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Social economy and gender wage differentials.

Evidence for the Spanish economy

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Abstract

The values shared by social economy enterprises generate a differentiated behaviour of these entities in relation to their staff composition, the work conditions, their productive specialisation and their geographical location. This differentiated behaviour constitutes, at the same time, an important contribution to social and territorial cohesion. In particular, the contribution to social cohesion is related to the occupation of groups with difficulties of access to employment, employment quality, improvement in equal opportunities and the offer of social services. In this paper we will focus on labour discrimination from a gender perspective, to measure the contribution of social economy entities to social cohesion.

In this context the main goal of the paper is to contribute to the analysis of the contribution of social economy to social cohesion, in terms of its role in reducing gender labour discrimination, analyzing general labour conditions, with especial attention to wage differences as the most representative way of gender labour discrimination. We assume that the differentiated behaviour that characterizes social economy entities has a significant impact over the labour conditions of their employees (job conditions, tenure, wage, etc.), contributing to enhance social cohesion. Thus, our hypothesis is that social economy entities shows less gender discrimination in terms of labour conditions.

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KEY WORDS: Social economy, labour discrimination, gender discrimination, wage differences, social cohesion.

1. Introduction

The values shared by social economy enterprises generate a differentiated behaviour of these entities in relation to their staff composition, the work conditions, their productive specialisation and their geographical location. This differentiated behaviour constitutes, at the same time, an important contribution to social and territorial cohesion. In particular, the contribution to social cohesion is related to the occupation of groups with difficulties of access to employment, employment quality, improvement in equal opportunities and the offer of social services. In this paper we will focus on labour discrimination from a gender perspective, to measure the contribution of social economy entities to social cohesion.

The goal of this paper is in line with the literature dealing with the empirical analysis of the relevance and contribution of Social Economy. The empirical literature approach is affected by the lack of differentiated statistical information related to Social Economy entities, in part due to the difficulty in defining Social Economy entities from an applied point of view and in part due to the difficulty in defining, again from an empirical point of view, the contribution of Social Economy to the society and economy of a country.

In fact the main contribution to the literature of this work is the advance in the analysis of contribution of Social Economy to social cohesion throughout improvement of gender equality in workplace. Only Leete (2000) for US and Narcy (2006) and Etienne and Narcy (2010) for France study gender equality in labour conditions, and like us, they focus on wages, finding less discrimination in non-profit entities. In this context, the analysis of the Spanish case offers an interesting opportunity due to the importance of social economy entities in Spanish economy and the existence of an official delimitation included in the Social Economy law (Ley 5/2011 de Economía Social). To our knowledge there is no previous study of this type for Spain and thus, we intend to foster the research in this field.

In this context the main goal of the paper is to contribute to the analysis of the contribution of social economy to social cohesion, in terms of its role in reducing gender labour discrimination, analyzing general labour conditions and also focusing in wage differences as the most representative way of gender labour discrimination. We identify the Social Economy for the Spanish case and design a control group in order to test if the differentiated behaviour that characterizes social economy entities has a significant impact over the labour conditions of their employees (job conditions, tenure, wage, etc.), contributing to enhance social cohesion.

In first term, labour conditions will be analyzed from a gender perspective, to obtain a general picture of the differences in labour conditions, both in social economy entities and control group. We then focus on wage differences, comparing the situation in both groups of entities considered. We apply Oaxaca (1973) and Blinder (1973) type decomposition of wage gap to analyze the gender wage gap and compare the results for Social Economy and control group.

Preliminary results obtained when comparing the Oaxaca-Blinder outcomes for Social Economy entities with those related to profit seeking firms show that both, the level of wage differences and the contribution of discrimination to that differences, is lower in social economy entities.

The rest of the paper is organized as follows, we first summarize the literature related to assessing the relevance and impact of Social Economy in a country. Section three describes the methodology used, section four presents the results and finally, we summarize the main conclusions and future lines of research.

2. Theoretical framework

The existing literature related to the impact of the social economy usually focus on some "family", mainly cooperatives, and on the impact of an economic nature, mainly the direct impact, in terms of economic activity and employment generated, such as the works for Italy (Guerreri et. al. 1992), France (Defourny, 1990; Huntzinger, 1994), United Kingdom (Jefferis and Mason, 1990; Cornforth and Thomas, 1995), Spain (Díaz, 2000; Cubedo, 2006; Díaz and Marcuello, 2010 and Martínez et al., 2011), Portugal (Bartlett and Pridham, 1991) and Holland

(Voets, 1990). Deller et. al. (2009), analyzes the turnover, salary remunerations and number of jobs in cooperatives in United States, considering both the economic impact as well as the indirect and induced impact, utilising the input-output analysis. The research related to the importance of social economy usually offer a general overview of their economic situation, but there are, however, very few studies related to the social and economic impact of the values of the social economy enterprises. The works that opt for a global perspective are scarce and are usually analysing the figures of the sector from a global perspective (Chaves and Monzon, 2007).

Focusing on the employment analysis for Spain, it is worth mentioning the works of Díaz (2000), who analyze the employment stability within the cooperatives, and Grávalos and Pomares (2001), who demonstrate the emergence of an employment shelter effect in the cooperatives, comparing the relation existing between the creation of employment in these entities with the trend of the unemployment rate. In a subsequent study, Díaz and Marcuello (2010) analyse the economic impact of the cooperatives on employment stability, reaching similar conclusions as those of Díaz (2000), namely, the employment of cooperatives becomes more stable to the extent in which its elasticity, with regard to the GDP, is lower than one (less sensitive to variations in the GDP), as opposed to total employment, whose elasticity is greater. Martinez et al (2011) focus on the assessment of the "social utility" generated by the social economy, beyond the direct contribution to economic activity and employment, finding positive contribution to social cohesion when compared with profit seeking firms.

