** | 0.114*** | 0.176*** | 0.182*** | 0.150*** |
| Prof Occ in Business/Finance | 0.051** | 0.158*** | 0.051** | 0.055* | 0.035 | -0.125*** |
| Financial, Secretarial \& Admin Occ | -0.146*** | -0.040** | -0.124*** | -0.135*** | $-0.171^{* * *}$ | -0.306*** |
| Clerical Occupations | -0.209*** | -0.040** | -0.166*** | $-0.201^{* * *}$ | -0.243*** | -0.393*** |
| Natural \& Applied Science | 0.074*** | 0.238*** | 0.098*** | 0.070** | 0.020*** | -0.071** |
| Prof Occ in Health | 0.234*** | 0.342*** | 0.265*** | 0.257*** | 0.205*** | 0.097*** |
|  |  |  |  |  |  | . . . cont. |

Appendix Table 4 continued

|  | OLS | $q=10$ | $\mathrm{q}=25$ | $q=.50$ | $q=.75$ | $q=90$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tech \& Assisting Health in Health | -0.088*** | -0.002 | -0.114*** | -0.088*** | -0.094*** | -0.110*** |
| Social Science, Govt, Religion | -0.022 | 0.073*** | -0.034 | -0.035*** | -0.032 | -0.112*** |
| Teachers/Professors | 0.063** | 0.128*** | 0.054** | 0.064** | 0.063* | -0.059* |
| Art, Culture, Rec \& Sport | -0.074*** | 0.044** | -0.082*** | -0.098*** | -0.079* | -0.094** |
| Retail Salespersons | -0.378*** | -0.182*** | -0.309*** | -0.361*** | -0.474*** | -0.596*** |
| Chefs/Cooks \& Food \& Bev | -0.337*** | -0.209*** | -0.295*** | -0.341*** | -0.405*** | -0.471*** |
| Protective Services | -0.152*** | -0.210*** | -0.173*** | -0.133*** | -0.106*** | -0.251*** |
| Childcare/Home Supp | -0.253*** | -0.139*** | -0.237*** | -0.257*** | -0.272*** | -0.380*** |
| Sales and Service | -0.336*** | -0.203*** | -0.300*** | -0.324*** | -0.386*** | -0.495*** |
| Contractors/Supervisors in Trades/Trans | -0.213*** | -0.178*** | -0.125** | -0.239*** | -0.234** | -0.556*** |
| Construction Trades | -0.053 | -0.036 | -0.220*** | 0.110*** | 0.098 | -0.120** |
| Other Trades Occupations | -0.252*** | 0.033 | -0.184*** | -0.269*** | -0.358*** | -0.312*** |
| Transport \& Equipment Operators | -0.323*** | -0.075*** | -0.295*** | -0.333*** | -0.345*** | -0.539*** |
| Trades Helpers, Construction | -0.325*** | -0.111*** | -0.261*** | -0.341*** | -0.374*** | -0.476*** |
| Unique to Primary Industry | -0.291*** | 0.021 | -0.131*** | -0.317*** | -0.375*** | -0.544*** |
| Machine Ops/M anufacting | -0.286*** | -0.152*** | -0.343*** | -0.320*** | -0.352*** | -0.375*** |
| Processing,M anufacturing | -0.444*** | -0.285*** | -0.483*** | -0.444*** | -0.521*** | -0.554*** |
| Agriculture | -0.071 | -0.132*** | -0.169*** | -0.006*** | -0.031 | -0.074* |
| Forestry, Fishing, M ining, O\& G | 0.228*** | 0.026* | 0.137*** | 0.313*** | 0.253*** | 0.223*** |
| Utilities | 0.286*** | 0.323*** | 0.357*** | 0.343*** | 0.280*** | 0.177*** |
| Construction | 0.164*** | 0.198*** | 0.223*** | 0.141*** | 0.122*** | 0.194*** |
| Manufacturing | 0.114*** | 0.054*** | 0.132*** | 0.169*** | 0.128*** | 0.084*** |
| Transportion \& Warehousing | 0.208*** | 0.155*** | 0.242*** | 0.247*** | 0.211*** | 0.174*** |
| Finance, Ins, Real Est \& Leasing | 0.175*** | 0.179*** | 0.196*** | 0.199*** | 0.177*** | 0.121*** |
| Prof, Scientific, and Tech Services | 0.172*** | 0.168*** | 0.211*** | 0.229*** | 0.188*** | 0.080*** |
| Business, Building and Support Services | 0.055*** | 0.084*** | 0.078*** | 0.081*** | 0.025*** | 0.007 |
| Educational Services | 0.093*** | 0.137*** | 0.145*** | 0.153*** | 0.102*** | 0.014 |
| Health Care \& Social Assistance | 0.067*** | 0.081*** | 0.112*** | 0.089*** | 0.072*** | -0.021 |
| Information, Culture \& Recreation | 0.110*** | 0.087*** | 0.091*** | 0.131*** | 0.157*** | 0.118*** |
| Accomodation and Food Services | -0.072*** | -0.003 | -0.045*** | -0.060*** | -0.086*** | -0.195*** |
| Other Services | 0.074*** | -0.001 | 0.075*** | 0.105*** | 0.115*** | 0.061*** |
| Public Admin | 0.232*** | 0.264*** | 0.287*** | 0.286*** | 0.222*** | 0.117*** |
| Constant | 2.452*** | 2.009*** | 2.224*** | 2.407*** | 2.662*** | 2.981*** |
| $\mathrm{R}^{2} /$ Pseudo $\mathrm{R}^{2}$ | 0.6132 | 0.3617 | 0.4167 | 0.4307 | 0.4127 | 0.3752 |

