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## THE DETERMINANTS AND CONSEQUENCES OF UNEMPLOYED WORKERS' WAGE DEMANDS

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# **The Determinants and Consequences of Unemployed Workers' Wage Demands\***

by

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## **Abstract**

This paper studies the determinants and labor market consequences of unemployed workers' wage demands using direct data on the workers' actual wage requests. Our results show that most workers want a wage close to what they earned in their previous jobs, and thus much more than they get in unemployment benefits. However, our results also show that some groups, such as women, tend to systematically demand lower wages. Also, we find that workers with high wage demands are contacted by firms less often than otherwise similar workers with lower wage demands. Thus our results indicate that too high wage demands may contribute to high unemployment.

**Keywords:** Unemployment, Job Search, Wage Demands, Gender Differences

**JEL codes:** J31, J64

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## **1 Introduction**

High unemployment is a major problem in many countries. Once unemployment reaches a high level, it is often very difficult to bring it down again. One partial explanation for this may be that unemployed workers demand too high wages. Even if it is not socially optimal that unemployed workers accept all job offers, it is problematic if they systematically demand higher wages than firms are willing to pay. Thus it is important to study the determinants of unemployed workers' wage demands, and if these wage demands affect their job finding rate. Also, it is likely that the searchers' wage demands affect the wages they get if they are hired. Thus, if there are systematic differences across groups in wage demands, this may result in wage differentials between e.g. men and women or natives and immigrants.

The purpose of this paper is to empirically study the determinants and consequences of unemployed workers' wage demands. We investigate how these wage demands are affected by personal and institutional factors, such as gender, age, ethnicity, education and unemployment benefits, and if workers with high wage demands are contacted by firms less often than otherwise similar workers with lower wage demands.

To empirically investigate these issues, detailed data are needed on the wage demands and other characteristics of unemployed workers. However, reliable data on wage demands, or reservation wages, are not easily available. Most existing data are from surveys where people are asked about the lowest wage they would be willing to work for. However, data from such surveys suffer from a major weakness: It is very difficult to know whether we can expect workers to give reliable answers to such a hypothetical question. The respondents know that their answers have no real world consequences. Also, some surveys ask questions to a relatively small group of people, which makes it difficult to know if the results are specific to the sample. Due to concerns about the quality of the available data, some studies therefore use indirect measures of reservation wages. Even if reliable data on wage demands are available,

it is often very difficult to study the labor market consequences of these wage demands (e.g. the effect on unemployment durations) since the researcher seldom has access to complete information on the searchers' other characteristics.

In this paper, we use data from 'My CV', which is an Internet-based search channel provided by the Swedish Public Employment Service.<sup>1</sup> Job searchers are invited to submit their CVs and the requirements they have about the jobs they want to find. When searchers submit their CVs they are given the opportunity to state their wage requirements. All Swedish employers are invited to search among the CVs in the database, and can contact searchers for interviews by e-mail within the system. The firm contacts are registered in the database. We combine this data with data on unemployment benefits and previous wages from other registers. The sample we use includes 1 507 unemployed workers.

Our dataset has several advantages. First, when workers state their wage demands they know that what they enter will be observed by firms, and thus may affect their probability of getting job offers. Since the wages entered have real world consequences, we should expect them to be more reliable than answers to hypothetical questions in surveys about reservation wages. Second, we have access to administrative data on the workers' previous wages and unemployment benefits. This data should be more reliable than the self-reported data used in previous studies. Third, compared with most previous studies of the effects of wage demands on labor market outcomes, our identification strategy is much stronger. Since we focus on the number of firm contacts received in 'My CV', we know that we have access to essentially the same information about the searchers as the recruiting firms. Thus our results should be less affected by problems with unobserved heterogeneity than the results in previous studies. Fourth, compared with some of the existing studies, our sample is quite big. A limitation of

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<sup>1</sup> This dataset is also used in Eriksson and Lagerström (2007) to study discrimination.

our data is that our wage demand variable is not fully comparable to a reservation wage, since it may not always be optimal for a worker to enter the lowest wage she is willing to accept. However, we expect that there is a close link between the reservation wage and the wage demand. Also, we can only study the effects of the wage demands in the first stage of the hiring process. However, it is likely that workers with excessive wage demands are sorted out early in the hiring process.

We find that there is a close relationship between the workers' wage demands and their previous wages. On average, the ratio of the wage demand to the previous wage is 1.0, but a non-negligible fraction of the workers want a significantly higher wage. Almost all workers want a higher wage than what they get in unemployment benefits. We also find that women and searchers who are young or have limited education and experience demand low wages. We then investigate the determinants of the workers' wage demands in a regression analysis, and find that, even after controlling for a number of other differences, e.g. women (especially women with non-Nordic names) and young searchers demand low wages. Also, we find that higher unemployment benefits are associated with higher wage demands. We then analyze if the searchers' wage demands affect the number of firm contacts they get. We find that high wage demands lead to fewer firm contacts, and that this effect is stronger for workers with low wage demands. Thus our results suggest that too high wage demands may contribute to high unemployment.

Our paper is related to the literature on the determinants of reservation wages and their effect on the job finding rate. This literature is discussed in Kiefer and Levine (1991) and Shimer and Werning (2007), and classical papers include Feldstein and Poterba (1984) and Jones (1988, 1989). Feldstein and Poterba (1984), using CPS data from the 1970s, find that unemployment benefits have a significant positive effect on reservation wages. Jones (1988) reports descriptive statistics on reservation wages using a sample of a few hundred British

men, and find that their wage demands typically are high compared with their previous wages. Jones (1989), using the same dataset, finds that reservation wages play a significant role in the determination of unemployment durations. There are also some more recent papers using data from household panels. Addison et al (2009b), using data for twelve countries from the European Household Panel (EHP), derive several key elasticities of reservation wages with respect to unemployment benefits and job offers. Addison et al (2009a), using the same data, find strong evidence that higher unemployment benefits lead to higher reservation wages. Prasad (2003), using German data (GSOP), analyze the determinants of reservation wages. However, a limitation of all these studies is that they are based on answers to hypothetical questions in surveys about the searchers' reservation wages which may not be reliable. Another related paper is S  ve-S  derbergh (2007) who analyzes survey data on wage bids made by Swedish college graduates, and finds that women submit lower wage bids.

The rest of the paper is organized as follows. Section 2 presents a stylized search model to identify factors which should be included in the empirical analysis. In Section 3, the data is introduced and descriptive statistics are presented. Section 4 contains the empirical analysis of the determinants of unemployed workers' wage demands and how these wage demands affect the number of firm contacts the searchers get. Section 5 concludes.