These studies have made it possible to visualise important effects, such as the weight of employment of the social economy (cooperatives mainly) upon total employment, its degree of stability, the trend of its salaries and the generation of social utility. But up to the moment the literature hasn't focus on social cohesion in terms of equality of opportunities from a gender perspective. In fact, the gender perspective haven't been explored for Spain, existing some international literature such us Benz (2005), Handy and Katz, (1998), dealing with motivation and wage in nonprofits institutions, but without focusing on a gender perspective. Only Leete (2000) for US and Narcy (2006) and Etienne and Narcy (2010) for France analyze the labour conditions in non profits entities using a gender perspective to study the level of discrimination compared to other type of entities. Leete (2000) and Narcy (2006) compare the average wage differences of nonprofit and for-profit firms, whereas Etienne and Narcy (2010) deeply study the french case for the complete wage distribution using quantile regressions, finding less gender wage discrimination even when controlling for the wage distribution.

Finally, although there is no previous literature on the particular hypothesis of this paper for Spain, there is an increasing body of applied works dealing with gender wage discrimination. Most of them conclude that women earn 20%-30% less than homogeneous male workers (Moreno et al, 1996; Pérez and Hidalgo, 2000; Oliver, 2005; Hospido and Bonhomme, 2013), and actually, the gender gap go beyond 30% for high qualified workers (Martínez et al, 2011). There is no agreement on the evolution of this gap, while for Martín and Zarapuz (2000) it has shirked from 1996 to 1999, the opposite conclusion is reached reviewing De Cabo and Garzón (2007) for the period 1995-2000.

In terms of discrimination analysis, meaning the proportion of the gap that can't be attributed to differences in key observable variables in terms of retribution such as educational attainment, tenure, industry, qualification and so on, there are no conclusive results. Moreno et al, (1996) conclude that 35% of the gender wage gap results from female labor discrimination, but that gap increases in other studies like Aláez y Ulibarri (1999), with a discrimination that would account for 60% of wage differences, Pérez and Hidalgo (2000), whose estimation is 50%, Gardeazabal y Ugidos (2005), 75%, and García y Morales (2006), 83%. Thus, there is a general agreement on the existence of gender wage discrimination but not in terms of the magnitude of that discrimination.

3. Methodology

The analysis of gender differences in labour conditions is based on a twofold approach. In first term for each subset (social economy and non-social economy) differences by gender in labour conditions are analyzed to identify their sign and significance.

Although we have chosen to focus on wage differences as they are one of the main ways of gender discrimination, we start by analyzing gender differences in a set of labour conditions as a general framework to understand the global impact of social economy over social cohesion. For that purpose we compare labour conditions in terms of type of contract, tenure (as a way of measuring the stability in job position) and wages for social economy and control group subsets.

We perform a comparative analysis of labor conditions in which using the control group we will test if the manipulation of the independent variable (pertaining or not to social economy) generates a significant difference in certain dependent variables related to equal gender opportunities (type of contract, tenure and wages) comparing gender differences in both subsets. Both nonparametric (Chi-squared and Levene) and parametric (Welch and Brown-Forsythe) differences in averages tests are conducted, to test the following hypothesis:

$$H_0: \mu_M = \mu_H, \text{ with the alternative hypothesis } H_1: \mu_M < \mu_H$$

where μ is the average of the labor condition to test, M represents the value for women and H for men.

In second term, which is in fact the main contribution of this work, we focus on wage differences and gender discrimination. The wage gap can be defined as the difference between the average wage for men and for women, whereas the gender wage discrimination reflects the portion of that difference once we control for the variables that theoretically explain wage differences. Those variables are mainly related to the factors that influence the productivity of a worker (which is considered by literature as the main determinant of wage) and include education level, tenure, firm characteristics and industry. Thus, discrimination refers to the differences that can't be explained by the mentioned variables, and that in our case are expected to be related to the gender of the worker.

There are several ways to approach the empirical analysis of wage discrimination, but the standard procedure, at least as a baseline analysis, is the decomposition technique developed by Oaxaca (1973) and Blinder (1973), which allows to decompose the wage gap, gender one in this work, in terms of differences in individual characteristics (characteristic effects) and differences in the coefficients of the earnings equations (coefficients effect).

The methodology assumes that the wage structures of women and men are different and they need to be estimated separately. Thus, the first step in the Oaxaca-Blinder decomposition is to estimate two wage equations by ordinary last squares –OLS-, for men and women, of the following form:

$$W_{gi} = \beta_g X_{gi} + u_{gi} \quad [1]$$

Where $g=(m, f)$ standing for the gender and i for individual, W_{gi} is the log-wage, X_{gi} include the control variables related to the characteristics that determine the wage, β_g are the coefficient to be estimated by OLS regression, relating individual characteristics with wage, and u_{gi} is the random error term. Usually the specification of these equations are based on mincerian equations to explain the main determinants of wage, we include also some control variables such as region of residence or industry of activity.

The second step focus on the analysis of the wage gap, decomposing it in the two components previously mentioned, coefficient effects and characteristics effects. The aggregate gender wage gap is estimated by using the average distribution of the individual characteristics:

$$\bar{W}_m - \bar{W}_f = \hat{\beta}_m \bar{X}_m - \hat{\beta}_f \bar{X}_f \quad [2]$$

Therefore, the total wage differential obtained in eq.2 can be decomposed into two components, one that account for the differences related to observable individual characteristics (characteristics or endowment effects) and a second term (coefficient effect) that accounts for

the unexplained residual, by adding and subtracting $\bar{X}_f \hat{\beta}'_m$ to obtain worker attributes in terms of “male retribution standards”:

$$\bar{W}_m - \bar{W}_f = \hat{\beta}'_m \bar{X}_m - \hat{\beta}'_f \bar{X}_f = \hat{\beta}'_m (\bar{X}_m - \bar{X}_f) + (\hat{\beta}'_m - \hat{\beta}'_f) \bar{X}_f \quad [3]$$

Where the first term, $\hat{\beta}'_m (\bar{X}_m - \bar{X}_f)$, is the wage difference that can be explained by differences in wage-determining characteristics between men and women, whereas the second term, $(\hat{\beta}'_m - \hat{\beta}'_f) \bar{X}_f$, is the unexplained share of the wage difference.

