

Gender Gaps in Unemployment Rates in OECD Countries

Ghazala Azmat*, Maia Guell** and Alan Manning***

Abstract

There is an enormous literature on gender gaps in pay and labour market participation but virtually no literature on gender gaps in unemployment rates. Although there are some countries in which there is essentially no gender gap in unemployment, there are others (crudely, the 'Mediterranean' countries) in which the female unemployment rate is substantially above the male. Although it is easy to give plausible reasons for why more women than men may decide not to want work, it is not obvious why, once they have decided they want work, women in these countries find it so much harder to get jobs. This is the subject of this paper.

We show that the source of the gap is a gender gap in both flows from employment into unemployment and from unemployment into employment. We investigate different hypotheses about the sources of these gaps. Most hypotheses find little support in the data and the gender gap in unemployment rates (like the gender gap in pay) remains largely unexplained. But it does seem to correlate with attitudes on whether men are more deserving of work than women so that discrimination against women may explain part of the gender gap in unemployment rates in the Mediterranean countries.

* Centre for Economic Performance, LSE

** Universitat Pompeu Fabra and Centre for Economic Performance, LSE

*** Department of Economics and Centre for Economic Performance, LSE

Introduction

There is an enormous literature on gender gaps in pay and a vast literature on gender gaps in labour force participation rates (see Altonji and Blank, 1999 inter alia). Yet, there is virtually nothing written on gender gaps in unemployment rates (though see Ham, Svejnar and Terrell, 1999, for an examination of two transition countries): for example a recent OECD paper on the position of women baldly stated on the first page that “the analysis concentrates on gender differences in employment, the organisation and characteristics of jobs and their remuneration, leaving aside the examination of unemployment or inactivity” (OECD, 2002, p63). If there were no interesting gender gaps in unemployment rates then this lack of literature might be understandable. But, as Table 1 shows, this is not the case, as while the gender gap in unemployment rates is small in some countries, there are others in which it is very large. In the ‘Anglo-Saxon’ countries, Norway and Sweden the male and female unemployment rates are quite similar and, in the UK, the male unemployment rate is noticeably higher than the female. But, in other countries the female unemployment rate is markedly above the male: the southern European countries of Greece and Spain stand out in this regard but it is also true of other ‘Mediterranean’ countries like Portugal, Italy and France and of Belgium, the Netherlands, Denmark and Switzerland. In a number of these countries the ‘unemployment problem’ is largely a problem of female unemployment¹.

Figure 1 looks at the evolution of male and female unemployment rates over time. One can see that there is an interesting reversal. Most (though not all – France and Italy are exceptions) of the countries that now have large gender unemployment gaps used to have small or non-existent gaps whereas some countries like the US used to have a gender gap but now do not (although it was always much smaller than seen in some countries today).

This paper attempts to understand why this gap exists and how the cross-country variation can be explained. The structure of the paper is as follows. In the next section we consider the gender gap in unemployment rates in more detail, investigating whether the aggregate figures (as presented in Table 1 and Figure 1) can be explained by gender gaps in characteristics. The answer, probably unsurprisingly, is ‘no’. This section also investigates variation in the gender gap in unemployment rates across different characteristics: we find that the gender gap (in countries where it exists) tends to be larger for the young, married women and those with young children.

The second section then looks at gender differences in labour market dynamics, the flows into and out of employment, unemployment and inactivity. Women tend to have higher flows out of employment into unemployment in countries with a marked gender gap in unemployment rates and higher flows into inactivity in most countries. But, the countries with a large gender gap in unemployment rates also tend to have large gender differentials in the flow out of unemployment into employment. We need to understand both why employed women in some countries leave employment for unemployment at a faster rate and why unemployed women in some countries find it so much more difficult than men to get employment.

The third section investigates in more detail flows out of employment into unemployment. We show that, in most countries, one cannot explain much of the gender gap in these flows using gender differences in the types of jobs that men and

¹ Typically these countries also have very high youth unemployment rates though we do not consider this issue here.

women do. We also show that domestic responsibilities (primarily child care) only account for a small fraction of job endings so that it is not primarily gender differences in these responsibilities that can account for the differences in these flows.

The fourth section investigates the flow from unemployment to employment. We find no evidence that the female unemployed are less 'serious' about wanting work than their male counterparts. Their reported search activity is as intense and their receipt of welfare benefits is typically quite low.

The fifth section considers the hypothesis that it is the behaviour of employers that makes it difficult for unemployed women to get jobs in some countries. We present evidence that in countries where attitudes are more gender biased the gender gap in unemployment rates is higher. We suggest that, when the overall unemployment rate is high and there are queues for most jobs, it is relatively easy for employers to indulge in discriminatory behaviour.

The sixth section investigates the hypothesis that, in some countries, there is a mismatch between the types of jobs that unemployed women want and employers are offering. Perhaps the most notable possible example is the availability of part-time work. It is true that there is a lot of variation in the extent of part-time employment and that it tends to be relatively rare in the 'Mediterranean' countries which have large gender gaps in unemployment rates. But, the unemployed women in these countries do not report they are looking for part-time jobs and it seems likely that the lack of availability of part-time work can explain low female participation rates in some countries but not their high unemployment rates.

The seventh section then considers in more detail the flows involving inactivity. We suggest that when unemployment is high, the flows from inactivity to unemployment are likely to be higher as one cannot just start looking for a job when one wants to work.

Our conclusion is that it is easier to provide evidence against certain hypotheses about the source of gender gaps in unemployment than it is to provide evidence for hypotheses. In this there is perhaps a parallel to the gender pay gap which is also hard to fully explain. However, we do suggest that attitudes towards male and female unemployment may be important in explaining the gap in countries where unemployment is high.

1. Variations in the gender gap in unemployment rates

It is conceivable that the gender gaps in unemployment rates observed in Table 1 can be explained away by gender gaps in characteristics that vary across countries. For example, it could be the case that, in the southern European countries, women are less well-educated than men and unemployment rates tend to be higher for those with lower levels of education.

To investigate this hypothesis we estimate probit models for the probability of being unemployed (conditional on being in the labour force) including a variety of characteristics as well as a female dummy. The other characteristics included are dummies for age, education, marital status, and the presence of kids in the household. For the European countries, we use data from the first six waves of the European Community Household Panel Survey (ECHPS) that cover the period 1994-1999² and, for the United States, we use data from the Current Population Survey (CPS) from 1996-2000 (to have an approximately comparable period).

² There have been some concerns about the representativeness of the ECHPS. But we have checked the results for the UK and Spain using their respective Labour Force Surveys and the results are very similar.

The results are reported in Table 2. The first column reports the marginal effects when only a female dummy is included i.e. we estimate a model of the form:

$$\Pr(U = 1) = \Phi(\mathbf{b}_0 + \mathbf{b}_1 \text{female}) \quad (1)$$

These marginal effects should be comparable to the gender gaps in aggregate unemployment rates presented in Table 1. They are similar though not identical, the reason being that the data come from different sources. The second column then reports the marginal effect of the female dummy when the other characteristics are included in the model (their coefficients are not reported to save space) i.e. we estimate a model of the form:

$$\Pr(U = 1) = \Phi(\mathbf{b}_0 + \mathbf{b}_1 \text{female} + \mathbf{b}_2 x) \quad (2)$$

where x is the vector of other characteristics. Although there is a very slight tendency for the gender gap in unemployment rates to fall in the ‘Mediterranean’ countries (largely because the educational attainment of women is lower than that of men in those countries) the amount of the gender gap that can be explained using these characteristics is small and substantial gender gaps in unemployment remain in the countries where they exist in the aggregate data.

The model estimated so far assumes that all women, whatever their other characteristics, have a higher chance of being unemployed. But, it may be the case that the gender gap varies with characteristics. So, we then estimate a model in which all the characteristics are interacted with a female dummy i.e. a model of the form:

$$\Pr(U = 1) = \Phi(\mathbf{b}_0 + \mathbf{b}_1 \text{female} + \mathbf{b}_2 x + \mathbf{b}_3 \text{female} * x) \quad (3)$$

The marginal effects of these interactions are reported in the third through twelfth column of Table 2. There is obviously a lot of information here so the results are hard to digest. Where the interaction terms are significant it seems to be that it is among the young, the married and those with young children that the gender gaps in unemployment rates are largest.

This section has shown that the raw gender gaps in unemployment rates cannot be explained away by gender gaps in characteristics and that, in countries where a large gender gap in unemployment rates exists, it is, to a first approximation, all women who suffer the disadvantage.

A natural next question is whether the gender gap in unemployment rates that we observe in some countries is the result of gender differences in flows into unemployment or flows out of unemployment: this is the subject of the next section.

