Temporary contracts and young women in Spain

Sanchez, Rosario; Diaz, Angeles

Temporary contracts and young women in Spain

Journal:	*Applied Economics*
Manuscript ID:	APE-06-0120.R1
Journal Selection:	Applied Economics
JEL Code:	J21 - Labor Force and Employment, Size, and Structure < J2 - Time Allocation, Work Behavior, and Employment Determination/Creation < J - Labor and Demographic Economics, J29 - Other < J2 - Time Allocation, Work Behavior, and Employment Determination/Creation < J - Labor and Demographic Economics
Keywords:	labour market, gender, temporary contract, permanent contract, panel data

Temporary contracts and young women in Spain[1]

Mª Angeles Díaz** and Rosario Sánchez**.

Abstract:

In this paper we analyse the determinants of temporary employment through a balanced panel of workers from 1995 to 2000. Firstly, we estimate a panel with 1267 individuals with ages ranging from 16 to 65 years. We obtain that the probability of having a temporary contract increases for people younger than 46 years old. Secondly, we estimate separately the sample of people younger than 46 years old and we obtain that the probability of temporality increases for young people with university level of education. More interestedly, the probability of being in a temporary contract is smaller for young women that for young men in Spain.

KEYWORDS: labour market, gender, temporary contract, permanent contract and panel data
JEL: J21 and J29

---

[1] This study has been financed by the project of Science and Technology GV04B-086

** University of Valencia. Department of Economic Analysis, Faculty of Economics, Campus dels Tarongers, Av. Dels Tarongers s/n, 46022 Valencia, Spain. Fax: 96-3828249.
E-mail: rosario.sanchez@uv.es.

1. Introduction

The persistence of the Spanish unemployment spurred, in 1984, the implementation of a major reform package to enhance labour market flexibility and to help entrance to the labour market[1]. One of the most labour market innovations was the modification of temporary contracts that allow firms to hire employees performing regular activities. Before this, permanent work contracts represented 90% of all contracts, with the remaining temporary contracts being mainly of seasonal nature. These contracts became attractive to employers because of both, their short duration and low severance payment. Consequently, from these greater incentives, the new temporary contracts immediately enjoyed a degree of success that far exceeded expectations.

The difference in severance payments between temporary and permanent contracts is a key for understanding its success (see Dolado et al, 2002). The number of temporary contracts was disproportional after the reform of 1984. In 1994, 1997 and 2001 took place new reforms, trying to achieve a more balanced situation by restricting the use of temporary contracts and by reducing mandatory firing costs under new permanent contracts. Afterwards, these reforms were not effective to reduce the rate of temporality that still remains around the level of 30%.

[1] For a deeply analysis of the legal framework of Spanish' temporary employment growth see Amuedo-Dorantes (2001); Dolado et al (2002) and Segura (2001).

Several studies carried out for the Spanish case show that the average productivity of temporary workers is lower than that of permanent ones. For instance, Sánchez and Toharia (2000) find evidence in favour of this hypothesis. This evidence is explained by the negative effect over the worker's effort caused by differences in wages. In addition, Diaz and Sánchez (2004) obtain, through a stochastic frontier analysis, that the high percentage of temporary contracts has affected negatively productivity. Thurow's (1975) model of job competition assumes that productivity is associated to jobs, not to workers. There are jobs with higher productivity than others, and firms allocate workers to jobs according to their educational profile. As employers rarely have direct evidence of the specific training costs for specific workers, they end up by ranking workers according to their educational attainment. In this sense, if job productivity is related with jobs as well as workers, in Spain the high augment of "bad jobs" could explain the negative effects in productivity. Also, Rodríguez-Gutierrez (2006) identifies the main determinants of the proportion of temporary workers at firms and show that this proportion has a countercyclical behaviour.

