EMPLOYMENT, GENDER, EDUCATION AND OTHER RELEVANT VARIABLES: THE FINANCIAL CRISIS IMPACT IN SPAIN

Flora Mª Díaz-Pérez   fdiazp@ull.es
Mª Olga González-Morales olgonzal@ull.es
University of La Laguna

Abstract

The present paper aims to ascertain whether gender differences continue to exist in Spain's working population. It sets out to obtain empirical evidence of the employment profile according to gender, quantify the extent to which self-employment or salaried employment is associated with certain characteristics (age, education, marital status and economic sector) and to analyse the evolution undergone during the recent economic crisis (2005-2009). In the study multivariate analysis statistical techniques will be applied to micro-data from the Working Population Survey compiled by Spain's National Statistics Office (INE). Results shows that significant gender differences in employment status are seen when this is disaggregated and that the economic crisis has had a negative impact especially in certain groups.

1. Introduction

Recent years have witnessed a noticeable increase in the number of women joining the labour market in developed countries, most of which implement programmes to provide support for certain population groups, including women, who have suffered discrimination. Such programmes are essentially designed to foster female participation in the labour market by increasing their human capital, reducing the barriers caused by family circumstances or by encouraging new forms of

employment, among which self-employment is emerging as a viable insertion measure.

The present paper seeks to offer empirical evidence of the profile of the working population in Spain according to gender, to quantify the extent to which this profile is associated with certain characteristics (employment status, education level, activity sector, age, marital status) and to analyse the situation undergone in 2009.

Section two below summarises relevant findings of research into the gender profile of the labour market. Section three sets out the working hypotheses and describes the methodology followed in the analysis offered, while section four and five analyses Spain's working population by gender, defining its profile in 2009. Lastly, a summary of the main conclusions is provided.

2. Labour market situation of men and women

Available statistical data corroborate the continued existence of a considerable wage gap separating men and women. The causes of this gap have not been accounted for fully. The most common economic explanations have fallen into three categories: the human capital theory, discrimination and concentration of women in certain occupations. The human capital explanation is unsupported by the data: gender differences in experience, education level and employment background account for a mere one-third of wage differences between men and women (Corcoran and Courant, 1985, p.275). Moreover, although women are very much crowded into relatively few occupations, this circumstance in itself does not explain how and why it comes about. Corcoran and Courant (1985, p.277) state that women earn less than men even if they hold similar qualifications and the gap is due to the effects of discrimination and socialization.

Men and women constitute separate groups as far as their labour market characteristics are concerned. This situation is reflected, above all, in the employment rate by sectors, in the case both of salaried workers and the self-employed (Navarro and Rueda, 2005). Hakim (1993) distinguishes between male, female and integrated occupations, depending on the degree to which women are represented in each.

2

One variable to take into consideration is the education level of the working population. The human capital theory (Becker 1975, 1981) establishes that the decision to invest in human capital is determined by the outcome of a cost-benefit analysis. According to Becker, women accepted that at some point in their lives they would have to leave the labour market to look after their children and hence they decided to invest less in human capital. This decision impacted on their careers and income, reducing their chances of attaining the best jobs. Traditionally, each partner in the family specialised in what was most profitable for him or her: as the higher earner, the man took paid employment offering career prospects while the woman assumed responsibility for the housework and for raising the children, a situation which influenced her employment decisions and income and career prospects. This situation was aggravated when reproduced within the employment market itself, which acted inefficiently by placing women in the worst occupations (Rubery et al., 1996). However, it appears to be changing of late: women are increasing their investment in human capital and are accessing higher levels of education, and they also receive considerable specific training for their job (European Commission, 2009).

Age can have an important impact on labour market access for women. Whereas men exploit their employment potential to the full between the ages of 30 and 44, women in this age group often put raising a family before professional development. Family responsibilities influence the aspirations of women, who require greater labour market flexibility, especially while they are of child-bearing age (Díaz et al., 2000; Díaz et al., 2002; European Commission, 2009).

Entrepreneurship is one avenue for women to strike a balance between home and career. Self-employment is considered a way of overcoming the barriers to female access to top management jobs (Justo, 2008). Díaz et al. (2002) note that self-employed women tend to have more children than their salaried counterparts, although women are less likely to set up on their own than men (Cuadrado, Iglesias et al., 2004; González, 2008). Self-employment also appears to improve women's labour market situation and allows them to do more skilled jobs.

Specifically, studies conducted by Castaño et al. (1999) and Cuadrado, Iglesias et al. (2004) show that the percentage of women occupying managerial positions increases considerably among self-

employed women. Self-employment also modifies the sectorial distribution pattern of female work substantially, increasing women's presence in traditionally male-dominated activities and reducing their presence in certain traditionally female-dominated and less-skilled activities, such as cleaning in the hospitality sector (Cuadrado, Iglesias et al., 2004). The emergence of new activities in the services sector has contributed to this situation by offering women new opportunities. Nevertheless, for Scherer et al. (1989), Matthews and Moser (1995), Kolvereid (1996) and Kourilsky and Walstad (1998), among others, *gender* is a variable that influences self-employment decisions. In particular, men have a greater propensity than women for entrepreneurship and exhibit a greater preference for self-employment, although authors such as Sexton and Robinson (1989) stress that it is not a matter of preference but rather that woman have fewer opportunities to become entrepreneurs.

In Spain studies by various authors (Rubio et al., 1999; Sanchís and Redondo, 1997; Cuervo, 1995) have shown that over 50% of the population of young people surveyed expressed a desire to set up their own company or enter self-employment. Similarly, Minniti and Nardone (2007) demonstrate the importance of perceptions in entrepreneurship motivation, although they also show that the relationship between the likelihood of starting a business, age, household income, work status, and education is not dependent on gender. However, with respect to the dependency that exists between self-confidence, fear of failure and, to a lesser extent, opportunity perceptions, the same authors maintain that "individual perceptions may differ from actual abilities and risk levels and are likely to be biased" (p. 236)[1].

Bearing in mind the above literature, the contribution of the present paper may be summarised as follows:

---

[1] Studies that analyse the factors impacting on entrepreneurship are many and varied: authors such as Chandler and Hanks (1994) focus on the personal characteristics and qualities of the entrepreneur; Cooper et al. (1986) and Stuart and Abetti (1987) on the circumstances of the economic and political environment; while more recently Sarason et al. (2006) consider entrepreneurship as the nexus of the individual and the opportunities offered by the environment.

