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Recession.

Gender Differences in Labor Force Participation Rates in Spain and Italy under the Great Recession.

Diferencias de género en las tasas de actividad en España e Italia durante la Gran Recesión.

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Abstract

This article analyzes gender differences in the decision to participate in the labor market under the economic crisis that derive from differences in women's position in the job structure, the family and the welfare economy. In order to test the behavior of male and female labor supply in Spain and Italy, we estimate labor supply models for women and men living in couples. The results show a strong countercyclical added-worker effect for women, in contrast with a procyclical discouraged-worker effect for men. Though the added-worker effect prevails for women in Spain, in Italy the discouraged worker effect dominates.

Keywords: Labor Supply; Economic Crisis; Gender; Added/Discouraged Worker Effect.

Resumen.

Este artículo analiza las diferencias de género en la decisión de participar en el mercado laboral durante la crisis económica causadas por las posiciones desiguales de las mujeres en la estructura del trabajo, la familia y la economía del bienestar. Para analizar la diferente participación laboral de mujeres y hombres en España e Italia, se calculan modelos de oferta de trabajo para mujeres y hombres que viven en pareja. Los resultados muestran la presencia de un importante efecto del trabajador adicional para las mujeres, mucho mayor que para los hombres, que se caracterizan por el efecto desánimo. Mientras que el efecto del trabajador añadido predomina para las españolas, para las italianas domina el efecto desánimo.

Palabras clave: Oferta de fuerza de trabajo; Crisis económica; Género; Efecto del trabajador adicional/desanimado.

JEL Clasification: J22, J21, J16, J64.

1. Introduction.

Women and men are differently affected by political and economic circum-stances, especially in the case of an economic downturn of such magnitude as the current recession. This is because women and men occupy different positions and have an unbalanced and unequal access to economic resources -including employment- or positions of power, and because of self-fulfilling prophecies regarding gender differentials.[1] Economic crises either emphasize or modify previous gender imbalances.

Thus, it is very difficult to grasp in all its complexity how the economic cycle may affect labor supply without taking into account gender differences (Rubery and Rafferty, 2013) since women's decisions to enter the labor market have always been more sensitive than male ones to economic cycles (Lundberg, 1985; Tano, 1993) because of the traditional secondary nature of female labor and lower women's activity rates linked to their historical specialization in unpaid domestic work.

In this paper, we analyze the different effects that this Great Recession, due to the financial and economic crisis which started in 2007 and the austerity policies implemented since 2010, have had on labor markets in two Mediterranean countries, Spain and Italy, and consequently, on women's and men's participation in the labor market The economically active population ratio can generally be decomposed into a trend and a cyclical component. This last one can be of different sign[2] in periods of slowdown of the economic activity and increases in unemployment rates: the added worker effect (AWE), when labor supply behavior is counter-cyclical as it implies an increase in a person's labor supply (hours worked or participation) in response to transitory shocks in his/her partner's earnings, or the pro-cyclical discouraged worker effect (DWE), when potential workers renounce finding a job and they leave the labor force because they estimate their chances of finding one as too small in the presence of high unemployment rates.

We have chosen two countries from the Mediterranean regime that have traditionally shared a similar overall structure of their welfare systems, with familialistic social policies and the pervasiveness of the male-breadwinner model

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[1] See, for example, the studies of Benería and Feldman (1992); Elson (1995, 2010); Antonopoulos (2009); Gálvez and Torres (2010); Pearson and Sweetman (2011).
[2] Early development of both theories can be found in Humphrey (1940) and Mincer (1966) for the DWE and Woytinsky (1940) and Long (1958) for the AWE.

(León and Pavolini, 2014) acting as strong barriers for female participation in the labor mark Both countries experienced great progress in gender equality in the labor market in the decades preceding the economic crisis, but this advancement in the integration of women within the labor force may be paralyzed with the crisis and policies implemented. Finally, both Spain and Italy were adversely hit by the financial and economic crisis and a sovereign debt crisis since the end of 2009, which forced them into the implementation of deep fiscal consolidation plans and structural reforms.

A few studies regarding the effect of this Great Recession on the Spanish and Italian labor supply have analyzed the AWE and DWE by gender, but these studies focus only on one country (on Spain: Domingo, 2011; Addabbo, Rodríguez-Modroño and Gálvez, 2013; González-Gago and Segales, 2014; and Congregado *et al.*, 2014; on Italy: Verashchagina and Capparucci, 2014; Ghignoni and Verashchagina, 2014).

