Wage differences between Austrian men and women: *semper idem?*[*]

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Abstract: In most OECD countries, the wage gap between men and women has narrowed during the past two decades. Developments of the last 20 years, e.g. increased labour market attachment of women or the introduction of equal pay laws, may have reduced the gender wage gap. We investigate the extent, persistence, and socio-economic determinants of the gender wage gap in Austria, for the years 1983 and 1997. Using wage decomposition techniques, we find that the average gender wage gap was almost as high in 1997 as it was in 1983. Not accounting for differences, the gender wage gap dropped from 25.5 to 23.3 per cent of men's wages. Taking observable differences between men and women into account, we estimate that the mean gender wage gap which cannot be explained, i.e. discrimination against women, dropped from 17 to 14 per cent of men's wages. A decomposition of the gender wage gap over time indicates that both returns to human capital and less discrimination were responsible for the narrowing of the gender wage gap.

JEL: J31, J71

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1. Introduction

In most OECD countries, the wage gap between men and women has declined during the past two decades.[1] In Austria, the gender wage gap at the beginning of the 1980s was about 37 per cent in the private sector, and about 12 per cent in the public sector (Zweimüller and Winter-Ebmer, 1994). We investigate how the gender wage gap developed between 1983 and 1997, two years for which we have adequate data from the Austrian micro-census (Statistik Austria, 1983, 1997). In particular, we analyse how the gender wage gap evolved over time, whether or not segregation by sex in industries effected the wage gap, and whether or not there is evidence of a "glass ceiling".

There are several explanations why men and women earn different wages for the same job (Altonji and Black, 1999). The standard approach to analyse wages is the human capital framework where personal characteristics, e.g. formal education, and relative scarcity of skills determine the wage structure. Different endowments result in different wages, reflecting the relative productivity of the workers. Workers who earn a wage below their productivity will bargain for a higher wage, once the employer observes their true productivity. Wage differences that are not related to differences in productivity should not *persist* over time, because workers have an incentive to re-negotiate their wage, or find a new employer.

Women's formal education and their labour market attachment have steadily increased throughout the last decades. Figure 1 shows this development for the formal qualification of employed women, from 1980 until today. Austrian women have overtaken men in terms of formal qualification in

[1] See Blau and Kahn (1992, 1998, 2003) for the US and international comparisons, Joshi and Paci (1998) for the UK, Machin and Puhani (2002) for Germany and the UK, Albrecht, Björklund, and Vroman (2003) for Sweden, and Weichselbaumer and Winter-Ebmer (2005) for a meta-analysis of gender wage studies.

1999 and have nowadays on average more formal qualification than men have. At the beginning of the 1980s, about 50 per cent of Austrian women participated in the labour market and about 63 per cent of women participated in the labour market in 2000. Women's labour force participation rate was slightly above the European average (Blau and Kahn, 2003). Male labour market participation, in contrast, was around 80 per cent. Figure 2 provides an overview on relative labour market participation, where we have taken the values of 1980 as the base value and plotted the growth of the labour market participation until 2005. The Figure demonstrates that the increase in women's labour market participation is to a large part owed to women who have not (yet) taken maternity leave. Over the last 25 years, women's labour market participation increased by about 40 per cent and men's increased by about 10 per cent. Fewer women have career breaks (these tend to be shorter than a few decades ago) and this arguably has also reduced their "disadvantages" in the labour market and possibly reduced the gender wage gap. The unemployment rates for men and women are plotted in Figure 3. The unemployment rates were about 2 per cent in 1980 and increased to about 7.5 per cent in 2005. Men had lower unemployment rates than women throughout most of the period, but since about 2000, their unemployment rate is greater than women's; it is currently about one percentage point greater than women's unemployment rate.

Increased competition, e.g. from joining the EU (in 1995), may also have contributed to a narrowing of the gender wage gap. If firms have a "taste" for discrimination, then only firms operating in an oligopolistic or otherwise not perfectly competitive environment can sustain the cost of discrimination (Becker, 1975). An increase in competition should induce firms to exit an industry that discriminates against women. Several empirical studies for the US provide evidence for this argument (Ashenfelter and Hannan, 1986; Hellerstein, Neumark and Troske, 1997; Blank and Brainerd, 1999; Blank and Strahan, 2001).

The probably most important change in the institutional setting was the introduction of an equal treatment law ("Gleichbehandlungsgesetz") in 1993. The law stipulates equal pay for equal jobs, which should have closed the gender wage gap, and created the Equal Pay Commission. Between 1991 and 2000, the commission has settled 85 discrimination cases and issued seven reports on unequal treatment in collective agreements, apprenticeship contracts and job advertisements (BMSG, n.d.). The complaints brought before the Commission were in the following categories (the figure in parentheses refers to the number of cases): job advertisement (2), hiring decision (11), unequal pay (20), on-the-job training (2), promotion (8), other working conditions (e.g. mobbing) (5), unfair dismissals (3), and sexual harassment (34).[2] Although the majority of these cases were concerned with sexual harassment at the workplace, about 33 per cent of complaints alleged discrimination in pay or promotion. If the gender wage gap is a result of discrimination against women, and not because of their different productivity, then we expect the gender wage gap to close over time with the introduction of equal treatment legislation.

The international empirical evidence shows that women still earn substantially less than men do. Women have been catching up, but at a slow rate. One explanation why this process is so slow is that women still do most of the work in the home and are responsible for childcare, also when they and their partners are employed full-time (Biernat and Wortman, 1991; Lennon and Rosenfeld, 1994; Robinson, 1988). In consequence, men have more leisure time and more time to recover from work and make therefore better employers. Rational employers anticipate that and discriminate accordingly (Francois and van Ours, 2000). Women, in particular graduating students, tend to negotiate their first salary less effectively than their male counterparts do (Babcock, 2002) and a wage gap in the beginning of a career typically results in an even wider gap in later years. This difference in bargaining outcomes is not due to systematic productivity differences between men

[2] Between 2001 and 2003, the Commission dealt with 79 complaints and settled 43 of them by the

and women, because although women negotiate less effectively on their own behalf, they do not reach inferior outcomes on behalf of their firm or others (Riley, Babcock and McGinn, 2003).

The development of the gender wage gap over time is essentially an empirical matter. Human capital theory suggests a closing of any gender wage gap that resulted from discrimination and the introduction of equal opportunity laws may further erode discrimination against women. Institutions, believes and the "taste" for discrimination, however, may retard the closing of the gender wage gap. We investigate the extent, persistence and socio-economic determinants of the gender wage gap in Austria, for the years 1983 and 1997. Using wage decomposition techniques, we find that the wage gap between men and women was almost as high in 1997 as it was in 1983. Weichselbaumer and Winter-Ebmer (2005) use a meta-analysis and analyse data from some 260 studies that cover the period from the 1960s to the 1990s. They find, for this period, a decrease of the raw gender wage gap from about 65 to about 35 per cent, but find no evidence for a reduction of the unexplained component, i.e. discrimination. In our data, when we do not account for observable differences in productivity, the gender wage gap closed slightly from 25.5 to 23.3 per cent. Taking observable differences between men and women into account, we find that discrimination against women dropped from 18 to 15.5 per cent of men's wages. This drop corresponds nearly one-to-one to the narrowing of the overall gender wage gap. The wage gap may differ over the wage distribution. We use quantile regressions and estimate that the gender wage gap was greater at the top than at the bottom end of the wage distribution.