2. Gender gaps in Labour Market Dynamics

Most labour economists are familiar with the following formula for the steady-state unemployment rate:

$$u = \frac{h_{eu}}{h_{eu} + h_{ue}} \quad (4)$$

where h_{eu} is the rate at which workers leave employment for unemployment and h_{ue} is the rate at which they leave unemployment for employment. But, the formula in (4) is based on the assumption that an individual can only be either employed or unemployed. Given the importance of inactivity for women (and increasingly for men in many countries) using this formula to understand differences in unemployment rates might be thought to be a bit limiting. If one introduces the extra state of inactivity then one can show that the steady-state unemployment rate (note – not the unemployment-population ratio) is given by:

$$u = \frac{h_{eu} + \frac{h_{iu}h_{ei}}{h_{ie} + h_{iu}}}{h_{eu} + h_{ue} + \frac{h_{iu}h_{ei} + h_{ie}h_{ui}}{h_{ie} + h_{iu}}} \quad (5)$$

where h_{iu} is the rate at which workers leave inactivity for unemployment etc. If there are gender differences in unemployment rates this must be because of gender differences in some (or all) of the hazard rates in (5). But which differences are most important is likely to be helpful in understanding gender differences in unemployment rates.

The formula in (5) is a little hard to get an intuitive feel for so the following way of re-writing it may be more helpful:

$$u = (1 - \mathbf{a}) \frac{h_{eu}}{h_{eu} + h_{ue}} + \mathbf{a} \frac{(h_{ei} / h_{ui})}{(h_{ei} / h_{ui}) + (h_{ie} / h_{iu})} \quad (6)$$

where:

$$\mathbf{a} = \frac{h_{ie}h_{ui} + h_{iu}h_{ei}}{h_{ie}(h_{ui} + h_{eu} + h_{ue}) + h_{iu}(h_{ei} + h_{eu} + h_{ue})} \quad (7)$$

The interpretation of (6) is the following. It says that the overall unemployment rate can be thought of as a weighted average of two ‘component’ unemployment rates. The first term on the right-hand side of (6) is the unemployment rate if there were never any flows into or out of inactivity (it is simply the formula in (4)). The second term on the right-hand side of (6) is what the unemployment rate would be if there were never any direct flows between employment and unemployment only indirect flows via inactivity. Note that it is the relative size of flows from between employment/unemployment and inactivity that determines this unemployment rate. So, if workers flow at a faster rate from employment to inactivity than from unemployment to inactivity this will tend to raise the unemployment rate.

So, one of the terms in (6) assumes inactivity is unimportant in determining the unemployment rate and the other that it is very important. The weight \mathbf{a} is then a measure of the relative importance of flows via inactivity in generating unemployment.

Table 3a presents estimates of the hazard rates and computation of the different components in (6) for men and Table 3b the corresponding information for women. The data we use for this comes from the retrospective monthly employment history that all individuals in the ECHPS are asked to complete and from consecutive monthly CPS files matching those individuals who are in both months. Our method for estimating the labour market transition rates is the following. We have observations on the labour market state an individual is in at one date (denote this by S_0 that can take the values e,u,i) and then again at a later date (denote this by S_t). In our data the interval between the two observations is a month so it is a reasonable approximation to assume that individuals cannot make two transitions in that period. Then the simplest way to estimate a hazard rate (h_{eu} say) is to note that:

$$\Pr(S_t = e | S_0 = e, S_t \neq i) = e^{-h_{eu}t} \quad (8)$$

The left-hand side of (8) is readily computed using our data and we take the negative of the log to compute the hazard rate. The hazard rates in Table 3 are multiplied by 100 so can be thought of as the percentage of individuals in one labour market state moving to another in the course of a month.

One noticeable feature of this data is that flows between different labour market states are much higher in the US than in the European countries. While this is probably true, there are some reasons for thinking that the gap as it appears in Table 3 is larger than in reality as the European data comes from retrospective information that tend to ‘forget’ transitions and the US data is known to have misclassification (see Abowd and Zellner, 1983, or Abraham and Shimer, 2002). However, the main interest here is not the comparison across countries but the gender gaps within countries so we do not attempt to correct the data in any way.

Table 3 also reports the estimated hazard rates for all labour market transitions, steady-state unemployment rate one would calculate ignoring inactivity, that one would calculate ignoring direct flows between employment and unemployment, and the ‘share’ of the two components using the formula in (6) and (7). Finally, this steady-state unemployment rate is compared with the actual in the data as a check on the internal consistency.

Looking at the results for men in Table 3a one can see that the ‘a’ is small, implying that flows into and out of inactivity are relatively unimportant in explaining the male unemployment rate. Also, the two component unemployment rates are very similar. So, the bottom line is that the difference in the steady-state unemployment rates computed using the formulae in (4) and (6) are very small and that, to a first approximation, one can ignore inactivity. Given the high labour force participation rates for men this is probably not that surprising.

What might be found more surprising are the results for women in Table 3b. It is true that ‘a’ is larger for women than for men, implying a more important role for inactivity but, in many countries, it is still very low. This is quite consistent with a low female participation rate if inactivity is a very stable state. And, again the two component unemployment rates tend to be quite similar with the conclusion that the use of (4) rather than (6) will not lead to seriously misleading conclusions.

Given the results in Table 3 we will concentrate initially on gender gaps in flows into and out of unemployment and only return later to gender gaps in flows involving inactivity. One must be careful here: the results in Table 3 do not suggest that gender gaps in flows involving inactivity are non-existent, it is simply that they mirror gender gaps in flows that do involve inactivity. This needs to be borne in mind.

We now estimate the hazard rates including other relevant controls. As the hazard rates must be non-negative a convenient empirical model is:

$$h_{eu} = e^{b_{eu}x} \quad (9)$$

where x is a vector of characteristics (that will include female dummies). Substituting (9) into (8) suggests that a simple way to estimate b_{eu} is to restrict the sample to those who are initially in employment and not subsequently in inactivity and then use a complementary log-log model to estimate the probability that the individual is in employment. A similar methodology can be used to estimate all the other hazard rates. The coefficients on a female dummy are reported in Table 4a without any other controls) and in Table 4b with controls.

Note that the coefficient estimates will be the extent to which the hazard rate for a particular labour market transition is proportionately different for women. So, when we see in the column headed h_{eu} that the coefficient on the female dummy for

Germany is 0.067 this means that women are 6.7% more likely to leave employment for unemployment than men³.

There is a lot of information in Table 4 but the most important points are the following. If we consider direct flows between employment and unemployment, the countries with a large gender gap in unemployment rates seem to have large gender gaps in both the flows from employment to unemployment and the flows from unemployment to employment. Both of these gender gaps need to be understood. One might be concerned about the robustness of this conclusion but other data support it. If women find it harder than men to leave unemployment in some countries then we would expect their durations of unemployment to be higher on average. This is what we see in Table 5.

If we consider flows involving inactivity, women in all countries tend to have higher flows into inactivity both from employment and unemployment. But, as the discussion of (6) above made clear, it is the proportional difference in the hazard rates from employment and unemployment to inactivity that is important for the unemployment rate so that one should look at the difference between the female dummy on the EI transition and the UI transition in Table 4. In the countries with high gender gaps in unemployment rates there is some indication that the gender gap in the flow from employment to inactivity is larger than the gender gap in the flow from unemployment to inactivity: this will tend to increase the unemployment rate. There is a less systematic pattern in the gender gap in flows from inactivity to employment or unemployment.

Given the evidence in Table 4 we focus first on the flows from employment to unemployment, then on the flows from unemployment to employment and finally on the flows involving inactivity.

3. Gender Differences in Flows from Employment to Unemployment

As Table 4 has shown, women in the countries with high gender gaps in unemployment rates tend to leave employment for unemployment at a higher rate than do men.

The flow from employment to unemployment is investigated in Table 6. Here we estimate models for the rate at which women leave employment for unemployment. These regressions are similar to those we estimated in Table 4 except that, because we are only considering individuals who are initially employed, we can include some characteristics of the job – notably, industry, occupation, the size of employer, the type of contract and whether the job is public sector to investigate whether gender gaps in these variables can help to explain gender gaps in flows from employment to unemployment.

³ One might wonder whether proportionate or absolute differences in hazard rates are the more important: we think proportionate differences for the following reason. To keep things simple, consider the formula for the steady-state unemployment rate in (4). Then simple, differentiation shows that:

$$\frac{\partial u}{\partial \ln(h_{eu})} = u(1-u) = -\frac{\partial u}{\partial \ln(h_{ue})}$$

¡Error! Sólo el documento principal.(9)

so that a proportionate change in h_{eu} will have the same impact on unemployment (though with the opposite sign) as an equal proportionate change in h_{ue} . This means that we can, more or less, compare the coefficients on the female dummy for different transition rates.

In the first column of Table 6 we report estimates of models for the transition from employment to unemployment that include only a female dummy. One can see that this is very large and significant in many countries as we would expect from the evidence of Table 4. The next four columns then reports results when we include personal characteristics like age, education, marital status and number of children. Because the impact of marital status and children on flows out of employment might be thought to be different for men and women we interact these variables with the female dummy. But, there are only a few countries in which these interactions are significant suggesting that domestic responsibilities do not play a big role in transitions from employment to unemployment. The final set of columns report the results when we also include job characteristics. In most countries (the exceptions are Denmark, France and Ireland) this has only a small effect on the female dummy suggesting that gender differences in the distribution of employment across occupation, industry and contract status cannot explain much of the gender gap in flows from employment to unemployment.