## **2 Theoretical Background**

As a background to the empirical analysis, it is instructive to briefly consider which factors we expect should affect an unemployed worker's wage demand. One way of thinking about the wage demand is to view it as a measure of the reservation wage. Then the relevant model is a search model. Another way of thinking about the wage demand is to view it as the first bid in a bargaining process. Then the relevant model is a bargaining model. However, a common feature of both of these ways of thinking about the problem is that the worker's

outside option – i.e. the utility while unemployed – is crucial. To keep the analysis simple, we will discuss a stylized search model, but keep in mind that strategic considerations and signaling may also affect the wage demand.

Let us consider the reservation wage of an unemployed worker in a stationary environment. The worker lives forever and gets utility equal to the wage. A job offer is a proposal to work at a constant wage,  $w$ , where the wage is an independent draw from a known wage offer distribution  $H(\cdot)$ . Only unemployed workers get job offers, the job offer arrival rate is  $\lambda$ , jobs get destroyed at the rate  $q$ , and unemployed workers get net income  $z$ . Then it is straightforward to show that the reservation wage,  $w^r$ , must satisfy

$$w^r = z + \frac{\lambda}{r+q} \int_{w^r}^{\infty} (w - w^r) dH(w). \quad (1)$$

Thus, the reservation wage is determined by the net income while unemployed, the job offer arrival rate, and the wage distribution. The hazard rate from unemployment is  $\lambda[1 - H(w^r)]$ , and the average duration of unemployment,  $T^u$ , is:

$$T^u = \frac{1}{\lambda[1 - H(w^r)]}. \quad (2)$$

Thus, all else equal, the higher the reservation wage is the longer we expect the worker to remain unemployed. The analysis assumes that the job seeker's environment is stationary. However, if the value of being unemployed declines over time, it is easy to show that the reservation wage will also decline over time.

If we introduce a bargaining component, the optimal wage demand may be higher than the reservation wage since the worker may use the wage demand to signal that she is a high ability worker. However, the worker's outside option will still be the key determinant of her wage demand since this represents the fallback option in the bargaining.



To summarize, unemployed workers' wage demands should depend on the job offer arrival rate, the wage distribution and the net income received while unemployed. This is true both in a search model and a bargaining model. Thus the empirical analysis should include controls for factors which affect the job offer arrival rate and the wage distribution, such as the searchers' personal characteristics and differences in labor market conditions across regions and occupations, as well as factors which affect the net income while unemployed, such as unemployment benefits.

### **3 Data**

In the empirical analysis, we use data from 'My CV' combined with data from other registers.

The database 'My CV' is a search channel offered to job seekers by the Swedish Public Employment Service (see the Appendix for a detailed description). Searchers, irrespective of current employment status, are invited to submit their CVs to the database over the Internet or at the Employment Service. The searchers submit their information by entering their personal details into a number of standardized forms. In the forms, they are asked to enter information about their education, labor market experience, language and computer skills, other skills, the requirements they have about the jobs they want to find, and are asked to write a short personal statement. One of the forms contains a question about the searcher's wage demand (the searcher is asked to enter his or her "wage demand"), but they are not required to enter this information.<sup>2</sup> All Swedish employers are invited to search online in the database, and can contact searchers for interviews by e-mail within the system.

All searchers – both new and previously registered – who logged into the system in December 2004 were asked if they wanted to participate in a research project on the

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<sup>2</sup> The searchers are allowed to enter this wage in any form they want, e.g. per month or per day. To be able to compare wages between searchers, we recalculate all wages to the corresponding monthly full-time wage.

recruitment behavior of firms. Around 40 percent agreed and were also asked to immediately answer a short online questionnaire.

In the empirical analysis, we use data on all searchers who satisfy the following criteria: (1) The searcher is 18-65 years old, (2) the searcher is registered as unemployed and receives unemployment benefits (we only have data on previous wages for such workers), (3) the searcher has entered a wage demand (22 percent of the searchers in our sample have entered a wage demand), and (4) the searcher's wage demand does not belong to the one percent biggest or smallest values of the distribution. Our sample includes 1 507 searchers. For these searchers, we have data on everything they have registered in 'My CV' (except for their names and personal statements, for confidentiality reasons) and the number of firm contacts they have received.

We combine the data from 'My CV' with data from two other databases used by the Employment Service in their daily operations; Händel, which is used to administer the Employment Service's contacts with registered job seekers, and Astat, which is used to administer the unemployment benefits system. From Händel, we get information about the searchers' employment histories. From Astat, we get information about the searchers' unemployment benefits and previous wages.<sup>3</sup>

Table 1 presents some descriptive statistics of our sample.

In Table 1, we see that, on average, the workers have received unemployment benefits for 22 weeks. The workers are quite diverse with respect to age, gender, ethnicity, education, experience, region and occupation. To see if the searchers in our sample are representative of unemployed job seekers in Sweden, Table A1 in the Appendix compares the characteristics of

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<sup>3</sup> In Astat, unemployment benefits and previous wages are given per working day. To compare these wages to the wage demands, we recalculate these numbers into monthly figures. For searchers who worked part-time in their previous jobs, we use information on working time to recalculate these numbers to their full-time equivalent.

the searchers in our sample with the characteristics of all other unemployed searchers registered in 'My CV' and at the Employment Service, respectively. We see that the searchers who use 'My CV' tend to be somewhat younger and have more education than the typical Swedish job seeker (c.f. Eriksson and Lagerström (2007)). We also see that the searchers in 'My CV' who have stated a wage demand are a bit older and have more work experience than the searchers who have not stated a wage demand.

Table 2 compares the job seekers' wage requirements with the wages they had in their previous jobs (recalculated as the corresponding full-time wage).

In Table 2, we see that in general the workers' wage demands are very similar to what they earned in their previous jobs. For all unemployed searchers, the average ratio of the wage demand to the previous wage is 1.00. This ratio is somewhat lower than the ratios 1.02 and 1.07 found by Jones (1988) and Feldstein and Poterba (1984), respectively. This may be due to differences in the composition of the samples.