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end of 2003 (BMGF, 2001; 2002; 2003).

2. Methods

We use the decomposition method by Blinder (1973) and Oaxaca (1973) to estimate differences between the mean wages earned. For men (M) and women (W), a Mincer-type wage equation is estimated:

$$\ln Y_i = \beta_i X_i + \varepsilon_i, \quad i = M, W, \tag{1}$$

where Y_i is the hourly wage, β_i is the vector of coefficients to be estimated, X_i is the vector of characteristics, and ε_i is an i.i.d. error-term.

The difference in the mean wages can be written as

$$\overline{\ln Y_M} - \overline{\ln Y_W} = \hat{\beta}_M (\overline{X_M} - \overline{X_W}) + (\hat{\beta}_M - \hat{\beta}_W) \overline{X_W}, \tag{2}$$

where the first term on the right hand side is the difference of the mean characteristics of both groups evaluated at the prices men receive for these characteristics. (The $\hat{\beta}$s are the estimated coefficients from equation (1).) The second term on the right hand side is the unexplained residual arising from differences in the estimation of (1). It gives the differences in prices, evaluated at women's mean characteristics, and is often referred to as "discrimination".

Extending this approach to decompose the mean wage differences between men and women over time requires the estimation of four wage equations (Juhn, Murphy and Pierce, 1991):

$$\ln Y_{it} = \beta_{it} X_{it} + \varepsilon_{it}, \quad i = M, W \text{ and } t = 1983, 1997. \tag{3}$$

If we subtract the mean wage difference in one period from the difference of the other period, then we can decompose the mean wage difference into four terms:

$$
\begin{aligned}
&(\overline{\ln Y_{M,97}} - \overline{\ln Y_{W,97}}) - (\overline{\ln Y_{M,83}} - \overline{\ln Y_{W,83}}) = \\
&\widehat{\beta}_{M,83}[(\overline{X_{M,97}} - \overline{X_{W,97}}) - (\overline{X_{M,83}} - \overline{X_{W,83}})] \\
&+ (\widehat{\beta}_{M,97} - \widehat{\beta}_{M,83})(\overline{X_{M,97}} - \overline{X_{W,97}}) \\
&+ (\widehat{\beta}_{M,97} - \widehat{\beta}_{W,97})\overline{X_{W,97}} - (\widehat{\beta}_{M,83} - \widehat{\beta}_{W,83})\overline{X_{W,83}} \ .
\end{aligned}
\tag{4}
$$

The first term on the right hand side is similar to the first term on the right hand side in equation (2). It corresponds to the relative change in mean characteristics between men and women over time, evaluated at the prices in the first period. The second term on the right hand side in equation (4) gives the change in prices over time, weighted by the differences in mean characteristics of the later period. The last two terms give the change of price differences over time, weighted by women's characteristics. These two terms capture the change in the residual wage gap over time and might be interpreted as the change in discrimination.

These approaches focus on the mean of the wage distribution and therefore provide only a limited picture of the differences in wages between men and women. Several authors have found that the mean wage gaps are not representative of the whole distribution. García, Hernández, and López-Nicolás (2001), using quantile regressions and Spanish data, show that the unexplained part of the wage gap increases over the wage distribution. DiNardo, Fortin and Lemieux (1996), using a semi-parametric kernel density approach, find that the wage gap in the USA increased more at the lower tail of the wage distribution and that labour market institutions (trade unions, minimum wages) reduce the wage gap. We decompose the wage gap at five points of the wage distributions using quantile regressions. We then compare the distributions of the unexplained components over time.

A quantile regression model specifies the quantile of a dependent variable as a linear function of characteristics, such that

$$\ln Y_i = \beta_{iq} X_{iq} + \varepsilon_{iq}, \quad i = M, W \text{ and } q = \text{quantiles 1, ..., 5.} \quad . \tag{5}$$

OLS regressions have the property that the mean of the dependent variable and the mean of the explanatory variables are on the regression line. The estimators for the quantile regression models do not have this property, but, as García et al. (2001) demonstrate, the conditional quantile wage difference,

$$\ln Y_{Mq} - \ln Y_{Wq} = (\hat{\beta}_{Mq} - \hat{\beta}_{Wq})X + remainder, \tag{6}$$

can be used as a measure of discrimination. The conditional quantile wage difference, equation (6), is the sum of the difference in quantile prices between men and women, weighted with characteristics X, and a remainder. As García et al. (2001) state, the choice of X is arbitrary and consequently the remaining term. A practical choice for X is $\bar{X}_M$ (e.g. Mueller (1998)), which makes the remainder equal to $\hat{\beta}_{Wq}(\bar{X}_M - \bar{X}_W)$. The arbitrary choice of X makes the unexplained component, $(\hat{\beta}_{Mq} - \hat{\beta}_{Wq})X$, in comparison with the measure of discrimination in the Blinder-Oaxaca decomposition, a less precise measure of discrimination.

3. Data

The data are from the Austrian micro-census for 1983 and 1997 (Statistik Austria, 1983, 1997). The micro-census is a quarterly household panel survey, representative for the Austrian economy. Every quarter an eighth of the sample is renewed. It contains detailed information on individual and household characteristics, e.g. personal and labour market characteristics, information on household demographics, etc. Information about individual net monthly earnings is available only every second year. These data are currently the only source for an adequate analysis of wage differences for such an extended period. Data from administrative records as used by e.g. Gregoritsch, Kalmár and Wagner-Pinter (2000) lack information on the number of hours worked and cannot be used if men and women have significantly different working hours. In general, men tend to work more hours than women do. For example, in 2003, 55 per cent of men worked 40 hours or more per week (Statistik Austria, 2005, Table 7.17). In contrast, only 45 per cent of women worked 40 hours or more per week.[3] For our analyses, we restrict the sample to workers who worked 30 hours or more per week.

Previous studies have often used potential work experience, i.e. age minus school-leaving age, as a proxy for actual work experience. Potential work experience might be a misleading proxy if career interruptions differ between men and women. Actual work experience was asked in the 1983 micro-census, but not in 1997. We therefore use data from the 1996 micro-census (Statistik Austria, 1996) where data are available on actual work experience, but not on wages, to augment the 1997 sample. The rotating survey design implies that one half of the workers who were interview in 1996 are not in the 1997 sample. While the resulting sample has enough observations for the analysis of the mean gender wage gap, the number of observations is too low for quantile regressions. For the

[3] About 20 per cent of women work fewer than 25 hours per week, only some 2 per cent of men work fewer than 25 hours per week.

analyses of the quantiles of the wage distribution, we use potential experience and the full 1997 sample. To demonstrate that our findings are robust, despite the use of the proxy, we present decomposition results for the mean wage gap using potential and actual experience.

Summary statistics for our sample are detailed in Table 1. We have a sample of 6,552 men and 3,635 women for the year 1983 and 1,757 men and 1,015 women for the year 1997. Wages are monthly net earnings in full-time equivalents (i.e. 40h/week) and deflated to 1997 prices. In 1983, men earned on average 3,157ATS more per month than women did. This difference translates into some 23 per cent of men's average monthly wages. In 1997, men earned on average 3,566 ATS more per month than women, this was about 20 per cent of the average male monthly wage. The variation in monthly wages was higher for men than for women, the Standard Deviation was some 5,200ATS in 1983 (6,800 in 1997) for men and some 3,800 (5,300) for women.