The bottom line is that, in the countries where there is a large gender gap in flows from employment to unemployment, a large part of this gap cannot be explained in terms of differences in the types of jobs that men and women do or to differences in the reaction to domestic responsibilities. One way to investigate this finding further is to look at information on the reasons given for why jobs end. Table 7a tabulates the reasons given by the currently unemployed for why their previous job ended and in Table 7b reasons are given by the currently inactive for why the previous job ended. With the exception of a couple of countries, reasons connected with ‘caring’ account for a very small fraction of jobs ending where the individual is currently unemployed⁴. This is not surprising: most women leaving employment to have children go directly into inactivity.

In many countries men are more likely than women to be laid-off. In countries like the UK this difference is extreme – 45% of male jobs end because the worker is laid-off compared to 23% of women. In the countries where the female unemployment rate is a long way above the male, the most striking feature of Table 7a is the similarity in the proportions of jobs ending for different reasons. So, there does not seem to be a large gender gap in the reasons for why workers leave employment for unemployment. This hints that it may be employers who are choosing to end the contracts of married women with children rather than those women choosing to quit.

Now, let us turn to flows in the opposite direction, from unemployment to employment.

4. Flows from Unemployment to Employment: The behaviour of workers

The actions of both individuals and employers are likely to affect the flow from unemployment to employment. In this section we consider the actions of the unemployed themselves and the following section considers the actions of employers.

The unemployment rate is meant to measure the fraction of people who want a job but do not have one. The ILO definition of unemployment uses evidence that people have looked for work in the recent past and are available to start work in the near future to determine whether people without work currently want it. But some economists think that while there is a meaningful distinction between employment

⁴ In fact, Table 7a probably overstates the proportion as women who had children and left employment for inactivity but are now trying to get a job again will be included in the ‘currently’ unemployed category.

and non-employment, the distinction between unemployment and inactivity is meaningless. On this view the fact that fewer women want paid work (largely because of domestic responsibilities) ‘spills over’ into a higher unemployment rate and does not simply show up in a lower labour force participation rate. If this is true then, in some sense, the female unemployed in countries with large gender gaps in unemployment are less serious about getting work. There are a number of ways in which one might test this hypothesis.

Whether unemployment and inactivity are distinct labour market states was a question first posed by Flinn and Heckman (1983) and subsequently also addressed by Green and Riddell (1999). The basis of their tests is to see whether there is a significant difference between the probability of entering employment between those who are unemployed and those who are inactive.

Table 8 reports results for this exercise for the countries in the ECHPS. We report the marginal effect of being in employment in a month’s time of being unemployed rather than inactive. We also interact the female dummy with this variable to see whether there are significant gender differences. In all countries the unemployed are more likely to get a job than the inactive. The extent of this is similar in countries with a gender gap in unemployment rates and those without. Further, the interaction with the female dummy is significant in only a few countries and not noticeably the ones with a large gender gap. There does not seem any evidence here that, in some countries, the difference between the unemployed and the inactive is more blurred than in others.

Another way to consider the hypothesis that the female unemployed in some countries are less serious about getting work is to look at evidence on job search intensity. Measuring search intensity is problematic and the only available evidence is on numbers and types of job search (though it should be noted that those who report using more search methods do typically have lower durations of unemployment so the measure does seem to capture something of what we might expect). Table 9 presents evidence. The most striking feature is how similar is the distribution of search methods used among men and women in the same country. There is no evidence here that the female unemployed in some countries are less serious in their desire for work.

Another variant of this hypothesis is that benefit availability affects whether individuals not in employment are classified as inactive or unemployed. For example, in many countries, eligibility for unemployment-related welfare benefits is conditional on job search activity so that welfare benefits act as a subsidy to job search and might be expected to move some individuals from inactivity to unemployment. Table 10 presents some data on the fraction of the unemployed of different genders who report receiving any form of welfare benefit. Looking at this table it is very hard to see how it could possibly form the basis of an explanation as to why, in some countries, there is such a large gender gap in unemployment rates. For example, virtually no-one, male or female, in Italy receives any benefits and the proportions of men and women doing so in Spain and the UK are very similar even though they have radically different gender gaps in unemployment rates.

This section has explored the hypothesis that, for some reason, women in some countries who are classified as unemployed are not as serious about wanting work as the male unemployed. But, there is no evidence whatsoever for this hypothesis.

Another possible hypothesis about why women in some countries seem to find it hard to get jobs is that employers are less likely to give women jobs. The next section considers this.

5. Do Employers favour Men?

There are a number of possible reasons why employers might favour men when it comes to appointing to jobs. There may be economic reasons for such behaviour or it might have more social origins.

In the presence of equal pay legislation (which all OECD countries now have although it is far from fully effective) or other legislation that prevents free adjustment of women and men's pay employers may prefer to hire men to women if the employment of women imposes extra costs. For example, one sometimes hears the argument that employers prefer to appoint men because hiring is costly and men are more likely to stick in their jobs. Even if this is true it cannot really explain why women seem to have similar durations of unemployment to men in some countries but much longer durations in others. In fact, in the Mediterranean countries where firing costs are high one would expect employers to be relatively more favourably inclined towards employing women as groups with a higher voluntary separation rate will be relatively attractive workers. So, this hypothesis does not seem to have much mileage. An alternative hypothesis is that differences in maternity leave legislation make employers more favourably inclined towards men in some countries. But, as Table 11 shows, the differences in maternity leave regulations across EU countries are relatively small and the Nordic countries which have generous maternity provisions also have small gender gaps in unemployment rates.

Of course, it may not be legislation that makes men more attractive to employers than women: it could be lower levels of accumulated labour market experience among unemployed women. This might particularly be thought to be true in some of the 'Mediterranean' countries where, until recently, female labour market participation was very low. To investigate this we estimated a model for the flows from unemployment to employment excluding and including a variable denoting whether the individual has ever worked before and, if so, a variable measuring the length of time since last worked. As Table 12 shows the inclusion of these variables does little to reduce the gender gap in flows from unemployment to employment.

Another hypothesis is prejudice or discrimination. Employers may simply feel that women are less deserving of employment than men and make their hiring decisions accordingly. Putting these prejudices into practice is likely to be more easy when unemployment is high and there are long queues for jobs as an employer is likely to have many suitable candidates for any job. We can get some idea as to how widespread are discriminatory attitudes from various Eurobarometer surveys that have been conducted at various times (1973, 1983 and 1996) on attitudes towards gender issues in society. For example, both the 1983 and 1996 surveys asks respondents whether they agree with the statement "when jobs are scarce, men should have more right to a job than women" that seems closely related to the question we would like to answer.

In all countries men are more likely than women to think that women are less deserving of employment. But, there are also substantial differences across countries with, crudely, the Nordic countries being less discriminatory and the Mediterranean countries more so. There are also differences across regions within countries e.g. Southern Italy is more discriminatory than Northern Italy. Figure 2 plots the proportion against the gender differential in the unemployment rate using the 1996 data and using regional data. There does seem to be some positive relationship as is confirmed by the following regression results across the 139 regions shown in Figure 2 that also includes country fixed effects (standard errors in parentheses):

$$\text{Gender gap in unemployment rate} = 2.47 + 5.71 * \text{prejudice} + \text{country fixed effects} \\ (0.69) (1.98)$$

This finding that the gender gap in unemployment rates is higher even within countries in regions which are more discriminatory towards women does suggest that some degree of discrimination may be partly responsible for the gender gap in unemployment rates. However, a problem with this hypothesis is that the discriminatory attitudes have been around for a long time but, as Figure 1 showed, large gender gaps in unemployment rates are a relatively recent phenomenon. One way to reconcile this is the following idea. When overall unemployment rates are high and there are many applicants for most jobs, employers may be faced with a large number of job applicants who are more or less equivalent. In this situation they are more or less free to indulge any slight discriminatory preferences they may have without suffering any loss in profits from doing so. In contrast, in tight labour markets, waiting for a male job applicant rather than hiring a female one may be a much more costly strategy.

6. Mismatch

The previous two sections have explored the hypotheses that the female unemployed in some countries might be less serious about getting work than men and that employers might be less inclined to give jobs to women. Another possibility is that there is simply a mismatch between the desires of the female unemployed in terms of jobs and the jobs that employers are offering. Perhaps the most plausible form of mismatch is that women may want part-time jobs but these are very rare in some countries.

We do have some way of investigating this mismatch hypothesis as a number of surveys ask the unemployed whether they are looking for full- or part-time employment. Table 13 presents the raw data. There is not much evidence here that there is much of a disparity between the type of jobs that women report they want and the type of jobs that are available. For example in Spain the desire for part-time employment among the unemployed is lower than the incidence of part-time working in the employed population.

7. Flows between Inactivity and Unemployment

The discussion so far has focused on direct flows between employment and unemployment. But flows involving inactivity may also have some role to play. In particular, from Table 4, if one compares countries like Spain and the UK (the two extremes) one notices that the gender gap in flows between inactivity and unemployment and vice versa is larger in the UK than in Spain. This will tend to lead to a larger gender gap in unemployment rate in Spain than in the UK.