Looking at the distribution of the ratios, we see that 50 percent want a wage that is at least as high as their previous wage, 20 percent want a wage that is at least 10 percent higher, and 10 percent want a wage that is at least 20 percent higher. Comparing the averages in different subgroups the following are worth noting: (1) Women demand lower wages. However, comparing the ratios, we see that even though women's wage demands are more than ten percent lower than men's, the ratio of women's wage demands is higher. (2) Workers with Nordic and non-Nordic names have similar wage demands and ratios. (3) Older workers have higher wage demands than younger workers, but the ratio of older workers wage demands is slightly lower. (4) Highly educated (and experienced) workers demand higher wages. However, these differences should be interpreted with caution until we control for other differences across groups in a regression analysis.

Table 3 compares the searchers' wage requirements with their unemployment benefits (in Sweden, unemployment benefits are based on the previous wage and in 2004 workers got 80 percent of their previous wage up to a daily cap of SEK 680/730).<sup>4</sup>

In Table 3, we see that almost all workers want a higher wage than what they get in unemployment benefits. On average, the ratio of the wage demand to the unemployment benefits received is 1.40; i.e. the average worker wants a wage which is 40 percent higher than what he or she gets in unemployment benefits. We also see that many workers, especially men, older searchers and searchers with a postsecondary education, get the maximum amount of unemployment benefits possible. Thus many workers get much less than the maximum replacement rate of 80 percent.

Figure 1 shows the distribution of the ratios of wage demands to previous wages and unemployment benefits, respectively.

An interesting question is if the searchers' wage demands are stationary or if they tend to decline with the length of the spell. Since we only have one observation for each searcher, we cannot answer this question directly, but we can get an indication by comparing the wage demands of workers with different time remaining until their benefits are exhausted. We find that workers who are close to exhaustion, on average, have lower wage demands. However, the differences are small and should be interpreted with caution until we control for other differences.

To summarize, we find that there is a close relationship between the workers' wage demands and the wages they had in their previous jobs, and that the wage demands are much higher than the workers' unemployment benefits. Also, some groups, such as women, demand

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<sup>4</sup> Workers without (with) children can get benefits for 300 (450) days. To get income-based unemployment benefits, a worker has to be a member of an insurance fund and satisfy a minimum work requirement.

lower wages. However, to understand these differences further we need to control for all differences simultaneously.

## **4 Estimation and Results**

We now turn to the empirical analysis and start by looking at the determinants of unemployed workers' wage demands. We then analyze whether workers who demand high wages get fewer firm contacts.

### **4.1 The Determinants of Unemployed Workers' Wage Demands**

To study the determinants of unemployed workers' wage demands, we need to consider all factors which may affect this decision. From the theoretical discussion in Section 2, we know that we should take into account factors which affect the job offer arrival rate, the wage distribution, and the net income received while unemployed. Obviously, a lot of factors may affect these magnitudes, including the searchers' personal characteristics (e.g. education, experience, other skills, age, gender and ethnicity), institutional factors (e.g. unemployment benefits), and differences across regional and occupational labor markets.

To control for the searchers' characteristics, we use the following variables. For education, we control for the highest level of completed education; primary, secondary or postsecondary. For experience, we control for seven lengths of experience and the fraction of that experience which is in the occupations where the searcher is looking for work (almost none, some or almost all). For other skills, we control for managerial experience, foreign work experience, telecommuting experience, research experience, driving skills, computer skills, language skills, and other skills. We control for age by dividing the workers into four age groups. We control for ethnicity by dividing the workers into two categories; Nordic and non-Nordic sounding names. For gender, we use a naturally defined variable. We also control

for regions of residence and search (12 counties), and occupations (114 occupations). Finally, an important determinant of the searchers' wage demands is unemployment benefits since, for most unemployed workers, this is their main source of income. Thus, we control for the amount of unemployment benefits the searchers' get.

Even though we can control for a large number of personal characteristics, a concern is that we may lack data on some important characteristics which affect the wage demands. One way of handling this issue is to include the wage in the previous job as a regressor. If we had data on all factors determining productivity, this variable should not be important. However, if this is not the case – i.e. if there are important personal characteristics affecting productivity which we cannot control for – the previous wage may capture such unobserved heterogeneity. This variable may also be relevant if the workers use the previous wage as a measure of their 'market value'. However, a problem with this variable is that it is highly correlated with unemployment benefits, since the benefits are based on the wage. Thus, we cannot include both of these variables simultaneously in the regressions, and we should be careful when we interpret the size of the estimated coefficients on unemployment benefits and previous wages.

Another concern is that unemployed workers' wage demands may not be stationary, but instead may decline with the duration of their spells. To take this into account, we construct two variables measuring the duration of the uncompleted unemployment spells; the time remaining until the benefits are exhausted and the time the worker has been registered as a job seeker.

Taking all this into account, the regression equation we use is:<sup>5</sup>

$$w^D = \alpha + X\beta + \gamma UB + \theta w^{\text{Previous}} + \omega D + \varepsilon, \quad (3)$$

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<sup>5</sup> Such an equation can be derived from a search model; see e.g. Hui (1991).

where  $w^D$  is the worker's wage demand,  $X$  is a vector of the worker's personal characteristics,  $UB$  is the amount of unemployment benefits the worker gets,  $w^{Previous}$  is the worker's wage in the previous job, and  $D$  is the worker's duration of unemployment. Usually, we will only include a subset of these variables in the regressions. We use ordinary least squares to estimate the model. Table 4 presents the results.

In column 1 in Table 4, we include the searchers' personal characteristics and the requirements they have about the jobs they want to find. We get the expected results; the more education and experience a worker has the higher is the wage demand. We also see that women and younger searchers have, on average, lower wage demands. In column 2, we add the variable for unemployment benefits, and see that it has the expected sign; higher unemployment benefits results in higher wage demands. The elasticity of the wage demand with respect to unemployment benefits is 0.13. The size of this elasticity should be interpreted with caution, since there is scope for unobserved heterogeneity, but it is roughly in line with what has been found in other studies (see e.g. Addison et al (2009a) and Shimer and Werning (2007)).

In Column 3, we include the wage in the previous job as a regressor and find that it has a positive effect. The other coefficients remain qualitatively similar, except that the gender coefficient is no longer significant. However, this is not surprising since it is likely that the women who demand low wages were paid low wages in their previous jobs as well. We cannot include the previous wage and unemployment benefits in the same regression since they are highly correlated. Thus the coefficient on the previous wage will pick up the effects of both unemployment benefits and omitted variables.

In Column 4, we check whether the wage demands are affected by the duration of unemployment by controlling for the time remaining until benefits are exhausted. We find that this variable is positive and significant, but that the coefficient is small; if the time to

exhaustion decreases with 10 percent the wage demand decreases with 0.14 percent. That this effect is small is in line with the results in Addison et al (2009a). We get similar results if we instead use the time the workers have been registered as unemployed.