Table 1 shows that in 1983 about 43 per cent of working women had only primary school level qualifications, compared with 27 per cent of working men. In 1997, about 26 per cent of women and 17 per cent of men had only primary school level qualification. The number of both male and female workers with higher educational levels increased; in 1997, about 5.5 per cent had a university degree (1.7 per cent in 1983). The relative increase of high skilled women may have led to a general decrease in wages for both skilled men and women. If wages compensate formal qualifications, we expect the wage gap to have narrowed over the period. In addition, the labour market attachment of women is expected to increase with more formal education, because the opportunity costs to not working are greater, other things equal.

An important aspect of qualification is job related. Our data provide the actual experience in years and the professional position, which allow conclusions about the skill level of the workers. In 1983, women had on average about 69 per cent of actual experience of men, some 13 years relative to

men's of about 19 years. In 1997, however, the difference between the two groups has narrowed. Women had on average 80 per cent of men's actual experience (16 vs. 20 years of actual experience). From this we would also expect the wage gap to have narrowed.

A recurring theme in the literature of discrimination is the "glass ceiling", referring to differences in the promotion prospects between men and women. The descriptive statistics show that in 1983 only one per cent of women were employed in the two top hierarchy levels (executive managers and managers), in comparison with four per cent of men. By 1997, relatively more women were working in the two top hierarchy levels (7 per cent), but women have not caught up with men (9 per cent).

Industries where predominantly women work pay lower wages; other authors, e.g. Bayard, Kellerstein, Neumark and Troske (1999), have found such a relationship of sex-specific segregation of jobs and wage differences. In Table 1 the percentages of female workers in various industries are given. The classification of industry is rather coarse in comparison to a classification along occupations, but it shows large differences between men and women. Typical female industriess are the leather, textile, and apparel industry where about 77 per cent of the work force is female. Other industries with a large share of women in the workforce are trade, tourism, services, and the health sector.

The changes over the last decades, i.e. the increased labour market participation of women, their relative increase in both formal and workplace-specific qualifications, and the penetration into top-level jobs, along with political pressure towards equal opportunities leaves us with an expectation that the gender wage gap should have dropped considerably over these two decades.

4. Results

In Table 2 we present estimates of wage regressions for men and women for the years 1983 and 1997. Wages were higher for higher levels of formal education and the estimations show that returns to education were lower in 1997 than in 1983. The estimates show that workers who worked in skilled professions also received higher wages than those in unskilled professions. In addition, those who worked in the top levels of a company, i.e. Managers and Executive Managers, earned more than those in lower hierarchy levels. Wages were not only determined by formal education or job rank, we estimate that actual work experience was associated with an increase of wages over time.

We also estimate that the more women worked in an industry, the lower the wages. The wage penalty was somewhat lower for men than for women and there is no statistical evidence that it decreased over time. Foreign nationals received lower wages than Austrians did, but the differences for female workers are not statistically significant at conventional levels. White-collar workers received higher wages than blue-collar workers. Like in many other empirical studies, we find that married women earned less than unmarried women did, but men received a marriage premium.

We calculate Blinder-Oaxaca wage decompositions to gauge the amount of discrimination in the Austrian labour market. We interpret the unexplained variance of wages, the residual, as discrimination. The decomposition results are presented in Table 3. Panel A in Table 3 tabulates the decomposition results from the wage equations as presented in Table 2. We present decomposition results for both men's and women's wage distributions as the reference distribution. In Panels B and C we tabulate results from different specifications of the wage equation. With these two additional specifications, we demonstrate the robustness of our results.

Taking the male wage as the reference wage, the discrimination in 1983 was 67 per cent. In other words, the observed characteristics explain about one third of the difference in wages between men and women. If we take women's wages as the reference wage distribution, we estimate a similar extent of discrimination, some 66 per cent. The lower half of Panel A tabulates the decomposition for 1997. In 1997, the male-based decomposition indicates that some 61 per cent of the wage gap was due to discrimination. Observed characteristics explain slightly more of the difference in wages between men and women in 1997 than in 1983, 39 vs. 33 per cent. If we use the female-based decomposition, we estimate a discrimination of about 86 per cent, up by 20 percentage points from 1983. This result implies that women, despite their more favourable characteristics, received a much lower return for their human capital than men did.

We do not have actual experience available for the quantile regressions below and estimate a specification, tabulated in panel B, which uses potential experience instead of actual experience. The decomposition results are somewhat robust to this change, i.e. we estimate similar magnitudes of discrimination for both years and for both reference wage distributions, but the explanatory power of the wage regressions is reduced. This however is an expected result as unobserved differences in experiences increase the residuals of the wage equations, and thus estimated discrimination.

Occupational segregation and differential promotions (the "glass ceiling") may also be seen as discrimination. We estimate the decompositions, tabulated in panel C, using wage regressions which use potential experience and exclude variables measuring industrial segregation and occupational hierarchy. The results demonstrate that the unexplained component (discrimination) was lower, if we control for the extent of industrial segregation or for occupational hierarchy. The latter result points to a "glass ceiling" where women are not discriminated against in terms of

payment, but in their chances of promotion. However, all our estimations confirm that a large part of the gender wage gap is not explained by the workers' observable characteristics.

The results presented in Table 3 demonstrate that discrimination declined only moderately over the period 1983 to 1997. In almost 15 years, the mean wage gap between men and women narrowed by about 8.6 per cent (2.2 percentage points). We now turn to analyse what contributed to this reduction of the gender wage gap. For this, we decompose the gender wage gap over time and present the results in Table 4. The average levels of human capital have increased over the period, however, but this change has not worked in favour of women. Although women increased their human capital, for example, from 1983 to 1997 the fraction of women in our sample who had at most completed primary school dropped from 43 to 26 per cent, the overall change in characteristics is estimated to have increased the gender wage gap by 3.7 percentage points.

The change in relative prices over time, thus different returns to a constant productivity, worked in favour of women, we estimate that the development of prices reduced the gender wage gap by 3.1 percentage points. The change in discrimination decreased the gender wage gap by about 2.8 percentage points.

The results presented above refer to average wages. The wage gap differs over the wage distributions (Arulampalam, Booth, and Bryan, 2004), and that the wage gaps changed differently over time. We also calculate wage decompositions based on quantile regressions. The underlying wage regressions use potential instead of actual experience because of data limitations.[4]

[4] These regressions results are available on request from the authors.

Table 5 shows the decomposition results based on the quantile regression results. They show that in 1983 the gender wage gap was greater at higher wages, and so was discrimination. However, when we consider discrimination in relation to the wage gap, we find that discrimination, as a proportion of the gender wage gap, was lower for high wages than for low wages.

The evidence for 1997 is not as clear as for 1983. The male- and female-based decompositions indicate that the wage gap was smaller for lower wages, but discrimination as a percentage of the wage gap was greater for higher wages than for lower wages using the male-based decomposition, while it is the other way round if we use the female-based decomposition. The male-based decomposition shows that for the whole wage distribution the wage gap narrowed between 1983 and 1997. The female-based results show a more differentiated pattern: the gender wage gap narrowed for low wages, but it increased for high wages.[5]

5. Summary

We have analysed the difference in full-time wages between men and women in Austria, for the years 1983 and 1997. For 1983, we find that women earned on average a quarter less than men did, but this difference does not account for observed characteristics. If we take differences in education, job position, and the like, into account, we find that observable characteristics explain about 33 per cent of the mean wage difference between men and women. In other words, women earned, after considering observable characteristics, on average about 17 per cent less than men because of other, unobserved factors. It is common to interpret this unobserved factor as discrimination against women.