The Oaxaca methodology relies on two hypothesis: (1) the choice of the nondiscrimination wage structure; and (2) the identification of the variables considered as capable of explaining differences in pay. In this paper, we assume that gender wage discrimination arises from the difference between the wage that a woman will earn if treated as a man and the real wage earned by her. This is estimated as the difference between the coefficients estimated for male and female, multiplied by male characteristics vector. The use of male coefficients as the “market prices” for the individual characteristics that affect wage determination implies the assumption that women are underpaid and male wage structure would prevail in absence of discrimination.

The results obtained will be used to estimate the level of gender discrimination in wage. A first approximation is to calculate and analyze the percentage of each component over the total gap. Furthermore we can also calculate a second discrimination indicator that shows in a more explicit way the level of that discrimination:

$$D = (\exp^{(\text{discrimination coefficient})} - 1) * 100 \quad [4]$$

Where D shows the percentage of discrimination based on the average wage for men.

Oaxaca (1973) uses as individual characteristics education level, work experience, class of worker, industry, occupation, health problems, among others, and following research has included other variables, as for instance Blinder (1973). But, even including more variables, the unexplained part of the gender wage gap could be due to a variable omitted from the wage equations in the Oaxaca-Blinder decompositions, so individual characteristics should take into account any factor that can determine the wage, besides the gender. In fact, the magnitude of the discrimination component crucially depends on the specification of the observable determinants of wage differences. In this sense, De la Rica et al (2011) analyze the gender wage gap in the performance-pay component of wage (something usually not included as an observable variable). Their findings support the existence of wage differences when analyzing this component that in other works is considered as non-observable.

The methodology itself has been both criticized and extended to correct for some drawbacks. Heckman (1979) designed the nowadays mostly used correction for the selection bias problem¹. In terms of the reference wage structure, Oaxaca-Blinder baseline approach uses male wage structure as the reference one, but Oaxaca and Ransom (1994) and Neumark (1988) suggest a reference wage structure a pooled regression of men and women without group-specific intercepts. Oaxaca-blinder decomposition focus on the differences among average wage and some authors have developed extensions of this methodology to analyze the differences along the wage distribution, mainly based on quantile regressions (Gardeazabal and Ugidos, 2005; Firpo, Fortin, and Lemieux, 2009). Finally some examples about applications of the Oaxaca-Blinder type methodology for the Spanish case includes Gardeazabal and Ugidos (2005), Del Río, Gradín and Cantó (2004), García and Morales (2006) and De Cabo and Garzón (2007), Murillo and Simón (2013,) among others.

¹ The dataset used lacks of complete information about unemployed people and thus, sample selection bias corrections such as Heckman one cannot be used.

4. Database and identification of the social economy and control group

4.1. Database

We use the Continuous Sample of Working Histories -CSWH- published in 2010 by the Ministry of Employment and Social Security, which contains longitudinal information about the working history of a 4% non-stratified random sample of all individuals who are registered in the Social Security System as contributors or receiving a contributory pension at some point of 2009 (employees, self-employed workers, pension earners, recipients of unemployment benefits or other contribution benefits).

The CSWH is an organised set of anonymous microdata extracted from administrative records of the Social Security, the Continuous Municipal Register and of the Tax Agency, pertaining to more than 1.2 million people resident in Spain. The dataset includes information about personal characteristics such as sex, age, place of residence and education² and related to the household it includes the number and ages of people registered. In terms of labour conditions it includes two type of information. From the point of view of the worker, it includes, among others, the type of contract (including if it is part-time or full-time and temporal or permanent), starting and termination date of each relationship with social security (both labour and unemployment types) and occupation classification. It also includes some information about the employer such as type, age and size of firm³, industry of activity. Finally, it includes tax data related to the employee individual compensation paid by a particular employer. Thus, we have the gross annual earnings for 2009, which can be turned into daily earnings by using information about the number of days worked in 2009, included also in the CSWH and, moreover, we can calculate full-time equivalent daily wage as there is a continuous variable with detail about the percentage of hours compared with a full-time job (from 0% to 100%).

The CSWH has a few drawbacks with regards to the information it contains. It only includes the Spanish population registered in the Social Security System in the reference year, and thus, there is no complete information for unemployed people (only those who receive a contributory pension). And for our purposes there is no available data about the hours worked by an employee and, thus, hourly wage cannot be computed.

The endogenous variable will be the full-time equivalent daily wage, and in particular the natural logarithm of the daily wage as this transformation allows also normalizing and linearizing the model, increasing its explanation power. The dataset includes gross annual wage, which includes all payments made by the employer to a particular employee along the reference year, and the number of days worked in 2009 by each worker, allowing calculating daily wage. Moreover, it also includes information about the percentage of hours compared to a full-time position for each part-time contract, making possible to obtain a full-time equivalent daily wage in an effort to have a realistic measure of the daily wage, as in Arranz and García-Serrano (2012). Other authors have gone even further in trying to obtain an hourly wage, but for that we would have to use external data from other sources than CSWH to have data for the number of hours worked by week or month, as in Hospido y Moral-Benito (2013), but this will imply to apply the same coefficient to more than a worker, something that could derive in a biased wage measure, especially in our social economy sample as there is no dataset that identify social economy for that purpose (hours worked by these workers).

The personal and labor characteristics included in the model are the following: Age, place of residence, level of disability, educational attainment, tenure (measured as the duration of the last job position), qualification of the position (measured by a variable developed by the social security system and included in the dataset), part-time or full-time contract, temporal or permanent contract and finally age, size and industry of activity of the firm.

