



**Migration Willingness in Spain: Analysis of
Temporal and Regional Differences**

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DOCUMENTO DE TRABAJO 2002-21

October 2002

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Abstract:

One of the reasons for persistent high unemployment in Spain has been attributed to a low mobility of workers between regions. We examine workers' geographical mobility indirectly through migration willingness of unemployed. We focus on two observed patterns in migration willingness, downward trend and persistent regional differences. The changes in the composition of unemployed workers and regional economic situations explain only a small part of temporal and regional variations in migration willingness. Madrid and Barcelona stand out for their low migration willingness. Our conjecture is that these two regions, due to their largest job markets, provide better expectations regarding future job availability and reemployment probability among the unemployed.

Resumen:

Una de las razones que se suele considerar a la hora de explicar la persistencia de un elevado desempleo en España es la escasa movilidad de trabajadores entre regiones. En este trabajo, tratamos de estudiar la movilidad geográfica de los trabajadores de forma indirecta, a través del análisis de la disposición a migrar de los trabajadores desempleados. Nos centramos en los dos patrones que fundamentalmente se observan: la tendencia decreciente a migrar y la persistencia de diferencias regionales. Los cambios en la composición de trabajadores desempleados y la situación económica de las regiones sólo explican una pequeña parte de las variaciones temporales y regionales observadas. Madrid y Barcelona destacan por su baja disposición a migrar. En nuestra opinión, el mayor tamaño de sus mercados de trabajo genera unas mejores expectativas en cuanto a la disponibilidad de futuros puestos de trabajo y la probabilidad de reemplazo entre los desempleados.

One of the reasons for persistent high unemployment in Spain has been attributed to a low mobility of workers between regions. Many authors have pointed out the extremely low regional migration rate in spite of the persistent regional differences in income and unemployment rates (Antolin and Bover, 1997; Bentolila, 1997; Jimeno and Bentolila, 1995). According to Antolin and Bover (1997), during the period 1987-1991, only 0.295% of Spanish men, aged 16 to 70, who were in the labor force changed their regions of residence over a one year period.

We examine workers' geographical mobility indirectly through migration willingness of unemployed workers had they had a hypothetical job offer which implied a residential move. Figure 1 shows the proportion of the unemployed workers who are willing to move for work since 1987. It ranges from 35% in 1987 to 24% since 1999. When the proportion is contrasted over the business cycle represented by overall unemployment rate, we can see a close co-movement between the two; the higher the unemployment rate, the greater the migration willingness. However, we notice a decreasing trend in migration willingness over time; given a similar unemployment rate migration willingness was higher the further back in the past. For instance, the unemployment rate was similar at about 20% in both 1987 and 1997 while the proportion willing to move for work decreased from 35% in 1987 to 29% in 1997, and the proportion willing was lower by 6 percentage points in 1999 than in 1990 while the unemployment rate was similar in both years.

What are the reasons for the decreasing migration willingness over time? Are unemployed workers now less willing to move for work than those before for some intrinsic reasons? Or, has the composition of unemployed workers changed over time in a manner that the groups with lower migration willingness has increased relative to those with greater willingness? To examine this question we compare migration willingness over time by some important characteristics which determine migration willingness.

Ahn et al. (1999) examine this question focusing on the effect of unemployment duration on this willingness. They conclude that some economic incentives such as unemployment benefit and the financial situation of the family do affect unemployed workers' migration willingness while unemployment duration does not seem to do so. In this paper, we focus on the regional and temporal differences in migration willingness of the unemployed Spanish workers. The principal objective of this study is to look for the determinants of the changes in the willingness over time and across regions and their interactions with the corresponding changes in unemployment rates.

1. Theoretical Background

At the outset, it is important to understand clearly our variable of analysis. The willingness to move for work that we analyse in this paper is not actual migration behavior but migration willingness based on a hypothetical question. In this respect it is different from literature on actual migration but is similar to the work by Hughes and McCormick (1985) which analyses workers' migration intention. However, the migration intention they analyse is not identical to ours, as in our data the interviewees are asked about their willingness to move for work given a job offer from other regions while the interviewees in Hughes and McCormick (1985) do not have a job offer, so that they refer to migration intention to other regions as a job search strategy. Hence, the migration willingness analysed in our paper cannot be interpreted either as a direct representation of actual migration or as broader job search effort by workers as in Hughes and McCormick's.

The willingness to accept a certain job offer will depend, according to the standard job search theory, on one's reservation wage and on one's expectations about future job offers one may receive, as well as search costs. Given an identical wage offer expectation, those with a lower reservation wage are more likely to accept a certain job offer. Individuals' reservation wages in turn depend on individual characteristics, family situation and regional economic situation. When the labor market is tight, those with greater family responsibility are more likely to accept a job offer than those with less responsibility.

The composition of the household and each household member's situation, such as the presence of small children and the numbers of working members and the presence of unemployed members, are also relevant factors. Similarly, those with smaller alternative financial resources (such as savings or unemployment insurance) are more likely to accept a certain job offer. Also relevant are individual preferences for work, which are not observed but may be captured by some individual characteristics such as age, education and place of residence. The reservation wage is also likely to be affected by the extent of human capital loss during unemployment spells. Those who face more rapid skill depreciation while unemployed will be more willing to accept a job offer. In this respect, occupation and educational level might be relevant variables.

Current economic situation and expectations about future economic conditions are likely to affect one's willingness to move for work. For example, during a recession, when offers arrive less frequently, job offers are more likely to be accepted than during a period of expansion.

With respect to willingness to accept a job offer which requires a residential move, we may understand the reservation wage as being region specific. Workers have a reservation wage relevant for the local labor market and a possibly different reservation wage for each non-local labor market. In a simple framework, the reservation wage relevant to an outside labor market would be the reservation wage in the local market plus moving costs, where moving costs in a broad sense also include regional differences in wages and job characteristics, housing and living costs, lifestyle and quality of life. Under this framework, in addition to the factors which affect the reservation wage in the local market, any factor which affects moving costs are relevant for the analysis of willingness to move for work. For example, attachment to local culture and life-style and the degree of difference between regions could affect migration willingness. Furthermore, expected monetary moving cost, such as current housing type, living cost differences between regions, and regional differences in real wage, are also likely to be relevant.