We built a balanced panel of 1267 workers from 16 to 65 years old to estimate a random effect probit model to analyse the determinants of the temporality in Spain. We obtain that temporality increases for employees younger than 46 years old. Given that temporality affects, over all, people younger than 46 years old we estimate separately two balanced panel of individuals, one for people younger of 46 and other for people older than 45 years old. We have found significant differences between those groups in gender, in education and in sectors

of activity. To be a woman younger than 46 reduces the probability of temporality. This result is related with the sample selection imposed to obtain a group of people that works six years without any unemployment spell. It is more difficult for women than for men to persist in employment given the women's higher unemployment rate. Therefore, we can say that the young women of our sample have strongly succeeded in the labour market. Other interesting result is that young people with university level of education increases the probability of temporality. As we will show later, this result could be explained by the fact that during this period most new contracts were temporal. This new contract framework has affected young workers that face different labour market legislation than that found by people who arrived to the labour market before 1984. Firstly, because they faced a labour market with a job creation focused mainly in temporary contracts and secondly, because the labour market reform of 1997 introduced a new permanent contract with lower firing cost and one of the target groups were workers older than 45 years old. Therefore, it explains our findings that workers under 45 have a higher incidence of temporary work. The Spanish legal framework, after the labour market reforms, have developed a broad set of rules promoting permanent contracts as, for example, the existence of legal restriction to the excessive renewing of temporary contracts for the same workers, and some economic incentives to convert temporary contracts in permanent ones. Even though the existence of a legal constraint[2], in our sample, the average number of years with the same employer for temporary workers exceed the three

[2] It is not allowed to renew a temporary contract to the same worker after three years.

years allowed by law, showing that the Spanish firms have been making other arrangements with workers to avoid legal constraints.

The paper is organised as follows: In section 2, we show the data and variables. Section 3 provides the discussion of results. Finally, in section 4 we present the concluding remarks.

2. Data and Variables

Data from the ECPH for Spain, conducted by the Spanish National Institute of Statistics (INE), is used to estimate three random effect Probit models to investigate the determinants of temporary work. We analyse a balanced panel of 1267 wage earners currently working 15 or more hours per week, from 1995 to 2000. This is a sample of people, which are employed during the six years of analysis. In the ECPH survey there are a number of questions (PE001A, PE002A, PE011, PI211M, PU001, and PU002) that allow us to discriminate between workers that have experienced some unemployment spell and those that have been working six years without interruption. Firstly, through variables of activity, and secondly, checking that individuals have obtained a monthly wage without interruption in this period.

The percentage of temporary workers in 1995 was of 23.8% while in 2000 it diminished until 10.4%. From these 1267 individuals we have 275 women, which represent the 21.7%. We have made this sample selection because we are interested in analysing the determinants of people that remain in temporary jobs even though they are working enough time to be in a permanent position. Table 1, shows the share of temporary and permanent workers included in the sample.

From 1995 to 2000, 170 temporary workers have obtained a permanent contract, while 132 workers remain in a temporary contract. The 75% of these 132 temporary workers have seniority with their employers from 5 to 9 years while the 21.5% have seniority higher than 10 years. From this results we infer how difficult is to understand the concept of temporality in Spain.

When we restrict the sample to those individuals younger than 46 years old, the percentage of temporary workers rise to 30% in 1995 while in 2000 the percentage diminished until 11.4%; both percentages are higher than that obtained for the whole sample. The younger have a high proportion of temporality. Here we have 159 women and 552 men; then women represent the 22.36% of the sample.

TABLE 1: DISTRIBUTION OF TEMPORARY AND PERMANENT WORKERS BY YEARS

YEARS	TEMPORARY		PERMANENT		TOTAL	
	Whole	Young	Whole	Young	Whole	Young
1995	302	213	965	498	1267	711
1996	262	175	1005	536	1267	711
1997	218	140	1049	571	1267	711
1998	192	119	1075	592	1267	711
1999	134	84	1133	627	1267	711
2000	132	81	1135	630	1267	711

Analysing the distribution of education by type of contract the sample shows that the 27.6% of permanent workers had university level in 1995 while

this percentage diminished until the 25.4% in 2000. From 1995 to 2000, one hundred and seventy temporary workers became permanent. The 14.1% came from primary education, 44.7% from first level of secondary education[3], 28.2% from second level of secondary education and 12.9% from university level. The percentage of people with university education that became permanent is smaller than that obtained in other levels of education.