1. A study of gender differences in employment status, broken down into self-employment, public-sector salaried employment and private-sector salaried employment.
2. An insight into the role played in the aforementioned employment status of the following variables: education, marital status, age and activity.
3. An analysis of the effect of the economic crisis.

3. Hypothesis, data source, variables and analysis

Hypothesis. Bearing in mind the discussion in the previous section, the following hypotheses are posited:

- H1. Significant gender differences exist in the employment status of Spain's working population, with salaried employment, particularly in the public sector, presenting fewest differences between men and women.
- H2. The education level of women has increased significantly in recent years, which has helped increase their labour market integration.
- H3. Age and marital status influence women's employment status.
- H4. The economic crisis is affecting men to a greater extent.

Data source. General data from Spain's Working Population Survey (EPA in Spanish) are used for the analysis. The data, produced by the National Statistics Institute (INE), correspond to 2005 and 2009 and are used to study the evolution of the different variables and the effects on them of the economic crisis. In addition, microdata from the EPA of 2009 are used to analyse the characteristics of the working population according to gender with the aim of detecting significant differences that might account for the labour market situation of men and women during the current crisis.

*Variables.*The variables gender, employment status, education, activity sector, age and marital status have been selected to ascertain if there is any association between them and their different modalities and to study the situation of the working population in the period.

Analysis. Index numbers are used for analysing the evolution of working population in the period 2005-2009 and Multiple

5

Correspondence Analysis for the Profile of the working population in 2009.

4. The evolution of the working population according to gender (2005-2009)

The decline suffered by Spain's working population between 2005 and 2009 has affected men and women differently. The female employment rate in Q1 2005 stood at 86.4% compared to 92.2% for men. By Q4 2009 the female rate had fallen by 5.5 points (80.9%), while the decrease in the rate among men was more drastic (down to 81.4%, 10.8 points below 2005).

Figure 1 illustrates the quarterly evolution through the corresponding indexes. As can be seen, the evolution is negative for men, 93.5% in Q4 2009 compared with the base year (Q1 2005: 100), while the index for woman is 111.9%, evidencing a more moderate fall.

Figure 1. Spain's working population by gender (2005-2009). Index numbers.
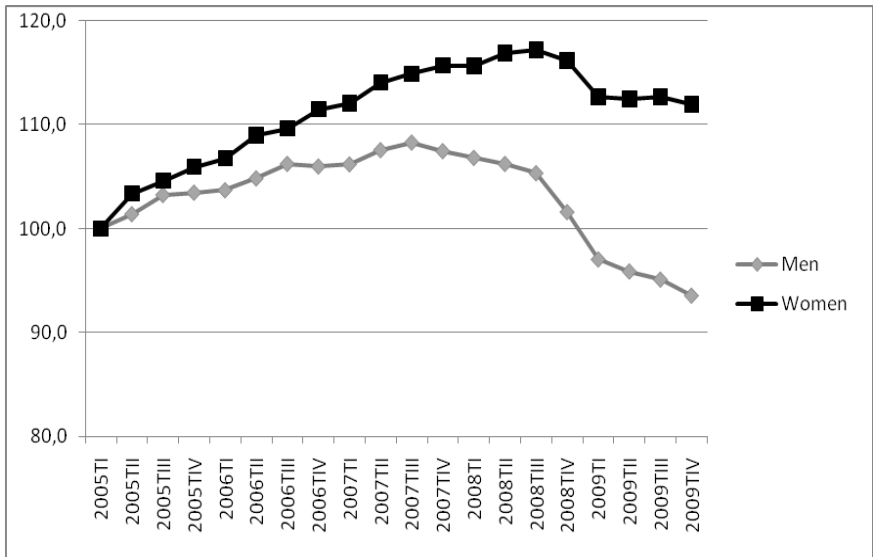
*Employment status.* Figure 2 shows the evolution of the self-employed and salaried working populations, which show major gender differences between the first quarter of 2005 and the fourth quarter of 2009. The biggest fall among the *self-employed* (CP) is seen among men (87.8%), whereas a relative recovery is noted for women as of the first quarter of 2009, with an index of 95.1%. Among *salaried employees* (CA), the differences are even more acute, with the index for men standing at 95.2% compared to the relatively positive position maintained by women (115.1%).

Figure 2. Self-employment and salaried employment by gender (2005-2009). Index numbers.
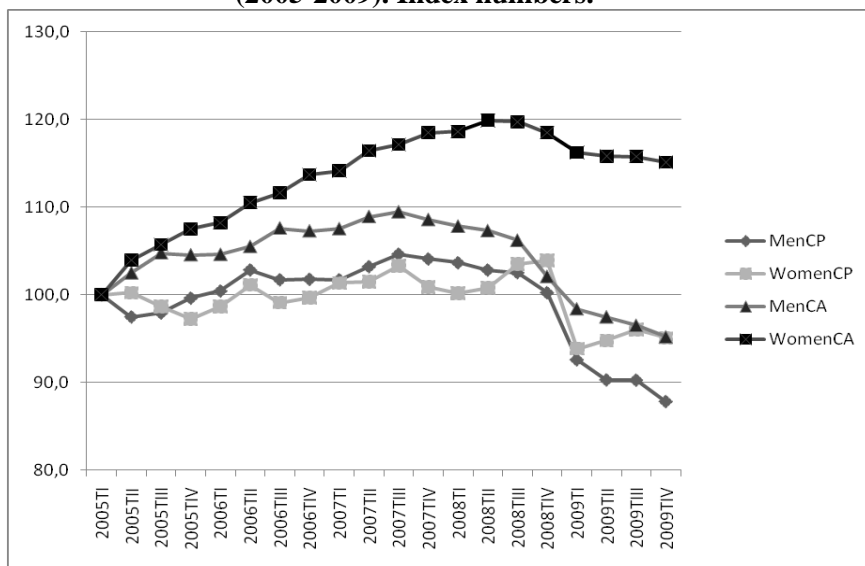
Education. An examination of the employment rate according to education level evidences a significant fall in the number of employed people with low levels of education (Table 1), particularly men. Conversely, scarcely any differences are found in the case of the university-educated working population.