Given that the variable we analyze is at most attitudinal, we need to convince ourselves its empirical and policy relevance before we carry on with our empirical analysis. We ask two questions to address this issue. First, “Does migration willingness reflect somehow actual migration behavior of workers? To answer this question, we need surveys which include both the migration willingness and subsequent migration behavior. The Spanish Labor Force Survey is in nature longitudinal (rotating panel) where households once chosen for the survey are followed during 6 quarters. Unfortunately, the households who change place of residence are lost from the survey. However, there is a retrospective question which asks the place of residence one year ago. Using this question we can contrast the migration willingness with past migration experience, and we find indeed a positive relationship between the two variables. Of those with positive willingness to move for work, about 1% had moved their place of residence during the past year while the proportion is only 0.4% among those with negative willingness.

The second question which addresses policy relevance of migration willingness is “How is migration willingness related to the reemployment probability of unemployed workers? In our previous study (Ahn et al. 1999), we found a significant positive effect of positive migration willingness on the job-finding probability. These results provide us with sufficient motivation for our analysis.

2. Migration Willingness Over Time: Composition Effect

The data used for this study are taken from the Spanish Labor Force Survey (EPA) which is the main source of labor market information in Spain. This survey is undertaken each quarter on about 60,000 households (about 200,000 individuals). The question regarding migration willingness is directed only to the unemployed workers, therefore disabling the comparison between occupied and unemployed workers in their willingness to move for work. Neither the question was asked before 1987, therefore providing us only with the data from 1987. We use the second quarter of surveys for each year between 1987 and 2000. This time period is long enough to cover the period of both booms and recessions that the Spanish economy has undergone. First we contrast the aggregate rates of migration willingness by some variables of main interest and compare their evolution to the compositional changes of the unemployed workers.

First, we see a substantially lower migration willingness among women than men. The difference has been consistently about 15 percentage points over the years (Figure 2). Over time the willingness has decreased by a similar magnitude for both men and women. On the other hand, the proportion of women among the unemployed has increased substantially, especially during the periods of expansion (Figure 3). Between 1993 and 2000 the proportion of women has increased from 48% to 59%. Therefore, the decreasing migration willingness over time can be attributed to both an increasing female proportion among the unemployed and a decreasing willingness for both men and women alike.

The second individual characteristic that we examine is the marital status of unemployed workers. For both men and women the singles are much more willing to move for work than the married (Figures 4-5). The difference is 25 to 30 percentage points for women while it is 15 to 20 percentage points among men. At the same time, the migration willingness has decreased for every marital status except for single women. On the other hand, the proportion of the married among the unemployed has decreased during the most of the decade of 1990s for both men and women after a swift increase of married women during the late 1980s (Figure 6). Therefore, we can conclude that the changing composition by marital status (that is, a decreasing proportion of the married) among the unemployed should have increased overall migration willingness during the decade of 90s. (However, we have to be cautious since the marital status is very likely to be endogenous with respect to employment status.)

Another important variable which affects migration willingness is education. In general, the higher the educational attainment is, the greater is the

migration willingness (Figure 7). The increase in migration willingness is most noticeable for those with university education. However, the willingness has been decreasing over time for all education levels. On the other hand, the average education level of the unemployed has increased considerably during the period (Figure 8). Between 1987 and 2000, those with lower than secondary schooling has decreased from 48% to 26% meanwhile those with university education has increased from 23% to 35%. In conclusion, the increase in education level among the unemployed must have increased migration willingness but has been counteracted by the decreasing (over time) willingness at all education levels.

Age is also an important individual characteristics in determining migration willingness. Figure 9 shows a clearly decreasing migration willingness with age. The average age of the unemployed has increased continuously over the period (Figure 10), and the increase was much greater among the female unemployed. The increasing age accompanied by the lower migration willingness among the older has contributed to the decreasing overall migration willingness over time.

One of the economic factors often accused as a prime culprit for high unemployment in Spain is unemployment benefits. It is often said that generous unemployment benefits raise unemployed workers' reservation wage and reduce the incentives of moving to other regions to work or to search for work. Indeed, the migration willingness is lower among those who receive unemployment benefits (Figure 11). However, the difference is quite small. One interesting phenomenon is that the decreasing trend of migration willingness is more pronounced among the benefit receivers (Figure 12). On the other hand, the share of the benefit receivers among the unemployed pool has decreased during the most of the last decade.

In summary, composition changes have clearly affected overall migration willingness of the unemployed, some (like education) positively and some (like gender) negatively. Also is clear that there remains a substantial decreasing trend in migration willingness even after controlling for the composition effects.

3. Regression Results of Migration Willingness

To establish the effects of each variable net of other correlated variables we run probit regressions with the unemployed workers' migration willingness as dependent variable and their individual and local area characteristics as explanatory variables. Regression results are in general consistent with those of bivariate analyses in the previous section.

Age: It is shown that there are no significant effects up to age 44, but migration willingness is considerably lower among those 45-64 years of age than the younger people.

Education: Only those with university level of education show significantly higher migration willingness. The effect is somewhat stronger among women.

Marital Status: The singles living in their parents' house show higher migration willingness while married women show much lower willingness than others.

Relation with Public Employment Office: Surprisingly, unemployment benefits have no significant effect even when we control for other characteristics. However, those who are not registered in a public employment office show lower migration willingness than those who are registered. This might be reflecting the weaker labor market attachment among those who are not registered.

Local Economic Variables: The higher the local wages are and the lower the local unemployment rate is, the lower is migration willingness. This result is consistent with the hypothesis that weaker local economic situation pushes people to other regions with better employment conditions. House price in local area does not show any significant effect. This might be due to a high correlation of this variable with local wage rate.

4. Regional Differences in Migration Willingness

Over the period of 1987-2000 the average proportion of the unemployed workers who are willing to move for work was about 30% in Spain. However, there are large differences between regions. While the proportion willing to move for work in Madrid, Catalunya and the Balearic Islands is 10% or lower, it is higher than 40% for Asturias, Las Castillas, Extremadura y Ceuta-Melilla (Figure 13). The regional differences have been more or less persistent throughout the period (Figure 14).

