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ARE WOMEN ASKING FOR LOW WAGES?
GENDER DIFFERENCES IN WAGE BARGAINING STRATEGIES
AND ENSUING BARGAINING SUCCESS

by

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Gender Differences in Wage Bargaining Strategies and Ensuing Bargaining Success[*]

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Abstract
Men and women's labor market outcomes differ along pay, promotion and competitiveness. This paper contributes by uncovering results in a related unexplored field using unique data on individual wage bargaining. We find striking gender differences. Women, like men, also bargain, but they submit lower wage bids and are offered lower wages than men. The adjusted gender wage gap is lower with posted-wage jobs than with individual bargaining, although less is ascribable to the term associated with discrimination. Both women and men use self-promoting, or competitive bargaining strategies, but women self-promote at lower levels. Employers reward self-promotion but the larger the self-promotion, the larger is the gender gap in bargaining success. Women therefore lack the incentives to self-promote, which helps to explain the gender disparities.

Keywords: Individual Wage Bargaining, Competitiveness, Bargaining strategies, Self-promoting Bargaining Strategies, Gender Wage Gap, and Discrimination.

JEL–codes: M51, M52, J31, J16,

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1 Introduction

The labor market outcomes of men and women differ along a variety of dimensions. Even after controlling for a broad range of demographic and background characteristics, women earn significantly less than men do (see e.g. Altonji and Black 2000; Blau & Kahn, 2003, for an international comparison; Edin & Richardson, 2002, and Albrecht et al, 2003, for Sweden[1]). Women are also less likely to have top-ranking positions (Bertrand & Hallock, 2001) and to have lower career mobility (Granqvist & Persson, 1999).

Standard economic explanations for such occupational differences include preferences, discrimination and ability. Common explanations for women having preferences different from men, and thereby choosing to enter low-paying jobs, often emphasize women's role in the family, which affects their human capital investment and career choices. Another common explanation is discrimination or anticipated discrimination limiting women's labor market opportunities. Finally, some argue that men and women differ along unobservable dimensions of skills, where these unobservable differences develop into disparate labor outcomes.

In this paper, several of these issues are addressed by investigating gender differences on the labor market from a new perspective; that of individual wage bargaining. In particular, we examine whether men and women differ in the bargaining strategies they use and whether the ensuing bargaining success, or the pay-off to a strategy, differs by gender.

Empirical evidence on gender differences in real wage bargaining is limited.[2] The study therefore contributes by uncovering results in an unexplored field.[3] Nonetheless, individual

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[1] As in most countries, the average raw gender wage gap in Sweden has narrowed since the 1960s. In 1968 the average raw gender wage gap was almost 30 percent while the equivalent for 1991 was 20 percent. However, since 1991 the raw gender wage gap has increased slightly (Albrecht et al, 2003). These developments are mainly driven by corresponding developments in the overall wage distribution (Edin & Richardsson, 2002).
[2] One important exception is Babcock (2003) who provides interesting results and anecdotes.
[3] Many studies, theoretical as well as empirical, have focused on the bargaining power of unions. When it comes to post-employment wage bargaining there is a vast amount of literature, especially in the field of personnel economics and with particular emphasis on the employers' concerns.

bargaining over wages is one of the main components of the interaction in the labor market. If gender differences in bargaining strategies exists and the ensuing outcomes differ, it may suggest an explanation to why women are less represented in competitive working environments, less represented in high–paying jobs, or are less likely to compete for promotion.

The data explored is a unique dataset from two Swedish surveys conducted in 1999 and 2000, which include recent graduates within the social sciences. The data contains of a homogenous population where all are young graduates with short labor market careers. This limits issues of selection due to career interruptions for family concerns, job changes, or participation selection. In addition, the surveys incorporate important control variables for differences in labor market opportunities, outside options and individual attributes.

In the survey, respondents were asked to report whether they were asked to state an explicit *wage bid* at the time of application for the initial job they got within their field of major, and if so, the level of the wage bid. Moreover, they were asked to state the *offered wage*, or in this case, the equivalent wage they accepted. Some respondents reported not being asked about a wage bid, and hence are assumed to have applied for a job with posted wages. The data thus allows for comparisons using the posted wage group as a control group.

In order to establish whether or not there are gender differences in bargaining and in bargaining outcomes, we focus on four issues. The first issue analyzed is whether there are gender differences in the propensity to choose to apply for a job with wage bargaining as a part of the application process, compared to choosing a job with a posted wage. Previous studies have found that women are less likely than men to initiate negotiations (Babcock & Laschever 2003; Babcock et al 2006). Recent experimental research has also shown that women choose competitive pay-offs to a lesser extent than men, (Datta Gupta et al, 2006; Niederle & Vesterlund, 2005). Women may additionally not choose to bargain if they are more risk averse

than men, as suggested by some research (e.g. Jianakoplos & Bernasek, 1998; Powell & Ansic, 1997; Sundén & Surette, 1998). In Datta Gupta et al (2006) one explanation to women not choosing a competitive pay-off is a higher risk-aversion.

The second issue investigated is whether men and women submit different wage bids. Women may submit lower wages than men do if they face different labor markets, and/or if they have different outside options. Women could face a monopsonistic labor market, a higher level of family responsibilities, or they may be restricted in choosing a job due to a husband-and-wife coordination of job locations, all causing a downward pressure on female wage bids. Yet, considering that the average age for women in Sweden at their first marriage was 29.9 in 1998 and 30.4 in 1999, and the equivalent for men was 32.4 and 32.9 (Statistics Sweden, 2000), such considerations should not be too predominant for the individuals in the sample where women (men) are 27 (28) years on average. Likewise, the average age for females having their first child in Sweden was approximately 28.5 years in both 1999 and 2000 (Statistics Sweden, 2000). Therefore, given the relatively high age, along with Sweden having generous public parental child-care benefits (with a share earmarked for the father), the choice of jobs should not be too different between men and women in the sample.

Third, we explore the use of self-promoting bargaining strategies. Assume that employers believe the wage bid reveals information on a personal attribute of the applicant, which is not observable. The extent of overbidding a similar applicant, that is, submitting a higher wage bid than an applicant with identical observable attributes who bargain for the same type of job, or underbidding a similar applicant, then reveals the individual's evaluation of these personal attributes. Overbidding could thus be considered as a self-promoting strategy or competitive strategy though assumed to be upperly bounded by a loss in credibility, and thereby by the loss of the job opportunity.

The self-promoting strategy is assumed to reflect a self-assessed evaluation of the applicant's unobservable productivity. A lower value than a similar applicant, and to some extent a higher value, would thus signal a lower, or higher, unobservable productivity. This is supported by empirical evidence suggesting that underbidding (and to some extent overbidding) market wages have been interpreted to be signals of lower (higher) productivity, (see Agell & Lundborg, 1995 and 2003, for survey evidence; and Fehr & Falk, 1999, for experimental evidence). Alternatively, a self-promoting strategy could reveal preferences on competitiveness or be taken to reveal preferences on risk-taking such that high-risk takers are those who also dare to overbid more.