When we analyse the distribution of temporary and permanent workers by education for the restricted sample of individuals younger than 46 years old, we obtain that the percentage of workers with university level in 1995 rise to 26.5% while in 2000 it was of 24.9%. Along the period, the percentage of university studies in permanent contracts was smaller than that of the whole sample analysed above.

Concerning the distribution of education between men and women for workers younger than 46 years old, we obtain that 40.25% of women have a university level of education while only the 18.12% of men have this level. The condition of been during six years in a job, is stronger for women than for men, given the existence of gender discrimination in the labour market. Thus, we infer that we have made a positive sample selection bias in favour of women[4], and only the most qualified have survive to unemployment.

[3] In the secondary education variable is included the vocational studies, focused in specific subject, more devoted to the labour market.

[4] Notice that in Spain the women unemployment rate is twice that of men. Usually, women have alternated temporary contracts and unemployment periods and then only the most qualified women have been in employment during the six years of our sample. See Escriche, Olcina and Sanchez

2.1 The variables

We have estimated three Random Effect Probit model to study the differences, in terms of temporality, between people younger than 46 and people older than 45 years old. The dependent variable used for estimation is TC, temporary contracts, that takes value 1 when the individual has a temporary contract, 0 if the contract is permanent.

The independent variables are:

Age:

Age1: This variable takes value 1 if the individual is from 16 to 24 years old and 0 otherwise.

Age2: This variable takes value 1 if the individual is from 25 to 45 years old and 0 otherwise.

Age3: This variable takes value 1 if the individual is from 46 to 55 years old and 0 otherwise.

Age4: This variable takes value 1 if the individual is from 56 and more years old and 0 otherwise.

Gender:

Women: This variable takes value 1 if the individual is a woman and 0 if it is a man.

Marriage:

Married: This variable takes value 1 if the individual is married and 0 otherwise.

Income:

(2004) for a good theoretical framework about gender discrimination and intergenerational

Wage: The monthly net wage.

Number of workers of the firm:

Less than 50 workers: This variable takes value 1 if the individual works for a firm with less than 50 workers and 0 otherwise.

From 51 to 100: This variable takes value 1 if the individual works for a firm from 51 to 100 workers and 0 otherwise.

From 101 to 499: This variable takes value 1 if the individual works for a firm from 101 to 499 workers and 0 otherwise.

More than 500: This variable takes value 1 if the individual works for a firm with more than 500 workers and 0 otherwise.

Education Classification:

Primary: Takes value 1 if the individual has primary education and zero otherwise.

Secondary 1st cycle: Takes value 1 if the individual has the first level of secondary education and vocational and zero otherwise, this education is obligatory.

Secondary 2nd cycle: Takes value 1 if the individual has the second level of secondary education and vocational and zero otherwise.

University: Takes value 1 if the individual has completed university education (three or five years) and zero otherwise.

transmission of preferences.

Industrial Sector Classification:

Fishing and agriculture: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Extractives industries: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Food, drinking and tobacco: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Textile, clothing and leather: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Wood and paper except furniture: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Chemical product, couch and plastic, non-metallic mineral products: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Metallurgy; fabricated metal products, industrial equipment: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Manufacturing of electronic material, office machinery: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Construction: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Retail industry: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Hotels: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Transportation, telecommunications: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Financial management: Takes value 1 if the individual works in this sector of activity and zero otherwise. This is the category of reference.

Real state activities: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Government administration: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Education: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Sanity service: Takes value 1 if the individual works in this sector of activity and zero otherwise.

Other social activities: Takes value 1 if the individual works in this sector of activity and zero otherwise

Private Sector: This variable takes value 1 if the individual works in the private sector zero otherwise.

Language: Takes value 1 if the individual needs a foreign language in its job and zero otherwise.

3. The discussion of results

Here we will analyse the results obtained by the estimation of three samples. Firstly, we will explain the results of the whole sample (Table 2), and secondly, we will make a sample selection to analyse separately the results obtained for individuals younger than 46 and older than 45 years old (Table 3). The tables with the results of the estimated coefficients appear in the Appendix. The variables used for estimation have been described in section 2.