² Data on educational level must be carefully used as they are provided by the Continuous Municipal Register, where it is not mandatory information. Therefore, compared with the information contained in the Labour Force Survey, it shows lower levels of education, specially for young people as it tends to be not updated

³ Data on firm size is not directly reported and it is estimated using information about the number of employees included in the firm' "administrative accounts" used by them to pay the contributions to the Social Security System.

4.2. Identification of the sample

The delimitation of the social economy for the Spanish case has been carried out taking into account the definition contained in Law 5/2011, of Social Economy, and those utilised by the scientific association CIRIEC-SPAIN and the Spanish Business Confederation of Social Economy (CEPES). In practice, the delimitation has included the following types of entities, taking into consideration the classification set forth in the Social Economy Law, in Article 5: Cooperatives, mutual benefit societies, employee-owned companies, insertion enterprises, special employment centres, fishermen associations, associations of the disability area and the ONCE, as a unique entity (within possible foundations whose activity can be classified within the social economy area).

In reference to the control group (profit seeking firms), the information pertaining to corporations and limited liability companies has been taken as a basis. The design of this control group must take into account that the elements should be statistically equivalent or comparable. Regarding this matter, the objective of the paper is to analyze the contribution to social cohesion of the social economy focusing on the labour conditions of their workers, and specifically in the gender wage gap as a way to analyze the improvement of equal opportunities and absence, or reduction, of labour discrimination in workplace. The design of the control group has been done with the hypothesis that the main descriptive characteristics of an enterprise, in terms of influence in its behaviour, are its size and sector of activity. Therefore, the design of the samples is controlled by the potential differences arising from the two variables that have the greatest influence upon business behaviour, equalising the cross distributions per business size and sector of activity. Thus, the samples will have the following format.

$$MES = \sum_{j=0}^n \sum_{i=0}^n E_{1ji} + \sum_{j=0}^n \sum_{i=0}^n E_{2ji} + \dots + \sum_{j=0}^n \sum_{i=0}^n E_{kji} \quad [5]$$

$$MENS = \sum_{j=0}^n \sum_{i=0}^n E_{1ji} + \sum_{j=0}^n \sum_{i=0}^n E_{2ji} + \dots + \sum_{j=0}^n \sum_{i=0}^n E_{mji} \quad [6]$$

Where MES collects the sample of enterprises pertaining to the social economy and MENS the one corresponding to enterprises outside of the social economy, where k is the type of entity within the social economy, m the type of control group entity, j the economic sector and i the business size. The final sample includes almost twelve thousand firms and entities and over twenty seven thousand workers.

5. Preliminary Results

5.1. Gender differences in labor conditions: A global perspective

Table 1 reports descriptive statistics of the main variables that describes personal characteristics. Both samples are conformed by people around 40 years old, slightly younger in the case of women. As expected the share of disabled workers is quite low in the control group, specially compared to the 20% in social economy. On average, women have a higher educational level in both subsets, although in general terms the individuals have a low level of education. In this sense it's worth recalling that the control group is designed following sector of activity and firm's size distribution of social economy firms, and thus, the educational level and qualification of the control group's workers is not representative of all non-social economy firms as it is related to a particular sample.

Even though the level of education doesn't seem to show differences between social economy and the control group, women working in social economy occupy higher qualification positions than in control group, which is quite interesting as we have corrected by sector of economic activity, which might explain some qualification differences.

Table 1. Descriptive statistics

	Social Economy		Control Group	
	Men	Women	Men	Women
Observations	7274	5667	7902	6227
Age (mean, years)	41	39	40	37
% over total column				
Disabled workers	32.62%	19.53%	0.68%	0.34%
Education attained				
Primary	69.6%	60.4%	55.1%	46.0%
Secondary	23.5%	27.9%	33.3%	36.3%
Tertiary	6.9%	11.7%	11.6%	17.8%
Job qualification*				
Low-skilled	60.3%	47.3%	54.7%	28.2%
Medium-skilled	27.3%	38.8%	24.4%	53.6%
High-skilled	12.3%	13.9%	20.9%	18.2%

* Occupational groups (High-skilled: groups 1-3, Medium-skilled:3 to 7, Low-skilled: 8 to 10). Source: CSWH, 2010.

An initial overview of the data have shown some differences between the two subsets in terms of the qualification of the job positions, which is in turn one of the main determinants of job quality.

In this sense, the following analysis has as its main objective to test the significance of the expected differences in the behavior of social firms in terms of women labour conditions. For an applied point of view we will test if gender differences in social economy are significantly smaller than in commercial firms, for the following labour conditions, with which we try to analyze some aspects of labor market attachment and job characteristics:

- Part-time of full time contract. We assume that in general term in the Spanish labour market workers do not decide to go into part-time jobs. This is in line with the findings that in high gender gap, women working part-time report that they would prefer a full-time job (Petrongolo, 2004).
- Temporal (fixed-term) or permanent (unlimited duration) contract. For the Spanish case it is worth mentioning that certain types of temporal contracts are used for long term labour relationships due to the rigidities in labour laws. Despite this, we assume that a permanent contract is more desirable even if the duration of some type of temporal contracts is actually close to the average tenure in a permanent position. Moreover, as we compare gender differences, if there is no discrimination, both women and men should be affected in a similar way.
- Tenure. The length of the current job position (tenure in years) is measured as a way to analyze the stability at work or attachment to labour market. Although we are focused on the differences by gender in tenure, we implicitly assume that the longer a worker stay in a job the better, as we understand that it contributes to stability and improvement of work experience.
- Earnings: We consider gross annual wage and full-time equivalent daily wage. Even though the limitation in the upper bound of wages can contribute to social cohesion, we are not exactly testing whether social economy pays more or less to men and women, but whether women earns less in social economy or in control group, compared to men.