Table 1. Employment rate according to gender and education (%)

Level of education	2005		2009	
	Men	**Women**	**Men**	**Women**
A&PR (Illiterate/primary studies)	91.4	85.0	73.4	73.5
ESO (Compulsory Secondary Education)	92.0	83.4	78.0	74.2
EsnO (Non-comp. Secondary Education)	93.6	88.2	83.9	81.9
FP (Vocational Training)	94.3	89.8	88.5	84.7
UNIV (University Education)	94.8	92.4	92.4	91.0

Source: INE (EPA, 2005 and 2009)

Distribution of female employment and salaried employment rate by sectors. The criterion of Hakim (1993) is followed to measure the share of female employment as a percentage of the total. According to the criterion, women are integrated in an occupation if the female percentage lies within the interval resulting from adding and subtracting 10% to the female share of the total employment. The interval in our case is 36.0-44.0 for 2005 and 39.2-48.0 for 2009 (see Table 2). Consequently, the services sector is markedly female, whereas women are under-represented in other sectors, especially Construction.

Table 2. Distribution of the female working population and female salaried employment index by sectors (%)

Sector	2005		2009	
	Distribution	**Salaried employment index**	**Distribution**	**Salaried employment index**
Agriculture	26.9	96.8	26.0	92.9
Industry	24.8	100.9	24.5	103.5
Construction	5.4	91.1	7.7	107.0
Services	51.7	109.7	53.7	109.5
Total	40.0	107.8	43.6	109.3

Source: INE (EPA, 2005 and 2009)

Table 2 also shows the female salaried employment index, which is obtained by dividing the rate of female salaried employment by the male rate for each economic sector. The index is higher for women than for men in both 2005 and 2009 and increased slightly during the period

studied. Only in agriculture is it lower, indicating a higher relative share of self-employment in the sector.

Age. The employment rates by age (Table 3) reveal that the biggest fall occurs among young persons under 30, especially men.

Table 3. Employment rates by gender and age (%)

Age	2005		2009	
	Men	**Women**	**Men**	**Women**
16 to 19	75.5	63.7	45.1	44.1
20 to 24	85.7	79.6	65.4	67.9
25 to 29	90.9	86.4	76.4	79.6
30 to 34	93.9	89.2	82.6	82.2
35 to 39	94.5	89.1	83.8	83.0
40 to 44	95.3	89.6	85.5	84.1
45 to 49	95.4	90.6	86.9	85.2
50 to 54	95.4	91.8	88.3	86.1
55 to 59	94.5	92.0	88.4	85.6
60 to 64	94.7	93.5	89.3	88.8
65 to 69	97.6	96.1	95.9	97.1
70 and over	99.4	97.5	100.0	98.6

Source: INE (EPA, 2005 and 2009)

Marital status. The employment rates by marital status (Table 4) show that the fall particularly affects married men.

Table 4. Employment rates by gender and marital status (%)

Marital status	2005		2009	
	Men	Women	Men	Women
S (Single)	88.2	85.1	74.4	77.8
C (Married)	96.1	89.5	87.7	83.8
R (Others) *	91.6	89.4	79.7	82.5

Source: INE (EPA, 2005 and 2009)
 *including widowed/separated/divorced

5. Profile of the working population in 2009

- *Independence hypothesis tests.* Independence hypothesis tests were performed to begin checking for possible associations between the variables studied and also between their modalities.

Table 5. Independence hypothesis tests (first case)

Variables and modalities		Pearson's Chi-square	df	Coefficient of contingency	Asymptotic sig. (bilateral)
Employment status	Age	12.1234	2	0.0211	0.0021
	Gender (*)	**2.2765**	**1**	**0.0091**	**0.1312**
	Marital status	10.0437	3	0.0179	0.0163
	Education	39.2677	4	0.0357	0.0000
	Activity	41.8235	9	0.0410	0.0000
Gender	Age	85.6324	2	0.0451	0.0000
	Marital status	482.1285	3	0.1272	0.0000
	Education	645.9337	4	0.1558	0.0000
	Activity (*)	**12.9261**	**9**	**0.0282**	**0.1674**
Age	Marital status	10912.7158	6	0.5154	0.0000
	Education	2046.7315	8	0.2711	0.0000
	Activity	4368.1829	18	0.3790	0.0000
Marital status	Education	612.1150	12	0.1440	0.0000
	Activity	639.9853	27	0.1634	0.0000
Education	Activity	432.8251	36	0.1370	0.0000

(*) Independence

The hypothesis to be tested (null hypothesis) is that the two variables are independent and the alternate hypothesis is that there is significant evidence of an association between them. As Table 5 shows, two

coefficients have been estimated that measure the independence or association between two qualitative variables: Pearson's chi-squared coefficient and the coefficient of contingency. The last column shows the significance. If this figure is less than 5% the null hypothesis is rejected and hence there is significant evidence of an association between the variables considered and their corresponding modalities. Conversely, a figure greater than 5% indicates there is no significant evidence to reject the hypothesis of independence between the two variables.

In all the cross-tabulations between the variables 2 x 2 and their modalities, the resulting significance is less than 5%, except where gender is crossed with employment status and gender with activity sector. Given gender's importance as a variable in our analysis we tested to see what would happen if a new variable was constructed reflecting employment status disaggregated into its different modalities and disaggregating these, in turn, into male and female, that is, the intersection between employment status and gender. Since the modalities "Other/men" and "Other/women" were found to account for only a very small number of cases and could therefore distort the results of the association analysis, it was decided to eliminate them, leaving a total of 46,686 cases distributed in the percentages shown in Figure 3. As can be seen, the biggest gender differences are seen in the private sector. This gives us the following eight modalities:

1. Men:
o Self-employed (CP)
o Salaried employment, public sector (CASP)
o Salaried employment, private sector (CASpr)
o Other
2. Women
o Self-employed (CP)
o Salaried employment, public sector (CASP)
o Salaried employment, private sector (CASpr)
o Other

Lastly, the modalities "widowed/separated/divorced" have been added to the variable "marital status" using the collective term

11

"others" (R), since they were considered to be single-parent family units.