3.1. The whole sample

We have estimated a balanced random effect Probit model to study the determinants of temporary contracts. In Table 2 of Appendix, we present the results. The dependent variable is a dummy variable that takes value one if the individual has a temporary contract, zero if the contract is permanent.

The age is a variable that affects the probability of been temporal. To be younger than 46 years old increases this probability with respect to be older. There are not significant differences between men and women in temporality.

In addition, to be married reduces the probability of temporality with respect other situations as single or divorced.

As higher is the monthly net wage, smaller is the probability of temporality. Even though we have a significant coefficient, the impact of this variable is very small because its value vanishes to zero.

To belong to a firm with more than 500 workers reduces the probability of temporality with respect to a firm from 101 to 499 workers.

The result, in terms of education, indicates that individuals with secondary or university education do not seem to make difference with respect individuals with primary education. When we analyse this sample with population from 16 to 65 years old of stable workers, the education level does not present significant differences in the probability of obtaining a permanent contract. This result reinforces the finding that temporary contracts have been used for all type of jobs. Therefore, in Spain, in the last twenty years, the most part of job creation have been oriented to "bad" jobs. Consequently, the Spanish productivity has been one of the lowest of the European Union.

To work in sectors as chemical products, metallurgy, construction, hotels and transportation increases the probability of temporality with respect the financial management sector; while to work in sectors as real states activities, textile and clothing, fishing and agriculture or education do not present significant differences with respect to work in the financial management sector.

We have obtained significant differences before and after the reform of 1997. The probability of temporality augment in 1995 compared with 1997, which is the year of the second labour market reform and is the category of reference. However, we do not found significant differences between the year 1998 and 1997, while in the years 1999 and 2000 the probability of temporality decreases with respect 1997.

3.2. The restricted samples

In this section, we will compare the results obtained from the estimation of two samples corresponding to individuals younger than 46 and older than 45, shown in Table 3.

As we have mentioned previously, temporality affects essentially young people. We have obtained that the probability of temporality, for younger than 25, is larger than for workers older than 24 years old.

When the sample is restricted to individuals younger than 46 to be women reduce the probability of been in a temporary contract. In Spain to persist in a job is difficult for women. So, in this selection we have the most qualified women as we have analysed in previous section. In fact, the percentage of university studies is higher for women than for men. In addition, we have to remark that since 1994 there have been some fiscal incentives to promote the transition of temporary to permanent people for some population groups and females being among these.

As higher is the monthly net wage lesser is the probability of temporality. This result is related with the Spanish labour market segmentation between "good" and "bad" jobs. In fact, one third of workers are under very flexible employment contracts with low wages and low severance payment and two-thirds are under permanent employment contracts with high wages and very high employment protection.

For individuals with university degree the probability of been temporal is higher than for people with primary education, for the sample of younger than 46 years old. Casquel and Cunyat (2004) have developed a matching model built on

Blanchard and Landier (2002) and Wasmer (1999). They have obtained, that for some type of workers "high productivity workers" temporary jobs act as stepping stones to permanent jobs, whereas other type of workers "low productivity workers" get stuck in temporary jobs. However, we have obtained, in a framework of stables workers, that people with university education get stuck in temporality. Even more, the percentage of conversion from temporary to permanent contracts is higher for workers with other levels of education below to that of university.

As we have mentioned in previous sections, after 1994, the new jobs' creation were essentially temporal. This restriction, have forced young individuals to start in the labour market with a temporary contract. The young people are more educated than older, usually with permanent contract because they came from other type of labour market regulation. In this context firms could choose the best workers from a pool of workers than exceed firm's labour demand. This type of policy has generated serious consequences on productivity, and, consequently, has reduced incentives for education in the long run.