Hypothesis one: Gender Equality in distribution of part-time and temporal contracts

Table 2. Distribution of workers by type of contract, gender and sample group

	Social Economy		Control Group	
	Men	Women	Men	Women
Type of contract I (total by column)				
Part-time	9.3%	23.2%	8.7%	30.1%
Full-time	90.7%	76.8%	91.3%	69.9%
Pearson chi square (p-valor)	471,13 (0,000)		1069,68 (0,000)	
Type of contract II (total by column)				
Permanent	72.7%	68.5%	79.3%	79.1%
Temporal	27.3%	31.5%	20.7%	20.9%
Pearson chi square (p-valor)	26,83 (0,000)		0,081 (0,390)	

Source: CSWH, 2010 and own calculations.

According to the results reported in table 2, there is evidence of differences in the part-time we reject the null hypothesis of homogeneous distribution among men and woman for both subsets, confirming that women have a higher share of part-time workers, although that share is lower in the social economy (66%) than in control group (73%). Thus, chances of getting a full-time job are higher in social economy, despite the higher general level in both cases.

The gender distribution of permanent and temporal contracts indicates that women and men follow different distributions in social economy, whereas in traditional economy they belong to the same theoretical population. Thus, we reject the null hypothesis for social economy and we accept it for the control group. The analysis of this distinction between permanent and fixed-term contract should take into account that in Spain certain type of temporal contracts (temporal contract for project work or services) have been widely used to avoid the high firing cost even when the duration of the contract is unknown and, in this sense, this type of contract introduce noise in the analysis of job temporality. Indeed, 24,5% of the workers in social economy have this type of contract (17,8% in control group).

To control for this circumstance we can study the length of the contract, which is analyzed in the following hypothesis, although it is clear that other things equal workers desire a permanent position and temporal jobs are considered to have lower quality. Despite the subset analyzed we also have to take into account that in Spain some public social services have been privatized and those public contracts are renewed on a yearly bases (or some other fixed amount of years), which affects the type of contracts that firms providing these services use to hire their workers.

Hypothesis two: Gender equality in job stability

The length of a job or tenure is crucial in terms of gaining experience, which in turn is one of the main determinants of employment opportunities and, for those actually working is one of the explanatory factors for wages and job promotion (besides different endowments). Long time periods in a position it is also a signal of labour stability as jumping from one job to another has negative connotations in the Spanish labour market (contrary to other labour markets such as US).

Table 3. Length of current position (years) by gender and sample group

		Average length	Test-t	Test Welch	Test Kruskal-Wallis
Social Economy	Men	5.2	18.64 (0.000)	347.60 (0.000)	290.23 (0.000)
	Women	3.3			
Control group	Men	5.3	16.19 (0.000)	262.46 (0.000)	239.59 (0.000)
	Women	3.8			

Source: CSWH, 2010 and own calculations.

According to the results reported in table 3 we reject the null hypothesis of homogeneous distribution among men and woman for both subsets finding, thus, evidence about higher instability in the labor market attachment for women. Indeed differences are quite similar in subsets, where men have been in their current position around 5 years whereas women show an average tenure of 3,3 years in social economy and 3,8 years in the control group.

Hypothesis three: Gender equality in wages

In annual terms (and thus, not controlling by part-time or temporal jobs) we reject the null hypothesis of homogeneous distribution among men and woman for both subsets. Social economy shows lower wages for both women and men, but gender differences are smaller than in control group. This results are confirmed using full-time equivalent daily wage, but in this case wage gap in Social Economy is even lower than using annual wage, specially due to the high average daily wage for men in control group, 131 €/day, compared to 78€/day for a women.

Table 4. Wages by gender and sample group.

		Average	Test-t	Test Welch	Test Kruskal-Wallis
Annual wage (euros)					
Social Economy	Men	18.623	19,11 (0,000)	364,99 (0,000)	418,54 (0,000)
	Women	13.715			
Control group	Men	28.189	15,54 (0,000)	241,79 (0,000)	761,71 (0,000)
	Women	18.483			
Daily wage (euros)					
Social Economy	Men	76.2	2.90 (0,000)	8.39 (0,004)	181,45 (0,000)
	Women	68.1			
Control group	Men	130.9	4.11 (0,000)	16.44 (0,000)	428,19 (0,000)
	Women	77.8			

Source: CSWH, 2010 and own calculations.

Thus, we find gender wage gap in both subsets, but Social Economy shows lower gap than control group. In order to conduct a deeply study of this gap, and try to identify discrimination in that gender wage differences (and not just endowment or personal characteristic differences) we will apply wage gap decomposition techniques.

5.2. Gender wage differences decomposition

A deeply look at earning numbers (table 5) points out the differences between social economy and traditional firms in terms of retributions to their employees. Not only the average pay gap is lower in the social economy (10,6% compared with 40,6% for control group) but also, it decreases in the higher percentiles, whereas in the traditional firms included in the control group the pay gap increases in the upper percentiles. The dispersion in wages is clearly higher in the control group, mainly as a consequence of the upper tail wage gap, as shown by the percentile 90 value of 27%. The indices of inequality related to the wage gap by percentiles (last rows in table 5) confirm that the main differences between both subsets are concentrated in the higher wages, where Social Economy and traditional firms actually show opposite tendencies.