Why might this be the case? One hypothesis is the following. In labour markets where jobs are relatively freely available one can decide whether to look for work now based on whether you want work now because it is relatively easy to reverse this decision at a later date. But, if jobs are very hard to find one must take a longer-term view: even if one does not want work now, it may be worth looking for a job because there is no guarantee of being able to get one at a later date when you do want work. In the appendix we present a simple theoretical model that confirms this intuition.

8. Conclusions

In many of the European countries with high unemployment rates, the female unemployment rate is substantially above the male. This important gender gap has hardly been studied: remedying that deficiency is the purpose of this paper. We show that, in the countries with a large gender gap in unemployment rates, there tends to be a large gender gap in both flows from employment into unemployment and from unemployment into employment.

Providing explanations for this is not so easy and it is much simpler to present evidence against hypotheses than evidence in favour of them. For example, the gender gap is not well-explained for why differences in the type of jobs that men and women do, by differences in benefit receipt, by differences in search intensity and by differences in the allocation of domestic responsibilities. There does seem to be some correlation with social attitudes about whether men are more deserving of work than women but, at the end of the paper one is left with a large part of this gender gap that we are incapable of explaining. This, of course has its parallels in the literature on the gender pay gap, which economists have also struggled to fully account for. It may be that both phenomena have a common cause.

References

- Abowd, John M and Arnold Zellner (1985) "Estimating Gross Labor Force Flows", Journal of Business and Economic Statistics, 3(3): 254-83
- Abraham, Katherine G. and Robert Shimer (2002) "Changes in Unemployment Duration and Labor-Force Attachment", in Alan B. Krueger and Robert M. Solow (eds) The Roaring Nineties: Can Full Employment Be Sustained?, New York: Russell Sage Foundation.
- Altonji, Joseph, G. and Rebecca, M. Blank, (1999), "Race and Gender in the Labor Market", in Ashenfelter, Orley and David Card (eds) Handbook of Labor Economics. Volume 3C. Handbooks In Economics, vol. 5. Amsterdam: North-Holland, pages 3143-3259.
- Flinn, Christopher J. and James J. Heckman, (1983), "Are Unemployment and Out of the Labor Force Behaviorally Distinct Labor Force States?" Journal of Labor Economics; 1(1), January, pages 28-42.
- Ham, John C., Jan Svejnar and Katharine Terrell (1999) "Women's Unemployment During Transition", Economics of Transition, 7, 47-78.
- Jones, Stephen R.G. and W. Craig Riddell, (1999), "The Measurement of Unemployment: An Empirical Approach", Econometrica; 67(1), January , pages 147-61.
- OECD (2002) "Women at work: who are they and how are they faring?", OECD Employment Outlook, 2002, 61-126.

Table 1
Gender Gaps in Unemployment Rates Among OECD Countries

Country	All Working Age (15-64)				Prime-Age (25-54)			
	Male	Female	Difference	Ratio	Male	Female	Difference	Ratio
Spain	11	22.91	11.91	2.08	9.2	21	11.8	2.28
Greece	7.56	17.92	10.36	2.37	6.2	15.2	9	2.45
Italy	8.67	15.71	7.04	1.81	6.6	12.7	6.1	1.92
France	9.66	12.96	3.3	1.34	9	12.6	3.6	1.4
Belgium	.	.			6.1	9	2.9	1.48
Netherlands	2.74	4.49	1.75	1.64	2.1	3.8	1.7	1.81
Luxembourg	1.77	2.68	0.91	1.51	1.4	2.9	1.5	2.07
Germany	8.15	9.22	1.07	1.13	7.2	8.5	1.3	1.18
Denmark	4.69	6.54	1.85	1.39	3.7	4.9	1.2	1.32
Portugal	3.84	5.05	1.21	1.32	3.4	4.6	1.2	1.35
Finland	9.58	10.73	1.15	1.12	7.9	9	1.1	1.14
Switzerland	2.52	3.68	1.16	1.46	2.2	3.2	1	1.45
Japan	4.82	4.46	-0.36	0.93	3.7	4.4	0.7	1.19
Sweden	7.5	6.76	-0.74	0.9	5.2	5.9	0.7	1.13
USA	4.05	4.33	0.28	1.07	3	3.4	0.4	1.13
Austria	3.69	3.85	0.16	1.04	3.4	3.6	0.2	1.06
Australia	7.13	6.64	-0.49	0.93	5.5	5.3	-0.2	0.96
Canada	7.78	7.25	-0.53	0.93	6.5	6.3	-0.2	0.97
NZ	6.94	6.58	-0.36	0.95	5.5	5.3	-0.2	0.96
Norway	3.36	3.05	-0.31	0.91	2.6	2.2	-0.4	0.85
Ireland	5.9	5.5	-0.4	0.93	5.7	4.8	-0.9	0.84
UK	6.75	5.07	-1.68	0.75	5.4	4.3	-1.1	0.8
New OECD Countries								
Hungary	7.52	6.26	-1.26	0.83	6.7	5.6	-1.1	0.84
Turkey	7.49	7.5	0.01	1	5.9	5.5	-0.4	0.93
Mexico	1.78	2.58	0.8	1.45	1.6	2.1	0.5	1.31
Czech Rep	7.27	10.5	3.23	1.44	5.9	9.5	3.6	1.61

Notes.

1. Source: OECD Labour Market Statistics (OECD Statistical Compendium), 1999

Table 2
The Marginal Effects of Characteristics on Gender Gaps in Unemployment Rates

	A Female	B Female	C Female	F*Age(15-24)	F*Age(35-44)	F*Age(45-54)	F*Low Edu	F*High Edu	F*Married	F*Div/Sep	F*Kids(0-12)	F*Kids(13-15)
Spain	0.087 [0.001]**	0.086 [0.001]**	0.052 [0.003]**	0.078 [0.004]**	-0.06 [0.003]**	-0.017 [0.003]**	-0.004 [0.003]	-0.012 [0.003]**	0.075 [0.003]**	-0.075 [0.004]**	0.035 [0.003]**	-0.013 [0.004]**
Greece	0.112 [0.001]**	0.102 [0.001]**	0.067 [0.003]**	0.054 [0.004]**	-0.03 [0.002]**	0.004 [0.003]	0.002 [0.003]	0.002 [0.002]	0.03 [0.003]**	-0.011 [0.005]*	0.026 [0.003]**	0.038 [0.004]**
Italy	0.062 [0.001]**	0.056 [0.001]**	0.045 [0.002]**	0.028 [0.003]**	-0.06 [0.002]**	0.002 [0.002]	0.025 [0.004]**	-0.011 [0.002]**	0.036 [0.002]**	0.006 [0.005]	0.007 [0.002]**	-0.011 [0.003]**
France	0.053 [0.001]**	0.053 [0.001]**	0.042 [0.002]**	0.004 [0.003]	-0.03 [0.002]**	-0.019 [0.002]**	-0.023 [0.002]**	-0.001 [0.002]	0.039 [0.002]**	-0.005 [0.003]	0.043 [0.002]**	0.026 [0.004]**
Belgium	0.084 [0.001]**	0.079 [0.001]**	0.058 [0.003]**	0.017 [0.005]**	-0.03 [0.002]**	-0.001 [0.003]	-0.066 [0.002]**	0.003 [0.003]	0.058 [0.004]**	0.086 [0.006]**	0.043 [0.004]**	-0.024 [0.004]**
Netherlands	0.154 [0.004]**	0.15 [0.004]**	0.022 [0.009]*	0.019 [0.017]	0 [0.009]	0.016 [0.009]	-0.027 [0.009]**	-0.029 [0.006]**	0.148 [0.014]**	0.086 [0.021]**	0.154 [0.015]**	0.08 [0.018]**
Luxembourg	0.007 [0.001]**	0 [0.001]	-0.015 [0.001]**	0.013 [0.002]**	0.02 [0.003]**	0.002 [0.002]	0.014 [0.003]**	-0.004 [0.001]**	0.044 [0.003]**	0.014 [0.003]**	0.002 [0.002]	-0.009 [0.002]**
Germany	0.035 [0.001]**	0.028 [0.001]**	-0.009 [0.002]**	0.01 [0.003]**	0.02 [0.002]**	0.015 [0.002]**	-0.024 [0.002]**	-0.026 [0.001]**	0.05 [0.002]**	0.003 [0.003]	0.048 [0.002]**	0.019 [0.003]**
Denmark	0.046 [0.001]**	0.045 [0.001]**	0.043 [0.002]**	-0.023 [0.003]**	-0.02 [0.003]**	-0.023 [0.002]**	-0.022 [0.002]**	0.032 [0.003]**	0.011 [0.003]**	-0.011 [0.003]**	0.059 [0.004]**	0.046 [0.007]**
Portugal	0.049 [0.001]**	0.053 [0.001]**	-0.008 [0.003]**	0.054 [0.003]**	-0.01 [0.002]*	-0.008 [0.002]**	0 [0.005]	0.022 [0.002]**	0.043 [0.002]**	-0.013 [0.003]**	0.041 [0.002]**	0.01 [0.003]**
Finland	0.019 [0.001]**	0.032 [0.001]**	0.007 [0.003]*	-0.009 [0.004]*	-0.01 [0.003]**	-0.003 [0.003]	0.002 [0.003]	-0.007 [0.003]*	0.044 [0.004]**	0.024 [0.005]**	0.021 [0.003]**	-0.003 [0.004]
USA	0.002 [0.000]**	0.002 [0.000]**	-0.002 [0.001]**	0.004 [0.001]**	-0.01 [0.001]**	0.001 [0.001]	0.007 [0.001]**	-0.001 [0.001]*	0.012 [0.001]**		0 [0.001]	
Austria	0.01 [0.001]**	0.005 [0.001]**	-0.006 [0.002]**	0.016 [0.003]**	0.01 [0.003]**	0.011 [0.003]**	-0.002 [0.004]	0.005 [0.002]*	-0.008 [0.002]**	0.023 [0.004]**	0.024 [0.002]**	0.031 [0.005]**
Ireland	-0.049 [0.001]**	-0.035 [0.001]**	-0.006 [0.003]*	0.038 [0.004]**	-0.04 [0.003]**	-0.027 [0.003]**	0.021 [0.004]**	0.005 [0.003]*	-0.042 [0.002]**	-0.06 [0.002]**	-0.027 [0.002]**	-0.019 [0.003]**
UK	-0.037 [0.001]**	-0.036 [0.001]**	-0.044 [0.002]**	0.016 [0.002]**	0 [0.002]	0.012 [0.002]**	0.018 [0.002]**	0 [0.002]	-0.004 [0.002]*	0.004 [0.002]	-0.003 [0.001]*	-0.002 [0.002]