Following sociological research we may expect gender differences in employing such strategies. A well-documented tendency in sociological research (see Smith & Powell, 1990, for further references) is that people often "self-enhance"; they positively differentiate between their own characteristics or behaviors relative to the same characteristics and behaviors in other people.[4] According to this line of research men tend to self-enhance to a greater extent than women do. Therefore men may have a higher estimation of their personal ability and thus would self-promote or overbid to a larger extent.[5]

An alternative explanation is that men and women could be treated differently if they bargain. Bowles (2005) suggests that bargaining poses a challenge for women because it calls for a type of dominative masculine behavior (competitive assertion of one's self-interest) that

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[4] Another explanation could of course be that men and women have an objective difference in ability, such that women have worse university performance and/or lower grades. As a matter of fact, the empirical evidence suggests the opposite. In a report on all Swedish university graduates for 1995/1996, it is found that women had a higher performance score (number of credits achieved per semester) of 85 percent while the equivalent for men were 80 percent. If only looking at the social science majors, the gender difference was 6 percent. Moreover, 18 percent of the women compared to 12 percent of the men were found in the upper end of the high-school grade distribution, with grade averages higher than 4.0 (on a scale between 1.0 to 5.0), Statistics Sweden and the National Board for Higher Education (1998).

[5] Paralleling these findings regarding a difference in subjective ability rating, females appear to expect less in terms of wage gains due to possession of a college degree (Brunello et al, 2004). Female students expect both significantly

contradicts the prescriptive norms of feminine behavior. The study also found that women who choose to bargain where evaluated as less nice and inappropriately demanding (but not as less competent), while this was only true for males if bargaining with a male evaluator.

Fourth, and finally, we want to assess if men and women are equally successful given the same self-promoting strategy, all observable characteristics equal. Psychological literature has found that women tend to be more cooperative in bargaining than men (see Walters et al, 1998, for a meta-analysis on the issue), although the difference is slight. If women are more cooperative either by nature or through socialization, or if they are perceived as being more cooperative, then they may not be equally rewarded, even for the same bargaining strategy. Holm (2000) also finds that both men and women tended to behave significantly more "hawkishly" (or non-cooperatively) towards women when bargaining, although this kind of discrimination against women worked as a coordination device that boosted the earnings of both sexes.[6]

Agell & Bennmarker (2002) also found that firms with a large share of female employees were less likely to believe that employees, who were unhappy about their pay, would respond by reducing their own efforts. Thus, even if women would enjoy a lower return from their bargaining, and would thus be less successful, employers may feel they will not respond by reducing their efforts to the same extent that men would.[7]

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lower starting salaries after graduation and believe their prospects to be worse, even if they rank themselves as highly as the equivalent male rates himself (see also Betts 1996).
[6] Hultin & Szulkin (1999) also found that gender wage differentials are affected by the gender composition of an establishment's managerial staff. The negative effect on women's wages due to a high male representation among managers and supervisors was three times as strong within organizations with a highly decentralized wage-setting process than it was for females in general. The data in this paper, however, reveals no information on the sex of the employer.
[7] In an efficiency-wage experiment, Schwieren (2002) however, found that the average wage asked for by men and women was the equivalent but that women were offered lower wages after bargaining. Moreover, men reciprocated by making more effort for high wage offers than women did, but this was mainly a consequence of women not being offered wages in the same range.

The empirical analysis of the four issues reveals striking findings. We first establish that women actually choose a job where bargaining is involved to the same extent as men do. This result thus differ from previous findings on women being more prone to avoid situations with competitive pay-offs. Second, women consistently submit lower wage bids than men do, also when controlling for important job and individual attributes.

Third, as found by many previous studies, women receive lower wages than men do. Interestingly, although wages are higher for both men and women who have bargained, *ex post*, bargaining for wages results in a higher unadjusted gender wage gap by one percentage point, with the gap being 0.95 for those applying for posted wage and 0.94 for those who chose to bargain. Also after adjusting the wage gap to account for important job and individual attributes, the difference between the groups remain at one percentage point. Yet, in a wage-decomposition (Blinder 1973; Oaxaca 1973), we find that the term commonly ascribed to discrimination explains less among those who bargained, 55 percent of the gender wage gap, while for those who chose posted wages, the similar term explain 68 percent of the wage gap. Thus, a failure to acknowledge individual wage bargaining may overestimate the gender wage gap typically ascribed to wage discrimination.

The use of self-promoting strategies also differs by gender. Women do not necessarily use self-promoting strategies less often than similar men do, but they do so at lower levels. Restricting the sample into those who strictly overbid a similar candidate, women overbid by 9.4 percent, compared to men who overbid by 12.9 percent, on average.

In general, self-promoting strategies are rewarded by employers. Overbidding has a positive effect on the bargaining success, that is, the amount additionally offered to the applicant relative to a similar applicant. Women, however, receive a lower pay-off relative to men from the same self-promoting strategy. The results may parallel the findings on reciprocal wage-setting

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found in Agell & Bennmarker (2002). But quantile regression estimates reveal that gender differences do not exist in the 25th quantile of bargaining success, and that it is in particular in the 75th quantile where gender differences are largest. Consequently, in a bargaining situation where the scope for improving the wage offer by a self-promoting strategy is high, women are less successful than men are from being self-promoting.

In summary, the lower pay-off to overbidding thus creates weaker incentives for women to employ self-promoting strategies. Even though women choose to self-promote, their strategies are either considered as less credible compared to similar males' strategies, or there is a glass-ceiling on the value of a self-promoting or competitive strategy for women. Hence the result may explain why women refrain from entering competitive working environments, or are less represented in high-paying jobs.

The paper is organized as follows. Section 2 describes the data. Section 3 presents the empirical model and Section 4 the results. Section 5 offers some concluding remarks.

2 Data

The data set is derived from two surveys conducted in 1999 and 2000 by Jusek,[8] a Swedish trade union for white-collar workers. The individuals in the surveys were university graduates as at September 1997-1998 and September 1998-1999 who had received at least three years university education. They should further have majored in one of five fields: law, business administration and economics, computer and systems science, personnel management or social science. Only individuals who fulfill the above requirement and who were born later than 1964 are included in

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[8] The Swedish Association of Graduates in Law, Business Administration and Economics, Computer and Systems Science, Personnel Management and Social Sciences.

the survey sample.[9] The data set includes 1911 individuals from the 1999 survey and 2054 from the 2000 survey.

Two wage variables are used in the analysis.[10] The first is the applicant's *wage bid*, that is, the wage asked for if employment were to occur (to the employer they accepted working for). The second wage variable is the *offered wage* (or starting salary) at the time when employment begins. Both these are given as monthly gross wages.[11] For those who work part time the survey explicitly states that the wage should be converted into a full-time monthly gross wage.

For the analysis of individuals who have stated an explicit wage bid the number of observations is reduced to 2112 for the pooled sample, with 1022 from 1999 and 1090 from 2000. In the pooled sample there are 57 percent women and 43 percent men.

Table 1 presents summary statistics for the wage data. The first noteworthy finding is that, dividing the sample into those who chose jobs where wage bargaining was a part of the application process, we find that man and women equally likely to choose such jobs. The share of women who choose jobs with bargaining is 54 percent and the equivalent for men is 53 percent with any statistically significant difference rejected in a t test. This is particularly interesting as Babcock & Laschever (2003) find that only 7 percent of women compared to 57 percent of men tried to improve their initial wage offer by negotiation. Moreover, in Gneezy et al

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[9] The response rate for the 1999 survey was 63 percent of the total of 4000 graduates between September 1997 and September 1998, and in the 2000 survey the response rate was 63 percent out of 4500 graduates between September 1998 and September 1999.