Note: ***, **, and * denote statistical significance at the 1,5 , and 10 per cent levels, respectively.

Appendix Table 5: Decomposition Results, OLS and Quantile Regressions at H-Five Percentiles, $1996 \& 2005$, w/o Occupation and Industry Controls

|  | 1996 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | OLS | $\mathrm{q}=10$ | $\mathrm{q}=25$ | $\mathrm{q}=.50$ | $\mathrm{q}=75$ | $\mathrm{q}=90$ |
| Male with M ale | 2.781 | 2.037 | 2.377 | 2.804 | 3.163 | 3.467 |
| M ale with Female | 2.717 | 1.976 | 2.329 | 2.716 | 3.086 | 3.408 |
| Female with Female | 2.558 | 1.850 | 2.144 | 2.551 | 2.949 | 3.282 |
| Total Differential | 0.222 | 0.187 | 0.233 | 0.253 | 0.214 | 0.185 |
| Explained | 0.063 | 0.060 | 0.047 | 0.088 | 0.077 | 0.059 |
| Unexplained | 0.159 | 0.127 | 0.186 | 0.165 | 0.137 | 0.126 |
| Adjusted female wage | 85.3 | 88.1 | 83.1 | 84.8 | 87.2 | 88.2 |
|  | 2005 |  |  |  |  |  |
|  | OLS | $\mathrm{q}=10$ | $\mathrm{q}=25$ | $\mathrm{q}=.50$ | $\mathrm{q}=75$ | $\mathrm{q}=.90$ |
| Male with M ale | 2.978 | 2.240 | 2.584 | 2.988 | 3.351 | 3.686 |
| M ale with Female | 2.925 | 2.180 | 2.530 | 2.920 | 3.296 | 3.629 |
| Female with Female | 2.773 | 2.068 | 2.359 | 2.772 | 3.150 | 3.514 |
| Total Differential | 0.205 | 0.172 | 0.225 | 0.216 | 0.201 | 0.172 |
| Explained | 0.053 | 0.060 | 0.054 | 0.067 | 0.055 | 0.057 |
| Unexplained | 0.152 | 0.112 | 0.171 | 0.148 | 0.145 | 0.115 |
| Adjusted female wage | 85.9 | 89.4 | 84.3 | 86.2 | 86.5 | 89.2 |