The results in Table 4 show that women demand lower wages than men. This may be interpreted as a sign that women expect employers to pay them less – i.e. that gender discrimination exists – and therefore are more cautious than men when they set their wage demands. One way of analyzing this issue further is to run separate regressions for men and women (see Table A2 in the Appendix). The results are similar, except that the effect from the previous wage is bigger for men; i.e. the results indicate that, all else equal, women are less likely to demand a high wage simply because they had a high wage in their previous job. Also, there is a large negative effect for women with non-Nordic names. One possible interpretation of this result is that these women expect both ethnic and gender discrimination. We have also run separate regressions based on ethnicity, but find no other significant differences.

An interesting question is if the results differ for different income groups. In Table A3 in the Appendix, we divide the searchers into two groups based on their previous wages (the division is based on the maximum benefit level). The results show that most of the effects are qualitatively similar in the two groups, but that the magnitudes are much bigger for workers in the high wage group. The effect from the previous wage is more than twice as big, and the gender effect is only significant in the high wage group.

A potential concern is unobserved heterogeneity. We have tried to control for unobserved heterogeneity by including e.g. the previous wage and find that most results remain. However, there are many variables which may affect the workers' wage demands, and thus there will always be scope for unobserved heterogeneity due to missing variables.



E.g. we do not have data on the searchers' family situation (e.g. marital status and children). This must be kept in mind when interpreting the results.

Another potential problem is that all searchers in the sample have uncompleted unemployment spells. It is likely that workers with long spells are negatively selected. This is hard to take into account since we do not have data on the workers who have left 'My CV'. However, we may get a sense of the importance of this issue by comparing the results for workers with short and long unemployment spells, since it is likely that the selection effect is less important at short durations (when fewer workers have deleted their profiles in 'My CV'). Splitting the sample into two based on the length of the spells and then running separate regressions on these subsamples, we find that most results remain stable (see Table A4 in the Appendix). Most importantly, we find that all major results hold for workers with short spells. This is an indication that this selection issue may not be that important.

To summarize, we find that unemployed workers' wage demands are affected by gender, age, education, experience, unemployment benefits, and that some groups, especially woman, systematically demand lower wages. These results are statistically significant at conventional levels and appear stable across different specifications. However, we should be careful when interpreting the size of the estimates since there is scope for unobserved heterogeneity.

#### **4.2 The Effect of the Wage Demands on the Number of Firm Contacts Received**

An important issue is whether unemployed workers' wage demands affect their job search success; i.e. if a high wage demand results in a lower probability of finding a job. As mentioned before, we have data on the number of firm contacts the searchers have received during their time in 'My CV'; i.e. the number of e-mails sent from employers to a searcher

typically containing an invitation to an interview. The searchers in our sample have received 694 firm contacts, and thus the average number of contacts received is 0.46.

How can we identify the effect of the wage demand on the number of firm contacts received? Our crucial identifying assumption is that we have access to essentially the same information as the firms using ‘My CV’ to recruit workers. Thus, if we include control variables for all observable differences in the regressions, we should get unbiased estimates of the effect of the wage demands on the number of contacts received.

Our data is count data and the conventional model used to analyze such data is the Poisson model. This model requires that events occur randomly over time. In our case, we believe that the ‘memoryless’ feature of the Poisson model is appropriate for a number of reasons. First, ‘My CV’ contains a large number of job seekers and thus it is reasonable to expect that most employers will not remember individual job seekers from one search to the next. Second, it is likely that most employers recruit workers only occasionally. Third, information on how long a searcher has been registered in the database is not available to the employers who use it. In particular, employers cannot specify search criteria based on the time searchers have been registered in the database. We use the Poisson model in the baseline regressions, but also consider other alternatives, such as the negative binomial model and estimating the model on subsamples only including searchers with short durations, as a robustness check. In the regressions, we include all the variables presented above as well as a time vector – consisting of time and time squared (in weeks) – to control for the fact that searchers who have been registered in the database longer have, on average, received more firm contacts (we consider alternatives to the time vector in the robustness analysis below).

In Table 5 we present the results.

In column 1 in Table 5, we see that a high wage demand has a clear negative effect on the number of firm contacts received. The coefficient implies that the relative effect is around

three percent. For an 18-25 year old searcher with a Swedish name, primary education, no experience and a wage demand of SEK 20,000 (equivalent to €2,000), our results predict that increasing the wage request with ten percent reduces the number of contacts received with around seven percent. Thus the effect is both statistically and economically significant. In column 2, we report the results of running the same regression on a subsample where we exclude the searchers with the ten percent highest wage demands. We see that the effect from a high wage demand is bigger for workers with low wage demands. This is not surprising; an increase in the wage demand by a fixed amount is obviously more important in relative terms for a worker with a low wage. The effects from other characteristics are as expected: The number of contacts received is e.g. lower for workers with non-Nordic names and older workers (c.f. Eriksson and Lagerström (2007)). All results are stable across different specifications and estimation methods (including using the negative binomial model).

We have also divided the sample into subsamples based on e.g. gender, age and ethnicity and run separate regressions, but find no statistically significant differences across groups.

To investigate whether our results are robust, we have experimented with a number of extensions to the baseline specification. First, a potential concern is that there exist important observable variables, affecting the number of contacts the searchers get, which we have not managed to properly control for. To test whether this is the case, we have experimented with adding additional variables from official registers not observable to the firms. For example, we have included the previous wage as a regressor. This variable, which is not observable by the firms, should only be significant if our specification does not capture how employers use the information in ‘My CV’. It turns out that this variable is clearly insignificant and does not affect any of the other results. This is a strong indication that our specification captures all relevant differences across searchers. Second, a potential concern is that the way we control

for time may affect the results. Essentially, there is a stock-flow sample issue which we need to consider as searchers enter and leave the database continuously (remember that our sample includes both new and previously registered users of ‘My CV’). In our regressions, we have controlled for differences in the time (in weeks) searchers have been registered in the database by including a time vector consisting of time and time squared. However, other alternatives are possible such as dividing the searchers into discrete groups based on their time in the database or to analyze subsamples of searchers where restrictions are imposed on the time they are allowed to have been in the database. We have tried these alternatives, and find that our results are robust to the way we control for time.