Searching for the Determinants of Regional Differences

In this analysis we use regional panel data to explain the regional and temporal differences in the rate of migration willingness. Data consists of 238 observation points (17 regions for 1987-2000). The explanatory variables we include are region dummy variables and trend, composition (sex, age, marital status and education, reception of unemployment benefits and sector) of

unemployed workers, regional economic conditions (unemployment rates, job creation rate and growth rate), and regional population. We add each additional set of variables in subsequent regressions. Due to serial correlation in error terms usual in the type of data we use, we employ Cochrane-Orcutt regression method which controls for the first order serial correlation. In all the regressions we can see the adequacy of Cochrane-Orcutt method due to the presence of serial correlation as shown in the estimated correlation coefficient and the Durbin-Watson statistics.

The results are encouraging. First column presents the result when only the region dummies and trend variable are included. As expected, Madrid, Catalunya and Balearic Islands show substantially lower willingness than other regions. Furthermore, it shows a significant negative trend. In the second column of the table we add variables which represent the composition of unemployed workers. Region dummy variables (Balearic Islands and Catalunya) lose slightly their fixed effects, suggesting that a part of regional differences is due to different characteristics of unemployed workers between regions. The effects of most composition variables show the same sign as shown in earlier univariate comparisons. In particular, the proportion of men and university educated workers increases significantly the proportion who are willing to move for work in a region. The negative trend becomes stronger with the inclusion of composition variables, which suggests that the composition of the unemployed workers has changed over time in a manner to increase migration willingness.

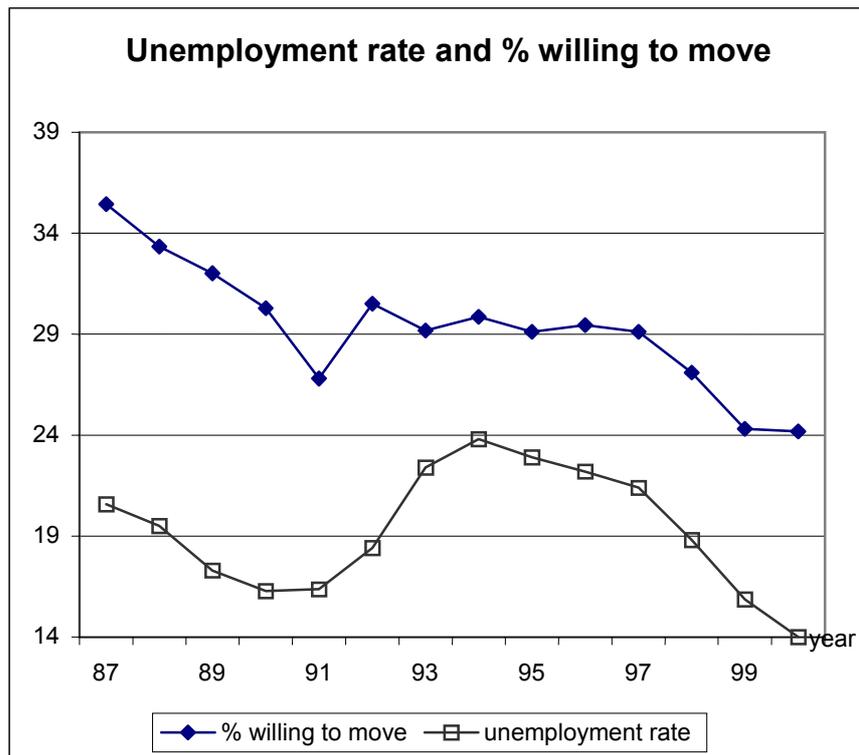
The inclusion of regional economic variables further weakens slightly regional fixed effects as shown in the third column of the table. Regional economic conditions affect the proportion who are willing to migrate. The higher the job creation rate or the lower the unemployment rate in the region, the lower the willingness, although the effects are only marginally significant. On the other hand, per-capita GDP growth rate does not affect significantly although the sign is as expected. The last column of the table includes the population size of the region to capture economy-of- scale effects in job availability as shown in the literature of job-matching (Petrongolo and Pissarides, 2001). However, regional population size does not show any significant effects.

However, the most interesting result is that even after controlling for the regional economic conditions and the composition of unemployed workers in each region, the region dummy variables come out very significant. Madrid and Catalunya again stand out for their low migration willingness. Our conjecture is that Madrid and Catalunya (mainly Barcelona) which are the two regions with largest job markets provide better expectations regarding future job availability and reemployment probability among the unemployed.