Figure 3. Distribution of employment status/gender
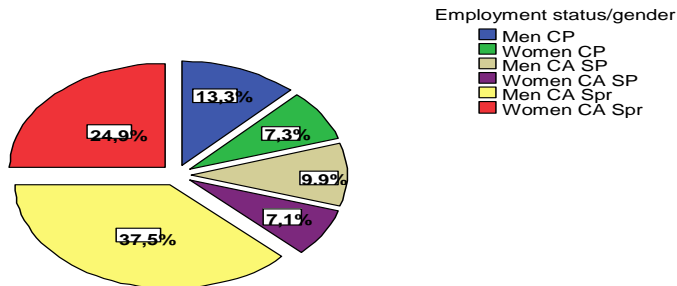
The independence tests were repeated to check for association between the variables and their modalities two by two, using the new variable that summarises the disaggregated employment status and gender. The results were as follows (Table 6).

Table 6. Independence hypothesis tests (second case)

Variables and modalities		Pearson's Chi-squared	df	Coefficient of contingency	Asymptotic Sig. (bilateral)
employment status/gender	Age	115.015	10	0.0570	0.0000
	Marital status	536.453	15	0.1334	0.0000
	Education	767.275	20	0.1619	0.0000
	Activity	127.253	45	0.0637	0.0000
Age	Marital status	10912.7158	6	0.5154	0.0000
	Education	2046.7315	8	0.2711	0.0000
	Activity	4368.1829	18	0.3790	0.0000
Marital status	Education	612.1150	12	0.1440	0.0000
	Activity	639.9853	27	0.1634	0.0000
Education	Activity	432.8221	36	0.1370	0.0000

From the results it can be concluded that there is significant evidence of an association between all the two by two variables and their modalities.

- *Contingency tables of the relationship between employment status/gender and other variables.*

2 x 2 contingency tables were drawn up for all the variables. The results are given in column percentages in Annex 3. However, due to the interest they hold for verifying the working hypotheses, this section will discuss only the contingencies between the new variable created ("employment status/gender") and the other variables, in column percentages, for the 46,686 cases, as shown in Table 7 (Aneex 1).

Education. The data indicate that a higher percentage of working women have a university education compared to men in the three employment categories. In addition, a comparison of men and women in terms of vocational training (F.P.) shows the figure is also higher for women, particularly female entrepreneurs, although among public-sector salaried workers the results are similar for both. The highest percentages in the case of men are for those who have completed compulsory secondary education (E.S.O.). The data for the different countries of the European Union (EU) show similar results to those obtained in this study as regards the proportion of self-employed working women with higher education (Alonso and Galvi, 2008).

Activity sector. The main sectors of activity for the three employment statuses are the retail trade/hospitality industry, construction and public administration/education/health, for which the percentages are much higher than for the other sectors. No major gender differences are detected among the employment statuses in this respect.

Age. Men and women behave differently in terms of age in the three employment status categories considered (self-employment, public-sector salaried work and private-sector salaried work). The percentage of men in each category with respect to the total is more or less similar in the 30-44 and 45+ age groups. In the case of women, however, the percentage in the latter age category is clearly lower in all three categories. The percentage of male entrepreneurs and men in salaried employment is lowest among the 16-29 age group, increasing as the age

13

of 30 for all modalities. In the case of women, the percentage is lowest also in the 16-29 age group, although significant differences are seen: while the percentages for the 45+ group are also higher, they are lower compared to the group of women aged 30-44.

Turning to a comparison by genders, we can see that the percentages of those under 45 are consistently higher in the case of women but lower above this age. The reason for this could be found in the higher unemployment among women aged 45 and above. The age effect is directly related to maternity also. For example, for the working population aged between 25 and 49 for all EU countries, a comparison of Eurostat data (2002-2007) for the employment rate of women and men who look after children under 12 reveals that the gender gap is almost twice that found in the rest of the working population[2]. Specifically, the employment rate of women looking after under 12s falls by 12.4 points, compared to an increase of 7.3 points for men in the same circumstances.

Marital status. Turning to marital status, we can also see differences according to gender. In all three employment status categories working married men account for the majority of the total, with significant differences seen compared to working married women, whose percentages are lower. Most of these differences are due to the higher share accounted for by the category of 'Other' working women (widowed/separated/divorced) compared to the same category in men[3]. No significant differences are found between single men and women.

- *Multiple Correspondence Analysis*

Given that all the variables are nominal, it would be useful to situate the cases spatially according to the modalities considered. The most appropriate technique for this is Multiple Correspondence Analysis (MCA), which enables us to plot the modalities of the variables that proved to be most characteristic and to obtain new variables or dimensions from the original ones. The analysis is based on a Burt

---

[2] Eurostat, Labour Force Survey (LFS), annual average.
[3] Similar results were obtained in Díaz et al. (2000)

matrix, for which 2x2 contingency tables were drawn up for all the variables (absolute values) for the 46,686 cases (see Annex 3).

➢ *Results summary*

The first four dimensions accounting for 33.56% of the original information are used. Although the percentage is low, it is sufficiently high for an MCA. Moreover, since it was concluded from the independence tests that the independence hypothesis was rejected, and some form of association exists therefore between some of the modalities considered, it makes sense to carry out an MCA.

➢ *Examination of scores and contributions*

The row and column points of the Burt matrix offer the same results, so only the latter will be used here.

o The scores in dimension refer to the distance to origin of each modality according to the conditional relative frequencies. The further away from the origin the points for the corresponding pairs of values of the dimensions of a modality are located, the better the modality is represented. The closer to the origin they lie, the poorer the interpretation since this indicates that the modality represented at the point exhibits average behaviour which is not differentiated according to other modalities.

o The inertia is the weight of each modality in the total analysis.

o The contribution of the points to the inertia of the dimension refers to the weight of each modality in the formation of the four axes considered.

o The contribution of the dimension to the point's inertia is the correlation of each modality with each axis or new dimension created.

In our analysis the best represented modalities in each dimension and their scores or distances to the origin, as detailed in Annex 4, are shown in table 8.