[5] Quantile regressions without controlling for industry and occupation yield similar results, comparable to the differences seen in the OLS wage regressions. We again find that discrimination was greater if we ignore differential selection into industries. These results are available on request.

Several developments between 1983 and 1997 would lead us to expect a (sharp) decline in the gender wage gap. First, women entered into the labour market much stronger than in previous periods. Second, women increasingly had higher levels of formal education. These two factors, along with a possible skill-biased technological change of the economy, is an increasing supply of workers with high skills, driving their relative wages down, all other factors held constant. A third factor, originating from outside the labour market, may also have influenced the relative wages of men and women. Gender politics, especially anti-discrimination laws, affirmative action and similar programmes, may have changed the bargaining position of women and thus narrowed of the gender wage gap.

Our estimates for 1997 however show that the expected sharp decline was not that sharp at all. The mean wage gap, again without accounting for observed differences, dropped from 25.5 per cent to 23.3 per cent of men’s wages. Accounting for observable differences, the average difference in wages between men and women that cannot be explained was 14 per cent (down from 17 per cent), using men's wages as reference. If we view women's wages as the “normal” wage, and men receive a premium over women, we estimate that discrimination actually increased between 1983 and 1997 and because of discrimination, in 1997, women earned 19 per cent less than men did.

The development of the gender wage gap between 1983 and 1997 can be summarised by changes in three principal components. These are the changes in the mean characteristics, the changes in the relative prices, and the change in discrimination. By applying decomposition techniques to our data, we found that changed wages and less discrimination reduced discrimination over this period. We found, using quantile regressions, that the gender wage gap was greater at the top end of the wage distribution. Although the gender wage gap narrowed over the whole distribution, discrimination accounted for a greater part for higher wages in 1997.

To conclude, in 15 years the gender wage gap has narrowed only moderately. Although discrimination was less important in 1997 than in 1983, women earned about one seventh less than men because of discrimination. In 15 years, discrimination was reduced by 2.5 percentage points and if it continues to fall by the same speed, it will take until the end of this century for men and women to earn equal wages for equal jobs.

Literature

Albrecht, James, Anders Björklund and Susan Vroman (2003), Is there a glass ceiling in Sweden?, *Journal of Labor Economics*, 21(1), 145—77.

Altonji, Joseph and Rebecca Blank (1999), *Race and gender in the labor market*; in: Orley Ashenfelter and David Card (eds.), *Handbook of Labor Economics*, Vol. 3c, North-Holland, Chapter 48, 3144–3259.

Arulampalam, Wiji, Alison L. Booth and Mark L. Bryan (2004), Is there a glass ceiling over Europe? Exploring the gender pay gap across the wages distribution, *IZA discussion paper* 1373, IZA, Bonn.

Ashenfelter, Orley and Timothy Hannan (1986), Sex Discrimination and Product Market Competition: The Case of the Banking Industry, *Quarterly Journal of Economics*, 101(1), 149—73.

Babcock, Linda (2002), Do graduate students negotiate their job offers?, Carnegie Mellon University, Unpublished report.

Bayard, Kimberly, Judith Hellerstein, David Neumark and Kenneth Troske (1999), New evidence on sex segregation and sex differences in wage from matched employee-employer data, *NBER working paper* 7003, Cambridge (Ma.).

Becker, Gary (1975), *The Economics of Discrimination*, Second Edition, The University of Chicago Press, Chicago.

Biernat, Monica and Camille B. Wortman (1991), Sharing home responsibilities between professionally employed women and their husbands, *Journal of Personality and Social Psychology*, 46(10), 1061—70.

Blank, Sandra and Elizabeth Brainerd (1999), Importing Equality? The Effects of Increased Competition on the Gender Wage Gap, unpublished, Federal Reserve Bank of NY.

Blank, Sandra and Philip E. Strahan (2001), The Division of Spoils: Rent-Sharing and Discrimination in a Regulated Industry, *American Economic Review*, 91(4), 814—31.

Blau, Francine D. (1998), The gender pay gap, in: I. Persson and C. Jonung, eds., *Women's work and wages*, Routledge, London.

Blau, Francine D. and Lawrence M. Kahn (1992), The gender earnings gap: Learning from international comparison, *American Economic Review* (Papers and Proceedings), 82(2), 533—38.

Blau, Francine D. and Lawrence M. Kahn (2003), Understanding international differences in the gender pay gap, *Journal of Labor Economics*, 21(1), 106–44.

Blinder, Alan S. (1973), Wage discrimination: Reduced form and structural estimates, *Journal of Human Resources* 18(4), 436–55

Bowles, Hannah Riley, Linda Babcock and Kathleen McGinn (2003), Gender as a situational phenomenon in negotiations, Carnegie Mellon University, Unpublished report.

BMSG—Bundesministerium für soziale Sicherheit und Generationen (n.d.) Anträge an die Gleichbehandlungskommission. Verfahren, Entscheidungen, Gutachten. http://www.bmgf.gv.at/-cms/site/attachments/0/9/7/CH0271/CMS1084442110267/loseblatt.pdf; (07/12/2006).

BMGF—Bundesministerium für Gesundheit und Frauen (2001), Gleichbehandlungsbericht 2001. http://www.bmgf.gv.at/cms/site/attachments/1/9/0/CH0374/CMS1132559815070/-berichtsteil_2001.pdf; (07/12/2006).

BMFG—Bundesministerium für Gesundheit und Frauen (2002), Gleichbehandlungsbericht 2002. http://www.bmgf.gv.at/cms/site/attachments/8/7/7/CH0374/CMS1132559828343/._-_b,_-endfassung-teil-i_-_gbk_-_bmwa.pdf; (07/12/2006).

BMFG—Bundesministerium für Gesundheit und Frauen (2003). Gleichbehandlungsbericht 2003. http://www.bmgf.gv.at/cms/site/attachments/5/5/7/CH0374/CMS1132559841177/-endfassung_teil_i.pdf; (07/12/2006).

Boeri, Tito, Angar Brugiavini, and Lars Calmfors (eds.) (2001), *The Role of Unions in the Twenty-First Century*, Oxford University Press, Oxford.

DiNardo, John, Nicole Fortin and Thomas Lemieux (1996), Labor market institutions and the distribution of wages, 1973—1992: a semiparamentric approach, *Econometrica*, 64, 1001—44.

Francois, Patrick and Jan van Ours (2000), Gender wage differentials in a competitive labour market: The houshold interaction effect, *CEPR Working Paper*, 2630.

García, Jaume, Pedro J. Hernández and Angel López-Nicolás (2001), How wide is the gap? An investigation of gender wage differences using quantile regression, *Empirical Economics*, 26, 149—67.

Gregoritsch, Petra, Monika Kalmár and Michael Wagner-Pinter, (2000), *Einkommen von Frauen und Männern in unselbständiger Beschäftigung*, Bundesministerium für Wirtschaft and Arbeit, Wien, http://www.bmags.gv.at/bmsg/relaunch/portal/content/berichte/doc/einkommen.pdf.

Hauptverband der österreichischen Sozialversicherungsträger, various years, Social security data, Vienna.

Hellerstein, Judith K., David Neumark, and Kenneth R. Troske (1997), Market Forces and Sex Discrimination, NBER Working Paper # 6321.

Joshi, Heather and Paci, Pierella (1998), *Unequal Pay for Women and Men*, WITH Press, Cambridge, Massachusetts.