The probability of temporality increases for jobs that belong to the industrial sectors of Fishing and Agriculture, Chemical products, Building and Hotels with respect to the management sector, for both samples. However only for the sample of workers younger than 46 to work in sectors as Food and drinking, Metallurgy, manufacturing and Government augment the probability of temporality with respect the management sector. The reform of 1997 has reduced the share of temporary jobs in private sector, but such a reduction was partially

offset by an increase of the share in the public sector. The reasons are related to fiscal consolidation and to the implementation of active labour market policies that affects especially young workers that are the new entrants in the labour market.

Finally, when we analyse the effect of the labour market reform of 1997 we observe that it was effective in the sample of younger than 46 while for people older than 45 years old there are not significant differences. This result reinforce our previous idea that young workers were the more affected by the change in labour market regulation. They were the most damaged by the use and abuse of temporary contracts and after the 1997 labour market' reform, they have been benefited by the restriction imposed by law and, overall, by the introduction of a new permanent contract. In any case, the reduction in temporality measured around 2 or 3% has questioned the efficacy of these labour market reforms. We have to point out that the temporality rate in Spain in 2006 is still around the 30%.

This result together with that obtained for the sectors of activity, show the segmentation of the Spanish labour market.

4. Concluding remarks

Temporary contracts have been used in Spain as a way to enter in the labour market. Therefore, as the old permanent contracts coexist together with those temporary modified after the reform of 1984, we have found that older and less educated individuals are more probable to have a permanent contract than young people, which are on average more educated.

Editorial Office, Dept of Economics, Warwick University, Coventry CV4 7AL, UK

From a panel of working people with an age ranged from 16 to 65 years old, the gender does not affect to the probability of been temporal. However when we restrict the sample to individuals younger than 46 years old, to be women reduces the probability of temporality with respect to be men. Our selection implies a sample of young workers that are employed during six years without interruption. In Spain to persist in a job is difficult for women. So in this selection we have the most qualified women. In fact the percentage of university studies is higher for young women than for young men. In this sense we could conclude that is more difficult for Spanish women to obtain a job and also to keep it, than to obtain a permanent contract.

We have shown that the probability of temporality in Government increases with respect to the financial management sector for young people. After the 1997 labour market reform the temporality share augments in the public sector. This policy affects mostly the new entrants in the labour market that were predominantly young people.

Our results have shown that temporary contracts have been used in Spain for jobs and in sectors where the long run relations were important to enhance productivity. Now we need a more balanced situation to avoid the disincentives of a high rate of temporality in young entrants in the labour market.

Editorial Office, Dept of Economics, Warwick University, Coventry CV4 7AL, UK

5. References.

Adam, P. and Canziani, P. (1998), Partial de-regulation: permanent-term contracts in Italy and Spain. *Centre for Economic Performance LSE*, DP: 386.

Amuedo-Dorantes, C. (2001), From temp to perm, promoting permanent employment in Spain. *International Journal of Manpower*, 22, 7, pp. 625-647.

Bentolila, S. and Dolado, J. (1994), Lessons from flexibility in Spain. *Economic Policy*, 9, pp. 53-99.

Bentolila, S. and Saint Paul, G. (1992), The macroeconomics impact of flexible labour contracts with an application to Spain. *European Economic Review*, 36, pp. 1013-47.

Blanchard, O. and Landlier, A. (2002), The perverse effects of partial labor market reform: fixed duration contracts in France. *Economic Journal*, 112, pp. 214-244.

Casquel, E and Cunyat, A (2004), The causes and consequences of temporary jobs in Spain: a theoretical-empirical approach. *Instituto Valenciano de Investigaciones Económicas (IVIE)* WP-EC 2004-18

Diaz-Mayans, M.A. and Sánchez, R. (2004), Temporary employment and technical efficiency in Spain. *International Journal of Manpower*, 25, 2, pp.181-194.

Dolado, J.J.; Garcia-Serrano, C. and Jimeno, J.F. (2002), Drawing lessons from the boom of temporary jobs in Spain. *The Economic Journal*, 112, pp. 270-295.

Escriche, L; Olcina G. and Sanchez, R. (2004), Gender discrimination and intergenerational transmission of preferences. *Oxford Economic Papers*, 56, pp.485-511.