➢ *Analysis of the MCA results*

For a better interpretation of the results, the starting points are:

o The results presented in Annex 3 for the 2 x 2 contingency tables, with column percentages.

o   The results presented in Annex 4 for the modalities considered, their contribution to the formation of the dimensions and correlations with the dimension obtained.
o   The scatter diagrams of the new variables created or dimensions, always crossing dimension 1, which has the greatest weight in the results, with dimensions 2, 3 and 4. Only the points corresponding to well-represented modalities will be shown in the figures, since they are far enough away from the origin, contribute adequately to the formation of the dimensions and correlate with the dimension.

Table 8. Best represented modalities

+	-	+	-
Dimension 1		**Dimension 2**	
2. 16-29 3. Single 4. Agriculture, forestry, fishing	5. 45 and over 6. Married	7. 45 and over 8. Illiterate, primary education 9. Agriculture, forestry, fishing	10. 30-44 11. Public administration, education, health
Dimension 3		**Dimension 4**	
➢ Women CASP ➢ Women CASpr ➢ Widowed/separated/divorced ➢ University	➢ Men CASpr ➢ Compulsory secondary	➢ Men CASP ➢ Non-compulsory secondary	➢ Women CASpr ➢ University

Dimensions 1 and 2. In the scatter diagram (Figure 4, Annex 2) we can see several groups, according to the conditional percentages and the results given in Annexes 2 and 3.

o   Group 1: Higher percentages of 16-29 year-olds, single, and higher percentage of people employed in agriculture, forestry and fishing.
o   Group 2: Higher percentages of over 45s, married, and higher percentages of illiterate/primary education.
o   Group 3: Higher percentages of 30-44 year-olds. Higher percentage of persons employed in public administration, education and health than for the other age groups.

Dimensions 1 and 3. Figure 5 (Annex 2)shows several groups according to the conditional percentages and the results given in Annexes 1 and 2.
  - o Group 1: Higher percentages of 16-29 year-olds, single, with higher percentage of people employed in agriculture, forestry and fishing.
  - o Group 2: Contrasting with higher percentages of over 45s, illiterate/primary education, and married.
  - o Group 3: Higher percentages of Women CASP and Women CASpr, widowed/separated/divorced and university education.
  - o Group 4: Contrasting with higher percentages of Men CASpr, married and compulsory secondary education.

Dimensions 1 and 4. Figure 6 (Annex 2) shows several groups according to the conditional percentages and the results given in Annexes 2 and 3.
  - o Group 1: Higher percentages of 16-29 year-olds, single and higher percentage of people employed in agriculture, forestry and fishing.
  - o Group 2: Contrasting with higher percentages of 45 and over, illiterate/primary education.
  - o Group 3: Higher percentages of Men CASP and Women CASP, with higher percentages of non-compulsory secondary education than the rest.
  - o Group 4: Contrasting with higher percentages of Women CASpr, with university education.

Conclusions

The main conclusions are as follows:
- o Significant gender differences in employment status are seen when this is disaggregated into self-employment, public-sector salaried work and private-sector salaried work. In particular, in 2009 the biggest fall among the *self-employed* is seen among men, whereas a relative recovery is noted for women. Among *salaried employees* (CA)*,* the differences are even more important.

- Education is an important variable in the differences between men and women. Men have a relatively lower level of education than women. Noteworthy is the high percentage of men who are illiterate or have primary studies only, associated mainly with married men aged 45 and above, and the high percentage of women with university-level education, associated mainly with private-sector salaried work, although the figure is also significant in the public sector and in self-employment.
- Compared to men, widowed/separated/divorced status favours the incorporation of women in the labour market in all three employment categories.
- Agricultural, forestry and fishing activities are associated with the young and single working population. Following the change in the classification of activities (CNAE93 becomes CNAE2009), a preponderance of women in health, education and other services is seen in the new classification.
- In summary, the economic crisis has had a negative impact primarily on men due to the incorporation of women in the services sector has helped them remain in employment.

The results indicate that the hypotheses posited are fulfilled to a relative degree, while also underlining the role played by education, a variable that emerges strongly in the statistical analysis undertaken.

REFERENCES

Alonso Nuez, J. and Galvi Górriz, C. (2008): Dinamismo empresarial y autoempleo una comparativa a nivel europeo. *Revista de Relaciones Laborales* 12(12), pp. 17-40.

Becker, G. (1975): *Human Capital.* Chicago University Press.

Becker, G. (1981): *A Treatise on the Family*. Harvard University Press, Cambridge.

Castaño, C., Iglesias, C., Mañas, E. and Sánchez-Herrero, M. (1999): *Diferencia o discriminación. La situación de las mujeres españolas en el mercado de trabajo y el impacto de las tecnologías de la información*. Consejo Económico y Social, Madrid.

Cooper, A., Willard, G. and Woo, C. (1986): "Strategies of High Performing New and Small Firms: a re-examination of the Niche Concept". *Journal of Business Venturing,* 1(3), pp. 247-260.

Corcoran, M.E. y Courant, P.N. (1985): "Sex Role Socialization and laber Market Outcomes". *The American Economic Review*, 75(2), pp.275-279.

Cuadrado Roura, J.R. (coord.), Iglesias Fernández, C. et al. (2004): *Empleo autónomo y empleo asalariado*. MTAS, Madrid.

Cuervo García, A. (1995): "Capacidades empresariales y directivas como explicación de la competitividad". *V Congreso Nacional de Economía*, Las Palmas de Gran Canaria, diciembre.

Chandler, G. and Hanks, S. H. (1994): "Market attractiveness, Resource-based Capabilities Venture Strategies and Venture Performance". *Journal of Business Venturing*, 1(3), pp. 247-260.

Díaz Pérez, F.M., Bonnet Escuela, M. and Fernández Hernández, C. (2000): *La mujer empresaria en un entorno rural: el caso de la isla de La Palma*. Asociación Turismo Rural Isla Bonita, S/C Tenerife.

Díaz Pérez, F.M., González Morales, O. and Bonnet Escuela, M. (2002): "La inserción laboral de la mujer canaria en el contexto de política familiar de la Unión Europea". In Acosta Molina, M. et al. *III Seminario de Economía Canaria*, La Laguna, Tenerife.

European Commission (2009): *Report on Equality between Women and Men 2009*. Directorate-General for Employment, Social Affairs and Equal Opportunities, Bruselas.

González Morales, O. (2008): "Análisis de las características que distinguen al trabajo por cuenta propia del empleo asalariado". In Neira Gómez, I. et al (coord.), *Investigaciones de Economía de la Educación*, no. 3, AEDE, Santiago de Compostela.