Appendix Table 6: Decomposition Results, OLS and Quantile Regressions at +/-Five Percentiles, 1996 \& 2005, Full-year, Full-time Workers Only

|  | 1996 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | OLS | $\mathrm{q}=10$ | $\mathrm{q}=25$ | $\mathrm{q}=50$ | $\mathrm{q}=75$ | $\mathrm{q}=.90$ |
| M ale with M ale | 2.870 | 2.157 | 2.527 | 2.891 | 3.223 | 3.500 |
| M ale with Female | 2.809 | 2.084 | 2.424 | 2.813 | 3.167 | 3.515 |
| Female with Female | 2.666 | 1.927 | 2.292 | 2.683 | 3.031 | 3.328 |
| Total Differential | 0.204 | 0.231 | 0.235 | 0.208 | 0.192 | 0.172 |
| Explained | 0.061 | 0.073 | 0.103 | 0.078 | 0.056 | -0.014 |
| Unexplained | 0.142 | 0.158 | 0.132 | 0.130 | 0.136 | 0.186 |
| Adjusted female wage | 86.7 | 85.4 | 87.6 | 87.8 | 87.3 | 83.0 |
|  | 2005 |  |  |  |  |  |
|  | OLS | $\mathrm{q}=10$ | $\mathrm{q}=25$ | $\mathrm{q}=50$ | $\mathrm{q}=75$ | $\mathrm{q}=.90$ |
| M ale with M ale | 3.052 | 2.327 | 2.683 | 3.028 | 3.423 | 3.762 |
| M ale with Female | 2.988 | 2.281 | 2.577 | 2.973 | 3.350 | 3.715 |
| Female with Female | 2.865 | 2.123 | 2.466 | 2.875 | 3.231 | 3.595 |
| Total Differential | 0.187 | 0.203 | 0.216 | 0.154 | 0.192 | 0.167 |
| Explained | 0.064 | 0.046 | 0.106 | 0.055 | 0.073 | 0.047 |
| Unexplained | 0.123 | 0.157 | 0.110 | 0.099 | 0.119 | 0.120 |
| Adjusted female wage | 88.4 | 85.5 | 89.6 | 90.6 | 88.8 | 88.7 |

Appendix Table 7: Decomposition Results, OLS and Quantile Regressions at H-Five Percentiles, $1996 \& 2005$, Annual Salary

|  | 1996 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | OLS | $\mathrm{q}=10$ | $\mathrm{q}=25$ | $\mathrm{q}=.50$ | $\mathrm{q}=75$ | $\mathrm{q}=.90$ |
| Male with M ale | 10.250 | 8.678 | 9.762 | 10.431 | 10.915 | 11.252 |
| Male with Female | 9.920 | 8.291 | 9.290 | 10.094 | 10.634 | 11.057 |
| Female with Female | 9.747 | 8.056 | 9.137 | 9.957 | 10.486 | 10.859 |
| Total Differential | 0.503 | 0.622 | 0.625 | 0.474 | 0.428 | 0.393 |
| Explained | 0.329 | 0.387 | 0.472 | 0.338 | 0.280 | 0.195 |
| Unexplained | 0.174 | 0.236 | 0.153 | 0.136 | 0.148 | 0.198 |
| Adjusted female wage | 84.1 | 79.0 | 85.8 | 87.2 | 86.2 | 82.1 |