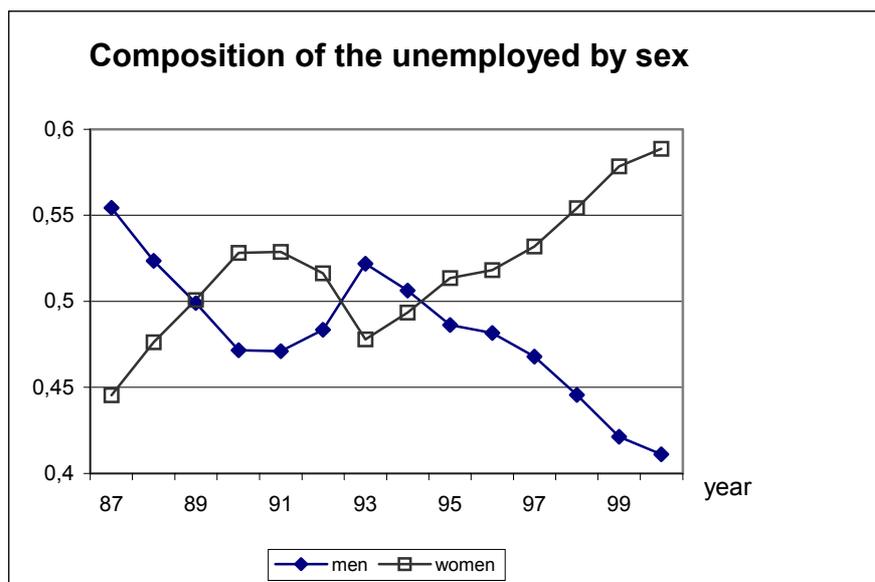
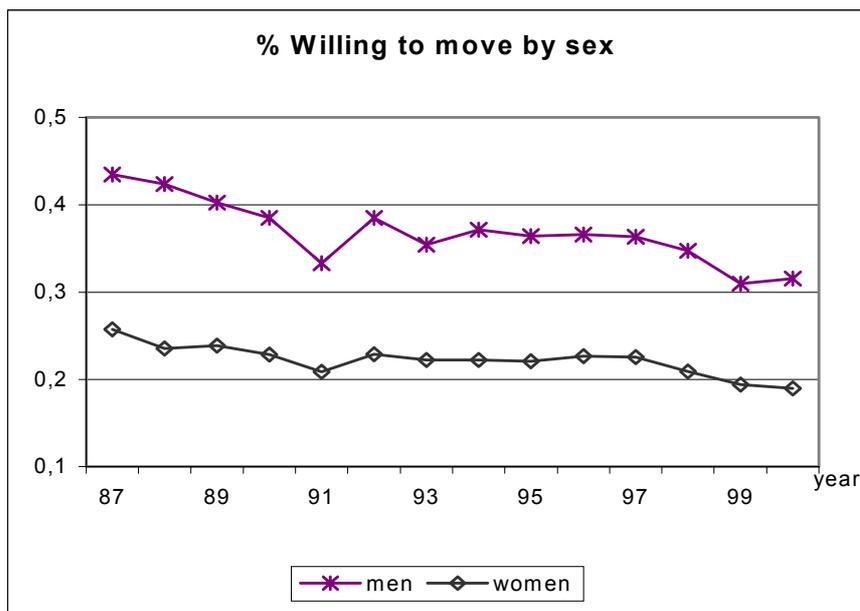
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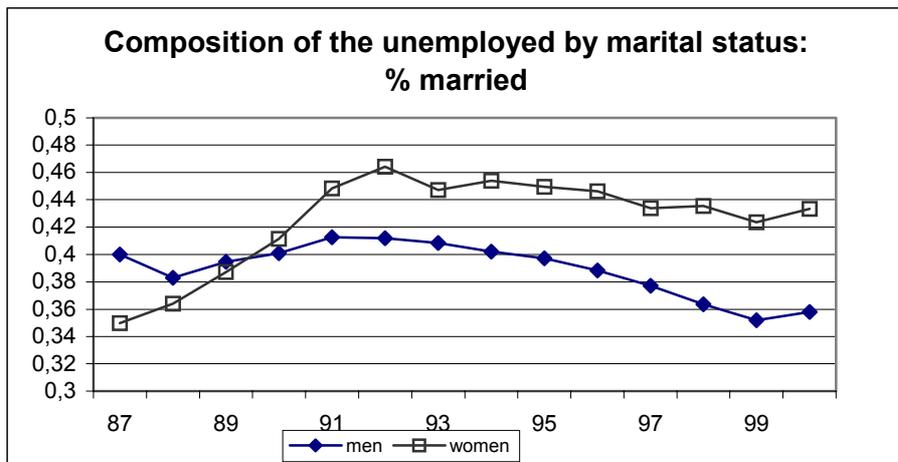
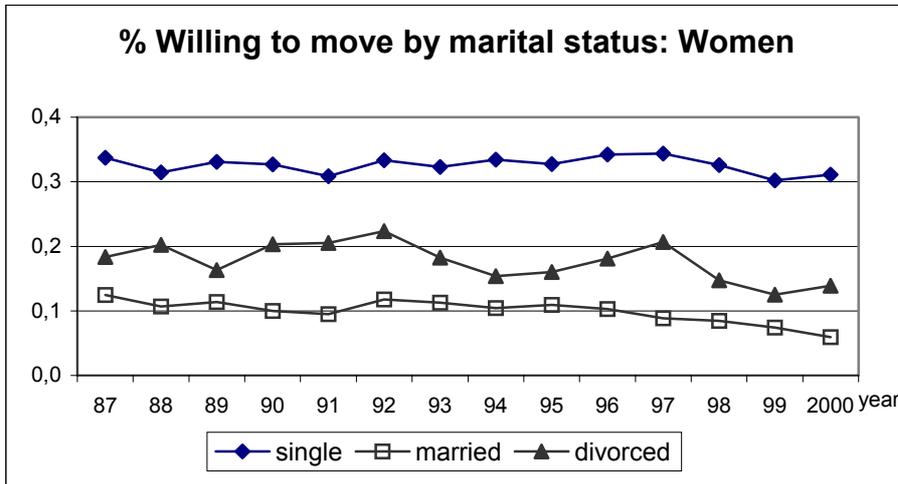
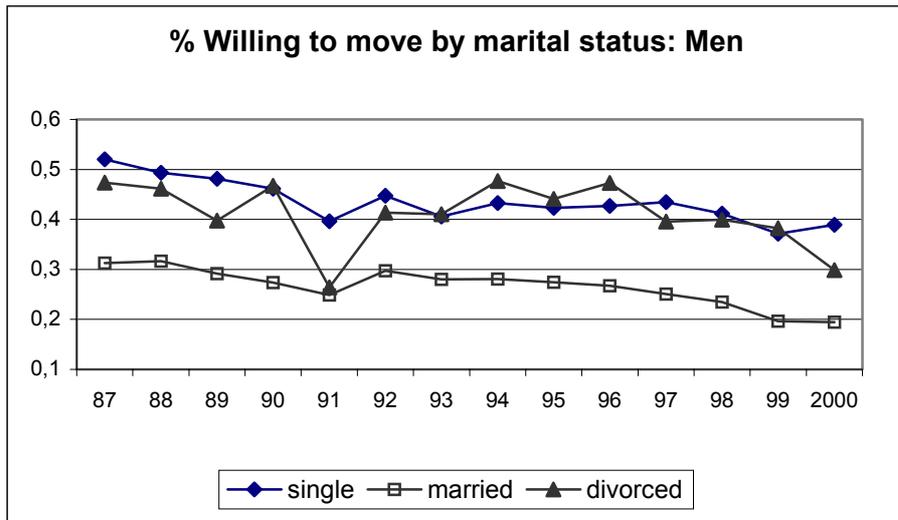
Figure 1