To summarize, we show that high wage demands reduce the number of firm contacts received in ‘My CV’. We know from previous research that contacts received in ‘My CV’ matter for the probability of actually getting a job (see Eriksson and Lagerström (2007)). Thus our results indicate that too high wage demands may contribute to high unemployment.

## **5 Concluding Remarks**

In this paper, we use a new dataset to study the determinants of unemployed workers’ wage demands, and how these wage demands affect the number of firm contacts the searchers get. Our data on wage demands are observed by real world firms, and thus should be more reliable than the answers to hypothetical questions in surveys which are typically used in the previous studies. We find that unemployed workers, in general, demand wages which are close to what they earned in their previous jobs and much higher than what they get in unemployment benefits, but that some groups, such as women (especially women with non-Nordic names), demand lower wages. Also, we find that searchers who demand high wages receive fewer firm contacts than otherwise similar searchers who demand lower wages.

Our results indicate that policymakers should consider the possibility that too high wage demands among unemployed workers may contribute to high unemployment. To reduce unemployment it is often needed that unemployed workers are willing to accept lower wages than what they received in their previous jobs, especially if their skills have become obsolete. If workers are unwilling to accept such wage cuts, it becomes much more difficult to reduce unemployment. Also we find that some groups, such as women, systematically demand lower wages. Thus our results may also, to some extent, help us understand existing wage differentials.

## References

- Addison, J. T., Centeno, M. and Portugal, P. (2009a), Do Reservation Wages Really Decline? Some International Evidence on the Determinants of Reservation Wages, *Journal of Labor Research*, 30, 1-8).
- Addison, J. T., Centeno, M. and Portugal, P. (2009b), Unemployment Benefits and Reservation Wages: Key Elasticities from a Stripped-Down Job Search Approach, *Economica* (forthcoming).
- Devine, T. J., and Kiefer, N. M. (1991), *Empirical Labor Economics: The Search Approach*, Oxford University Press, Oxford.
- Eriksson, S., and Lagerström, J. (2007), Detecting Discrimination in the Hiring Process: Evidence from an Internet-based Search Channel, Working Paper 2007:29, Department of Economics, Uppsala.
- Feldstein, M., and Poterba, J. (1984), Unemployment Insurance and Reservation Wages, *Journal of Public Economics*, 23, 141-167.
- Hui, W.-T. (1991), Reservation Wages of Unemployed Youths in Australia, *Applied Economics*, 23, 1341-1350.

- Jones, S. R. G. (1988), The Relationship Between Unemployment Spells and Reservation Wages as a Test of Search Theory, *Quarterly Journal of Economics*, 103, 741-765.
- Jones, S. R. G. (1989), Reservation Wages and the Cost of Unemployment, *Economica*, 56, 225-246.
- Prasad, E. S. (2003), What Determines Reservation Wages of Unemployed Workers? New Evidence from German Micro Data, IZA DP 694.
- Shimer, R., and Werning, I. (2007), Reservation Wages and Unemployment Insurance, *The Quarterly Journal of Economics*, 122, 1145-1186.
- Säve-Söderbergh, J. (2007), Are Women Asking for Low Wages? Gender Differences in Wage Bargaining Strategies and Ensuing Bargaining Success, Working Paper 7/2007, Swedish Institute for Social Research, Stockholm.

## **Appendix**

### **Description of 'My CV'**

When registering, the searchers are required to enter information into the following eleven forms: (1) Personal information, (2) Employment history, (3) Education, (4) Other merits, (5) Computer skills, (6) Language skills, (7) Driving license, (8) Personal statement, (9) Occupations where the searcher is looking for work, (10) Counties/cities where the searcher is looking for work, and (11) Other requirements (including the wage demand). Mostly, information is entered by choosing from lists of alternatives. Searchers are allowed to change or delete their CVs at any time.

The CVs are only visible to employers if all the forms are completed. To stay visible, searchers are required to log into their accounts at least every twelve weeks.

All employers registered at the Employment Service are allowed to search in the database. Employers have access to a search tool where they can specify search criteria such as occupation, region etc., but they cannot specify requirements on e.g. the time the searcher has been registered in the database, gender, ethnicity, age or employment status.

All searchers (both new and previously registered users) who logged into 'My CV' during a couple of weeks in December 2004 were asked if they wanted to participate in a research project on 'the recruitment behavior of firms'. The offer appeared as a pop-up box on the computer screen during login, and a short text explained that to participate meant that they agreed that their CVs could be used for anonymous research. Those who agreed were also asked to immediately answer a short online questionnaire also appearing as a pop-up box on the computer screen. The questionnaire was designed by us in collaboration with the Employment Service for a larger research project. The questions were: (1) So far, have you received a contact with an employer from using 'My CV' [yes, no], (2) What is your main employment status at present [employed, unemployed, in a labor market program, university

student, participate in adult education, high school student, on parental leave, none of the above], (3) How long is your total labor market experience [less than one year, 1-2 years, 2-5 years, 5-10 years, 10-15 years, 15-20 years, more than 20 years], (4) How much of your total labor market experience are in those occupations that you are looking for work in [nothing or almost nothing, some, all or almost all], (5) Are you registered as unemployed at the Employment Service [yes, no], (6) Do you think that an employer in general perceives your name as Swedish [yes, no], and (7) If you answered no to the previous question: How do you think that employers generally perceive your name [Nordic, Asian, African, Arabic, none of the above].

Our dataset includes all the information that the searchers have registered in their CVs (except their names and short personal statements), the answers to the questionnaire and how many firm contacts they have received. Our identification strategy requires that we take into account all the information observable to the employers who use 'My CV'. Thus we construct our variables using the information directly available in the CVs. However, since our data does not include the searchers' names (or any other information on ethnicity), we use the answer to the ethnicity questions in the questionnaire to create the ethnicity variable. This should be similar to the information firms can deduce directly from the searchers' names. Otherwise, the answers to the questionnaire were used only as a guide in the classification of data already available in the CVs.



**Table A1.** Comparison of the characteristics of the searchers in the sample with other unemployed searchers in ‘My CV’ and at the Employment Office.