Güell, M. and Petrongolo, B. (2000), Workers transitions from temporary to permanent employment: the Spanish case, *CEP, Discussion Paper* 438.

Rodríguez-Gutiérrez, C. (2006), An explanation of the changes in the proportion of temporary workers in Spain. *Applied Economics*, 38, pp. 47-62.

Sanchez, R. and Toharia, L. (2000), Temporary workers and productivity: the case of Spain. *Applied Economics,* 32, pp. 583-591.

Thurow, L. (1975), *Generating inequality*. New York basic books.

Wasmer, E. (1999), Competence for jobs in a growing economy and the emergence of dualism. *Economic Journal*, 109, pp. 349-371.

6. Appendix: Maximum Likelihood Estimates of Random Effects Probit Model

TABLE 2: RANDOM EFFECT PROBIT MODEL OF TEMPORALITY (1995-2000)

Variable	**Coefficient**	**T-Value**	**Mean of variable**
Constant	-0.9933 *	-3.831	
Age of individuals the category of reference is Age 3 (46-55) years.			
Age1 (16-24)	1.388 *	5.399	0.0125
Age2 (25-45)	0.6915 *	5.233	0.6390
Age4 (more than 55)	-0.0758	-0.426	0.0738
Gender the category of reference is woman			
Woman	-0.1548	-1.054	0.2170
Marriage the category of reference is not married (single, divorced.)			
Married	-0.2889 *	-2.865	0.7499
Monthly net wage			
Wage	-0.00009*	-3.831	195527.97
Average number of workers by firm, the category of reference is from 101 to 499.			
Less than 50	-0.467	-0.475	0.4672
From 51 to 100	0.0968	0.802	0.0949
More than 500	-0.3174*	-2.281	0.1793
Education, the category of reference is EDU1: Primary education.			
Secondary 1º cicle	0.0316	0.259	0.2853
Secondary 2º cycle	-0.1509	-0.936	0.2139
University level	0.3611	1.833	0.2382
Industrial sector classification, the category of reference is Sec13 (Financial Management)			
Fishing and agriculture	0.4321	1.799	0.0322
Extractive industries	0.3956	1.266	0.0263
Food, drinking…	0.3964	1.498	0.0377
Textile, clothing….	0.4363	1.159	0.0161
Wood and paper…	0.1027	0.283	0.0292
Chemical products	0.7816*	3.093	0.0418
Metallurgy…	0.6469*	2.738	0.0567
Manufacturing…	0.1462	0.610	0.0494
Building…	1.780*	8.963	0.0895
Retail industry	0.3893	1.814	0.0957

Hotels…	0.8143*	3.102	0.0399
Transportation…	0.4658*	2.013	0.0656
Real state activities	-0.3648	-0.943	0.0602
Government	0.3331	1.421	0.0538
Education	-0.2060	-0.974	0.1306
Sanity	0.0068	0.023	0.0578
Other social activities	0.1325	0.655	0.0843
Private Sector, the category of reference is public sector.			
Private Sector	-0.1606	-0.118	0.6852
Time, the category of reference is 1997 (the year of the second labour market reform).			
1995	0.3639*	3.665	0.1667
1996	0.2023	1.806	0.1667
1998	-0.0817	-0.721	0.1667
1999	-0.4197*	-3.584	0.1667
2000	-0.3371*	-3.414	0.1667
Language, category of reference does not need foreign language in the job.			
Foreign Language	-0.0303	-0.193	0.0947
Rho	0.6285*	24.465	
Statistics			
N		1267 individuals	7602 observations
Log likelihood function		-1864.075	
Restricted log likelihood		-2247.634	
Chi-squared		767.1174	

Note: the coefficient with * are significant at one percent.