Hakim, C. (1993): "Segregated and Integrated Occupations: A New Approach to Analysing Social Change". *European Sociological Review*, 9(3), pp. 289-314.

Justo, R. (2008): *La influencia del género y entorno familiar en el éxito y fracaso de las iniciativas emprendedoras*. PhD. Universidad Autónoma de Madrid.

Kolvereid, L. (1996): "Prediction of Employment Status Choice Intentions". *Entrepreneurship Theory and Practice*, 21(1), pp.47-57.

Kourilsky, M.L. and Walstad, W.B. (1998): "Entrepreneurship and Female Youth: Knowledge, Attitudes, Gender Differences and Educational Practices". *Journal of Business Venturing*, 13(1), pp.77-88.

Matthews, C.H. and Moser, S.B. (1995): "Family Background and Gender: Implications for Interest in Small Firm Ownership". *Entrepreneurship & Regional Development*, 7(4), pp.365-377.

Minniti, M. and Nardone, C. (2007): "Being in someone else´s shoes: the role of gender in nascent entrepreneurship". *Small Business Economics*, nº 28, pp.223-38.

Navarro Gómez, L. and Rueda Narváez, M.F. (2005): "Discriminación y segregación de las mujeres en el mercado laboral". XIII Jornadas de la AEDE, San Sebastián, 13-14 September.

Rubery, J., Fagan, C. and Maier, F. (1996): "Occupational Segregation, Discrimination and Equal Opportunity". In Schmid, G.; O'Reilly, J. and Schömann, K. *International Handbook of Labour Market Policy and Evaluation*, Edward Elgar, pp. 431-461.

Rubio López, E.A., Cordón Pozo, E and Agote Martín, A.L. (1999): "Actitudes hacia laceración de empresas: Un modelo explicativo". *Revista Europea de Dirección y Economía de la Empresa*, 8(3), pp.37-52.

Sanchís Palacio, J.M. y Redondo Cano, A. (1997): "Actitudes hacia la creación de empresas: Un estudio empírico aplicado a los estudiantes de relaciones laborales de la Universidad de Valencia". *II Jornadas Nacionales de la enseñanza en las Relaciones Laborales*. Salamanca, junio.

Sarason, Y., Dean, T. and Dillard, J.F. (2006): "Entrepreneurship as the Nexus of Individual and Opportunity: a Structuration View". *Journal of Business Venturing*, vol. 21, 286-305.

Scherer, P.D., Adams, J.; Carley, S. and Wiebe, F. (1989): "Role Model Performance Effects on Development of Entrepreneurial Career Preference". *Entrepreneurship Theory and Practice*, 13(3), pp.53-81.

Sexton, E.A. and Robinson, P.B. (1989): "The Economic and Demographic of Self-employment". In Vesper, K (eds.), *Frontiers of Entrepreneurship Research*, Babson College, Wellesley, pp.28-42.

Stuart, R. and Abetti, P. (1987): "Start–up Ventures: Towards the Production of Initial Success". *Journal of Business Venturing*, 2(3), pp.215-230.

ANNEX 1. Table 7. Contingency table: Employment status/gender, education, age, marital status and activity sector

% columns	Employment status/gender						Total
	M CP	**W CP**	**M CASP**	**W CASP**	**M CASpr**	**W CASpr**	
Age							
16 to 29	23.8	26.0	21.2	24.5	21.1	24.2	23.5
30 to 44	38.8	**42.2**	38.3	39.8	39.6	**42.9**	40.0
45 and above	**37.4**	31.8	**40.5**	35.7	**39.3**	32.9	36.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Marital status							
Single	34.0	35.2	34.8	35.2	31.9	33.9	33.4
Married	**62.0**	54.0	**60.2**	54.0	**65.1**	57.2	60.6
Other	4.0	**10.8**	5.0	**10.8**	3.1	**8.9**	6.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Education							
A and PR	**26.6**	16.9	**20.1**	14.9	**25.3**	16.5	21.3
ESO	**31.7**	27.0	**28.4**	22.2	**30.2**	24.2	27.7
EsnO	12.0	12.3	14.8	16.3	10.5	11.8	12.0
FP	14.9	**18.9**	18.0	18.6	17.2	19.2	17.9
UNIV	14.8	**24.9**	18.7	**28.0**	16.8	**28.3**	21.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Activity * economic activity classification CNAE93 (old)							
A1 (Agric., forestry, fishing)	6.1	6.0	7.0	7.1	6.7	6.4	6.5
A2 (Food, textile, leather, wood, paper)	6.5	5.5	5.9	7.0	6.5	6.3	6.4
A3 (Mining/quarrying, chem., metal, energy and water)	6.4	7.1	8.9	7.5	6.0	6.1	6.6
A4 (Machinery., electrical equip., transp. material, various manufacturing activities)	5.1	4.9	5.0	4.6	4.7	4.4	4.7
A5 Construction	12.6	11.4	12.1	11.4	12.1	12.1	12.1
A6 (Retail trade and hospitality)	23.7	23.7	21.4	**23.0**	21.5	20.6	21.8
A7 (Transportation)	5.3	5.5	4.8	5.0	5.2	5.1	5.2
A8 (Financial and real estate activities)	**10.9**	9.5	9.8	9.6	9.9	9.6	9.8
A9 (Public admin., educ., health)	16.6	**19.0**	18.0	17.9	20.8	**22.9**	20.2
A10 (Other services)	6.8	7.4	7.1	6.9	6.6	6.5	6.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