	Sample ‘My CV’	All ‘My CV’	Employment Service
<i>Age:</i>			
Mean (years)	38.3	34.3	35.5
Age 18-25	0.10	0.27	0.26
Age 26-35	0.38	0.32	0.31
Age 36-50	0.34	0.28	0.28
Age 51-65	0.18	0.12	0.15
<i>Gender:</i>			
Female	0.55	0.53	0.40
<i>Ethnicity:</i>			
Nordic-sounding name	0.89	0.82	0.81
Non-Nordic sounding name	0.11	0.18	0.19
<i>Highest level of completed education:</i>			
Primary	0.14	0.13	0.34
Secondary	0.29	0.33	0.39
Postsecondary	0.57	0.54	0.27
<i>Occupation:</i>			
Legislators, senior officials and managers	0.04	0.04	0.02
Professionals	0.36	0.32	0.23
Technicians and associate professionals	0.31	0.31	0.17
Clerks	0.34	0.31	0.23
Service workers and shop sales workers	0.23	0.28	0.39
Skilled agricultural and fishery workers	0.08	0.04	0.03
Craft and related trades workers	0.11	0.13	0.13
Plant and machine operators and assemblers	0.13	0.13	0.19
Elementary occupations	0.14	0.31	0.18

Note: For the data from ‘My CV’ the following applies: ‘All’ includes all unemployed searchers who have agreed to participate in the study irrespective of whether or not they have registered a wage demand. A searcher may look for work in several occupations. For the data from the Employment Service the following applies: The ethnicity variable is based on the country of birth.

**Table A2.** The determinants of the wage demand, by gender

	(2)		(3)		(4)	
	Women	Men	Women	Men	Women	Men
Age 26-35	0.090*** (0.019)	0.020 (0.028)	0.077*** (0.022)	-0.033 (0.035)	0.091*** (0.019)	0.026 (0.028)
Age 36-50	0.100*** (0.025)	0.089** (0.036)	0.086*** (0.027)	0.042 (0.042)	0.102*** (0.025)	0.099*** (0.036)
Age 51-65	0.107*** (0.030)	0.112*** (0.043)	0.083*** (0.031)	0.045 (0.047)	0.110*** (0.030)	0.123*** (0.043)
Non-Nordic name	-0.063*** (0.018)	0.013 (0.022)	-0.067*** (0.018)	-0.001 (0.023)	-0.064*** (0.018)	0.009 (0.022)
Secondary school	-0.006 (0.016)	-0.011 (0.022)	0.004 (0.016)	-0.010 (0.022)	-0.005 (0.016)	-0.006 (0.022)
Postsecondary school	0.032** (0.016)	0.052** (0.021)	0.036** (0.016)	0.041** (0.021)	0.033** (0.016)	0.057*** (0.021)
Log unemployment benefits	0.108*** (0.021)	0.120*** (0.028)	-	-	0.109*** (0.021)	0.118*** (0.028)
Log previous wage	-	-	0.216*** (0.028)	0.340*** (0.030)	-	-
Log time to exhaustion	-	-	-	-	0.005 (0.006)	0.020** (0.010)
Experience	Yes	Yes	Yes	Yes	Yes	Yes
Other skills	Yes	Yes	Yes	Yes	Yes	Yes
Region of residence	Yes	Yes	Yes	Yes	Yes	Yes
Region of search	Yes	Yes	Yes	Yes	Yes	Yes
Occupation	Yes	Yes	Yes	Yes	Yes	Yes
Number of obs.	822	685	715	584	822	685
R <sup>2</sup>	0.54	0.58	0.57	0.66	0.54	0.58

Note: The dependent variable is the log of the wage demand. The column numbers correspond to those in Table 4. A constant is always included. The experience and skill variables include all variables in Table 1. The reference category is an 18-25 year old person with a Swedish-sounding name who has primary education and no experience. \*\*\*, \*\* and \* denotes significance at the 1, 5 and 10 percent level. Robust standard errors are in parenthesis.

**Table A3.** The determinants of the wage demand, by previous wage

	(2)		(3)		(4)	
	Low wage	High wage	Low wage	High wage	Low wage	High wage
Female	0.015 (0.015)	-0.044*** (0.014)	0.016 (0.015)	-0.021 (0.015)	0.015 (0.015)	-0.042*** (0.014)
Age 26-35	0.074*** (0.022)	0.056** (0.024)	0.048** (0.022)	0.048 (0.036)	0.073*** (0.022)	0.062*** (0.024)
Age 36-50	0.070** (0.029)	0.099*** (0.029)	0.052* (0.029)	0.082** (0.040)	0.070** (0.029)	0.108*** (0.029)
Age 51-65	0.027 (0.037)	0.111*** (0.034)	0.007 (0.036)	0.081* (0.043)	0.028 (0.037)	0.123*** (0.034)
Non-Nordic name	-0.025 (0.022)	-0.009 (0.018)	-0.030 (0.021)	-0.007 (0.021)	-0.025 (0.022)	-0.014 (0.018)
Secondary school	-0.031 (0.021)	0.008 (0.018)	-0.020 (0.020)	0.008 (0.018)	-0.030 (0.021)	0.008 (0.018)
Postsecondary school	0.009 (0.021)	0.057*** (0.016)	0.015 (0.020)	0.046*** (0.016)	0.010 (0.021)	0.059*** (0.016)
Log unemployment benefits	0.105*** (0.035)	0.127*** (0.021)	-	-	0.107*** (0.035)	0.127*** (0.021)
Log previous wage	-	-	0.138*** (0.045)	0.316*** (0.032)	-	-
Log time to exhaustion	-	-	-	-	0.004 (0.007)	0.021*** (0.008)
Experience	Yes	Yes	Yes	Yes	Yes	Yes
Other skills	Yes	Yes	Yes	Yes	Yes	Yes
Region of res.	Yes	Yes	Yes	Yes	Yes	Yes
Region of search	Yes	Yes	Yes	Yes	Yes	Yes
Occupation	Yes	Yes	Yes	Yes	Yes	Yes
Number of obs.	577	930	553	746	577	930
R <sup>2</sup>	0.38	0.55	0.37	0.56	0.38	0.55

Note: The dependent variable is the log of the wage demand. The column numbers correspond to those in Table 4. 'High wage' and 'low wage' correspond to an income level >(<) SEK 18,700 (€1870). A constant is always included. The experience and skill variables include all variables in Table 1. The reference category is an 18-25 year old man with a Swedish-sounding name who has primary education and no experience. \*\*\*, \*\* and \* denotes significance at the 1, 5 and 10 percent level. Robust standard errors are in parenthesis.