We estimate labor supply models using EU SILC 2011 micro data by gender interpreting the impact of partner's employment status while controlling for the socio-demographic structure of the household before and during the crisis. This allows us also to analyze more in depth the impact of other individual, household and regional variables on labor supply by gender. For this purpose we estimate two probit models of labor supply by gender, taking into account the different effects by gender of one's partner's employment condition and individual and family characteristics, such as income, age, educational level, children, household's indebtedness, regional differences in unemployment rates and availability of childcare services.

The paper is structured as follows. In Section 2, we discuss the literature and empirical evidences of previous studies supporting the AWE or the DWE of economic crises by gender. Section 3 focuses on Spain and Italy and analyses their labor markets, gender regimes and institutional frameworks. Section 4 presents the methodology and data used to estimate the labor supply models, while section 5 discusses the results of the estimation. Finally, concluding remarks and some policy suggestions are presented in section 6.

2. Crises and labor supply by gender and countries' development.

One of the main debates in gender analyses of economic crises has been the impact of crises on the labor supply of women. Some analyses point to a DWE for women that act as a buffer in period of crisis either in protecting men against job loss or acting as a labor reserve in voluntarily withdrawing from the labor market (Benston, 1971; Mitchell, 1971). Whereas other authors, like Bruegel (1979) or Rubery and Tarling (1982), point to a countercyclical behavior derived from the AWE, due mainly to occupational segregation and the secondary role of female employment (Milkman, 1976; Johnson, 1983; Miller, 1990).

The available evidence suggests ambiguous results regarding the AWE and the DWE and further support to the key role played by occupational segrega-

tion. Some of the factors that may influence the magnitude of the two effects are the country's degree of development and the timing of the crises in each country, as found in various studies of past crises (Gálvez and Rodríguez-Modroño, 2011; Rodríguez-Modroño, 2012).

Large AWE manifests mainly in developing countries. There is strong evidence of the AWE during the 1997 Asian crisis. Layoffs had a marginally greater effect on men than on women in both Thailand and Malaysia (Nathan and Kelkar, 1999) and in the Indonesian and Philippines crises of the 1990s (Smith *et al.,* 2002), during which employment fell more markedly for men than for women, as female workers were absorbed by the informal sector and by more resilient large firms (Hallward-Driemeier *et al.*, 2011). A large share of working-aged women also became added workers in Latinoamerican crisis during the 70s, 80s and 90s (Leslie *et al.*, 1988; Francke, 1992; Pessino and Gill, 1997; Cerutti, 2000; Skoufias and Parker, 2006). In Brazil, poor women joined the workforce, though their AWE was compensated by women who were above the poverty line and were expelled from the labor market (Humphrey, 1996).

On the contrary, the DWE seems to be predominant on an aggregate and long-term basis in developed countries (Dernburg and Strand, 1966; Maloney, 1987, 1991; Dex *et al.*, 1995; Spletzer, 1997; Addabbo, 1999; Cullen and Gruber, 2000; Prieto and Rodríguez, 2000, Signorelli *et al.*, 2012). However, also in developed countries we need to take into account intra-gender differences and analyze the vulnerability of the various types of women and their relative position in the labor market according to their educational level, age, household income, etc. since there is a considerable heterogeneity in women's response regarding the labor market In fact, though the study by Filatriau and Reynès (2012) of twelve OECD countries between the 1970s/1980s and 2006 showed that, generally speaking, the DWE dominated the AWE, for 25 to 54 year-old women living in continental Europe and Mediterranean countries or in Japan, the AWE was predominant. Stephens (2002) and Kohara (2010) have also found the AWE to be significant using panel data from US and Japan.

With regards to the impact of this Great Recession on female labor supply, although the studies are still limited and mixed, in global terms women's greater participation seems to dominate the labor market (AWE).[3] Cho and Newhouse (2013) analysis of the effects of the recent economic crisis on the labor markets of 17 medium-sized countries shows that for all types of workers, falls in employment mainly lead to increased unemployment rather than to reduced participation. Also, they find a mild AWE, even among less educated women, suggesting that the informal sector is playing a relatively little role as a buffer for the shock. Karaoglan and Okten (2012) analysis on married women in Turkey for the period 2000-2010 shows that wives whose husbands experience a job loss are more likely to increase their labor force participation.