ANNEX 2. Figures 4, 5 & 6

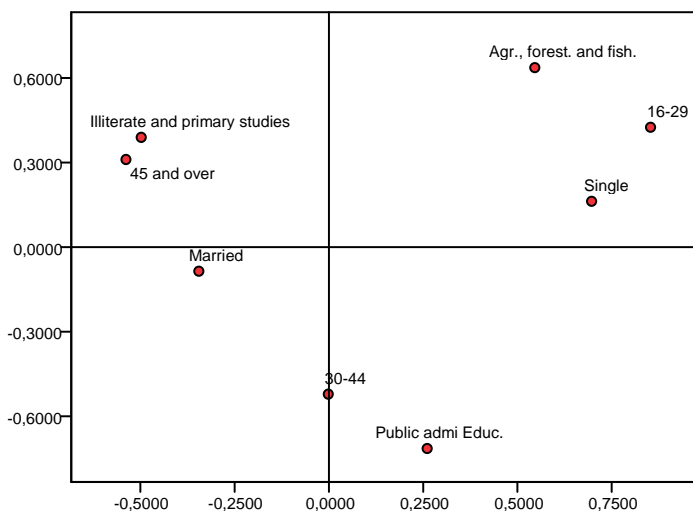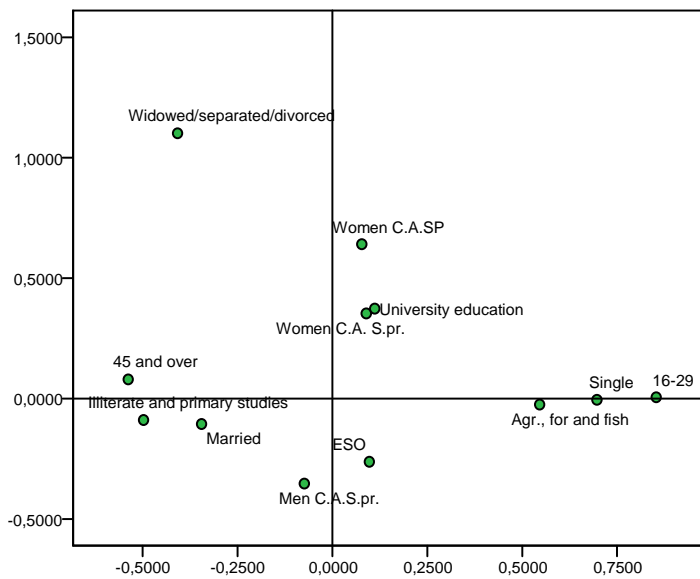
Figure 4

Figure 5

23

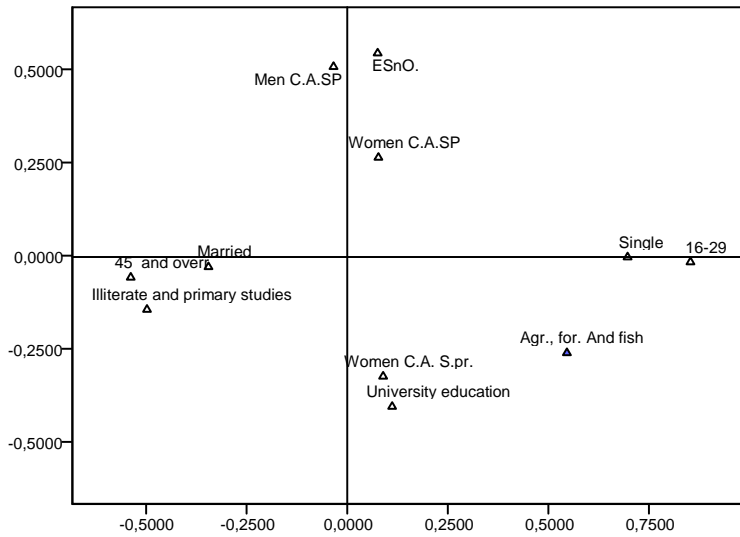Figure 6

ANNEX 3. Contingency tables between the variables. Micro-data EPA, 2009

Variable	Employment status /gender						Age			Marital status			Education				
Age	MCP	WCP	MCASP	WCASP	MCASpr	WCASpr	16/29	30/44	45/+	S	C	R	AyPR	ESO	ESnO	FP	UNIV
16/29	23.8	26.0	21.2	24.5	21.1	24.2											
30/44	38.8	**42.2**	38.3	39.8	39.6	**42.9**											
45/+	**37.4**	31.8	**40.5**	35.7	**39.3**	32.9											
Marital status																	
S	34.0	35.2	34.8	35.2	31.9	33.9	86.7	25.6	8.4								
C	**62.0**	54.0	**60.2**	54.0	**65.1**	57.2	12.6	68.3	82.3								
R	4.0	**10.8**	5.0	**10.8**	3.1	**8.9**	0.5	6.1	9.3								
Education																	
AyPR	**26.6**	16.9	**20.1**	14.9	**25.3**	16.5	12.0	13.3	**35.8**	13.4	**24.9**	27.7					
ESO	**31.7**	27.0	**28.4**	22.2	**30.2**	24.2	**31.7**	29.9	23.0	29.1	27.2	26.6					
ESnO	12.0	12.3	14.8	16.3	10.5	11.8	13.2	12.7	10.6	12.8	11.7	11.7					
FP	14.9	**18.9**	18.0	18.6	17.2	19.2	**22.8**	20.8	11.4	20.7	16.3	16.3					
UNIV	14.8	**24.9**	18.7	**28.0**	16.8	**28.3**	20.3	23.3	19.2	24.0	19.9	17.7					
Activity																	
A1	6.1	6.0	7.0	7.1	6.7	6.4	**14.8**	2.4	5.9	**9.7**	5.0	4.1	6.1	7.0	6.0	7.2	6.1
A2	6.5	5.5	5.9	7.0	6.5	6.3	4.6	6.0	**8.0**	5.0	7.1	6.9	8.0	5.9	6.1	6.2	5.6
A3	6.4	7.1	8.9	7.5	6.0	6.1	2.8	5.9	**9.7**	3.9	7.8	**9.3**	8.2	6.5	6.8	5.7	5.6
A4	5.1	4.9	5.0	4.6	4.7	4.4	3.2	4.4	6.0	3.6	5.2	6.2	5.6	4.2	4.6	3.8	5.2
A5	12.6	11.4	12.1	11.4	12.1	12.1	12.1	8.6	15.8	10.9	12.7	11.3	13.7	12.0	12.4	10.4	11.8
A6	23.7	23.7	21.4	**23.0**	21.5	20.6	**29.1**	16.1	23.6	23.9	20.6	21.8	23.4	22.6	21.3	20.8	20.3
A7	5.3	5.5	4.8	5.0	5.2	5.1	5.3	5.4	4.8	5.1	5.2	5.3	5.0	5.2	5.8	4.9	5.1
A8	**10.9**	9.5	9.8	9.6	9.9	9.6	8.4	9.0	11.7	8.6	10.3	12.2	11.0	9.2	10.8	9.5	9.3
A9	16.6	**19.0**	18.0	17.9	20.8	**22.9**	15.1	**36.0**	6.0	**24.0**	18.6	15.8	12.0	20.8	19.3	**24.5**	**24.5**
A10	6.8	7.4	7.1	6.9	6.6	6.5	4.8	6.3	8.5	5.2	7.5	7.0	6.8	6.6	6.9	7.0	6.5