Juhn, Chinhui, Kevin M. Murphy and Brooks Pierce (1991). Accounting for the slowdown in black-white wage convergence, in: Marvin H. Costas, ed., *Workers and their wages*, Washington, D.C., AEI Press, pp. 107—143.

Lennon, Marie Clare and Sara Rosenfeld (1994), Relative fairness and the division of homework: The importance of options, *American Journal of Sociology*, 100, 506--31.

Machin, Stephen and Patrick A Puhani (2002), Subject of degree and the gender wage differential. *IZA discussion paper No. 553*, IZA, Bonn.

Mueller, Richard E. (1998), Public-private wage differentials in Canada: evidence from quantile regressions, *Economic Letters*, 60, 229-235

Oaxaca, Ronald L. (1973), Male-female wage differentials in urban labor markets, *International Economic Review* 14, 693–709.

Robinson, John P. (1988), Who is doing the homework?, *American Demographics*, 10, 24--8.

Rowthorn, Robert E. (1992), Centralisation, employment, and wage dispersion, *Economic Journal*, 102, 506—23.

Statistik Austria (1983), Mikrozensus 1983, Vienna.

Statistik Austria (1996), Mikrozensus 1996, Vienna.

Statistik Austria (1997), Mikrozensus 1997, Vienna.

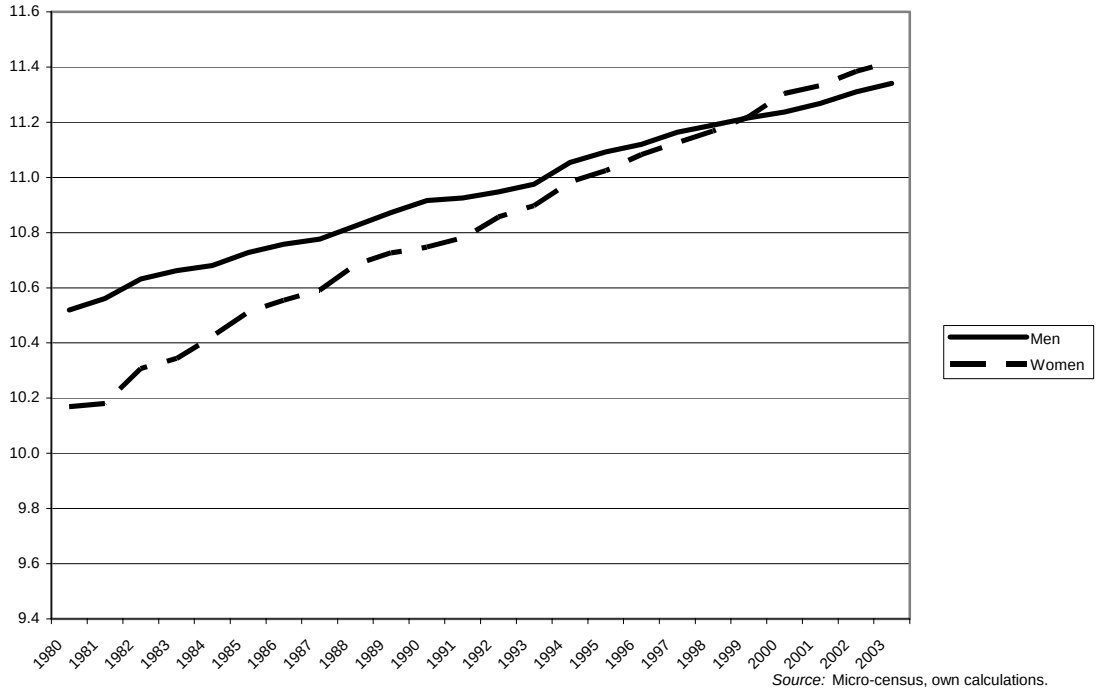
Statistik Austria (2005). *Statistisches Jahrbuch*, Wien. http://www.statistik.at/jahrbuch_2005/deutsch/start.shtml.

Weichselbaumer, Doris and Winter-Ebmer, Rudolf (2003), The effects of competition and equal treatment laws on the gender wage differential, unpublished, Johannes Kepler Universität Linz.

Weichselbaumer, Doris and Winter-Ebmer, Rudolf (2005), A meta-analysis of the international gender wage gap, *Journal of Economic Surveys*, 19(3), 479—511.

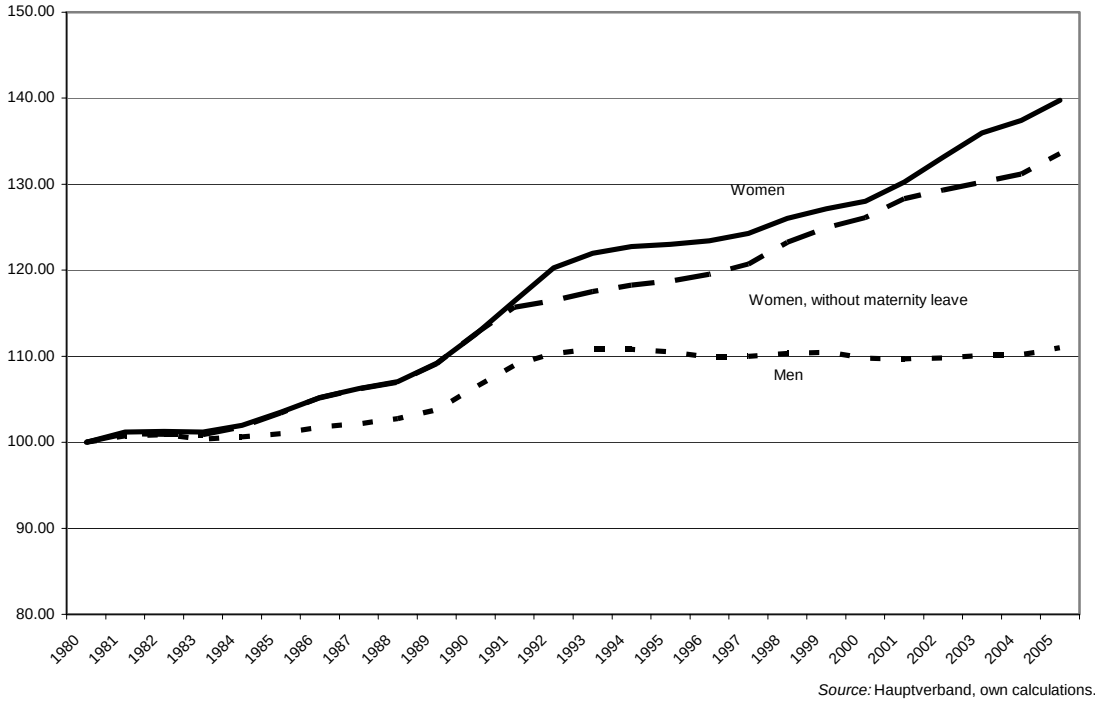
Zweimüller, Josef and Winter-Ebmer, Rudolf (1994), Gender wage differentials in private and public sector jobs, *Journal of Population Economics* 7, 271–85.