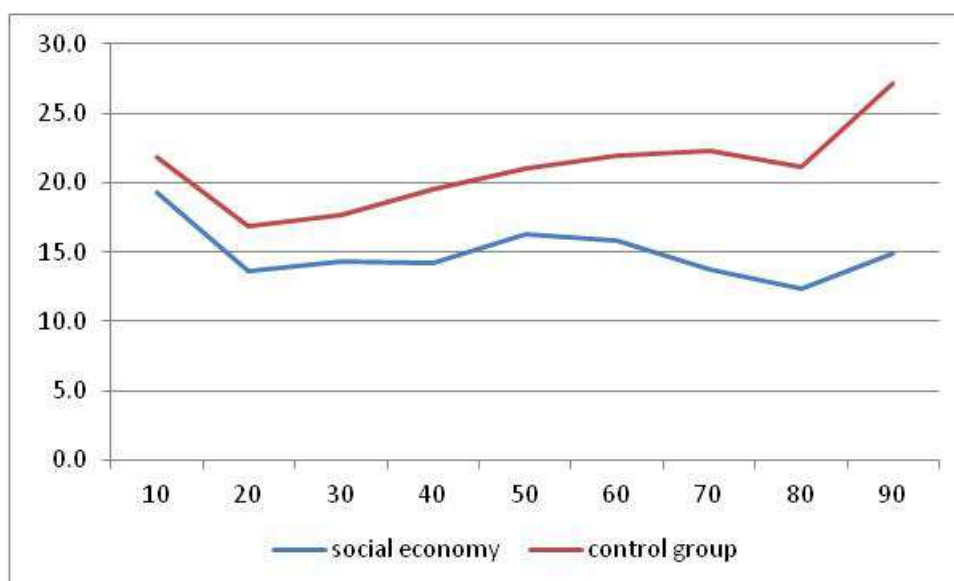
Table 5. Gender wage gap

	Social economy		Control group	
	man	woman	man	woman
Daily wage (€)				
Average	76.2	68.1	130.9	77.8
Standard d.	147.8	164.7	1142.6	115.7
Gender wage gap				
p10	19.3		21.9	
p50	16.3		21.0	
p90	14.8		27.1	
P90/p10	0.77		1.24	
P90/p50	0.91		1.29	
P50/p10	0.85		0.96	

Source: CSWH, 2010 and own calculations.

Figure 1 pictures the wage gap by percentiles, confirming that Social Economy shows lower level of gender wage gap along the pay distribution. In next section we apply decomposition techniques to analyze the existence of discrimination in those wage differences. The higher gap at the lower tail of the wage distribution is consistent with the results obtained by Bonhomme and Hospido (2013) for Spain, using same dataset but without distinction by type of firm.

Figure 1. Wage gap by gender (% by percentiles)



Focusing on the logarithm of the full-time equivalent wage, figures 2 and 3 shows the kernel density functions for social economy and control group. Although in both samples women density function is shifted to the left in line with lower retributions, social economy function density shapes for women and men are more similar than in the control group sample. The main differences are in the tails, wider in the control group, especially for men, which imply a higher earning gap in that group, increasing as we move away from the average. In that sense, while women earn on average slightly more in the control group (table 5), data shows that the gap is mainly due to differences in men retribution compare to women than in differences in women retribution in each sample.

Figure 2. Kernel density function for social economy sample

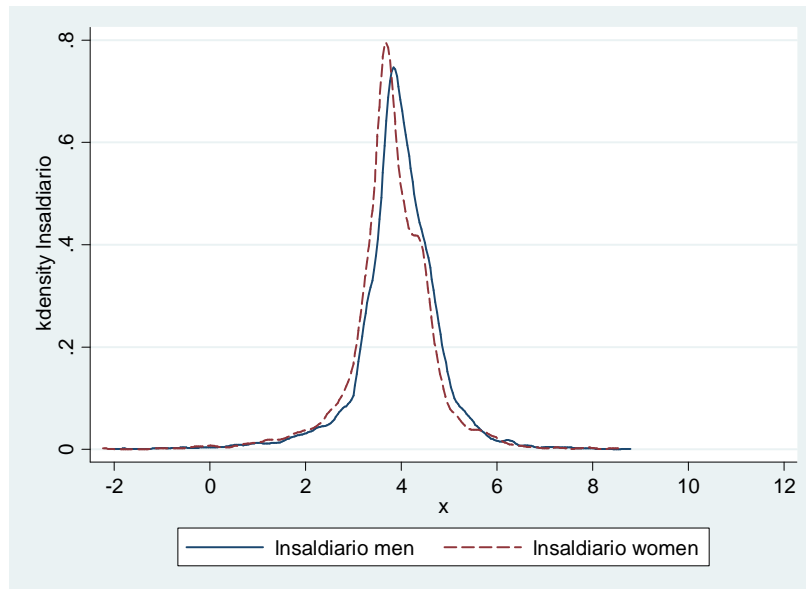
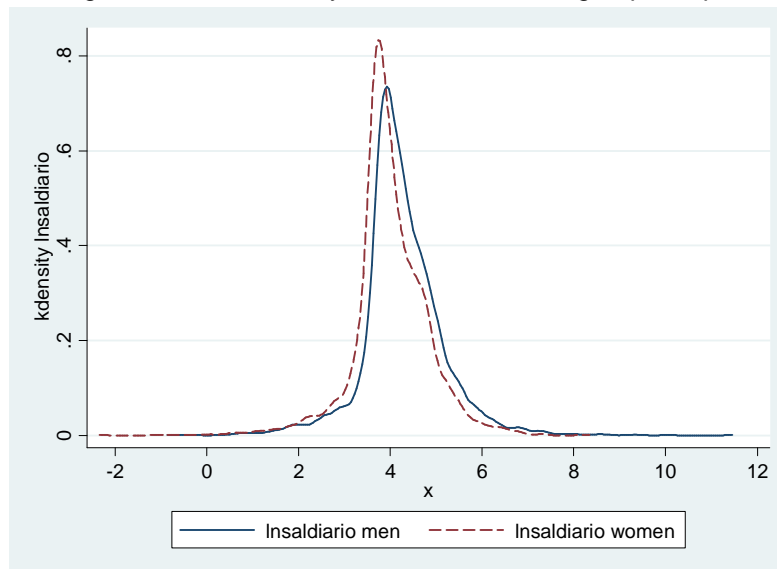


Figure 3. Kernel density function for control group sample



Oaxaca-blinder decomposition allows us to divide the gender wage differential into a part "explained" by endowment characteristics such as education, work experience and so on, and another part that cannot be accounted by such observable differences. Despite the considerations made in the methodology section, we can use the unobservable part as an

approximation to the concept of discrimination and compare the importance of that part in wage gap for Social Economy and control group.