Notes:

1. Data for European countries come from ECHPS, data for US from CPS. Dependent variable is whether individual is unemployed conditional on being in the labour force. The reported coefficients are the marginal effects.
2. Coefficient in Column marked A is that on female dummy in probit model of (1). Coefficient in Column marked B is that on female dummy in probit model of (2) where the controls are age, education (high being college graduates, ISCED 5-7, and low being less than second stage of secondary education, ISCED 0-2), marital status and number of children aged 0-12 and 13-15. Coefficient in Column marked C and subsequent columns is that on female dummy and female dummy interacted with characteristics in probit model of (3).
3. Standard errors in parenthesis. ** denotes 1% significance level.

Table 3a
Flows between Labour Market States and Implied Steady-State Unemployment Rates: Men

	heu	hei	hue	hui	hiu	hie	a	heu/heu+hue	(hiuhei) (hiuhei+hiehui)	Implied Steady- State U-Rate	Actual U-Rate
Spain	1.5	0.37	7.43	0.85	0.72	1.16	0.07	16.8	21.3	17.1	17.8
Greece	0.63	0.21	9.4	0.61	0.44	0.99	0.05	6.3	13.4	6.6	9.4
Italy	0.52	0.32	3.93	0.71	0.64	0.73	0.11	11.7	28.6	13.5	12.6
France	0.61	0.29	8.43	1.85	0.86	1.33	0.12	6.7	9.2	7	10.1
Belgium	0.35	0.23	5.19	0.68	0.46	0.99	0.09	6.3	13.7	6.9	6
Luxembourg	0.21	0.29	10.69	0.72	0.3	1.82	0.06	2	6.1	2.2	2.6
Germany	0.57	0.29	7.42	1.44	0.42	1.72	0.13	7.1	4.7	6.8	6.1
Denmark	0.69	0.38	10.65	1.72	0.81	2.07	0.11	6.1	7.9	6.3	8.7
Portugal	0.43	0.23	7.44	0.84	0.35	1.14	0.08	5.5	7.9	5.7	5.2
Finland	0.92	1.01	9.06	2.63	0.97	3.44	0.19	9.3	9.8	9.3	11.2
USA	1.26	1.37	51.35	29.22	6.11	10.7	0.27	2.4	2.6	2.5	3.4
Austria	0.61	0.37	14.12	1.35	0.31	1.52	0.07	4.1	5.2	4.2	3.1
Ireland	0.57	0.38	4.57	0.54	0.76	2.54	0.09	11.2	17.5	11.7	12.5
UK	0.61	0.25	7.7	1.49	0.96	1.7	0.11	7.4	8.8	7.5	6.7

Notes.

1. Data for European countries are from retrospective monthly work history data in ECHPS. Retrospective monthly data from Sweden and Netherlands is missing. US data from successive monthly CPS.
2. Hazard Rates are estimated using the methodology described in (8).
3. Sample restricted to those aged between 25 and 54.

Table 3b
Flows between Labour Market States and Implied Steady-State Unemployment Rates: Women

	heu	hei	hue	hui	hiu	hie	a	heu/heu+hue	(hiuhei) (hiuhei+hiehui)	Implied Steady- State U-Rate	Actual U-Rate
Spain	1.9	0.89	5.62	1.49	0.37	0.55	0.14	25.3	28.7	25.8	31.9
Greece	1.05	0.79	5.75	1.1	0.25	0.55	0.13	15.5	24.9	16.7	23
Italy	0.74	0.7	3.62	1.11	0.3	0.45	0.18	17	29.5	19.2	24.2
France	0.76	0.44	6.29	1.99	0.49	0.79	0.17	10.7	12.1	11	16.2
Belgium	0.56	0.65	3.19	0.96	0.33	0.92	0.19	14.8	19.3	15.7	9.7
Luxembourg	0.23	0.66	8.61	2.13	0.09	0.83	0.18	2.6	3.3	2.7	5.9
Germany	0.61	0.45	5.03	1.46	0.23	0.97	0.18	10.8	6.8	10	9.6
Denmark	0.93	0.65	7.11	2.54	0.83	1.97	0.2	11.6	9.7	11.2	9.3
Portugal	0.62	0.43	5.85	1	0.21	0.66	0.12	9.6	12.1	9.8	10.5
Finland	1.14	1.59	8.74	3.45	0.91	3.22	0.24	11.5	11.6	11.5	12
USA	1.09	2.69	51.09	46.41	3.59	7.25	0.38	2.1	2.8	2.4	3
Austria	0.59	0.65	9.23	2.11	0.18	0.77	0.16	6	6.6	6.1	5.4
Ireland	0.62	1.24	8.63	2.32	0.18	1.15	0.19	6.7	7.6	6.9	12.4
UK	0.39	0.85	10.27	4.06	0.39	1.64	0.24	3.6	4.7	3.9	4

Notes.

1. As for Table 3a.

Table 4a
Gender Gaps in Labour Market Transition Rates: No Other Controls

Country	E? U	U? E	U? I	E? I	I? U	I? E
Spain	0.236 [0.045]**	-0.278 [0.037]**	0.564 [0.063]**	0.878 [0.056]**	-0.67 [0.059]**	-0.746 [0.053]**
Greece	0.517 [0.066]**	-0.489 [0.058]**	0.595 [0.127]**	1.32 [0.067]**	-0.544 [0.091]**	-0.578 [0.066]**
Italy	0.351 [0.063]**	-0.081 [0.055]	0.446 [0.077]**	0.775 [0.054]**	-0.772 [0.061]**	-0.487 [0.063]**
France	0.217 [0.062]**	-0.291 [0.059]**	0.077 [0.086]	0.423 [0.064]**	-0.558 [0.088]**	-0.511 [0.072]**
Belgium	0.472 [0.102]**	-0.485 [0.111]**	0.339 [0.172]*	1.017 [0.094]**	-0.327 [0.142]*	-0.062 [0.106]
Luxembourg	0.065 [0.125]	-0.216 [0.112]	1.082 [0.277]**	0.818 [0.081]**	-1.17 [0.207]**	-0.778 [0.089]**
Germany	0.067 [0.043]	-0.385 [0.046]**	0.014 [0.074]	0.45 [0.051]**	-0.614 [0.088]**	-0.566 [0.049]**
Denmark	0.302 [0.072]**	-0.4 [0.069]**	0.392 [0.112]**	0.544 [0.081]**	0.023 [0.116]	-0.049 [0.078]
Portugal	0.36 [0.071]**	-0.237 [0.065]**	0.171 [0.121]	0.603 [0.068]**	-0.517 [0.102]**	-0.548 [0.062]**
Finland	0.206 [0.067]**	-0.029 [0.061]	0.28 (3.22)**	0.458 (7.91)**	-0.06 [0.087]	-0.063 [0.049]
USA	-0.142 [0.013]**	-0.005 [0.012]	0.463 [0.014]**	0.463 [0.014]**	-0.532 [0.014]**	-0.39 [0.010]**
Austria	-0.029 [0.092]	-0.421 [0.103]**	0.452 [0.163]**	0.569 [0.074]**	-0.551 [0.145]**	-0.68 [0.073]**
Ireland	0.074 [0.077]	0.631 [0.077]**	1.457 [0.139]**	1.176 [0.071]**	-1.453 [0.111]**	-0.789 [0.061]**
UK	-0.463 [0.054]**	0.29 [0.054]**	1.001 [0.077]**	1.207 [0.051]**	-0.908 [0.071]**	-0.033 [0.046]

Notes.