Figures and Tables



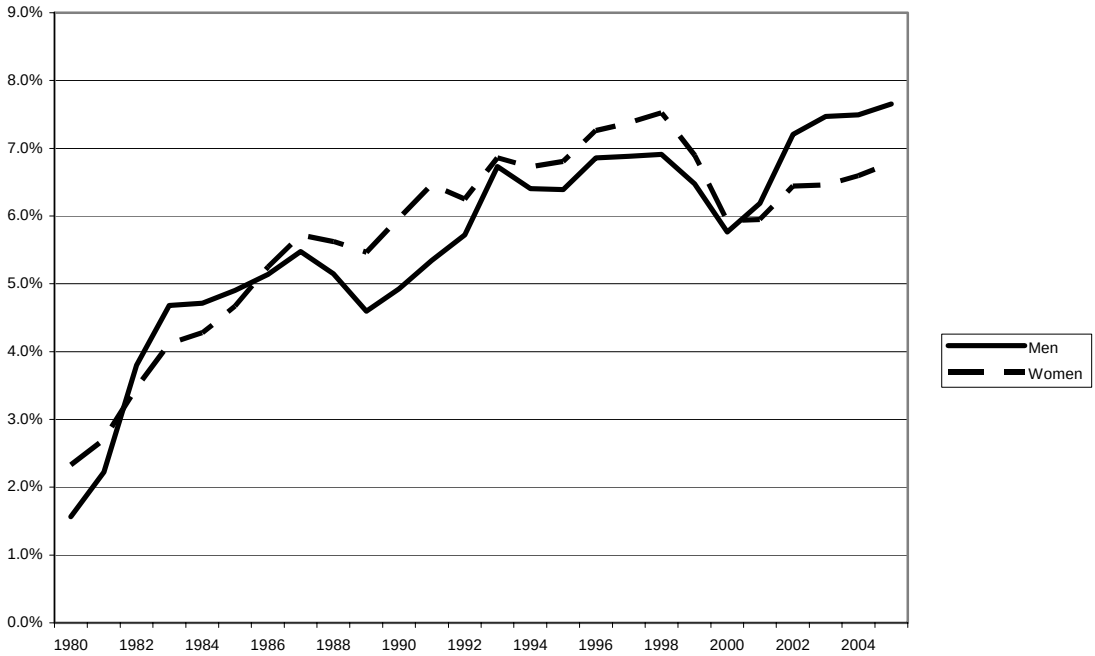
Source: Micro-census, own calculations.

Figure 1: Average years of schooling (employees), by gender.



Source: Hauptverband, own calculations.

Figure 2: Labour Force Participation, by gender, 1980 - 2005 (1980=100).



Source: Hauptverband, own calculations.

Figure 3: Unemployment rate, by gender.

Table 1: Descriptive statistics for 1983 and 1997.

	1983		1997	
Variable	Men	Women	Men	Women
Monthly net earnings (in 1997 prices)				
Mean in ATS	13776.86	10619.86	17837.10	14270.78
(in Euro)	(1001.20)	(771.78)	(1296.27)	(1037.10)
Standard deviation	5190.46	3765.93	6799.01	5319.58
Hours/week	40.571	40.006	39.962	38.609
White collar worker (=1)	0.340	0.598	0.372	0.651
Potential experience [a]	19.41	16.13	20.00	18.83
Actual experience	18.61	12.83	19.92	16.11
Highest formal education				
Primary school	0.272	0.427	0.170	0.264
Apprenticeship	0.590	0.304	0.590	0.355
Commercial/Technical College (3 years)	0.060	0.182	0.072	0.171
High School	0.025	0.045	0.031	0.057
Commercial/Technical College (5 years)	0.035	0.031	0.080	0.098
University	0.018	0.012	0.056	0.055
Professional position				
No formal skills	0.140	0.216	0.102	0.205
Low skilled	0.280	0.445	0.285	0.355
Medium skilled	0.478	0.274	0.428	0.248
High skilled	0.058	0.054	0.094	0.124
Managers	0.029	0.009	0.069	0.064
Executive managers	0.014	0.001	0.022	0.004
Industry				
Agriculture and forestry	0.019	0.011	0.014	0.013
Mining and construction	0.229	0.020	0.170	0.017
Manufacturing	0.419	0.307	0.361	0.198
Trade and hotels	0.111	0.275	0.167	0.300
Transportation	0.084	0.029	0.087	0.036
Financial sector	0.047	0.077	0.087	0.126
Other services	0.091	0.281	0.114	0.311
Region				
Burgenland, Lower Austria, Vienna	0.343	0.379	0.364	0.425
Carinthia, Styria, Upper Austria	0.380	0.346	0.367	0.327
Salzburg, Tyrol	0.187	0.193	0.182	0.174
Vorarlberg	0.091	0.082	0.087	0.074
Size of city				
<2000	0.300	0.243	0.259	0.225
2000 - 10000	0.381	0.343	0.394	0.358
10000-100000	0.165	0.177	0.175	0.173
>100000	0.158	0.237	0.172	0.245
Per cent of workforce female (%)	0.629	0.371	0.588	0.412
Married	0.641	0.422	0.616	0.464
Number of observations	6552	3635	5791	3392
Number of observations for Actual experience	6552	3635	1757	1015

Note: Monthly net earnings are in full-time equivalents, i.e. 40h/week. [a] Calculated as Age-Schoolyears-6.

Table 2: Estimation results for 1983 and 1997, by sex.

	1983		1997	
	Men	Women	Men	Women
Formal education: (Primary School is reference)				
Apprenticeship	0.035	0.019	0.041	0.039
	(3.47)***	(1.59)	(2.05)**	(1.49)
Commercial/Technical College (3 years)	0.062	0.081	0.084	0.102
	(3.24)***	(5.46)***	(3.06)***	(3.31)***
High School	0.095	0.133	0.074	0.11
	(3.37)***	(5.28)***	(1.65)*	(2.92)***
Commercial/Technical College (5 years)	0.089	0.138	0.08	0.099
	(3.42)***	(4.81)***	(2.28)**	(2.69)***
University	0.211	0.25	0.163	0.12
	(5.22)***	(3.06)***	(3.55)***	(2.20)**
Position (No formal skills is reference)				
Low skilled	0.065	0.041	0.019	0.046
	(5.66)***	(3.78)***	(0.84)	(1.98)**
Medium skilled	0.144	0.171	0.099	0.116
	(11.86)***	(11.96)***	(4.03)***	(4.19)***
High skilled	0.304	0.256	0.211	0.222
	(15.15)***	(9.80)***	(6.74)***	(7.30)***
Manager and executive manager	0.497	0.576	0.336	0.274
	(17.00)***	(6.85)***	(8.81)***	(6.23)***
Experience	0.02	0.02	0.021	0.015
	(13.92)***	(12.41)***	(8.24)***	(5.53)***
Experience^2/1000	-0.033	-0.034	-0.035	-0.013
	(9.74)***	(7.67)***	(6.07)***	(1.88)*
Career interruptions	0.004	0.001	0.004	0.004
	(3.72)***	(0.84)	(1.80)*	(2.51)**
White-collar worker	0.106	0.13	0.126	0.102
	(9.87)***	(9.65)***	(6.33)***	(4.07)***
Per cent of workforce female (%)	-0.074	-0.17	-0.082	-0.146
	(3.63)***	(7.61)***	(2.30)**	(2.53)**
Married	0.013	-0.019	0.071	-0.015
	(1.38)	(1.96)**	(4.72)***	(0.91)
Austrian (=1, 0=foreign)	-0.076	-0.011	-0.106	-0.045
	(2.58)***	(0.47)	(4.84)***	(1.68)*
Constant	9.219	9.15	9.399	9.361
	(212.67)***	(224.02)***	(150.31)***	(119.02)***
Number of observations	6552	3635	1757	1015
R^2	0.33	0.43	0.39	0.4

Note: t-statistics in parentheses. Equations include indicator variables for city size (4), sector (7), region (4), and seasonal employment. *, **, *** indicates statistical significance at the 10, 5, and 1 per cent error level.