[10] A third wage measure, the current wage, is also available in the survey. As this measure was given directly after the questions on the wage bid and the offered wage, the error of reporting the offered wage as the current wage should be minimized.

[11] The gross monthly wages are used rather than an hourly wage measure. Even though the surveys include information on hours worked per week, the measure is ambiguous due to the formulation of the question, whereby the respondents cannot mark up exactly 40 hours worked per week. Either they must choose "work less than 40 hours" or "41-45 hours per week". The exclusion of the alternative 'exactly 40 hours' may thus have meant that respondents misclassified their working hours. As this is the only measure of part-time work available in the data, individuals who work part time will be treated as if they work full time. In addition, individuals who have stated a wage bid below SEK 10 000 are excluded (3 individuals), since the wage bid is more likely to refer to part-time than to full-time employment.

(2003) & Datta Gupta et al (2006) it is found that women choose a competitive pay-off to a lower extent than women do.

The second noteworthy finding is that women on average submit lower wage bids. The average wage bid for the pooled sample in gross monthly wages for women is SEK 18 215 (appr US $ 2600), while the equivalent for men is SEK 19 228 (appr US $ 2750). Thus the unadjusted relative wage bid for women is approximately 94.7 percent of the same bid for men, and the difference is statistically significant at the 99 percent level. Furthermore, men have a larger spread in their wage bids. These gender differences in wage bidding also apply for both years separately.

The third finding is that offered wages are also lower for women on average. For men, the average offered wage is SEK 18 628 (appr US $ 2665), while for women it is SEK 17 517 (appr US $ 2502), with a statistically significant difference at the 99 percent level. The unadjusted relative wage offer for women is thus approximately 94.0 percent.

Comparing these findings with those who chose jobs with posted wages, we find a similar difference in men's and women's wage offers with a statistically significant difference. However, the gender wage gap for applicants to jobs with posted wages is lower. Consequently the preliminary results point toward an increase in the gender wage gap following individual wage bargaining.

Nonetheless, wage offers are considerably higher both for men and women who chose to individually bargain over their wages compared to those choosing posted wage offers. Between men who bargained and men who did not, wage offers are significantly higher, also statistically, for the former group. The same result is found within the female group. Hence, although gender wage differentials are higher within the group who bargained, as compared with those who did not, wages are considerably higher in the former group. Thus similar to Datta Gupta et al (2006)

we find that women are more likely to choose a competitive pay when the economic incentives are higher. However, as the finding refers to the unadjusted wage differentials, several other factors could explain the higher wages subsequent to bargaining and the increasing gender wage differentials.

3 Empirical Model

3.1. Adjusted Wage Gaps

To establish whether differences in the gender wage gap prevail if we adjust for crucial wage-generating characteristics a standard Mincer wage model is estimated where:

$$W_i^{OFF} = \delta_0 + \beta_1 FEMALE + \beta_2 MAJOR + \beta_3 EXPERI + \beta_4 AGE + \beta_5 SECTOR +$$

$$+ \beta_6 CONTRACT + \beta_7 TRAINEE + \beta_8 METRO + \beta_9 S2000 + \upsilon_i \qquad [1].$$

$MAJOR_i$ represents the different fields of major to indicate the highest educational level completed by the applicant. Previous job experience, $EXPERI_i$, is also included as job experience may increase productivity. In both of the surveys subjects were able to indicate whether they had had any employment between graduation and the current position, thus covering postgraduate work only. In the 2000 survey respondents could also indicate whether or not their work was "qualified" or "unqualified" (with no further interpretation given in the survey). In the pooled sample only those who marked qualified experience are included in the category qualified work experience, while those with any work experience are pooled with those who marked unqualified work experience. Note that since the type of job experience cannot be distinguished, qualified work experience will be underestimated.

To account for any additional labor market experience, the age, AGE_i, of the respondent is included. This measure is intended to capture not any specific job-market experience but

experience in other job-related aspects, dimensions that are thought to increase productivity. As there is no information on pre-graduation work experience, the variable age may capture some of this effect.

Job- and employer-related characteristics are also included to control for differences in market opportunities. First, wages may differ between job sectors, $SECTOR_i$, and hence dummy variables are included to control for applying to the private, governmental or municipal sector.[12] Furthermore, individuals with temporary employment contracts (trial period, project basis or substitute contracts), $CONTRACT_i$, are separated from individuals with permanent employment contracts. As some individuals have applied for trainee positions, a dummy variable has been added, $TRAINEE_i$. Because a job location in a metropolitan area could represent a more flexible labor market and thereby increase the bargaining power of the applicant we distinguish between a job location in a metropolitan and non-metropolitan area, $METRO_i$. To account for any year or survey effects a survey dummy, $S2000_i$ is included. Finally υ_i is the error component, assumed to fulfill the usual criteria of independence.

To analyze the adjusted wage gap in wage bids, a similar Mincer model to equation (1) for the wage bids is estimated, with an additional proxy for the applicant's outside option. The estimated model is then:

$$W_i^{BID} = \delta_0 + \beta_1 FEMALE + \beta_2 MAJOR + \beta_3 EXPERI + \beta_4 AGE + \beta_5 SECTOR +$$

$$+ \beta_6 CONTRACT + \beta_7 TRAINEE + \beta_8 METRO + \beta_9 S2000 + \beta_{10} SEARCH\ TIME + \varepsilon_i \ [2]$$

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[12] Some individuals have reported working in a sector denoted "other" and are dropped (45 individuals) since the survey lacks any information as to what is defined as "other". Individuals working outside Sweden are also dropped (25 working in Nordic countries, 37 in other parts of Europe and 12 outside Europe) along with those being self-employed (14 individuals), or who participate in labor market programs (67 individuals).

One proxy for outside option is the time spent on searching for the job, $SEARCHTIME_i$. Assuming unobservable productivity is positively correlated with the probability of getting a job, wage bids would decline with the time spent searching for a job.[13]

Another measure of the outside option consists of the number of jobs applied for prior to accepting the current employment, $APPLIEDJOBS_i$. Assume job utility is higher for the more able applicants, and therefore abler applicants would need to search for fewer jobs than an equivalent applicant with lower unobserved ability would have to. This variable is however only available for the 1999 survey.

Table 2 displays the summary statistics for the control variables. There are some gender differences worth noting. Men and women have majored in different fields, with more women among those majoring in social sciences and personnel management, whereas more men major in the field of computer and system science.[14] The same difference is found for those who chose a posted wage job. Further, more men are employed in the private sector and they are older on average than the women.[15] Men are also more strongly represented in the group having no search time[16], while women are more often found in the groups who searched for more than six months before finding (or accepting) their current jobs.

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[13] However, time spent in searching for the job may also have a contrary effect. Assuming that individuals with more time to search will also learn more about how to find a good job-match, then we could find a positive effect on wage bids depending on the time spent in job search.