TABLE 3: RANDOM EFFECT PROBIT MODEL OF TEMPORALITY (1995-2000)

Variable	YOUNGER THAN 46			OLDER THAN 45		
	Coefficient	T-Value	Mean	Coefficient	T-Value	Mean
Constant	-0.0107	-0.045		-0.3655	-0.815	
Age of individuals the: category of reference is Age 2 (25-45) years old for younger than 46. For older than 45 the category of reference is age 3 (46-55).						
Age1 (16-24)	0.8293*	2.536	0.0222	----------	----------	----------
Age4 (more than 56)	----------	----------	----------	0.0092	0.074	0.2807
Gender: the category of reference is man.						
Woman	-0.3334*	-3.372	0.2273	0.2236	1.289	0.1951
Marriage the category of reference is not married (single, divorced.)						
Married	-0.5441*	-6.580	0.7022	0.1920	0.917	0.8173
Monthly net wage						
Wage	-0.0001*	-12.850	180989.65	-0.0001*	-5.261	208211.68
Average number of workers by firm, the category of reference is from 101 to 499.						
Less than 50	0.0475	0.5138	0.5054	-0.1852	-1.003	0.4559
From 51 to 100	0.0870	0.1211	0.0893	0.2182	0.704	0.0915
More than 500	-0.1178	-0.709	0.1579	-0.4854	-1.017	0.1952
Education, the category of reference is EDU1: Primary education.						
Secondary 1º cycle	0.0796	0.811	0.3413	-0.2198	-1.201	0.1751
Secondary 2º cycle	-0.0487	-0.372	0.2480	0.1980	0.853	0.0955
University level	0.6037*	3.779	0.2445	-0.0501	-0.146	0.2237
Industrial sector classification, the category of reference is Sec13 (Financial Management)						
Fishing and agriculture	0.7313*	3.091	0.0309	0.6375*	2.970	0.0405
Extractive industries	0.3682	1.167	0.0295	-5.782	0.001	0.0185
Food, drinking…	0.7465*	2.837	0.0389	-0.2435	-0.453	0.0455
Textile, clothing….	0.4468	1.525	0.0159	0.6202*	2.046	0.0145
Wood and paper…	0.5194	1.462	0.0236	-0.1878	-0.330	0.0370
Chemical products	1.0113*	4.003	0.0321	0.6814*	2.854	0.0610
Metallurgy…	0.7725*	3.229	0.0539	0.6642	1.747	0.0580
Manufacturing…	0.5275*	2.024	0.0445	-0.2384	-0.436	0.0455
Building…	2.040*	10.082	0.0895	1.5227*	7.584	0.0905
Retail industry	0.5908*	2.953	0.1148	0.2276	0.724	0.0680
Hotels…	0.6862*	2.810	0.0473	1.0202*	4.078	0.0285
Transportation…	0.5245*	2.465	0.0682	0.3938	1.194	0.0620
Real state activities	0.0226	0.0643	0.0635	-6.295	0.000	0.0435
Government	0.5524*	2.367	0.0496	-0.0057	-0.015	0.0560
Education	-0.0986	-0.4665	0.1303	0.2793	0.942	0.1401

Sanity	0.3969	1.4403	0.0468	-0.0800	-0.0118	0.0665
Other social activities	0.4627*	2.2850	0.0888	-0.3461	-0.751	0.0790
Private Sector, the category of reference is public sector.						
Private Sector	-0.1658	-1.380	0.6875	0.6040	1.379	0.6806
Time, the category of reference is 1997(the year of the second labour market reform).						
1995	0.3521*	3.403	0.1667	0.0071	0.025	0.1667
1996	0.2187**	1.931	0.1667	-0.516	-0.157	0.1667
1998	-0.0385	-0.3147	0.1667	0.0063	0.020	0.1667
1999	-0.3882*	-3.124	0.1667	-0.2509	-0.654	0.1667
2000	-0.2551*	-2.095	0.1667	-0.5412	-1.529	0.1667
Language, category of reference does not need foreign language in the job.						
Foreign language	0.1399	1.138	0.1064	-7.615	0.000	0.0625
Rho	0.4818*	15.271	0.0484	1.320		
N	711 individuals			333 individuals		
Log likelihood function	-1378.094			-330.3227		
Restricted log likelihood	-1432.274			-341.3601		
Chi-squared	308.3604			22.0746		

Note: the coefficient with * are significant at one percent, those with ** are significant at five percent.