Oaxaca-Blinder decomposition has been conducted for Social Economy and control group excluding the lower salary related category for each variable included and considering men wage structure as the reference one. The econometric results are fairly standard, in line with the human capital theory (wage regression results for both subsets are reported in annexes⁴). In general terms the estimations for all coefficients for each category show the expected sign from a theoretical point of view, although there are some exceptions such as the negative sign obtained for permanent contracts. This would imply a lower wage for this type of contracts and might be related to the temporal contract for project work or services, considered as temporal but used to hire high-skilled workers, with high wages. As said formerly this type of contract might introduce some noise in the analysis.

Table 6 includes the summary results for Oaxaca decomposition for Social Economy and control group, where the previous results for wage gap differences between the two subsets are confirmed. The raw gender gap is 62% higher in the control group, 0,25 logarithmic points, compared to the 0,16 points in Social Economy.

Table 6. Gender wage gap decomposition

	Social Economy		Control group	
	value	%	value	%
Wage gap	0.155	100%	0.251	100%
- Characteristics (endowment) effect	0.013	8.51%	-0.005	-1.84%
- Discrimination effect	0.142	91.49%	0.184	101.84%
D-discrimination indicator	15.3%		29.1%	

Source: Own calculations.

The decomposition of those differences in endowments (or skills), and the so-called "residual" component, which measures the different returns that men and women obtain for the same endowments, points out some interesting results. In Social Economy gender wage gap is explained to a large extent by unobservable components (91%) and, thus, despite the small difference in retribution by gender, this gap cannot be explained by divergences in human capital endowment and other observable explanation for that differences (such as place of residence or sector of activity).

The situation in the control group is quite interesting because we obtain a negative value for the endowment effect. This imply that if we use male wage structure to pay a women with same endowment we obtain a negative sign (-0.005 log points), meaning that there is a higher retribution to women for the same endowment (and other observable characteristics) than men. But, as in raw terms women are lower remunerated, our findings imply that the discrimination effect explains all the differences in wages, including the fact that in terms of the observable characteristics, women are better remunerated. The D discrimination indicator defined in the methodology section shows that discrimination effect relating the results to the wage in euros (instead of logs) for the control group (29%) almost double the situation in Social Economy (15%), pointing out that discrimination in the latter is sensitively smaller.

When interpreting these estimations we need to take into account that the control group reproduces the Social Economy firm's structure in terms of sector of activity and size. In this sense, Social Economy is specialized in some sectors of economic activity and thus, the control group is not representative of the "rest" of the economy, but of a sample of similar firms in terms of sector of activity and firm, but different in terms of their objectives and values.

⁴ Wage data in CSWH are obtained from tax data reported by employees belonging to the common tax regime, which includes Spain except the Basque country and Navarra. Thus, wage analysis does not include this two Spanish regions, although they are included in the rest of the analysis conducted.

6. Conclusions

The main goal of the paper was to analyze the contribution of social economy to social cohesion, in terms of its role in reducing gender labour discrimination, with especial attention to wage differences as the most representative way of gender labour discrimination. With that purpose we identify the Social Economy for Spain using the definition contained in the Social Economy Law (Ley 5/2011) and we designed a control group of the most representative trading companies of the non-social economy (limited liability companies and corporations) with stratification by sector of economic activity and firm size.

In a first approach to labour conditions, we analyze the two most interesting characteristics of contract in terms of discrimination: part-time or full-time and temporal or permanent type of contract. There is lower percentage of women with part-time jobs, but higher share of females with temporal contracts (especially due to the percentage of a particular type of contract: temporal contract for project work or services). In order to see if despite the classification in temporal or permanent type of contract, Social Economy shows more stable labour relationships, we study the length of the current job, but results are quite similar for both subsets, men have a 5 years tenure in the current position whereas women are around 3,5 years, slightly lower for social economy.

The more interesting results are related to wages, as where we find an average gender wage gap smaller in Social Economy (8€/day, compared to 53 €/day in control group) that actually increases along the wage distribution, reaching almost 30% for the highest salaries. The use of decomposition techniques allows having an approach to the measurement of the relevance of discrimination in that raw gender differences, finding that the average discrimination in Social Economy (15%) is half the one in the control group (29%). In this sense the objective of the control group is to test if the lower differences in wage differences by gender are related to the values that social economy firms share or we could find similar gender differences in other type of firms. The empirical findings show that the discrimination seems to be higher in the control group, in consistency with the view that Social Economy firms generates some "social utility" in terms of gender wage discrimination, which might be related to the contribution of the differentiating and intrinsic values of these entities.

The results obtained are among the attempts to measure the contribution of Social Economy to social cohesion as a way to assess the contribution of these entities to the society beyond their direct impact over traditional macroeconomic variables such as GDP or employment. The concept of social utility might reflect in a better way the relevance of Social Economy, and in this paper we have focused in the improvement of gender equal opportunities. Certainly, equal opportunities is a global concept that includes not only the characteristics analyzed in this work but also job satisfaction, promotion opportunities (existence of glass ceiling), problems for reconciling work and family life among other forms of discrimination. In this sense, one of the main problems in analyzing Social Economy is the lack of differentiated statistical information. In this work we have used a statistical source that allows the identification of Social Economy to some extent, but is limited to social security data, whereas other sources with more detailed information about labour conditions and satisfaction do not allow identifying Social Economy entities.

7. References

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8. Anexes

Table A.1. Wage regression, social economy.