[14] Women have noted that they work less than 40 hours per week to a greater extent than men, see footnote 16. As regards those who chose to bargain (posted wages), 21 (18) percent of the women work part time while the equivalent for men is 14 (12) percent. Yet, given the age of the individuals included in the sample, it is reasonable to assume few applied for part-time work as the average age for females having their first child in Sweden is approximately 28 years in both 1999 and 2000 (Statistics Sweden, 2000). A t-test, moreover, reveals that the share of women over 28 years is smaller than the share of over 28 men in the group which has noted "work less than 40 hours". The difference is also statistically significant at the 5 percent level.

[15] The higher average age among men may be explained by the compulsory military service for young men in Sweden.

[16] Note that the group no search time includes (i) individuals who got the job before graduation, (ii) those who returned to a previous employer from the time before their university studies, or (iii) those who found their jobs within a month of graduation.

There are also some differences between the groups who applied for a job requiring wage bargaining and those who applied for jobs with posted wages. Gender differences between these groups, however, are small. This last could then be taken as evidence that there are no particular selection effects along gender lines.

3.2. Self-promoting Bargaining Strategies and Bargaining Success

To assess the extent to which applicants overbid, or underbid, similar applicants a measure which relates the wage bid to a "reference wage bid" the employer may have expected given the applicants characteristics is developed. The reference wage is derived from regressing the wage bid according to equation [2] and from this then predict a "market wage bid" for every applicant who chose to bargain over their wages, $PREDMARKET\ BID_i$. The measure of overbidding is then given by:

$$OVERBID_i = \frac{BID_i}{PREDMARKET\ BID_i} \qquad [3].$$

When the measure, $OVERBID_i$ is above 1, the applicant has bid a wage higher than a similar applicant would, given the same characteristics. When it is below 1 the applicant has bid a wage lower than a similar applicant would, in general, given the same characteristics.

Similarly, we develop a measure which captures the bargaining outcome or bargaining success, relative to what the applicant may have expected given the job and applicant characteristics. Likewise, the actual wage offer is compared to a calculated "reference wage offer" derived by estimating equation [1] for the whole sample and from this predict a "market wage offer" for each applicant who chose to bargain over their wage, $PREDMARKET\ OFFER_i$. The measure of bargaining success is then given by:

$$BARGSUCCES\ S_i = \frac{OFFER_i}{PREDMARKET\ OFFER_i} \qquad [4].$$

When the measure is above 1 (below 1) the applicant received an offer higher (lower) than that predicted by his or her wage- generating characteristics or by the job attributes.

We allow for two different specifications of the reference wage offer and wage bids. In a first specification a gender dummy is not included when estimating the reference wages. The reference wages are thereby set according to what is expected of a similar candidate regardless of gender. In a second specification the gender dummy is included to take into account that men and women may be differently valued in the market (the commonly found negative wage premium for women) and therefore do not serve as substitutes for a similar candidate. Note that with the first specification, women's overbidding is undervalued if men and women do not appear as substitutes to the employer.

Finally we want to elicit the differences in the pay-off from a self-promoting bargaining strategy. To measure the pay-off we regress the level of overbidding on the bargaining outcome, $BARGSUCCES\ S_i$, such that:

$$BARGSUCCES\ S_i = \alpha + \beta_F FEM + \beta_{ob} OVERBID_i + \beta_{FEMob} FEM * OVERBID + \varepsilon_i \qquad [5].$$

The β_{ob} measures the effect of overbidding on the bargaining success, i.e. the pay-off at different levels of overbidding, relative to a similar applicant. Notice that β_{ob} can capture the pay-off to unobservable ability, preferences for risk-taking or competitiveness. The female dummy, FEM, and interaction effects, $FEM * OVERBID$ are included to compare bargaining outcome differences between men and women.

To allow for a better characterization of the conditional distribution of the bargaining success a quantile regression method is used. Since if overbidding influence the conditional distribution of the bargaining success other than at the mean, a quantile regression model

constitutes a superior way of describing the whole distribution compared to OLS, see

Koenker and Hallok (2001). Note that standard errors are obtained by bootstrap methods. OLS

estimates are also included for comparison.

4 Results

4.1 The Mincer Model for the Wage Bids and Wage Offers

The results for the Mincer wage model for the wage bid model are reported in Table III, column

1 and 2. What the estimated model first reveals is that women submit lower wage bids than men

do, also after controlling for a broad range of factors. The difference is approximately 3 percent,

or between 2.9 -3.5 percent depending upon the number of controls. The control variables all

have the expected signs, and are apart from being a trainee, or not, statistically significant.[17]

The results for the offered wage are reported in Table III, column 3-5. The third column

refers to findings based on the total sample while the fourth and fifth refers to a division of the

sample into those choosing a job involving bargaining and those choosing a job with posted

wage offers.

As in many previous studies on the gender wage gap we find that women are offered

lower wages, even when education, experience, age and other work-specific characteristics are

controlled for. The gender dummy reveals an average effect of 2.7 percent lower offered wages

for women. Dividing the sample, we obtain a striking finding that the gender difference in

offered wages is higher for those who chose to bargain relative to those with posted-wage jobs,

3.2 percent versus 2.6 percent, and that the difference is higher than that for the wage bids, 2.9

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[17] There are two coefficients worth noting. First, only if the applicant has searched for more than nine months is there a positive effect on wage bids, suggesting that a long search time could have an informational value on the job-match quality. One possible explanation could however be that respondents misclassified their search time. Within this group, 27 percent have had a job for more than six moths prior to the current one, in comparison to 11 percent for the whole sample. However, the correlation between postgraduate work experience and searching for more than

percent. Thus there is a gender difference not only in bargaining but also an even stronger one in the *post*-bargaining outcome.

To further assess the extent to which the adjusted wage gap is explained by gender-specific differences in characteristics, or to which these characteristics are differently priced, the widely employed method of decomposition suggested by Blinder (1973) and Oaxaca (1973) is used (for a thorough explanation see Appendix A). In Appendix Table I we present the OLS estimates of equation [2] separated by gender and bargaining. The results of the wage decomposition are displayed in Table 4. To what extent would the gap then decrease, if women's characteristics were the same as men's? The second term (ii) indicate that the gap would decrease by 2.7 percentage points for those choosing a job with wage bargaining and by 1.6 percentage points for those choosing a posted wage-job, if women had the same characteristics as men. This resembles results found in other papers using Swedish data (see e.g. Edin & Richardson, 2001).

The term commonly associated with discrimination then accounts for 55 percent of the wage gap for those who bargained and 68 percent for those with posted wages. Hence, even though the gap is larger for women in the former group, less of it can be ascribed to discrimination. What this finding indicates is that earlier studies which measure gender wage differentials on a basis of offered wages and without knowing whether the offered wage is a result of individual wage bargaining behavior or not, may actually have overestimated the unexplained share or the part commonly ascribed to discrimination.