1. Data as for Table 3.
2. These represent the coefficients on a female dummy for the method for estimating hazard rates described in the text. Standard errors in parentheses.

Table 4b
Gender Gaps in Labour Market Transition Rates: With Controls

Country	E? U	U? E	U? I	E? I	I? U	I? E
Spain	0.275 [0.045]**	-0.354 [0.038]**	0.575 [0.066]**	0.884 [0.060]**	-0.366 [0.067]**	-0.574 [0.061]**
Greece	0.538 [0.067]**	-0.47 [0.058]**	0.551 [0.133]**	1.312 [0.067]**	-0.002 [0.103]	-0.608 [0.081]**
Italy	0.394 [0.064]**	-0.138 [0.057]*	0.359 [0.081]**	0.849 [0.056]**	-0.263 [0.066]**	-0.641 [0.080]**
France	0.266 [0.061]**	-0.341 [0.059]**	-0.008 [0.088]	0.422 [0.065]**	-0.497 [0.111]**	-0.525 [0.085]**
Belgium	0.466 [0.100]**	-0.49 [0.115]**	0.424 [0.187]*	1.059 [0.095]**	-0.245 [0.158]	-0.343 [0.123]**
Luxembourg	-0.189 [0.128]	-0.195 [0.111]	0.94 [0.287]**	0.93 [0.086]**	-0.698 [0.266]**	-0.641 [0.114]**
Germany	0.012 [0.043]	-0.425 [0.046]**	0.05 [0.075]	0.395 [0.053]**	-0.519 [0.110]**	-0.34 [0.059]**
Denmark	0.371 [0.071]**	-0.432 [0.068]**	0.387 [0.116]**	0.609 [0.080]**	-0.064 [0.114]	0.026 [0.075]
Portugal	0.446 [0.073]**	-0.3 [0.068]**	0.16 [0.122]	0.69 [0.069]**	-0.257 [0.111]*	-0.56 [0.069]**
Finland	0.344 [0.066]**	-0.068 [0.060]	0.28 [0.088]**	0.629 [0.061]**	-0.341 [0.093]**	-0.179 [0.048]**
USA	-0.114 [0.013]**	-0.012 [0.012]	0.474 [0.014]**	0.474 [0.014]**	-0.463 [0.015]**	-0.436 [0.011]**
Austria	-0.05 [0.093]	-0.511 [0.102]**	0.578 [0.168]**	0.527 [7.12]**	-0.408 [0.176]*	-0.509 [0.079]**
Ireland	0.062 [0.080]	0.401 [0.079]**	1.058 [0.164]**	1.174 [0.077]**	-0.687 [0.129]**	-0.22 [0.057]**
UK	-0.473 [0.054]**	0.292 [0.053]**	1.019 [0.078]**	1.206 [0.051]**	-0.76 [0.084]**	-0.111 [0.050]*

Notes.

1. Data as for Table 3a. Controls are age, education, marital status and number of children.

Table 5
Gender Gaps in Unemployment Durations

Country	% of unemployed with duration >6mths		% of unemployed with duration >12mths	
	Men	Women	Men	Women
Spain	62.1	72	45.4	55.5
Greece	69	77.7	48.6	59.5
Italy	76.6	77.7	62.1	60.7
France	53.7	57.4	39	41.7
Belgium	73.2	73.8	60.1	60.9
Netherlands	75.1	84.9	47.7	40.4
Luxembourg	61.6	47.5	38.6	27.2
Germany	65.3	69.4	49.9	54
Denmark	38.6	38.5	20.9	20.1
Portugal	63.5	64.2	39.5	42.9
Finland	49.2	43.7	33.1	26.2
Switzerland	59.3	63.1	40.6	38.7
Japan	49.5	36.9	27.4	14.8
Sweden	48.5	41.2	33.3	26.1
USA	13	11.6	7.4	6.2
Austria	43.6	39.8	32.7	24.1
Australia	50.9	44.9	31.8	25.8
Canada	23.3	18.9	12.8	10.2
NZ	42.5	34.3	23	17.9
Norway	17.1	15.6	7.3	6.3
Ireland	77.8	72.9	59.5	47.5
UK	50.1	37.6	34.5	21.5
Hungary	70.9	69.7	50.6	47.9
Turkey	47.4	56	25.2	36.4
Mexico	5.8	8	2.7	0.4
Czech	58	65.3	32.7	40.9

Notes:

1. Source: OECD Employment Outlook 1999.

Table 6
Gender Differences in Flows from Employment to Unemployment

Country	No Controls	Controls on Personal Characteristics				Controls on Personal and Job Characteristics			
	female	female	Female* married	Female* kids0-12	Female* kids13-15	female	Female* married	Female* kids0-12	Female* kids13-15
Spain	0.222 [0.052]**	0.199 [0.080]*	0.01 [0.116]	0.071 [0.141]	0.167 [0.194]	0.102 [0.084]	-0.046 [0.118]	0.09 [0.142]	0.055 [0.194]
Greece	0.531 [0.074]**	0.516 [0.114]**	0.01 [0.169]	0.061 [0.214]	0.364 [0.285]	0.476 [0.120]**	0.016 [0.170]	0.106 [0.214]	0.358 [0.285]
Italy	0.056 [0.070]	0.1 [0.098]	-0.134 [0.160]	0.254 [0.195]	0.205 [0.277]	-0.025 [0.103]	-0.128 [0.161]	0.171 [0.195]	-0.004 [0.278]
France	0.357 [0.096]**	0.158 [0.152]	0.394 [0.207]	0.358 [0.232]	-0.393 [0.422]	-0.029 [0.165]	0.204 [0.210]	0.426 [0.234]	-0.137 [0.429]
Belgium	0.717 [0.132]**	0.449 [0.207]*	0.348 [0.284]	0.677 [0.391]	0.039 [0.657]	0.457 [0.221]*	0.258 [0.290]	0.584 [0.396]	-0.127 [0.660]
Netherlands	0.983 [0.115]**	0.33 [0.198]	0.24 [0.268]	0.774 [0.301]*	1.02 [0.474]*	0.531 [0.211]*	0.113 [0.273]	0.859 [0.304]**	0.952 [0.476]*
Luxembourg	0.334 [0.296]	-0.43 [0.515]	1.511 [0.688]*	-0.069 [0.796]	-0.014 [1.491]	-0.214 [0.571]	1.132 [0.693]	-0.303 [0.791]	-0.126 [1.503]
Germany	0.153 [0.053]**	-0.374 [0.090]**	0.486 [0.115]**	0.289 [0.135]*	0.468 [0.213]*	-0.33 [0.097]**	0.445 [0.115]**	0.35 [0.136]**	0.451 [0.213]*
Denmark	0.612 [0.118]**	0.238 [0.173]	0.206 [0.249]	0.586 [0.323]	13.362 [363.531]	0.078 [0.188]	0.169 [0.252]	0.616 [0.326]	12.479 [245.632]
Portugal	0.448 [0.078]**	0.243 [0.136]	-0.006 [0.169]	0.681 [0.191]**	0.427 [0.275]	0.228 [0.140]	-0.051 [0.170]	0.668 [0.191]**	0.385 [0.275]
Finland	0.358 [0.124]**	0.204 [0.214]	0.405 [0.271]	0.011 [0.290]	-0.071 [0.421]	0.218 [0.225]	0.23 [0.274]	0.141 [0.299]	0.023 [0.425]
Sweden	0.014 [0.093]	0.117 [0.169]	0.095 [0.196]	-0.36 [0.211]	-0.02 [0.280]	0.114 [0.174]	0.085 [0.197]	-0.343 [0.212]	0.001 [0.281]
Austria	0.29 [0.122]*	0.271 [0.197]	-0.691 [0.260]**	0.712 [0.279]*	0.211 [0.498]	0.429 [0.215]*	-0.685 [0.264]**	0.739 [0.280]**	0.31 [0.498]
Ireland	-0.103 [0.108]	0.12 [0.175]	-0.232 [0.235]	-0.048 [0.271]	-0.521 [0.413]	0.009 [0.186]	-0.493 [0.238]*	-0.076 [0.271]	-0.58 [0.415]
UK	-0.188 [0.089]*	-0.211 [0.131]	-0.129 [0.187]	0.091 [0.245]	0.314 [0.341]	-0.201 [0.139]	-0.136 [0.189]	0.048 [0.245]	0.295 [0.342]

Notes.

1. Data is from ECHPS. The sample is all those who are employed at one interview and employed or unemployed subsequently. Model estimated is a cloglog model where the dependent variable takes the value one if the individual is still employed.
2. Standard errors in parentheses.
3. The ILO main activity status is used for Sweden as the Self-Defined main activity status question, used for the other countries, is not asked.