Table 3: Blinder-Oacaxa Decomposition for 1983 and 1997.

Panel A: Decomposition based on wage regressions in Table 2.

			Male based		Female based	
		Mean wage gap	Discrimination	Characteristics	Discrimination	Characteristics
1983						
	Effect	0.255	0.170	0.084	0.169	0.086
	(t-statistic)		(20.07)	(12.79)	(12.70)	(7.12)
	Proportion	1.000	0.670	0.333	0.664	0.338
1997						
	Effect	0.233	0.142	0.091	0.188	0.045
	(t-statistic)		(11.04)	(10.03)	(9.29)	(2.53)
	Proportion	1.000	0.611	0.389	0.865	0.205

Panel B: As in Panel A, but with potential experience instead of actual experience.

			Male based		Female based	
		Mean wage gap	Discrimination	Characteristics	Discrimination	Characteristics
1983						
	Effect	0.255	0.175	0.080	0.181	0.074
	(t-statistic)		(21.26)	(12.75)	(13.64)	(6.20)
	Proportion	1.000	0.686	0.314	0.709	0.291
1997						
	Effect	0.233	0.146	0.088	0.198	0.035
	(t-statistic)		(11.75)	(10.62)	(9.83)	(1.97)
	Proportion	1.000	0.625	0.375	0.851	0.149

Panel C: As in Panel B, but without industrial segregation and hierarchy variables.

			Male based		Female based	
		Mean wage gap	Discrimination	Characteristics	Discrimination	Characteristics
1983						
	Effect	0.255	0.216	0.039	0.277	-0.022
	(t-statistic)		(29.67)	(8.12)	(23.93)	(-2.20)
	Proportion	1.000	0.847	0.153	1.086	-0.086
1997						
	Effect	0.233	0.185	0.048	0.257	-0.024
	(t-statistic)		(15.84)	(7.11)	(15.01)	(-1.71)
	Proportion	1.000	0.792	0.208	1.102	-0.102

T-statistics in parenthesis

Note: Male (female) based takes the men's (women's) wages as the reference wage distribution and women's (men's) wages are seen as a deviation from this reference wage distribution.

Table 4: Decomposition over Time.

Changes of the Mean gender wage gap	Mean characteristics	Mean prices	Mean discrimination
-0.022	0.037	-0.031	-0.028

Note: Decomposition based on wage regressions in Table 2.

Table 5: Decomposition of the gender wage gap for quantiles of the wage distributions, 1983 and 1997.

			Male based		Female based	
		(1)	(2)	(3)	(4)	(5)
Year	Quantile	Wage difference	Discrimination	Proportion: (2)/(1)	Discrimination	Proportion: (4)/(1)
1983	10	0.182	0.135	0.740	0.161	0.883
	25	0.227	0.164	0.724	0.186	0.822
	50	0.251	0.175	0.697	0.191	0.761
	75	0.294	0.189	0.644	0.177	0.601
	90	0.336	0.219	0.650	0.194	0.578
1997	10	0.182	0.124	0.681	0.198	1.086
	25	0.241	0.143	0.594	0.204	0.845
	50	0.227	0.159	0.698	0.193	0.848
	75	0.223	0.187	0.837	0.211	0.947
	90	0.248	0.196	0.792	0.226	0.911

Note: based on quantile regressions, specifications of the regressions as in Table 2, but with potential instead of actual experience.

Appendix: Additional material for referees.

Table 6: Quantile Decomposition for 1983 and 1997.

Without hierarchy variables and without industrial segregation

			Male based		Female based	
		(1)	(2)	(3)	(4)	(5)
Year	Quintile	Wage difference	Discrimination	Proportion: (2)/(1)	Discrimination	Proportion: (4)/(1)
1983	10	0.182	0.183	1.003	0.244	1.341
	25	0.227	0.197	0.869	0.267	1.180
	50	0.251	0.212	0.845	0.280	1.113
	75	0.294	0.233	0.794	0.283	0.964
	90	0.336	0.269	0.800	0.315	0.937
1997	10	0.182	0.161	0.881	0.245	1.343
	25	0.241	0.177	0.736	0.238	0.986
	50	0.227	0.207	0.909	0.257	1.132
	75	0.223	0.220	0.987	0.279	1.252
	90	0.248	0.237	0.957	0.294	1.186

Table 7: Quantile-estimation results for 1983 by sex

	0.1		0.25		0.5		0.75		0.9	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Nationality	-0.172	-0.008	-0.144	0.015	-0.107	-0.024	-0.051	-0.056	0.019	-0.098
	(4.10)***	(0.16)	(5.02)***	(0.43)	(4.21)***	(0.83)	(1.62)	(1.34)	(0.51)	(2.52)**
Position (No formal skills)										
Low skilled	0.063	0.04	0.069	0.034	0.043	0.051	0.062	0.056	0.071	0.065
	(2.96)***	(1.87)*	(4.82)***	(2.40)**	(3.43)***	(4.38)***	(3.98)***	(3.24)***	(3.87)***	(3.87)***
Medium skilled	0.127	0.115	0.142	0.131	0.142	0.176	0.146	0.214	0.148	0.254
	(5.71)***	(4.27)***	(9.58)***	(7.44)***	(10.87)***	(12.35)***	(8.72)***	(10.18)***	(7.33)***	(12.39)***
High skilled	0.278	0.208	0.293	0.224	0.302	0.282	0.312	0.292	0.337	0.252
	(7.41)***	(4.21)***	(11.67)***	(7.27)***	(13.75)***	(11.67)***	(11.46)***	(8.57)***	(10.46)***	(7.36)***
Manager and executive manager	0.478	0.467	0.511	0.479	0.523	0.522	0.565	0.61	0.613	0.639
	(9.19)***	(4.75)***	(15.77)***	(7.97)***	(19.16)***	(10.65)***	(16.92)***	(7.52)***	(15.17)***	(8.80)***
Education (Primary School)										
Apprenticeship	0.09	0.037	0.046	0.035	0.027	0.032	0.036	0.029	0.046	0.014
	(4.85)***	(1.69)*	(3.78)***	(2.33)**	(2.57)**	(2.71)***	(2.64)***	(1.63)	(2.86)***	(0.76)
Commercial/Technical College (3 years)	0.052	0.085	0.048	0.1	0.031	0.098	0.072	0.074	0.114	0.042
	(1.54)	(2.93)***	(2.14)**	(5.30)***	(1.56)	(6.43)***	(2.89)***	(3.23)***	(3.76)***	(1.86)*
High School	0.068	0.096	0.066	0.126	0.041	0.114	0.112	0.156	0.144	0.135
	(1.33)	(1.97)**	(2.01)**	(4.09)***	(1.46)	(4.65)***	(3.19)***	(4.37)***	(3.48)***	(3.84)***
Commercial/Technical College (5 years)	0.074	0.09	0.067	0.169	0.05	0.142	0.119	0.133	0.153	0.188
	(1.61)	(1.58)	(2.18)**	(4.67)***	(1.85)*	(4.96)***	(3.62)***	(3.22)***	(3.85)***	(4.66)***
University	0.13	0.268	0.065	0.188	0.12	0.301	0.217	0.3	0.251	0.315
	(1.88)*	(2.60)***	(1.50)	(3.14)***	(3.22)***	(6.20)***	(4.68)***	(3.87)***	(4.46)***	(4.38)***
Experience	0.012	0.016	0.016	0.018	0.019	0.021	0.02	0.023	0.025	0.022
	(4.62)***	(5.80)***	(9.23)***	(9.98)***	(12.89)***	(14.42)***	(10.81)***	(10.63)***	(10.87)***	(10.36)***
Experience^2/1000	-0.016	-0.029	-0.024	-0.031	-0.029	-0.036	-0.03	-0.04	-0.038	-0.035
	(2.89)***	(4.59)***	(6.67)***	(7.27)***	(9.39)***	(10.61)***	(7.59)***	(7.74)***	(7.95)***	(7.01)***
White collar worker	0.105	0.159	0.088	0.157	0.102	0.113	0.108	0.1	0.112	0.108
	(5.24)***	(6.24)***	(6.65)***	(9.48)***	(8.83)***	(8.61)***	(7.52)***	(5.14)***	(6.55)***	(5.39)***
Industrial segregation	-0.159	-0.207	-0.094	-0.165	-0.082	-0.166	-0.045	-0.175	-0.007	-0.171
	(4.25)***	(4.47)***	(3.76)***	(5.37)***	(3.73)***	(6.86)***	(1.64)	(4.87)***	(0.21)	(4.83)***
Married	-0.01	-0.065	0.015	-0.039	0.025	-0.032	0.039	-0.033	0.025	-0.041
	(0.62)	(3.63)***	(1.29)	(3.18)***	(2.34)**	(3.20)***	(2.83)***	(2.23)**	(1.50)	(2.94)***
Constant	9.114	8.909	9.215	8.957	9.291	9.15	9.306	9.343	9.334	9.525
	(129.05)***	(107.93)***	(194.90)***	(161.59)***	(224.81)***	(202.39)***	(179.39)***	(138.31)***	(144.46)***	(144.37)***
Number of observations	7132	3844	7132	3844	7132	3844	7132	3844	7132	3844