**Table A4.** The determinants of the wage demand, by the duration of unemployment

	(2)		(3)		(4)	
	Short	Long	Short	Long	Short	Long
Female	-0.045*** (0.015)	-0.014 (0.016)	-0.038*** (0.016)	0.002 (0.015)	-0.044*** (0.015)	-0.013 (0.016)
Age 26-35	0.041* (0.022)	0.050* (0.027)	0.020 (0.027)	0.019 (0.031)	0.044* (0.022)	0.050* (0.027)
Age 36-50	0.050 (0.031)	0.096*** (0.032)	0.035 (0.035)	0.070** (0.035)	0.054* (0.031)	0.096*** (0.032)
Age 51-65	0.045 (0.040)	0.123*** (0.037)	0.005 (0.043)	0.080** (0.038)	0.054 (0.040)	0.125*** (0.037)
Non-Nordic name	-0.001 (0.021)	-0.012 (0.021)	-0.021 (0.022)	-0.015 (0.020)	-0.002 (0.021)	-0.015 (0.021)
Secondary school	0.001 (0.020)	-0.021 (0.021)	0.021 (0.020)	-0.015 (0.019)	0.003 (0.020)	-0.020 (0.021)
Postsecondary school	0.034* (0.019)	0.043** (0.019)	0.047** (0.019)	0.029 (0.018)	0.039** (0.019)	0.044** (0.019)
Log unemployment benefits	0.094*** (0.024)	0.130*** (0.027)	-	-	0.093*** (0.024)	0.131*** (0.028)
Previous wage	-	-	0.250*** (0.031)	0.356*** (0.029)	-	-
Log time to exhaustion	-	-	-	-	0.024** (0.010)	0.008 (0.007)
Experience	Yes	Yes	Yes	Yes	Yes	Yes
Other skills	Yes	Yes	Yes	Yes	Yes	Yes
Region of res.	Yes	Yes	Yes	Yes	Yes	Yes
Region of search	Yes	Yes	Yes	Yes	Yes	Yes
Occupation	Yes	Yes	Yes	Yes	Yes	Yes
Number of obs.	718	739	603	655	718	739
R <sup>2</sup>	0.58	0.54	0.62	0.63	0.58	0.54

Note: The dependent variable is the log of the wage demand. The column numbers correspond to those in Table 4. The columns labeled 'short' and 'long' refers to workers who have been unemployed less or more than the median. A constant is always included. The experience and skill variables include all variables in Table 1. The reference category is an 18-25 year old man with a Swedish-sounding name who has primary education and no experience. \*\*\*, \*\* and \* denotes significance at the 1, 5 and 10 percent level. Robust standard errors are in parenthesis.

**Table 1.** Descriptive statistics about the searchers (in fractions)

Number of applicants	1 507
<i>Unemployment:</i>	
Average time on unemployment benefits (weeks)	22.0
<i>Age:</i>	
Mean (years)	38.3
Age 18-25	0.10
Age 26-35	0.38
Age 36-50	0.34
Age 51-65	0.18
<i>Gender:</i>	
Female	0.55
<i>Ethnicity:</i>	
Swedish or other Nordic name	0.89
Non-Nordic name	0.11
<i>Highest level of completed education:</i>	
Primary	0.14
Secondary	0.29
Postsecondary	0.57
<i>Work experience:</i>	
Less than 1 year	0.06
1-2 years	0.07
2-5 years	0.17
5-10 years	0.17
10-15 years	0.14
15-20 years	0.11
More than 20 years	0.28
Almost no experience in desired occupation	0.21
Some experience in desired occupation	0.40
Almost all experience in desired occupation	0.39
<i>Other skills:</i>	
Managerial experience	0.35
Telecommuting experience	0.11
Research experience	0.06
Driving license	0.81
Good computer skills	0.30
Good language skills - Swedish	0.94
Good language skills - English	0.57
Good language skills – German/French/Spanish	0.20
<i>Occupation:</i>	
Legislators, senior officials and managers	0.04
Professionals	0.36
Technicians and associate professionals	0.31
Clerks	0.34
Service workers and shop sales workers	0.23
Skilled agricultural and fishery workers	0.08
Craft and related trades workers	0.11
Plant and machine operators and assemblers	0.13
Elementary occupations	0.14

Note: The ethnicity variable is based on a question in the questionnaire. Searchers may look for work in several occupations.

**Table 2.** Wage demands and ratios compared with the wage in last job

Group	Wage demand	Ratio	Fraction with ratio				
			<0.8	<0.9	<1.0	<1.1	<1.2
All	19,866	1.00	0.12	0.23	0.50	0.80	0.90
Short-term unemployed	20,381	1.00	0.12	0.22	0.49	0.80	0.91
Long-term unemployed	19,664	1.00	0.12	0.25	0.53	0.80	0.90
Men	21,383	0.99	0.15	0.26	0.55	0.81	0.89
Women	19,127	1.01	0.10	0.21	0.47	0.79	0.91
Nordic name	20,140	1.01	0.12	0.23	0.50	0.80	0.91
Non-Nordic name	20,182	1.01	0.13	0.27	0.51	0.76	0.87
Age 18-25	16,036	0.97	0.19	0.30	0.55	0.74	0.90
Age 26-35	19,254	1.03	0.11	0.22	0.45	0.75	0.91
Age 36-50	20,613	1.01	0.11	0.21	0.48	0.79	0.91
Age 51-65	22,141	0.96	0.14	0.28	0.61	0.80	0.96
Primary school	19,945	0.96	0.16	0.28	0.58	0.88	0.95
Secondary school	18,265	0.98	0.12	0.26	0.59	0.85	0.94
Postsecondary school	21,224	1.03	0.11	0.20	0.43	0.74	0.87

Note: All wages are averages for each group, and are calculated as SEK per month for full-time employment. Ten SEK is equivalent to around one Euro. ‘Short- and long-term unemployed workers’ are workers whose durations are shorter or longer than the average duration. Only workers who receive income-based unemployment benefits are included.

**Table 3.** Wage demands and ratios compared with unemployment benefits

Group	Wage demand	Fraction max UB	Ratio	Fraction with ratio		
				<1.0	<1.5	<2.0
All	19,866	0.50	1.40	0.04	0.74	0.94
Short-term unemployed	20,381	0.51	1.41	0.04	0.73	0.94
Long-term unemployed	19,664	0.47	1.39	0.03	0.75	0.95
Men	21,383	0.61	1.46	0.04	0.64	0.91
Women	19,127	0.40	1.35	0.04	0.82	0.97
Nordic name	20,140	0.50	1.40	0.04	0.74	0.94
Non-Nordic name	20,182	0.49	1.44	0.06	0.68	0.94
Age 18-25	16,036	0.14	1.27	0.13	0.85	0.98
Age 26-35	19,254	0.41	1.38	0.04	0.75	0.96
Age 36-50	20,613	0.50	1.41	0.03	0.74	0.94
Age 51-65	22,141	0.74	1.47	0.03	0.65	0.91
Primary school	19,945	0.57	1.35	0.06	0.79	0.94
Secondary school	18,265	0.36	1.31	0.05	0.86	0.96
Postsecondary school	21,224	0.55	1.46	0.03	0.65	0.93

Note: All wages are averages for each group, and are calculated as SEK per month for full-time employment. Ten SEK is equivalent to around one Euro. Unemployment benefits are calculated in a similar way. The column labeled ‘fraction max UB’ shows the fraction of the workers in the group that receives the maximum amount of unemployment benefits possible. ‘Short- and long-term unemployed workers’ are workers whose durations are shorter or longer than the average duration. Only workers who receive income-based unemployment benefits are included.