Table 7a
Reasons for leaving Previous Job (%): Currently Unemployed

		Obliged by Employer	End of Contract	Child Birth/ Care	Sick /Disabled	Retired	Other*	Sample Size
Spain	M	22	63	0	3	0	12	3575
	F	17	64	5	2	0	12	2652
Greece	M	38	37	0	3	2	21	1097
	F	38	39	5	1	2	15	1331
Italy	M	39	36	1	4	8	11	1494
	F	28	46	4	3	10	9	1169
France	M	41	44	0	3	0	12	999
	F	34	44	6	2	0	15	1271
Belgium	M	55	18	0	0	8	19	536
	F	43	22	8	11	1	14	939
Netherlands	M	30	15	2	34	2	17	709
	F	12	12	42	13	1	21	1917
Germany	M	59	20	0	2	9	10	2191
	F	54	22	1	2	9	12	2421
Denmark	M	42	26	1	9	1	21	590
	F	36	29	7	10	3	16	906
Portugal	M	24	40	0	5	2	30	971
	F	24	44	4	5	1	23	1252
Finland	M	28	57	0	2	1	11	1009
	F	22	60	4	3	1	10	1123
Austria	M	43	10	1	1	33	13	464
	F	33	15	18	11	1	22	398
Ireland	M	41	33	1	6	0	19	1393
	F	26	33	3	9	0	29	409
UK	M	45	18	1	6	15	16	1332
	F	23	16	16	7	17	21	611

Note:

1. Data from ECHPS. Question only asked of those who have worked within the last two years.
2. Other reasons includes: Marriage, Move for partner's job, Closure of own business & Study/National service

Table 7b
Reasons for leaving Previous Job (%): Currently Inactive

		Obliged by Employer	End of Contract	Child Birth/ Care	Sick/ Disabled	Retired	Other*	Sample Size
Spain	M	20	20	0	32	7	21	3259
	F	12	30	16	12	1	28	5105
Greece	M	10	5	0	15	60	10	1895
	F	16	13	22	11	5	33	2374
Italy	M	16	6	0	13	52	13	3832
	F	13	12	21	7	29	17	4645
France	M	33	5	1	19	35	6	1805
	F	17	11	21	13	16	22	3029
Belgium	M	37	2	0	22	32	7	949
	F	21	8	16	16	16	23	1419
Netherlands	M	8	4	1	34	28	24	1598
	F	7	8	38	16	4	27	3490
Germany	M	46	10	0	11	19	15	3416
	F	27	8	19	5	18	24	6850
Denmark	M	10	11	0	30	17	32	969
	F	12	14	5	27	14	29	1737
Portugal	M	4	5	0	32	41	18	1671
	F	6	12	11	26	16	29	2767
Finland	M	10	31	0	23	10	25	2029
	F	9	34	9	16	7	25	2631
Austria	M	12	2	0	36	34	16	1575
	F	9	3	36	15	21	17	2581
Ireland	M	18	7	1	33	10	30	1297
	F	11	10	36	12	1	30	3622
UK	M	22	6	4	18	33	17	1949
	F	12	6	36	8	22	16	6318

Notes:

1. As for Table 7a

Table 8
Are the Unemployed More Likely than the Inactive to Get a Job?

	Female		Female & Unemployed in t=0		Unemployed in t=0
Spain	-0.124 [0.164]		0.418 [0.069]**		1.702 [0.047]**
Greece	-0.302 [0.253]		0.426 [0.105]**		1.985 [0.074]**
Italy	-1.04 [0.324]**		0.611 [0.100]**		1.452 [0.070]**
France	-0.269 [0.196]		0.19 [0.100]		1.557 [0.077]**
Belgium	-0.836 [0.347]*		-0.513 [0.169]**		1.396 [0.131]**
Luxembourg	-0.203 [0.325]		0.317 [0.159]*		0.793 [0.112]**
Germany	-0.093 [0.157]		0.094 [0.070]		1.392 [0.051]**
Denmark	-0.428 [0.219]		-0.434 [0.104]**		1.78 [0.081]**
Portugal	-0.346 [0.227]		0.289 [0.097]**		1.724 [0.070]**
Finland	0.059 [0.196]		0.137 [0.078]		0.911 [0.059]**
USA	-0.035 [0.026]		0.266 [0.016]**		1.145 [0.012]**
Austria	-0.45 [0.303]		0.171 [0.129]		2.149 [0.092]**
Ireland	-0.341 [0.265]		0.491 [0.104]**		0.972 [0.067]**
UK	-0.179 [0.138]		0.235 [0.073]**		1.579 [0.055]**

Notes.

1. The sample is all those who are not in employment in an initial month and the dependent variable is whether they are still not in employment a month later. The other controls included are: age, education level, gender, presence and age of children and the gender dummy interacted with the other controls.
2. Data for European countries from ECHPS retrospective work history data; data for US from successive monthly CPS files.
3. Sample restricted to those aged between x and x.

Table 9
Methods of Job Search Among the Unemployed (%)

	Contacted public employment office		Contacted private employment office		Applied to employers directly		Asked friends and relative		Inserted advert in newspaper		Studied adverts in newspaper		Other methods	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Spain	90.5	87.1	0.3	0.3	2.7	2.4	5.4	8.7	0.3	0.6	0	0	0.8	0.8
Greece	6.6	5.9	0	0	45.9	36	28.1	33.9	3.2	4.6	12.6	16.9	2.3	2.2
Italy	37.9	40.7	1.6	1.4	29.9	27.1	14.4	12.6	4.1	4.3	6	7.7	6.2	6.3
France	93.6	92.2	1.3	1	3.6	3.9	1.3	2.3	0	0	0	0	0	0
Belgium	73.9	70.9	2.6	3.1	6	7.1	2	2.4	9.9	9.9	3.5	5.3	1.7	0
Netherlands	54.2	42.4	7	8.5	5.6	5.2	0	0	10.7	10.6	0	0	22.5	32.7
Luxembourg	67.4	57.3	0	0	0	0	0	0	0	0	0	0	0	0
Germany	97.1	94.4	0.6	1	0.2	0.3	0.6	1.3	0.6	1.4	0.2	0.8	0.5	0.7
Denmark	60.1	58.9	0	0	15.7	15.5	0	0	13.5	12.8	5.4	9.9	0	0
Portugal	26.6	34.6	0	0	24.5	21.8	27.5	24.5	8.9	10.6	4.1	1.9	7.3	5.3
Finland	83.8	84.3	0	0	12.7	11.9	0	0	1.7	0	0	0	0	0
Sweden	87.3	90.7	0	0	9.3	4.7	0	0	2	3.6	0	0	0	0
Austria	74.9	69.7	0	0	5.1	8.9	15.1	16.1	0	0	3.3	3.2	0	0
Ireland	25.4	24.2	0	0	15.4	10.9	19.2	12.1	30.7	40.7	8.1	10.8	0	0
UK	33	22	2.3	3.6	10.1	8.4	12.7	9.5	9.1	11.5	28.8	42.4	3.9	2.2

Notes.

1. Source: Eurostat Labour Force Survey, 1996.

Table 10
Benefit Receipt Among the Unemployed

Country	Male	Female
Spain	34.56	15.86
Greece	13.62	9.41
Italy	4.29	3.28
France	51.01	40.55
Belgium	79.85	73.99
Luxembourg	22.22	17.86
Germany	68.7	69.44
Denmark	85.8	83.72
Portugal	26.92	23.37
Finland	79.66	75.43
Austria	59.45	43.5
Ireland	87.86	44.9
UK	33.25	17.21

Notes.

1. Source: ECHPS. The question asked is “Do you receive unemployment benefit or assistance?”

Table 11
Maternity Leave Legislation, 1999-2000

Country	Paid Maternity Leave			Parental Leave*		Observations
	Length	Payment	Flexibility	max. child age	Length	
Spain	16	100				unpaid
Greece	14	100				unpaid
Italy	18	80	7 prior/11post			30%earnings
France	16-26	84	4prior/10post			paid
Belgium	15	82/75	1prior/8post	4 yrs	3 months FT/6m. PT	paid
Netherlands	16	100	max6/min4			unpaid
Luxembourg	na	na	Na	na	na	na
Germany	14	100	6prior/8post			paid
Denmark	18	same as UI	4prior/14post			paid
Portugal	12.5	100	8.5 post			unpaid
Finland	17.5	43-82	5prior/9.5post			paid
Austria	16	100	8 prior/8 post	24 months		paid
Ireland	14	70	4 prior			unpaid
UK	18	flat-rate				unpaid
	40(**)	90(6w)/flat-rate	11prior/29post			

Table 12
The Impact of Work History on the Flows from Unemployment to Employment

	No Controls for Work History	With Controls for Work History
Spain	-0.217 [0.046]**	-0.286 [0.048]**
Greece	-0.529 [0.065]**	-0.545 [0.069]**
Italy	-0.305 [0.058]**	-0.374 [0.060]**
France	-0.282 [0.092]**	-0.316 [0.095]**
Belgium	-0.52 [0.132]**	-0.511 [0.141]**
Netherlands	-0.69 [0.099]**	-0.513 [0.107]**
Luxembourg	-0.26 [0.441]	1.302 [1.005]
Germany	-0.22 [0.060]**	-0.182 [0.062]**
Denmark	-0.324 [0.117]**	-0.312 [0.124]*
Portugal	-0.245 [0.070]**	-0.223 [0.074]**
Finland	-0.013 [0.118]	-0.074 [0.126]
Sweden	-0.138 [0.103]	-0.166 [0.109]
Austria	0.207 [0.138]	0.275 [0.150]
Ireland	0.54 [0.092]**	0.309 [0.106]**
UK	0.473 [0.087]**	0.381 [0.091]**