4.2. Self-promoting Bargaining Strategies and the Bargaining Success

The summary statistics of the measure of overbidding are given in Table 5. The first finding is that women overbid the reference wage less often than men do and if they do, they overbid by a

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9 months is no greater than 0.19 for unqualified work and 0.28 for qualified work experience. Second, the number of

smaller amount. In particular, on average, a woman who strictly overbids a similar candidate, man or woman, overbids with 9 percent, while men do so by 13 percent on average. If we instead compare the wage bid to a reference wage which takes the gender into account, then women overbid a similar candidate to a larger extent than men do and by a higher amount, on average. This comes from the fact that when the reference wage takes the gender into account, then the reference wage for a female applicant is significantly lower than for a male applicant (due to the significant negative gender dummy in the references wage regression). Therefore more women have a ratio above 1. But when we restrict the sample into those who strictly overbid a similar candidate, women overbid by a smaller amount, 9.4 percent, compared to men who overbid by 12.9 percent on average. Hence also when taking the negative gender premium into account, women use self-promoting strategies to a lesser extent. Looking at the level of underbidding, we find the opposite pattern. If men underbid a similar applicant, then he underbids by a higher level than women do, although the difference is not so large.

Figure 1 illustrates our findings well. In Figure 1 the conditional distributions of overbidding using gender adjusted reference wages, for men and women is depicted. We can then see that men's distribution is laying to the right of the female distribution suggesting that they have a higher level of overbidding similar applicants, especially for high levels of overbidding.

Table 6 reports the results from the estimations of equation [5], when not taking the female dummy into account. A comparison of the OLS estimates and the median, or 50th, quantile estimates provides very similar results suggesting that women obtain lower bargaining pay-off when self-promoting or overbidding a similar candidate. For example, assume an applicant decides to overbid a similar applicant by 20 percent instead of 10 percent. If the

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jobs applied for has a clearly negative effect on the wage bid, also when the length of search is controlled for.

applicant is a woman this strategy is rewarded by 8.9 percentage points higher offered wage, while the equivalent for a male is 9.4 percentage points.
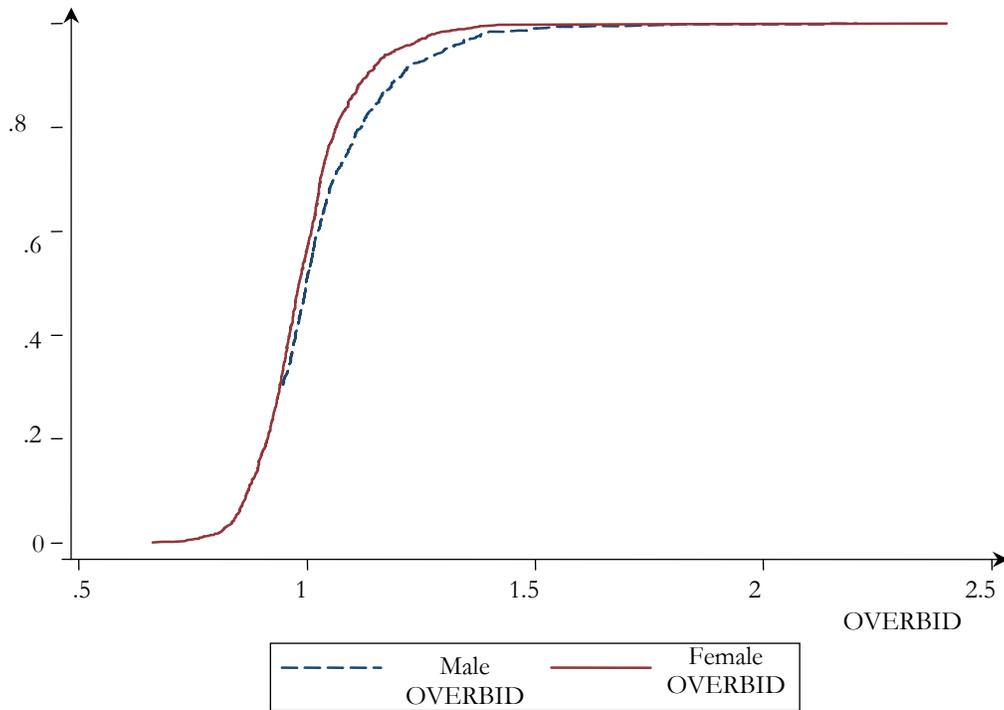
Figure 1 The Conditional Distribution of Overbidding for men (dashed line) and women (filled line).

Comparing the effect of overbidding at different quantiles of the bargaining success, we first note that the effect is much larger in the 75th quantile compared to, in particular, the 25th quantile. Assuming a similar example to the one above, a woman who is in the 75th quantile of the bargaining success receives as a counter-offer which is 9.6 percentage points higher while the equivalent for a male is 10.5 percentage points. In Figure 2 predicted differences of overbidding in the highest quantile compared to the lowest quantile of bargaining success is shown. Note that these differences are all significant at the 99 percent level. In sum, the estimated relationship first suggests that women fare better from self-promoting, or overbidding, in the groups where the

distribution of offered wages is narrower among similar applicants, i.e. in the 25th quantile. Second, women do relatively worse when the distribution of offered wages among similar applicants is wider, hence where there is more scope for individual wage bargaining.
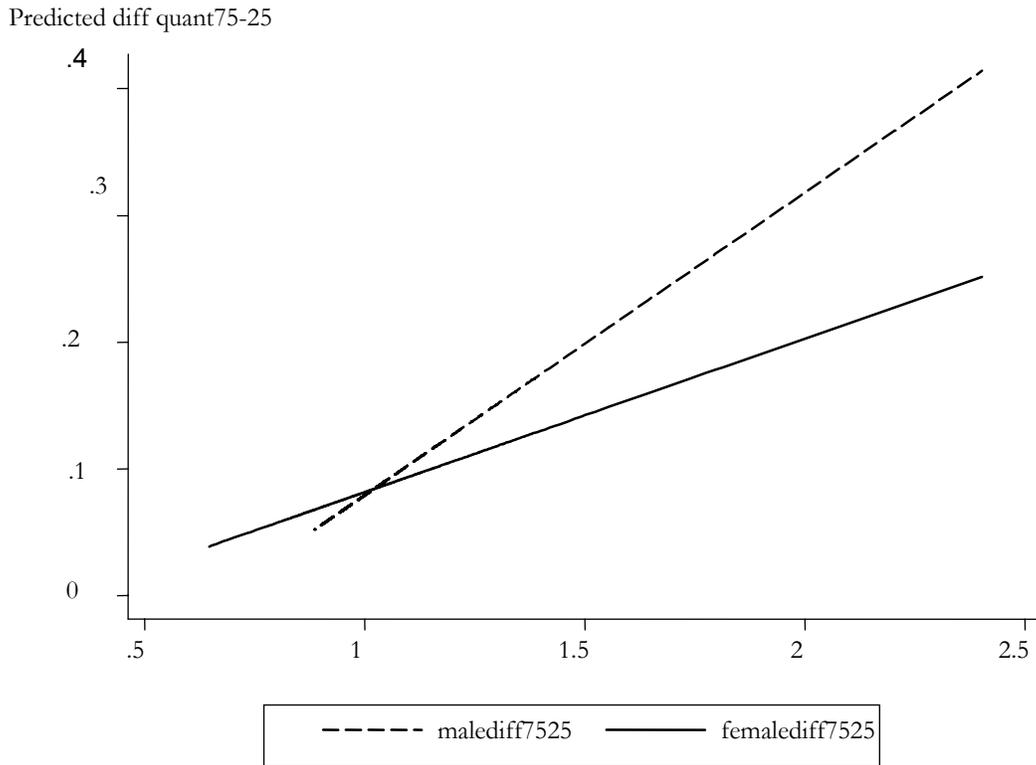
Figure 2 The predicted difference from overbidding in the 75th quantile relative to overbidding in the 25th quantile for men (dashed line) and women (solid line) separately.