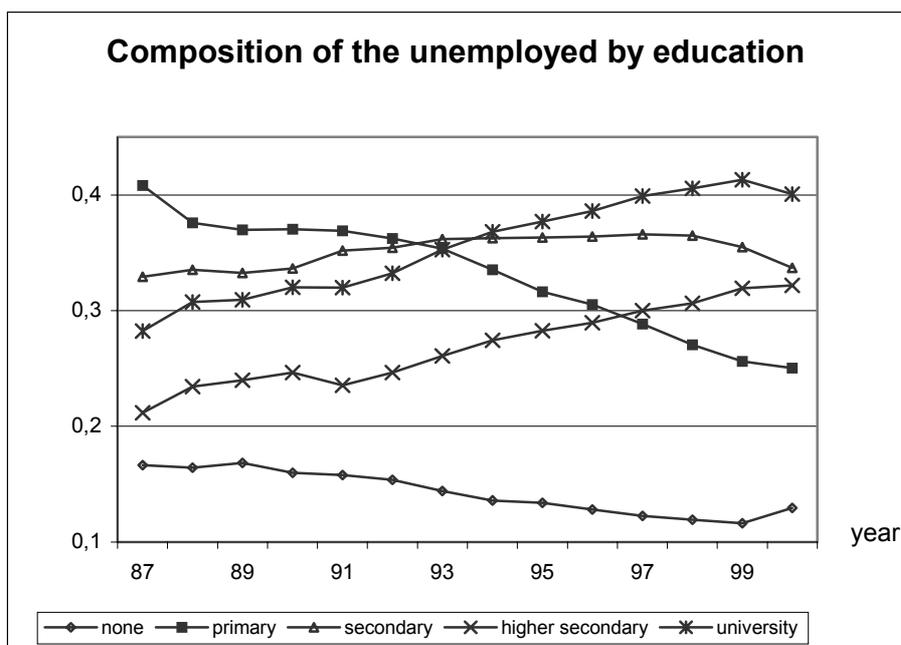
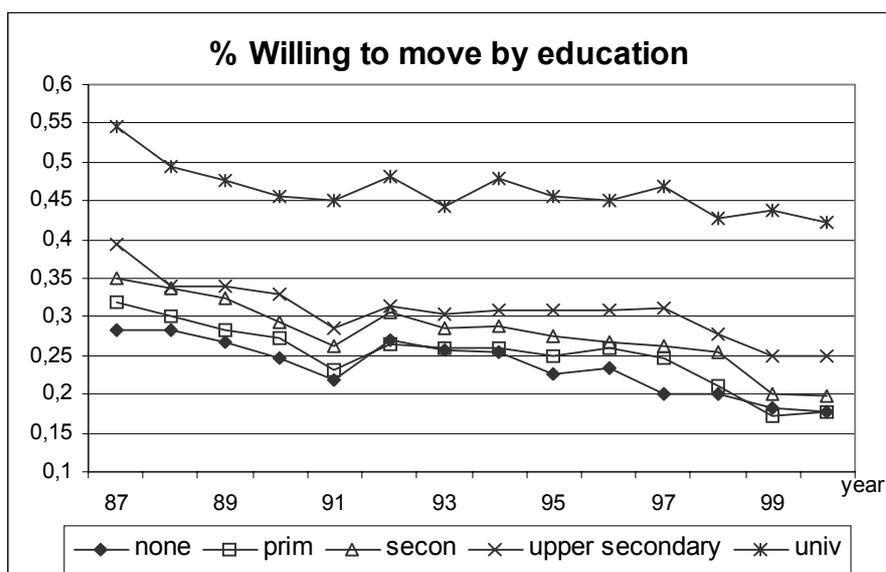
Figures 2-3



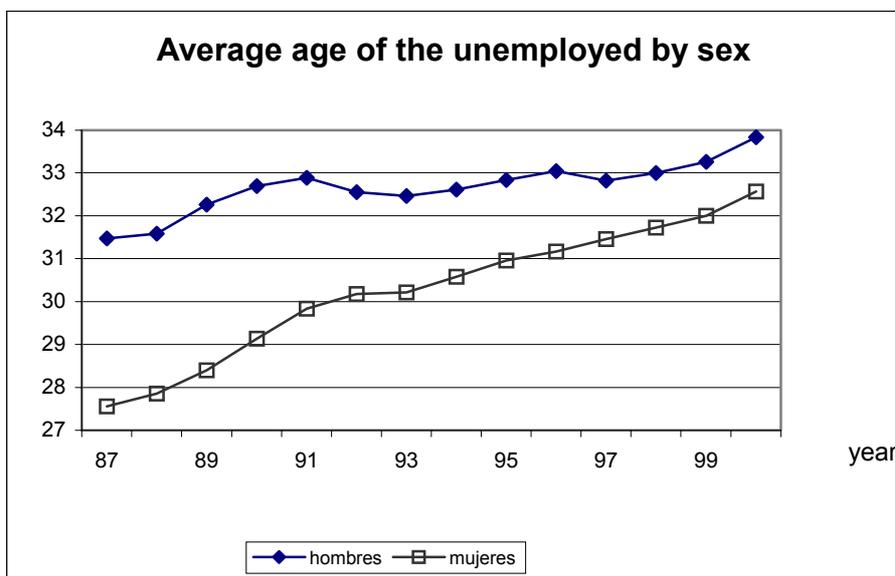
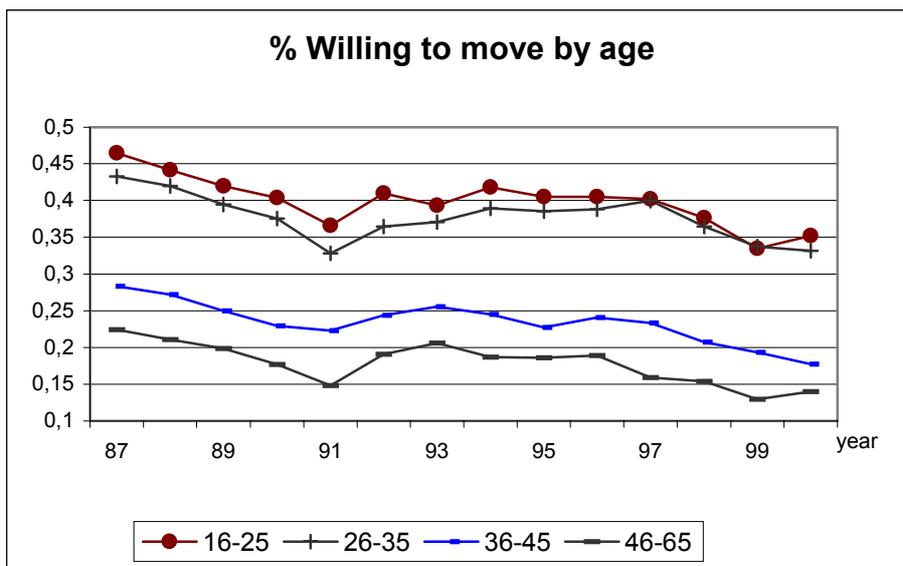
Figures 4-6