**Table 4.** The determinants of the wage demand

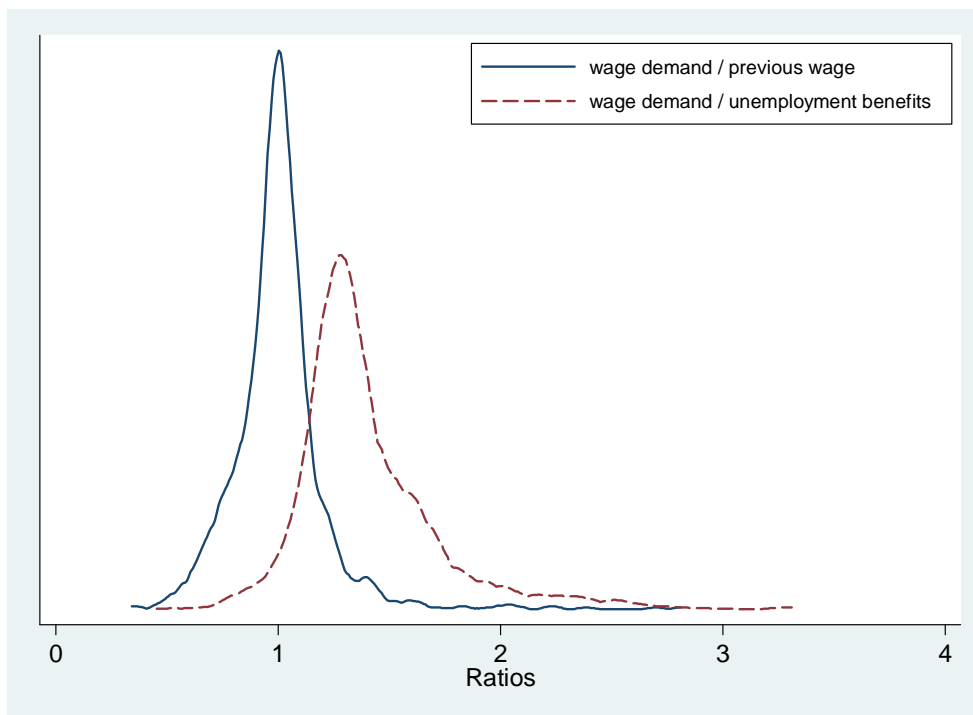
	(1)	(2)	(3)	(4)
Female	-0.026** (0.010)	-0.027*** (0.010)	-0.014 (0.010)	-0.026*** (0.010)
Age 26-35	0.067*** (0.016)	0.049*** (0.016)	0.038** (0.019)	0.051*** (0.016)
Age 36-50	0.107*** (0.021)	0.075*** (0.021)	0.066*** (0.022)	0.080*** (0.021)
Age 51-65	0.119*** (0.025)	0.087*** (0.025)	0.059** (0.026)	0.094*** (0.025)
Non-Nordic name	-0.012 (0.014)	-0.008 (0.014)	-0.013 (0.014)	-0.011 (0.014)
Secondary school	-0.013 (0.135)	-0.012 (0.013)	-0.001 (0.013)	-0.010 (0.013)
Postsecondary school	0.035*** (0.013)	0.038*** (0.012)	0.034*** (0.012)	0.040*** (0.012)
Log unemployment benefits	-	0.129*** (0.017)	-	0.131*** (0.017)
Log previous wage	-	-	0.304*** (0.019)	-
Log time to exhaustion	-	-	-	0.014*** (0.005)
Experience	Yes	Yes	Yes	Yes
Other skills	Yes	Yes	Yes	Yes
Region of residence	Yes	Yes	Yes	Yes
Region of search	Yes	Yes	Yes	Yes
Occupation	Yes	Yes	Yes	Yes
Number of obs.	1 507	1 507	1 299	1 507
R <sup>2</sup>	0.53	0.55	0.61	0.55

Note: The dependent variable is the log of the wage demand. A constant is always included. The experience and skill variables include all variables in Table 1. The reference category is an 18-25 year old man with a Swedish-sounding name who has primary education and no experience. \*\*\*, \*\* and \* denotes significance at the 1, 5 and 10 percent level. Robust standard errors are in parenthesis.

**Table 5.** Poisson estimates of the number of contacts received

	All	Wage demand <p90
Wage demand (in thousands SEK)	-0.034** (0.015)	-0.073*** (0.022)
Female	-0.174 (0.125)	-0.056 (0.136)
Age 26-35	-0.285 (0.202)	-0.143 (0.210)
Age 36-50	-0.388 (0.258)	-0.307 (0.273)
Age 51-65	-0.571* (0.309)	-0.475 (0.335)
Non-Nordic name	-0.507*** (0.184)	-0.448** (0.195)
Secondary school	-0.084 (0.160)	-0.149 (0.171)
Postsecondary school	0.153 (0.144)	0.028 (0.161)
Experience	Yes	Yes
Other skills	Yes	Yes
Region of residence	Yes	Yes
Region of search	Yes	Yes
Occupation	Yes	Yes
Number of obs.	1507	1383
R <sup>2</sup>	0.45	0.47

Note: The dependent variable is the number of firm contacts received. Ten SEK is equivalent to around one Euro. In column 2, we exclude the searchers with the ten percent highest wage demands. A constant and a time vector (time and time squared) is always included. All skill variables listed in Table 1 are included. The reference category is an 18-25 year old man with a Swedish-sounding name who has primary education and no experience. \*\*\*, \*\* and \* denotes significance at the 1, 5 and 10 percent level. Robust standard errors are in parenthesis.

**Figure 1.** The ratios of wage demands to previous wages and unemployment benefits



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