In Table 7 we report the equivalent estimates controlling for the fact that men and women are not evaluated as perfect substitutes on average by employers. The results suggest a similar relationship, also when this effect is taken into account. Finally in Table 8, we report separate estimates for men and women. Again we find the pay-off difference between men and women to be accentuated the larger the scope for individual wage bargaining.

This gender difference in pay-off in wage bargaining may first reflect the gender differences in motivation and pay noted in Agell & Bennmarker (2002). Although women enjoy

a lower return from their bargaining, and are thus less successful, employers may feel they will not respond by reducing their efforts to the same extent that men would.

Alternatively, the result could suggest that women come up against a "glass ceiling" when the scope for bargaining, and the use of self-promoting bargaining strategies is large despite having the same wage-generating characteristics needed. This result could suggest that employers are more discriminatory with a more wide spread wage distribution. Assuming that in higher-paying jobs or in high-profile jobs, employers allow for larger wage distributions then the results may also then parallel the results found in Albrecht et al (2003), where in Swedish wage data the gender log wage gap increases throughout the wage distribution, and actually accelerates at the upper end of the distribution. Likewise, if the level of the wage bid is seen as a signal of unobservable productivity, the finding may suggest that employers find women's signals to be less credible.

Consequently, if women are aware of the lower marginal gain from increasing their relative wage bid, the incentive to overbid in bargaining declines relative to men's. Thus we would find that women do not ask for higher wages relative to similar applicants, in particular the larger the scope for bargaining, resulting in them finding themselves in a vicious circle, such that if they do not ask for higher wages they will not be given them. Hence incentives for self-promoting bargaining strategies could be an explanation for the finding that female wage bids are lower.

5 Concluding Remarks

Men and women's choices and outcomes in the labor market differ along many dimensions. Differences in bargaining strategies may capture many of these disparities. For example, the use

of self-promoting strategies may be necessary to influence the probability to be promoted. Alternatively they may be necessary when applying for a better paid job.

The general conclusion to be drawn from this paper is that gender differences do exist in both wage bargaining behavior and bargaining outcomes. It is found that women both ask for lower wages and receive lower counter-offers from employers. These results are robust to the inclusion of controls for individual-specific and employer-specific characteristics.

Another finding here is that if wage bargaining is acknowledged when explaining the wage offer gender gap, the unexplained part of the gap is reduced. This suggests that if gender differences are neglected in wage bargaining, the term commonly attributed to discrimination in wage decompositions may be overestimated. Instead, it may be the gender differences in wage bargaining that reflect discrimination.

Gender differences were found in the use of self-promoting strategies. Women self-promoted less. First, if this arises due to self-perceived ability differences or self-enhancement, then gender wage differentials may be exacerbated by individual wage bargaining more than if the employer uses wage-offer posting. Second, if as suggested by this study the economic incentives are weaker for women then women may decide to choose occupations where self-promotion or competition is less likely to be important.

As this study is unique in its kind, the results regarding individual wage bargaining differences are striking but yet primary. Therefore, in view of the findings in this paper, a stronger focus on bargaining behavior even when assessing the different outcomes for men and women in the labor market, is a useful direction for future research.

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Tables

	BMALE‡	BFEM‡	Raw-Wage gap	PWMALE‡	PWFEM‡	Raw-Wage gap

TABLE 1 SUMMARY STATISTICS ON WAGE BIDS AND WAGE OFFERS

	BMALE‡	BFEM‡	Raw-Wage gap	PWMALE‡	PWFEM‡	Raw-Wage gap
WAGE BID (SEK)	19 312***	18 196	0.942			
	(3 288.5)	(2 663.9)				
ln. WAGE BID	9.85***	9.80				
WAGE OFFER (SEK)	18 628***[a]	17 517[a]	0.938	16 925***	16 047	0.948
	(3 311.1)	(2560.2)		(2 964.1)	(2 337.6)	
ln. WAGE OFFER	9.82***	9.76		9.72***	9.67	
No of Obs	901	1222		812	1030	

Note: Numbers in parentheses are standard deviations. ‡ "B" refers to those choosing a job involving individual wage bargaining and "PW" refers to those choosing a job with a posted wage. ***/**/* denote statistical gender differences at the 1/5/10 percent levels respectively in a t-test of equal variance. a/b/c denote statistical difference between bargainers and non-bargainers at the 1/5/10 percent levels respectively.

TABLE 2 SUMMARY STATISTICS ON SELECTED CONTROL VARIABLES

	BMALE‡	BFEM‡	PWMALE‡	PWFEM‡
Business Adm. & Economics	47 % ** [a]	42 %[a]	40 %**	35 %
Law	9 %*** [a]	13 %[a]	29 %**	33 %
Computer and System sc.	27 %*** [b]	14 % [a]	17 %***	10 %
Personnel Management	4 %*** [a]	10 % [a]	2 %**	7 %
Social Science	13 %***	21 % [a]	11 %***	16 %
Age	28.4***	27.5	28.0***	27.2
No work experience	58 %*** [a]	47 % [a]	68 %***	59 %
Unqualified work experience	25 %*** [a]	35 % [a]	20 %***	27 %
Qualified work experience	17 % [a]	17 % [b]	12 %*	14 %
Temporary†	22 %*** [a]	35 % [a]	40 %***	48 %
Trainee	10 %*** [a]	7 % [a]	16 %	15 %
Metropolitan ††	69 %	66 % [a]	67 %***	61 %
Search < 1 month‡	45 %***	40 %	52 %***	47 %
Search 1-3 months	16 %	15 %	19 %	21 %
Search 3-6 months	14 %	14 %	13 %	13 %
Search 6-9 months	9 %***	14 %	8 %	9 %
Search > 9 months	15 %*	17 %	8 %**	10 %
Applied 1-5 jobs‡‡	53 %*	48 %	63 %	60 %
Applied 6-20 jobs	29 %	27 %	24 %	26 %
Applied 21-50 jobs	12 %**	17 %	9 %	9 %
Applied >50 jobs	6 %	8 %	4 %	5 %
No of obs	901	1222	812	1030

Note: Numbers in parentheses are standard deviations. ‡ "B" refers to those choosing a job involving individual wage bargaining and "PW" refers to those choosing a job with a posted wage. ***/**/* denote statistical gender differences at the 1/5/10 percent levels respectively in a t-test of equal variance. a/b/c denote statistical difference between bargainers and non-bargainers at the 1/5/10 percent levels respectively. † Employment contracts are permanent or temporary (trial period, project basis or substitute contract.). ††. Metropolitan areas: Stockholm, Gothenburg and Malmo. ‡ Search <1 month includes individuals who got job prior to graduation, who returned to same employer as before studying, and those who searched for less than a month. ‡‡ Only available for 1999.