ANNEX 4. Multiple Correspondence Analysis Results for four dimensions

Modal.	Mass	Scores in the dimension				Inertia	Contribution								Total
							of points to the inertia of the dimension				of the dimension to the inertia of the points				
		1	2	3	4		1	2	3	4	1	2	3	4	
MCP	0.0243	-0.0476	0.1898	-0.2883	0.3119	0.0354	0.0004	0.0105	0.0301	0.0533	0.0016	0.0247	0.0570	0.0668	0.151
WCP	0.0159	0.1091	-0.0500	0.4307	0.3632	0.0371	0.0014	0.0005	0.0565	0.0462	0.0051	0.0011	0.0794	0.0564	0.142
MCASP	0.0194	-0.0336	0.0807	-0.0188	0.5165	0.0362	0.0002	0.0015	0.0001	0.1103	0.0006	0.0035	0.0002	0.1377	0.142
WCASP	0.0149	0.0777	-0.0099	0.6425	0.2628	0.0374	0.0007	0.0000	0.1090	0.0227	0.0024	0.0000	0.1633	0.0275	0.193
MCASpr	0.0754	-0.0736	0.0432	-0.3530	-0.1441	0.0255	0.0031	0.0017	0.1782	0.0346	0.0160	0.0055	0.3688	0.0613	0.452
WCASpr	0.0500	0.0894	-0.1700	0.3532	-0.3345	0.0307	0.0030	0.0175	0.1115	0.1265	0.0130	0.0472	0.2035	0.1719	0.436
16/29	0.0461	0.8545	0.4244	0.0050	-0.0173	0.0448	0.2545	0.1004	0.0000	0.0003	0.7498	0.1854	0.0000	0.0003	0.936
30/44	0.0809	-0.0016	-0.5219	-0.0744	0.0631	0.0278	0.0000	0.2670	0.0080	0.0071	0.0000	0.7928	0.0161	0.0116	0.821
45/+	0.0730	-0.5389	0.3101	0.0794	-0.0590	0.0337	0.1599	0.0847	0.0082	0.0056	0.6262	0.2080	0.0136	0.0075	0.855
S	0.0669	0.6971	0.1620	-0.0056	-0.0044	0.0387	0.2561	0.0212	0.0000	0.0000	0.8408	0.0454	0.0001	0.0000	0.886
M	0.1211	-0.3465	-0.0858	-0.1060	-0.0308	0.0210	0.1088	0.0108	0.0243	0.0025	0.6797	0.0422	0.0644	0.0054	0.798
R	0.0120	-0.4076	-0.0365	1.1008	0.3353	0.0391	0.0151	0.0002	0.2598	0.0275	0.0510	0.0004	0.3720	0.0345	0.458
AyPR	0.0424	-0.4974	0.3890	-0.0896	-0.1452	0.0352	0.0795	0.0775	0.0061	0.0198	0.2983	0.1824	0.0097	0.0254	0.516
ESO	0.0556	0.0974	-0.0180	-0.2627	0.1957	0.0292	0.0040	0.0002	0.0607	0.0471	0.0181	0.0006	0.1313	0.0729	0.223
ESnO	0.0241	0.0758	-0.0169	0.1612	0.5528	0.0353	0.0010	0.0001	0.0112	0.1592	0.0039	0.0002	0.0177	0.2111	0.223
FP	0.0356	0.2569	-0.1793	-0.0345	-0.0199	0.0337	0.0178	0.0129	0.0008	0.0003	0.0697	0.0340	0.0013	0.0004	0.105
UNIV	0.0422	0.1117	-0.2065	0.3732	-0.4254	0.0324	0.0040	0.0217	0.1050	0.1533	0.0163	0.0556	0.1816	0.2153	0.468
A1	0.0131	0.5464	0.6361	-0.0252	-0.2614	0.0391	0.0296	0.0640	0.0001	0.0198	0.1001	0.1376	0.0002	0.0229	0.259
A2	0.0127	-0.2626	0.0591	-0.0345	-0.2306	0.0377	0.0067	0.0005	0.0003	0.0150	0.0233	0.0012	0.0004	0.0180	0.043
A3	0.0131	-0.4708	0.0500	0.1786	0.5319	0.0381	0.0120	0.0004	0.0075	0.0821	0.0763	0.0009	0.0110	0.0974	0.186
A4	0.0094	-0.2859	0.0423	0.1536	-0.1548	0.0383	0.0058	0.0002	0.0040	0.0050	0.0201	0.0004	0.0058	0.0059	0.032
A5	0.0241	-0.1421	0.2402	0.0088	-0.2842	0.0356	0.0037	0.0168	0.0000	0.0431	0.0137	0.0391	0.0001	0.0548	0.108
A6	0.0436	0.0893	0.2719	0.0232	0.1061	0.0319	0.0026	0.0389	0.0004	0.0108	0.0109	0.1012	0.0007	0.0154	0.128
A7	0.0103	0.0218	-0.0347	-0.0130	0.2052	0.0380	0.0000	0.0001	0.0000	0.0096	0.0001	0.0003	0.0000	0.0114	0.012
A8	0.0197	-0.1598	0.0763	0.0623	0.0989	0.0362	0.0038	0.0014	0.0014	0.0043	0.0139	0.0032	0.0021	0.0053	0.025
A9	0.0404	0.2609	-0.7144	-0.1492	-0.0536	0.0361	0.0208	0.2491	0.0161	0.0026	0.0761	0.5707	0.0249	0.0032	0.675

A10	0.0135	-0.2254	-0.0045	0.0515	0.0870	0.0375	0.0052	0.0000	0.0006	0.0023	0.0182	0.0000	0.0010	0.0027	0.022
Total	1					0.9419	1	1	1	1					