Figures 7-8



Figures 9-10



Figures 11-12

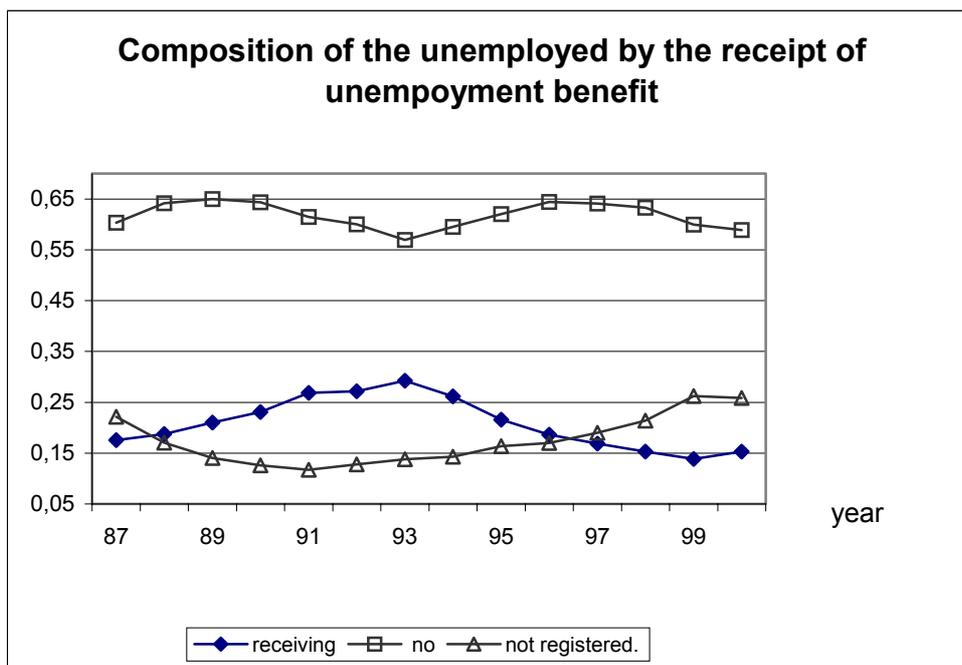
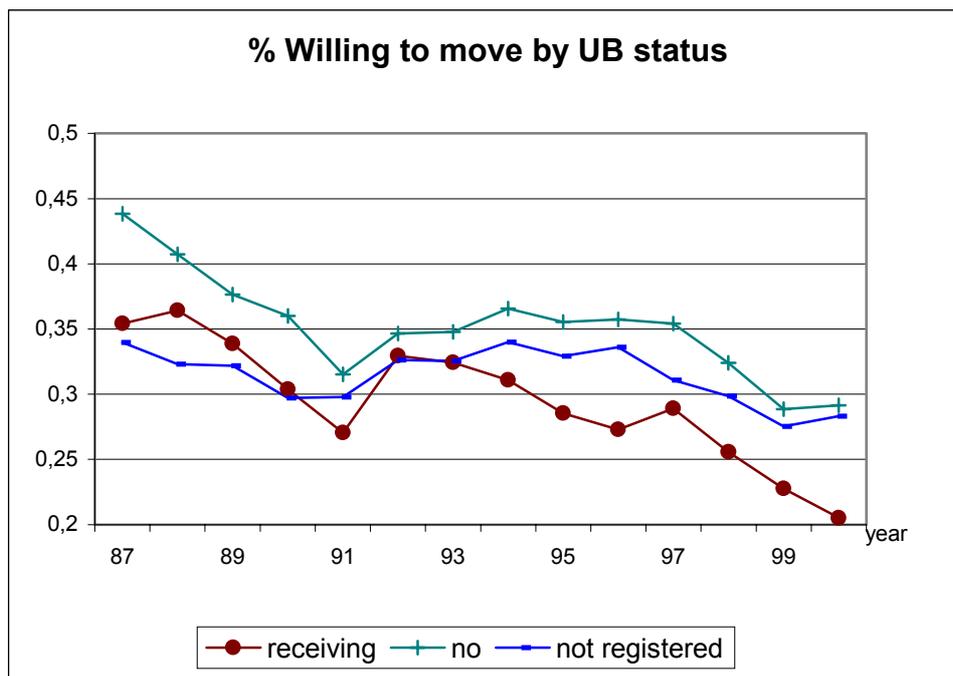
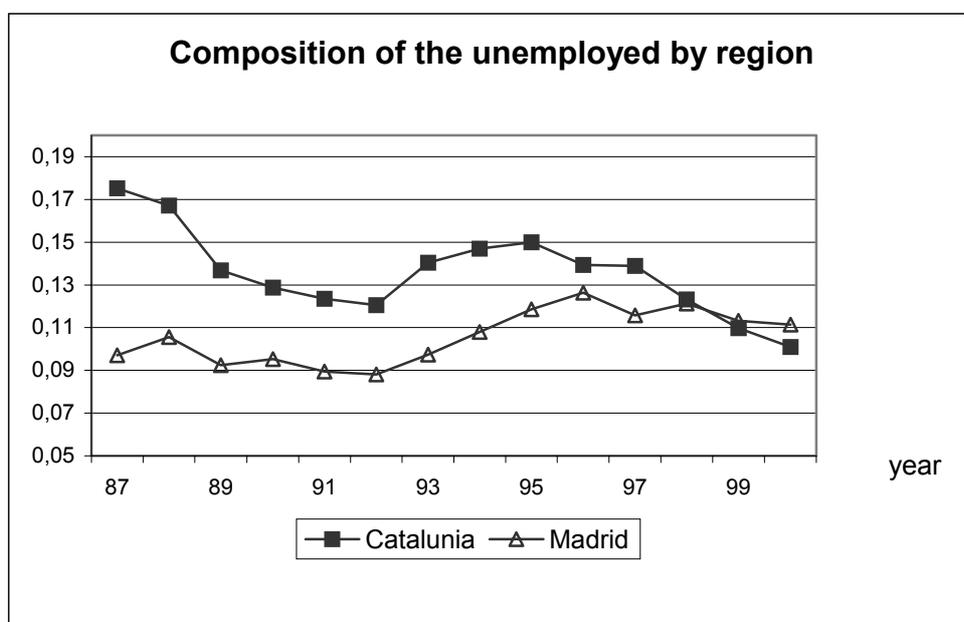
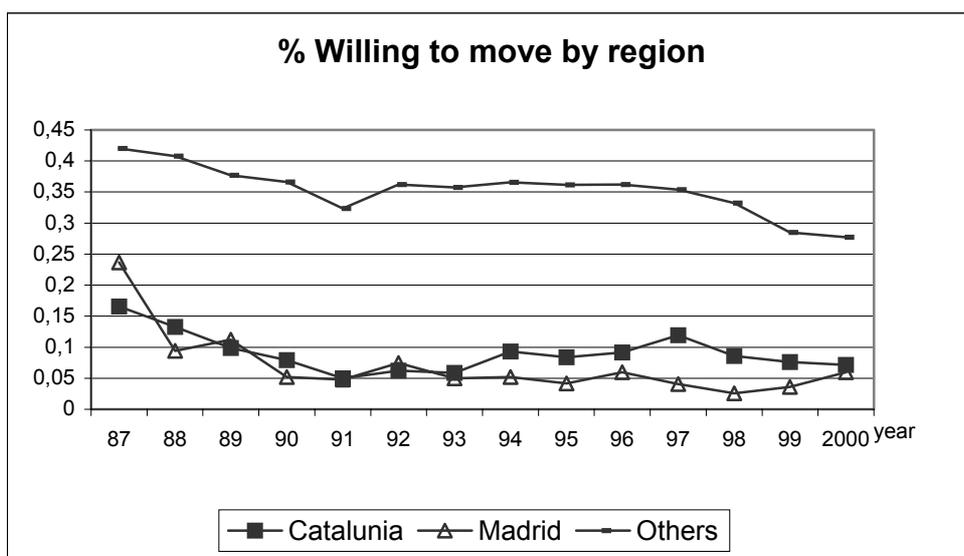