TABLE 3 REGRESSION RESULTS OF THE STANDARD MINCER MODEL FOR THE WAGE BID AND WAGE OFFERS, SEPARATED BY GENDER

Sample	Wage Bid		Wage Offer		
	B	B 1999	ALL	B	PW
Female	-0.029***	-0.035***	-0.027***	-0.032***	-0.026***
	(0.006)	(0.008)	(0.004)	(0.006)	(0.006)
Law	-0.012	-0.013	-0.038***	-0.012	-0.035***
	(0.009)	(0.013)	(0.006)	(0.009)	(0.009)
Computer & Sys. Scien	0.051***	0.033***	0.072***	0.063***	0.079***
	(0.007)	(0.011)	(0.006)	(0.008)	(0.009)
Personnel Man.	-0.028***	-0.039**	-0.022**	-0.021*	-0.037**
	(0.011)	(0.018)	(0.009)	(0.011)	(0.015)
Social Science	-0.038***	-0.031***	-0.030***	-0.038***	-0.024**
	(0.008)	(0.011)	(0.006)	(0.008)	(0.010)
Unqual. Work Exper.	0.024***	0.042***	0.036***	0.037***	0.013*
	(0.007)	(0.009)	(0.005)	(0.007)	(0.007)
Qualif. Work Exper.	0.087***		0.104***	0.113***	0.075***
	(0.009)		(0.006)	(0.008)	(0.009)
Age	0.014***	0.013***	0.011***	0.013***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Governmental Sector	-0.039***	-0.035***	-0.047***	-0.040***	-0.036***
	(0.007)	(0.010)	(0.005)	(0.007)	(0.008)
Municipal Sector	-0.031***	-0.037***	-0.019**	-0.024**	-0.033**
	(0.010)	(0.014)	(0.009)	(0.011)	(0.016)
Temporary contr.	-0.023***	-0.030***	-0.038***	-0.027***	-0.034***
	(0.006)	(0.009)	(0.005)	(0.006)	(0.007)
Trainee	0.008	0.019	-0.008	0.007	-0.006
	(0.009)	(0.012)	(0.006)	(0.010)	(0.008)
Metropolitan Area	0.060***	0.062***	0.065***	0.070***	0.059***
	(0.006)	(0.008)	(0.004)	(0.006)	(0.006)
Survey 2000	0.042***		0.045***	0.033***	0.055***
	(0.006)		(0.005)	(0.006)	(0.007)
Search 1-3 months	-0.017**	-0.016			
	(0.008)	(0.011)			
Search 3-6 months	-0.010	-0.003			
	(0.009)	(0.013)			
Search 6-9 months	-0.003	0.011			
	(0.010)	(0.014)			
Search >9 months	0.036***	0.046***			
	(0.009)	(0.013)			
Applied 6-20 Jobs		-0.039***			
		(0.009)			
Applied 21-50 Jobs		-0.042***			
		(0.011)			
Applied >50 Jobs		-0.060***			
		(0.015)			
Constant	10.741***	10.704***	10.497***	10.657***	10.071***
	(0.069)	(0.098)	(0.056)	(0.072)	(0.084)
R-squared	0.313	0.306	0.323	0.309	0.307
Adjusted R-squared	0.307	0.293	0.320	0.304	0.302
F-value	53.207	23.307	134.416	67.182	57.828
No of obs.	2123	1022	3965	2123	1842

Note: Standard errors are in italics. All values are in SEK. ***/**/* denote statistical significance at the 1/5/10 percent levels respectively. B" refers to those choosing a job involving individual wage bargaining and "PW" refers to those choosing a job with a posted wage. For a variable description see Table II.

TABLE 4 DECOMPOSING THE GENDER WAGE GAP IN OFFERED WAGES FOR THOSE WITH A JOB REQUIRING WAGE BARGAINING AND THOSE WITH A POSTED-WAGE JOB

	THE MALE-FEMALE WAGE GAP	EXPLAINED BY DIFFERENCES IN:	
		(I) CHARACTERISTICS	(II) THE RETURN TO CHARACTERISTICS
	$\ln W_M - \ln W_F$	$\beta_M (X_M - X_F)$ $[\beta_F (X_F - X_M)]$	$X_F (\beta_M - \beta_F)$ $[X_M (\beta_F - \beta_M)]$
THE MINCER MODEL FOR "POSTED-WAGE JOBS"[‡]	0.050	0.016 [-0.025]	0.034 [-0.018]
THE MINCER MODEL FOR "BARGAINING JOBS"[‡‡]	0.060	0.027 [-0.028]	0.033 [-0.030]

[‡] Estimates follow from estimations reported in Appendix Table I, columns 1 and 2.
[‡‡] Estimates follow from estimations reported in Appendix Table I, columns 3 and 4.

TABLE 5 THE DISTRIBUTION OF OVERBIDDING OR SELF-PROMOMTING BARGAINING STRATEGY

	ALL	MALE	FEMALE
OVERBID$^{\diamond}$	1.008	1.024***	0.996***
	(0.131)	(0.146)	(0.116)
OVERBID < 1	0.924	0.925	0.924
	(0.056)	(0.058)	(0.056)
share	*0.54*	*0.51*	*0.57*
OVERBID > 1	1.108	1.130***	1.090***
	(0.123)	(0.137)	(0.107)
share	*0.46*	*0.49****	*0.43****
OVERBID|F $^{\diamond\diamond}$	1.008	1.011***	1.027
	(0.130)	(0.144)	(0.122)
OVERBID|F < 1	0.925	0.920**	0.928**
	(0.057)	(0.059)	(0.055)
Share	*0.55*	*0.56*	*0.53*
OVERBID|F > 1	1.108	1.129***	1.094***
	(0.121)	(0.137)	(0.108)
share	*0.45*	*0.44**	*0.47**

Note: Numbers in parenthesis are standard deviations. ***/**/* denote a statistically significant gender difference at the 1/5/10 percent levels respectively. $\diamond$ OVERBID is defined as the ratio of the wage bid and a reference wage bid predicted for each individual using the same controls as in Table III column 1, except for the gender dummy. $^{\diamond\diamond}$ OVERBID|F is defined as the ratio of the wage bid and a reference wage bid predicted for each individual using the same controls as in Table III column 1 including the gender dummy

TABLE 6 REGRESSION RESULTS ON THE SUCCESS OF THE WAGE BARGAINING

	BARG SUCCESS	BARG SUCCESS	BARG SUCCESS	BARG SUCCESS
	25TH QUANTILE	50TH QUANTILE	75TH QUANTILE	OLS
OVERBID	0.808***	0.943***	1.047*** [A]	0.936***
	(0.017)	(0.017)	(0.017)	(0.017)
FEM*OVERBID	0.035	-0.052**	-0.083*** [A]	-0.050**
	(0.025)	(0.024)	(0.022)	(0.025)
FEMALE	-0.038	0.043*	0.082*** [A]	0.044*
	(0.025)	(0.025)	(0.022)	(0.025)
Constant	0.181***	0.096***	0.022 [A]	0.094***
	(0.018)	(0.017)	(0.017)	(0.017)
Pseudo R-sq	0.3884	0.4628	0.5455	
R-squared				0.727
Adj-R-squared				0.726
F-value				1879.51
p-value				0.000
No of Obs.	2123	2123	2123	2123

Note: Standard errors are in italics. ***/**/* denote statistical significance at the 1/5/10 percent levels respectively. [A] indicates a statistically significant difference between the 75th and 25th quantile at the 1 percent level. The dependent variable is the bargaining success defined as the ratio of the offered wage and a predicted reference wage offer, using the same control variables as in Table III, column 3 except for the gender dummy. OVERBID is defined as the ratio of the wage bid and a reference wage bid predicted for each individual using the same controls as in Table III column 1, except for the gender dummy.