Variable	Men		Women	
	Coefficient	St. Dev.	Coefficient	St. Dev.
Age	0.001	0.001	0.002	0.001*
Tenure	0.006	0.002*	0.008	0.003*
Firm's age	0.005	0.001*	0.003	0.001*
Permanent contract	-0.064	0.023*	-0.166	0.026*
Full-time contract	0.056	0.033	-0.026	0.027
Disability	0.050	0.024*	0.018	0.031
Occupational groups				
gcotiza1	0.951	0.057*	0.741	0.067*
gcotiza2	0.705	0.060*	0.641	0.055*
gcotiza3	0.687	0.046*	0.574	0.070*
gcotiza4	0.490	0.059*	0.231	0.069*
gcotiza5	0.438	0.037*	0.331	0.039*
gcotiza6	0.123	0.057*	0.031	0.075
gcotiza7	0.268	0.045*	0.259	0.039*
gcotiza8	0.351	0.028*	0.213	0.052*
gcotiza9	0.181	0.036*	0.216	0.045*
Sector of economic activity				
actieco1	0.069	0.076	0.031	0.084
actieco2	0.187	0.141	0.003	0.305
actieco3	0.119	0.081	0.297	0.124*
actieco4	0.017	0.076	-0.006	0.082
actieco5	0.050	0.088	0.073	0.121
actieco6	-0.095	0.103	0.014	0.105
actieco7	-0.212	0.117	-0.233	0.146
actieco8	0.319	0.084*	0.431	0.090*
actieco10	-0.041	0.081	0.089	0.088
actieco11	0.797	0.447	--	--
actieco12	0.063	0.090	0.226	0.086*
actieco13	0.021	0.077	0.128	0.082
Education attainment				
estu2	0.076	0.022*	0.066	0.028*
estu3	0.130	0.054*	0.144	0.058*
estu4	0.145	0.028*	0.180	0.033*
estu5	0.222	0.046*	0.200	0.045*
Firm's size				
tam2	0.060	0.055	0.065	0.078
tam3	0.099	0.055	0.100	0.078
tam4	0.044	0.057	0.091	0.078
tam5	0.167	0.060*	0.201	0.079*
Place of residence				
ccaa1	0.083	0.041*	0.260	0.048*
ccaa2	0.134	0.062*	0.242	0.080*
ccaa3	0.137	0.071	0.299	0.085*
ccaa4	0.074	0.081	0.401	0.098*
ccaa5	0.083	0.062	0.217	0.071*
ccaa6	0.021	0.096	0.255	0.121*
ccaa7	0.039	0.051	0.086	0.070
ccaa8	0.097	0.052	0.218	0.070*
ccaa9	0.161	0.044*	0.221	0.052*
ccaa10	0.003	0.043	0.116	0.050*
ccaa11	0.051	0.063	0.201	0.085*
ccaa12	0.053	0.056	0.129	0.070
ccaa13	0.091	0.049	0.302	0.057*
ccaa15	0.003	0.163	0.655	0.200*

ccaa16	0.073	0.102	0.323	0.119*
Intercept	3.186	0.106*	3.007	0.124*
Nº observations	7023		5513	
R ²	0.213		0.1975	

* Significance coefficient 5%. Source: Own calculations

Tabla 1. Resultados de la estimación de las ecuaciones salariales para trabajadores/as de empresas pertenecientes al grupo de control

Variable	Men		Women	
	Coefficient	St. Dev.		Coefficient
Age	0.004	0.001*	0.003	0.001*
Tenure	0.000	0.002	0.002	0.002
Firm's age	0.002	0.001*	0.003	0.001*
Permanent contract	-0.113	0.024*	-0.140	0.025*
Full-time contract	-0.046	0.033	-0.096	0.022*
Disability	0.071	0.103	0.055	0.156
Occupational groups				
gcotiza1	1.051	0.045*	0.799	0.052*
gcotiza2	0.656	0.054*	0.542	0.051*
gcotiza3	0.687	0.042*	0.660	0.053*
gcotiza4	0.466	0.047*	0.423	0.053*
gcotiza5	0.385	0.038*	0.311	0.038*
gcotiza6	0.191	0.061*	0.085	0.057
gcotiza7	0.202	0.045*	0.135	0.036*
gcotiza8	0.253	0.030*	0.181	0.045*
gcotiza9	0.155	0.035*	0.093	0.043
Sector of economic activity				
actieco1	-0.049	0.067	0.032	0.064
actieco2	0.130	0.127	0.257	0.164
actieco3	-0.047	0.072	0.192	0.090*
actieco4	-0.056	0.067	0.000	0.062
actieco5	0.058	0.077	0.166	0.104
actieco6	0.023	0.095	0.067	0.089
actieco7	-0.259	0.100*	0.116	0.117
actieco8	0.240	0.075*	0.347	0.070*
actieco10	-0.138	0.074	-0.054	0.068
actieco11	-0.404	0.215	-0.172	0.235
actieco12	-0.226	0.078*	-0.039	0.065
actieco13	-0.111	0.072	-0.012	0.063
Education attainment				
estu2	0.048	0.024*	0.035	0.028
estu3	0.088	0.046	-0.045	0.048
estu4	0.106	0.026*	0.123	0.030*
estu5	0.200	0.037*	0.215	0.036*
Firm's size				
tam2	0.165	0.056*	0.194	0.062*
tam3	0.274	0.055*	0.307	0.062*
tam4	0.391	0.056*	0.334	0.062*
tam5	0.415	0.057*	0.396	0.062*
Place of residence				
ccaa1	-0.038	0.055	0.041	0.062
ccaa2	0.109	0.070	-0.007	0.083
ccaa3	-0.001	0.080	0.100	0.089
ccaa4	-0.062	0.078	0.276	0.089*
ccaa5	-0.120	0.066	0.000	0.074
ccaa6	0.079	0.086	-0.154	0.112
ccaa7	0.025	0.061	0.060	0.071
ccaa8	-0.018	0.061	0.107	0.073
ccaa9	0.112	0.053*	0.192	0.059*
ccaa10	-0.005	0.056	0.042	0.063
ccaa11	-0.261	0.083*	-0.117	0.100
ccaa12	-0.048	0.060	0.022	0.069
ccaa13	0.070	0.054	0.138	0.060*

cca15	0.248	0.159	0.260	0.198
cca16	0.014	0.105	0.068	0.114
Intercept	3.474	0.106*	3.200	0.110*
N° observations	7656		6090	
R ²	0.2686		0.2295	

* Significance coefficient 5%. Source: Own calculations