Notes:

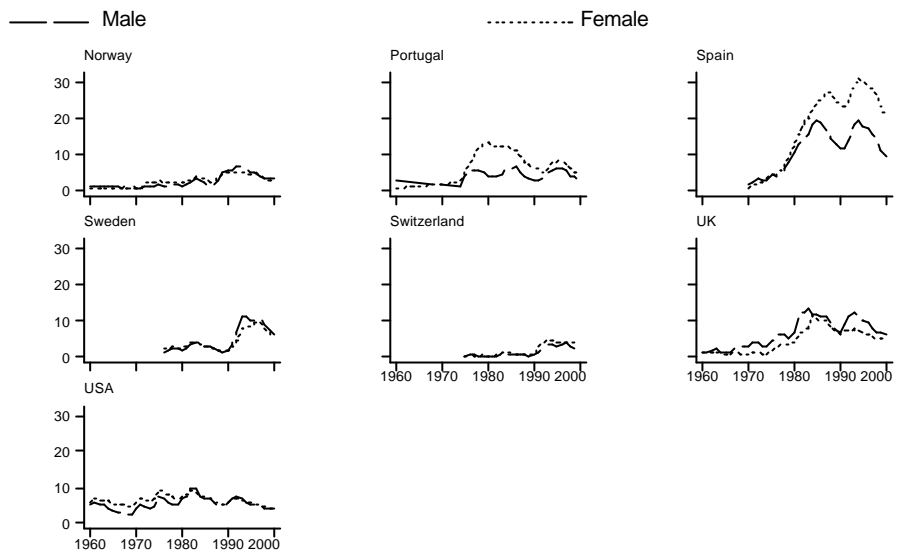
1. Source is ECHPS Annual Data. Sample is those currently unemployed who are either unemployed or employed at the subsequent interview. Other controls included are age, education, marital status and number of children.

Table 13
Part-time Employment

	Female		Male	
	Unemployed wanting PT work (%)	Employed Working Part-Time (%)	Unemployed wanting PT work (%)	Employed Working Part-Time (%)
Spain	7.8	16.5	1.3	2.6
Greece	6.8	5.7	0	2.6
Italy	34.4	12.4	3.7	2.8
France	23.2	30	2.7	5.3
Belgium	20.1	34	2.1	3.2
Netherlands	72.4	68.7	15.3	16.7
Luxembourg	36.1	18.1	0	1.3
Germany	23.7	33.6	3.2	3.3
Denmark	16.3	35.1	0	11.4
Portugal	0	8.3	0	1.6
Finland	7.1	15.2	0	6.5
Sweden	19.4	42.6	2.9	8.3
Austria	44.8	28.7	3.8	3
Ireland	47.2	22.2	0	5.7
UK	55.1	44.2	5.2	7.5

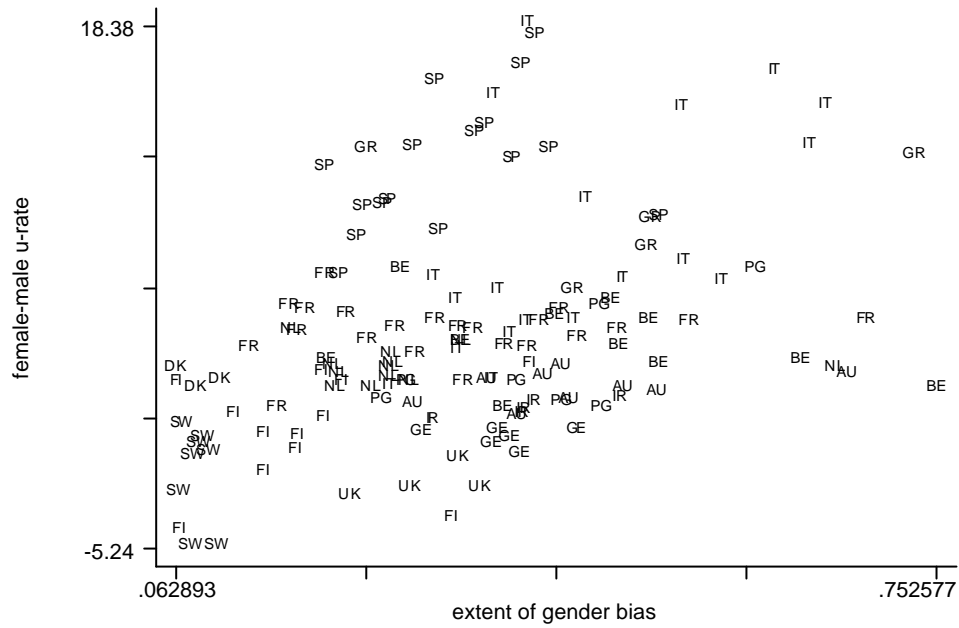
Notes.

1. Source: Eurostat: Labour Force Survey, 1996.



Graphs by Country

Figure 2



Notes.

1. The vertical axis is the average of the gap between female and male unemployment rates over the period 1996-2000 inclusive.
2. The horizontal axis is the fraction agreeing with the statement "when jobs are scarce, men should have more right to a job than women".

Appendix
A Model of the Transition from Unemployment to Inactivity

Consider a very simple model designed to illustrate the point that the harder it is to get jobs, the larger are likely to be the flows between inactivity and unemployment. The model is designed to capture the idea that women with young children may only want to return to work after the children reach a certain age. To capture this idea assume that the value of home production is initially b but this falls to 0 at time T and remains there subsequently. Assume that all jobs pay the same wage, w , which satisfies the restrictions $b > w > 0$. This means that, before time T , women do not want work but after time T they do. Assume that jobs, once attained last forever so that, if the discount rate is r , the value of a job is given by $E = (w/r)$.

The decision for the woman is when to start to look for work. We assume they only look for work if they would be prepared to accept a job if offered one although we assume zero costs of job search. If they are prepared to accept a job, they are unemployed while if they are not, they are inactive.

Obviously once we reach time T , women will choose to be unemployed rather than inactive. But, in general, they will start to look for work before T if jobs are hard to come by as, although the wage offered might be below the current value of home production, they realize that waiting until the value of home production falls risks not finding a job when they do want one. So, the choice variable is t^* the point at which they start looking for a job.

If the individual is inactive at time t ($t < T$) and will remain so in the immediate future then the value function, $V^i(t)$, will be given by:

$$rV^i(t) = b + \frac{\partial V^i(t)}{\partial t}$$

where this captures the idea that there is no immediate prospect of getting a job. Solving this differential equation leads to:

$$V^i(t) = e^{-r(t^*-t)}V^i(t^*) + \left[1 - e^{-r(t^*-t)}\right] \frac{b}{r}$$

Now, at the point where the individual changes state from inactive to active we must have:

$$V^i(t^*) = V^u(t^*)$$

where $V^u(t)$ is the value of being unemployed at time t . For this value function we must have (for $t < T$):

$$rV^u(t) = b + I \left[E - V^u(t) \right] + \frac{\partial V^u(t)}{\partial t}$$

where I is the arrival rate of job offers. The solution to this differential equation can be written as:

$$V^u(t) = e^{-(r+I)(T-t)}V^u(T) + \left[1 - e^{-(r+I)(T-t)}\right] \frac{b + IE}{r + I}$$

Now $V^u(T)$ can be derived using x with b replaced by zero and recognizing that for $t > T$, $V^u(t)$ will be constant. So, we have:

$$V^u(T) = \frac{IE}{r + I}$$

Substituting x into, x evaluated at $t = t^*$ into x , means x can be re-written as:

$$V^i(t) = \frac{b}{r} + e^{-r(t^*-t)} \left[\frac{b + \mathbf{I}E}{r + \mathbf{I}} - \frac{b}{r} - \frac{be^{-(r+\mathbf{I})(T-t^*)}}{r + \mathbf{I}} \right]$$

Using the fact the $E=(w/r)$ and defining $\mathbf{t} = T - t^*$ (the time before T when the individual starts to work, x can be simplified to:

$$V^i(t) = \frac{b}{r} + \frac{e^{-r(T-t)} e^{rt}}{r + \mathbf{I}} \left[-\frac{\mathbf{I}(b-w)}{r} - be^{-(r+\mathbf{I})t} \right]$$

Maximizing this with respect to \mathbf{t} leads to the solution:

$$\mathbf{t} = \frac{\ln(b) - \ln(b-w)}{r + \mathbf{I}}$$

This says that if job offers arrive more slowly, individuals will start looking for work earlier so they will transit from inactivity to unemployment earlier. In the extreme case where jobs are freely available, $\mathbf{I} \rightarrow \infty$, x says that individuals will start looking for work only at T when they want it.

One could construct similar models to explain why transitions from unemployment to inactivity are likely to be less when jobs are hard to find.