|  | 2005 |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | OLS | $\mathrm{q}=.10$ | $\mathrm{q}=.25$ | $\mathrm{q}=.50$ | $\mathrm{q}=.75$ | $\mathrm{q}=.90$ |
| Male with M ale | 10.510 | 9.039 | 10.022 | 10.655 | 11.174 | 11.544 |
| Male with Female | 10.202 | 8.479 | 9.512 | 10.355 | 10.934 | 11.322 |
| Female with Female | 10.057 | 8.343 | 9.378 | 10.241 | 10.794 | 11.176 |
| Total Differential | 0.452 | 0.695 | 0.644 | 0.414 | 0.380 | 0.368 |
| $\quad$ Explained | 0.308 | 0.560 | 0.510 | 0.299 | 0.240 | 0.222 |
| $\quad$ Unexplained | 0.144 | 0.135 | 0.133 | 0.114 | 0.140 | 0.146 |
| Adjusted female wage | 86.5 | 87.3 | 87.5 | 89.2 | 86.9 | 86.4 |

Appendix Table 8: Decomposition Results, OLS and Quantile Regressions at H-Five Percentiles, $1996 \& 2005$,
Annual Salary (no hours controls)

|  | 1996 |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | OLS | $\mathrm{q}=.10$ | $\mathrm{q}=.25$ | $\mathrm{q}=.50$ | $\mathrm{q}=.75$ | $\mathrm{q}=.90$ |
| Male with M ale | 10.251 | 8.677 | 9.724 | 10.407 | 10.859 | 11.233 |
| Male with Female | 10.015 | 8.402 | 9.368 | 10.138 | 10.669 | 11.112 |
| Female with Female | 9.752 | 8.068 | 9.067 | 9.930 | 10.469 | 10.854 |
| Total Differential | 0.499 | 0.610 | 0.658 | 0.477 | 0.390 | 0.379 |
| $\quad$ Explained | 0.236 | 0.275 | 0.357 | 0.269 | 0.190 | 0.121 |
| $\quad$ Unexplained | 0.263 | 0.335 | 0.301 | 0.207 | 0.200 | 0.259 |
| Adjusted female wage | 76.9 | 71.5 | 74.0 | 81.3 | 81.9 | 77.2 |


|  | 2005 |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | OLS | $\mathrm{q}=.10$ | $\mathrm{q}=.25$ | $\mathrm{q}=.50$ | $\mathrm{q}=.75$ | $\mathrm{q}=.90$ |
| Male with M ale | 10.511 | 9.005 | 9.997 | 10.641 | 11.160 | 11.533 |
| Male with Female | 10.259 | 8.451 | 9.545 | 10.368 | 10.967 | 11.345 |
| Female with Female | 10.058 | 8.314 | 9.320 | 10.217 | 10.786 | 11.151 |
| Total Differential | 0.453 | 0.691 | 0.677 | 0.424 | 0.374 | 0.382 |
| $\quad$ Explained | 0.252 | 0.554 | 0.451 | 0.273 | 0.193 | 0.188 |
| $\quad$ Unexplained | 0.201 | 0.137 | 0.225 | 0.151 | 0.182 | 0.193 |
| Adjusted female wage | 81.8 | 87.2 | 79.8 | 86.0 | 83.4 | 82.4 |


[^0]:    ${ }^{1}$ Throughout this paper I will use the term "gender pay gap" as a generic phrase that includes differences in annual earnings, weekly earnings, or hourly wages. Each of these has been used in the literature and will be used in this research as well.
    ${ }^{2}$ The major studies, the methodologies and data sets employed, and the main findings are contained in the separate data appendix that accompanies this paper.

[^1]:    ${ }^{3}$ Canadian studies using this methodology include, but are not limited to, Shapiro and Stelcner (1987), Maki and Ng (1990), Christofides and Swidinsky (1994), Doiron and Riddell (1994), Baker et al. (2995), Finnie and Wannell (1996, 2004), Kidd and Shannon (1996), Day and Devlin (1997), Christie and Shannon (2001), Drolet (2001, 2002b), Fortin and Huberman (2002), Ng (2003), Leung (2006), Warman et al. (2006), Frenette and Coulombe (2007), and Myles, et al. (2007).