Note: t-statistics in parentheses. Equations include indicator variables for city size (4), sector (7), region (4), and seasonal employment. *, **, *** indicates statistical significance at the 10, 5, and 1 per cent error level.

Table 8: Quantile-Estimation results for 1997 by sex.

	0.1		0.25		0.5		0.75		0.9	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Nationality	-0.071 (3.54)***	0.007 (0.28)	-0.095 (6.91)***	-0.027 (1.46)	-0.108 (8.35)***	-0.056 (3.66)***	-0.135 (7.40)***	-0.06 (3.59)***	-0.144 (6.23)***	-0.072 (2.35)**
Position (No formal skills)										
Low skilled	0.079 (4.20)***	0.061 (3.30)***	0.077 (5.92)***	0.048 (3.46)***	0.071 (5.80)***	0.038 (3.38)***	0.054 (3.18)***	0.024 (1.94)*	0.054 (2.51)**	0.065 (2.95)***
Medium skilled	0.15 (7.62)***	0.178 (8.20)***	0.156 (11.44)***	0.134 (7.99)***	0.135 (10.44)***	0.135 (10.13)***	0.122 (6.73)***	0.138 (9.27)***	0.111 (4.96)***	0.171 (6.45)***
High skilled	0.238 (8.55)***	0.273 (9.92)***	0.255 (13.74)***	0.221 (10.64)***	0.246 (14.24)***	0.222 (13.24)***	0.197 (8.20)***	0.241 (12.81)***	0.215 (7.35)***	0.285 (8.50)***
Manager and executive manager	0.308 (9.81)***	0.284 (8.31)***	0.357 (17.18)***	0.281 (10.29)***	0.357 (18.74)***	0.272 (12.01)***	0.377 (14.40)***	0.303 (11.62)***	0.44 (13.37)***	0.374 (8.27)***
Education (Primary school)										
Apprenticeship	0.048 (3.01)***	-0.019 (0.96)	0.044 (3.95)***	0.013 (0.88)	0.05 (4.84)***	0.033 (2.81)***	0.051 (3.54)***	0.042 (3.28)***	0.077 (4.30)***	0.016 (0.68)
Commercial/Technical College (3 years)	0.107 (4.26)***	0.008 (0.30)	0.091 (5.18)***	0.05 (2.50)**	0.082 (5.02)***	0.085 (5.46)***	0.105 (4.58)***	0.114 (6.80)***	0.121 (4.22)***	0.079 (2.61)***
High School	0.098 (2.74)***	0.015 (0.43)	0.083 (3.52)***	0.07 (2.67)***	0.123 (5.61)***	0.102 (4.96)***	0.182 (6.00)***	0.112 (4.95)***	0.283 (7.78)***	0.06 (1.49)
Commercial/Technical College (5 years)	0.072 (2.40)**	0.029 (0.91)	0.069 (3.59)***	0.061 (2.49)**	0.077 (4.28)***	0.087 (4.55)***	0.109 (4.41)***	0.12 (5.70)***	0.122 (3.97)***	0.102 (2.77)***
University	0.131 (3.63)***	-0.037 (0.92)	0.136 (5.71)***	0.079 (2.52)**	0.149 (6.97)***	0.169 (6.68)***	0.209 (7.24)***	0.176 (6.18)***	0.253 (7.05)***	0.144 (2.90)***
Experience	0.019 (8.22)***	0.018 (7.05)***	0.019 (12.66)***	0.016 (8.59)***	0.02 (14.47)***	0.017 (11.83)***	0.02 (10.45)***	0.018 (11.26)***	0.021 (8.92)***	0.02 (7.28)***
Experience^2/1000	-0.031 (6.73)***	-0.029 (4.87)***	-0.029 (9.30)***	-0.024 (5.51)***	-0.029 (10.06)***	-0.024 (6.96)***	-0.027 (6.77)***	-0.022 (5.89)***	-0.028 (5.58)***	-0.027 (4.13)***
White collar worker	0.108 (6.35)***	0.117 (6.02)***	0.115 (10.01)***	0.121 (8.26)***	0.12 (11.02)***	0.118 (10.11)***	0.127 (8.54)***	0.095 (7.52)***	0.134 (7.21)***	0.102 (4.46)***
Industrial segregation	-0.153 (4.89)***	-0.135 (2.68)***	-0.118 (5.62)***	-0.141 (3.86)***	-0.088 (4.46)***	-0.142 (5.05)***	-0.041 (1.52)	-0.138 (4.56)***	-0.101 (3.08)***	-0.18 (3.39)***
Married	0.072 (5.73)***	-0.062 (4.49)***	0.061 (6.96)***	-0.034 (3.19)***	0.061 (7.33)***	-0.013 (1.54)	0.07 (6.06)***	-0.014 (1.47)	0.048 (3.32)***	-0.004 (0.24)
Constant	9.102 (164.46)***	9.074 (136.45)***	9.233 (256.41)***	9.221 (186.46)***	9.384 (281.98)***	9.335 (238.42)***	9.497 (205.36)***	9.492 (220.09)***	9.605 (165.42)***	9.682 (120.83)***
Number of observations	6120	3457	6120	3457	6120	3457	6120	3457	6120	3457

Note: t-statistics in parentheses. Equations include indicator variables for city size (4), sector (7), region (4), and seasonal employment. *, **, *** indicates statistical significance at the 10, 5, and 1 per cent error level.