Figure 13-14



Figures 15-16

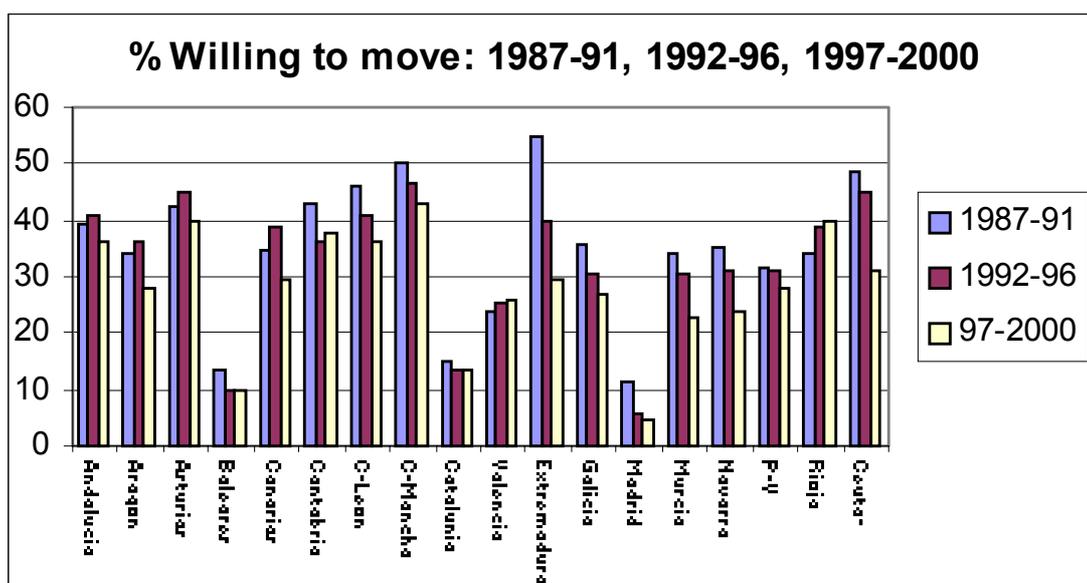
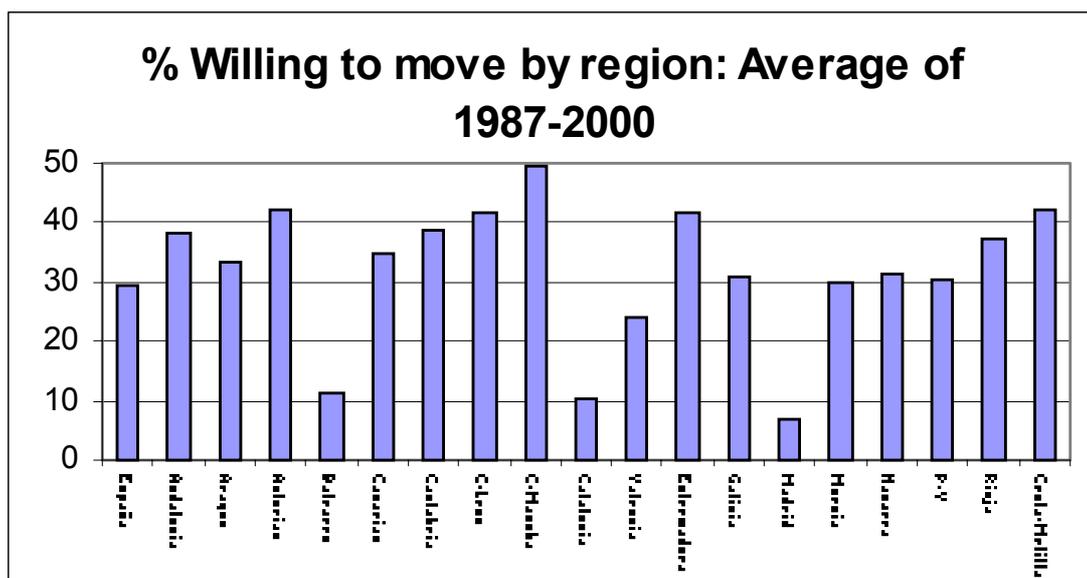