[^2]:    ${ }^{4}$ Since the estimation of equation (1) may be sensitive to the choice of base group - males in this case - this group can be changed to females. Comparing the results of these separate decompositions gives a lower and higher bound of the unexplained wage differential. Throughout this paper we will use males as the base group. This is the most common methodology employed in the literature, since it is argued that the vector of returns to male characteristics is nondiscriminatory and hence acts as the standard to which all others should be compared.

[^3]:    ${ }^{5}$ See Gunderson (2006) for a comprehensive review of the methodologies for estimating the gender pay gap as well as the limitations associated with each.

[^4]:    ${ }^{6}$ This variable is "cmphrw28" in both the 1996 and 2005 SLID. It is calculated using the based on the implicit hourly wage for all paid-worker jobs and weighted using total hours paid for each. The implicit hourly wage at each job is either the hourly wage (if so reported) including commissions, bonuses and tips, or is derived from the other salary measure (e.g., annual) adjusted for the number of hours usually worked.

[^5]:    ${ }^{7}$ Sample sizes here and throughout do not permit us to look at only those individuals at each exact percentile. In fact, sometimes the number of males or females at each percentile value is zero.

[^6]:    ${ }^{8}$ The statistical program STATA contains a number of programs that are capable of decomposing mean earnings differences between two or more groups, males and females in our case. Since we are interested in decomposing the earnings differential at different points in the distribution, these prepackaged programs are of limited use, and some of the calculations must be done manually. In particular, many of the results in the STATA programs are not weighted. Furthermore, the decompositions in STATA are conducted using the coefficients from the quantile regressions, but the mean values of dependent variables from the entire group of males and females. We will overcome these limitations by performing manual calculations and weight the

[^7]:    data as well as using the appropriate dependent variables values (i.e., the values at $+/$ - five percentiles from the quantile being evaluated). The downside of doing this manually is that we are not easily able to include standard errors. Still, the estimations that were performed in STATA (despite its limitations) almost always produced coefficients that were significant at the usual levels of significance.
    ${ }^{9}$ The regression coefficients used to generate these results are contained in Appendix Tables 1 through 4.
    ${ }^{10}$ There are a variety of weighting schemes that can be used to calculate the differentials based what is considered to be the base (or non-discriminatory) wage for comparison purposes. We follow the convention and use the male weight (i.e., $\mathrm{W}=1$ ) as originally suggested by both Oaxaca (1973) and Blinder (1973). Other weighting options are a scheme that uses relative group sample sizes (Cotton, 1988) or using the group of pooled males and females as the group to which comparisons are made (Neumark, 1988). As the weight given to males decreases, this tends to reduce the explained component and increase the unexplained component, although the patterns observed here do no change. Using the male group as the comparator group is the most common weighting scheme in the literature are corresponds to the case where male earnings are considered to be the non-discriminatory earnings to which female earnings are compared.
    ${ }^{11}$ The adjusted female-male earnings ratio here and throughout the paper is obtained by using the formula $e^{-x *} 100$ where x is the unexplained log difference between males and females.
    ${ }^{12}$ This is equivalent to saying that the unexplained log difference (i.e., x in the formula in the previous footnote) increases as the quantile level increases.

[^8]:    ${ }^{13}$ Weekly wages were also used as the dependent variable in separate regressions. However, since we had to derive this variable using three variables - annual salary, hours worked per year, and weeks worked per year - this introduced a lot of noise into the weekly wages variable so the results were not reliable.

[^9]:    ${ }^{14}$ According to Drolet (2001:5): " . . . pay ratios based on annual earnings do not accurately account for differences in work volume. Even among men and women working full year, full time, the number of hours worked per week varies considerably. . . . Ratios based on hourly wage rates overcome this problem."

[^10]:    ${ }^{15}$ This comparator group was chosen arbitrarily, but its choice in no way influences the results in the decompositions.
    ${ }^{16}$ It should be noted that that affects of individual components within an each category occupation, for example, are extremely sensitive to the omitted variable. This, however, does not change the net explained and unexplained components at each quantile level.