TABLE 7 REGRESSION RESULTS ON THE SUCCESS OF THE WAGE BARGAINING

	BARG SUCCESS|F	BARG SUCCESS|F	BARG SUCCESS|F	BARG SUCCESS|F
	25TH QUANTILE	50TH QUANTILE	75TH QUANTILE	OLS
OVERBID|F	0.806***	0.946***	1.044*** A	0.937***
	(0.017)	(0.018)	(0.017)	(0.017)
FEM* OVERBID|F	0.045*	-0.061**	-0.079*** A	-0.053**
	(0.025)	(0.026)	(0.022)	(0.025)
FEMALE	-0.047*	0.052**	0.077*** A	0.048*
	(0.025)	(0.027)	(0.023)	(0.025)
Constant	0.183***	0.093***	0.026 A	0.093***
	(0.018)	(0.019)	(0.017)	(0.017)
Pseudo R-sq	0.3861	0.4603	0.5395	
R-squared				0.723
Adj-R-squared				0.722
F-value				1840.715
p-value				0.000
No of Obs.	2123	2123	2123	2123

Note: Standard errors are in italics. ***/**/* denote statistical significance at the 1/5/10 percent levels respectively. A indicates a statistically significant difference between the 75th and 25th quantile at the 1 percent level. The dependent variable is the bargaining success defined as the ratio of the offered wage and a predicted reference wage offer, using the same control variables as in Table III, column 3 including the gender dummy. OVERBID\|F is defined as the ratio of the wage bid and a reference wage bid predicted for each individual using the same controls as in Table III column 1, including the gender dummy.

TABLE 8 REGRESSION RESULTS ON THE SUCCESS OF THE WAGE BARGAINING

	BS|F	BS|F	BS|F	BS|F	BS|F	BS|F	BS|F	BS|F
	25TH QUANT	50TH QUANT	75TH QUANT.	OLS	25TH QUANT	50TH QUANT	75TH QUANT	OLS
	WOMEN	WOMEN	WOMEN	WOMEN	MEN	MEN	MEN	MEN
OVERBID|F	0.851***	0.885***	0.965*** [A]	0.884***	0.806***	0.946***	1.044*** [A]	0.937***
	(0.021)	(0.017)	(0.013)	(0.017)	(0.023)	(0.017)	(0.022)	(0.018)
Constant	0.136***	0.145***	0.103***	0.141***	0.183***	0.093***	0.026	0.093***
	(0.021)	(0.018)	(0.014)	(0.017)	(0.024)	(0.017)	(0.023)	(0.019)
Ps. R-sq	0.3856	0.4389	0.5056		0.3854	0.4840	0.5733	
R-sq				0.697				0.744
Adj Rsq				0.696				0.744
F-value				2802.526				2618.993
p-value				0.000				0
No of Obs.	1222	1222	1222	1222	901	901	901	901

Note: Standard errors are in italics.***/**/* denote statistical significance at the 1/5/10 percent levels respectively.
[A] indicates a statistically significant difference between the 75th and 25th quantile at the 1 percent level.
OVERBID|F is defined as the ratio of the wage bid and a reference wage bid predicted for each individual using the same controls as in Table III column 1, including the gender dummy.

	Bargaining		Posted Wage	
Sample	Male	Female	Male	Female
Law	-0.004	-0.013	-0.010	-0.048***
	(0.017)	(0.011)	(0.015)	(0.011)
Computer & Sys. Scien	0.045***	0.084***	0.075***	0.088***
	(0.011)	(0.011)	(0.013)	(0.013)
Personnel Man.	-0.063***	-0.007	0.020	-0.056***
	(0.024)	(0.012)	(0.034)	(0.016)
Social Science	-0.045***	-0.028***	0.005	-0.035***
	(0.016)	(0.009)	(0.016)	(0.012)
Unqual. Work Exper.	0.056***	0.026***	0.033***	-0.000
	(0.012)	(0.008)	(0.012)	(0.009)
Qualif. Work Exper.	0.148***	0.086***	0.102***	0.051***
	(0.013)	(0.010)	(0.015)	(0.012)
Age	0.012***	0.013***	0.002	0.008***
	(0.002)	(0.001)	(0.002)	(0.001)
Governmental Sector	-0.052***	-0.030***	-0.068***	-0.017*
	(0.013)	(0.009)	(0.013)	(0.010)
Municipal Sector	-0.024	-0.022*	-0.029	-0.028
	(0.021)	(0.012)	(0.032)	(0.018)
Temporary contr.	-0.035***	-0.021***	-0.041***	-0.026***
	(0.011)	(0.007)	(0.012)	(0.009)
Trainee	-0.025*	0.038***	-0.020	0.007
	(0.015)	(0.013)	(0.013)	(0.010)
Metropolitan Area	0.077***	0.068***	0.061***	0.056***
	(0.010)	(0.007)	(0.010)	(0.008)
Survey 2000	0.018	0.044***	0.055***	0.055***
	(0.011)	(0.008)	(0.010)	(0.008)
Constant	10.599***	10.640***	9.837***	10.208***
	(0.126)	(0.086)	(0.138)	(0.104)
R-squared	0.292	0.299	0.313	0.288
Adjusted R-squared	0.282	0.291	0.302	0.279
F-value	28.185	39.640	27.952	31.611
No of obs.	901	1222	812	1030

Note: Standard errors are in italics. All values are in SEK. For variable definition see Table II. ***/**/* denote
statistical significance at the 1/5/10 percent levels respectively.

Appendix A: The Oaxaca Blinder Wage Decomposition

Let $\ln W_M$ be the natural logarithm monthly mean wage for men and $\ln W_F$ be the equivalent for women. Further, let X_M and X_F denote the mean values of the characteristics used as explanatory variables and let β_M and β_F denote the slope coefficients of the male and female wage equations respectively. The wage gap can then be written as

$$\underset{(i)}{\ln W_M - \ln W_F} = \underset{(ii)}{\sum \beta_M (X_M - X_F)} + \underset{(iii)}{\sum X_F (\beta_M - \beta_F)}, \qquad [2]$$

where first term *(i)* equals the male-female wage differential in log wages. The second term *(ii)* is the share of the wage gap which can be credited to differences in the mean values of the explanatory variables. The final and third term *(iii)* is the share of the wage gap that is credited to different returns connected with those characteristics or variables (i.e. measurable and seemingly identical characteristics). It is this final term that is assumed to be ascribable to discrimination.[18]

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[18] There are two limitations to this decomposition and the extent to which the third term can be assumed to reflect discrimination. First, a crucial element for dividing the decomposition into one non-discriminatory (explained) and one discriminatory (unexplained) part, is that all productivity-related aspects that affect wages have to be included in the wage equation. Second, the slope coefficients used in the decomposition ought to have a significant impact on the wages. Both of the above conditions are hard to fulfill, which means that the results should be analyzed with this shortcoming in mind. Moreover, two other points should be made. If identical characteristics do not yield the same return, this cannot always be ascribed to discrimination (Goldin and Polachek, 1987). Moreover, differences in characteristics may in their turn be due to discrimination.