Table 1: Probit Estimation of Migration Willingness

Dependent variable=1 if willing to move for work; 0 otherwise

Variables	Men		Women	
	Coef.	Std. Error	Coef.	Std. Error
Age (re: 16-29)				
- Age 30-44	0.023	0.018	-0.115	0.020
- Age 45-64	-0.408	0.023	-0.319	0.032
University educated	0.493	0.030	0.681	0.022
Marital status (re: singles)				
- Married	-0.214	0.022	-0.521	0.027
- Others	0.247	0.039	-0.217	0.034
Relation to household head (re: head)				
- Spouse	-0.015	0.062	-0.176	0.038
- Son/Daughter	0.213	0.023	0.157	0.032
- Others	0.196	0.034	0.151	0.043
Relation to employment office (registered but not receiving benefits)				
- Receiving UB	-0.014	0.016	-0.006	0.020
- Not registered	-0.084	0.026	-0.065	0.025
Local economic situation				
- Average wage	-1.635	0.113	-1.436	0.113
- House price	-0.030	0.037	-0.057	0.039
- Unemp. rate	2.473	0.169	1.659	0.178

Note: Region and year dummies are included in all regressions.

Table 2: Cochrane-Orcutt Regression using Regional Panel Data

Dependent variable: log (% willing to move for work)

Data: 17 regions for 1987-2000

Variables	Coef. (t)	Coef. (t)	Coef. (t)	Coef. (t)
Region (re: Andalusia)				
Baleares	-1.40 (10.5)	-1.16 (7.05)	-0.91 (4.62)	0.13 (0.05)
Catalunia	-1.46 (12.9)	-1.23 (6.77)	-1.10 (5.81)	-1.05 (4.24)
Madrid	-1.91 (17.0)	-1.96 (10.3)	-1.79 (8.86)	-1.64 (3.54)
Trend	-0.02 (4.37)	-0.04 (2.73)	-0.03 (1.90)	-0.03 (1.91)
Composition (in natural logarithm)				
% men		0.62 (2.54)	0.42 (1.62)	0.41 (1.58)
% age>35		0.02 (0.09)	0.11 (0.54)	0.12 (0.58)
% single		-0.14 (0.42)	-0.11 (0.33)	-0.10 (0.32)
% university		0.28 (3.87)	0.27 (3.68)	0.27 (3.66)
% UB		-0.11 (1.12)	-0.15 (1.54)	-0.16 (1.59)
% w/o exp.		-0.42 (1.93)	-0.26 (1.19)	-0.26 (1.18)
% manufacturin		-0.10 (1.02)	-0.09 (0.91)	-0.08 (0.79)
% construction		-0.04 (0.57)	-0.05 (0.74)	-0.05 (0.72)
% service		-0.19 (0.92)	-0.17 (0.85)	-0.16 (0.80)
Regional Economic Condition (in natural logarithm)				
Job creation			-0.01 (1.47)	-0.01 (1.46)
Unemployment			0.23 (1.96)	0.24 (1.99)
GDP/cap			-0.09 (0.99)	-0.09 (0.97)
Population				0.46 (0.37)
Rho	0.21	0.31	0.26	0.26
DW-original	1.40	1.44	1.56	1.57
DW-transf.	1.88	1.94	1.97	1.98
Adj. R-squared	0.81	0.80	0.82	0.82
Observations	221	221	221	221

Previous Regression

Variables	Coef.	Std. Error	t-statistics
Demographic composition of unemployed workers (in log)			
% Age>44	0.210	0.125	1.680
% Singles	0.038	0.307	0.120
% university	0.251	0.072	3.470
% receiving UB	-0.122	0.101	-1.210
Regional economic condition			
Variation of employment	-0.007	0.007	-1.020
Log % Unemployment	0.524	0.106	4.970
Log wage rate	-0.642	0.207	-3.090
Region (re: Andaluçia)			
Aragón	0.050	0.146	0.350
Asturias	0.336	0.138	2.430
Baleares	-0.919	0.153	-5.990
Canarias	0.025	0.124	0.200
Cantabria	0.116	0.129	0.900
C-Leon	0.139	0.126	1.110
C-La Mancha	0.345	0.133	2.590
Catalunia	-1.131	0.133	-8.540
Valencia	-0.377	0.124	-3.040
Extremadura	-0.153	0.116	-1.320
Galicia	-0.130	0.126	-1.040
Madrid	-1.753	0.150	-11.730
Murcia	-0.409	0.139	-2.930
Navarra	0.105	0.163	0.640
País Vasco	-0.069	0.133	-0.520
Rioja	0.233	0.156	1.490
Durbin-Watson	2.05		
Number of observation	187		
Adj. R-squared	0.85		

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