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[3] Bhalotra and Umaña-Aponte (2010) show that a 10 percent drop in a country's GDP is associated with an increase of 0.34 points in the participation of women in the workforce in the present economic crisis.

The few analyses already performed in EU countries (Arpaia and Curci, 2010; Bettio *et al.*, 2012; Karamessini and Rubery, 2014) show evidence of the DWE for both sexes, but also the presence of the AWE for women. Indeed, it seems that the present economic crisis may be altering the gendered behaviors common to previous crises as a result of the recent increase in female educational levels and attachment to the workforce (Sabarwal *et al.*, 2011; Rubery, 2014).

In conclusion, there is a considerable heterogeneity in women's response regarding the labor market, and women may enter or withdraw from the labor force during a recession depending on factors such as the institutional setting, occupational segregation, the harder-hit sectors, the stage of the crisis, the extent of austerity policies and welfare cuts and women's educational levels and relative position in the labor market Also, employers' beliefs about women's lower attachment to employment due to statistical discrimination and cognitive bias might lead to wage differentials in favor of men, and since women will expect to face a lower expected return opportunity cost, they may end up devoting more time to housework, validating through self-fulfilling prophecies, firm's beliefs (Dolado *et al.*, 2013).

But it seems that this recession is being characterized, unless till the present moment, by an AWE for women, even in developed countries, due to occupational segregation and the strong loss of male jobs compared to women, female educational gains, improved positions of women in the labor market previous to the crisis, the shift to dual-earner couples and past equal opportunities policies, all of which have contributed to women's attachment to the labor market Therefore, in our analysis of the impact of this Great Recession on the labor force supply of women and men in Spain and Italy, we will take into account personal and household characteristics to study the presence of an AWE or DWE.

3. A gender analysis of the Spanish and Italian labor market under the crisis.

In a first phase of the global economic crisis (2008-09), most governments introduced fiscal stimulus programs; however, expenditure contraction became widespread in the spring of 2010, which marked the beginning of a second phase of the crisis characterized by austerity policies and a second deep recession. According to IMF's World Economic Outlook (2012), changes in total government expenditures as a percentage of GDP have been of -1.4, -0.6 and +1.1 in Italy and -0.5, -1.2 and -1.7 in Spain during 2010-12.

While stimulus programs did have an important gender impact in job creation mainly linked to male sectors such as building and specific traditional manufacturing industries,[4] austerity measures are the ones showing the most important gendered effects mainly in the long-run. Austerity is leading to a

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[4] More than 95% of all jobs created in Spain through stimulus packages were occupied by men.

deterioration and privatization of social services, including childcare and long term care services, that means the transfer of public responsibilities to the private sphere and the reduction of the public sector. Women are being adversely affected in three different ways. On the one hand, income declines affect them to a great extent, since women-headed households are concentrated at the lowest income levels. On the other hand, women are the main employees and beneficiaries of public services, and a weakening of them increases the demand for female provision. Finally, because this re-privatization of care means an intensification of women's work that may seriously limit their employment opportunities and conditions, as it happened already in other regions and crisis characterized by the implementation of those measures.

Table 1 shows the evolution of main variables in the labor market by gender during the first period of the crisis and fiscal expansion (2008-09), a light economic recovery with a lower intensity of job losses in 2009-10 and the period of austerity (2010-2012). We can see that total unemployment rate increases in Italy have been of 4.4 per cent points for men and 3.4 for women in Italy and of 17.2 and 13.2 in Spain, respectively. Though unemployment has increased globally more for men due to labor market segregation, women are the most adversely affected by austerity measures as public employment is declining very fast and public provision of services are disappearing or deteriorating. In Spain, women represent the majority of public employment (55% in 2012) but public employment has decreased by 12% in the period 2011-13, and the majority was female jobs as women concentrate mainly in education, social services and health. Also in Italy, public administration employment decreased continuously showing on the whole a decrease by 8% (Bank of Italy, 2013).

Despite a bigger increase on male unemployment, female unemployment rates continue to be higher in both countries and higher unemployment rates usually mean a deterioration of labor opportunities and conditions. Especially due to gender segregation, female employment in Spain is concentrated on five out of thirty five economic sectors. Also, it is necessary to add the effects of the reallocation of female unemployed on household production and the intensification of working time on employment search, opportunities and flexibility. Indeed, the Spanish labor survey shows a decrease in unemployment since 2013, but male unemployment has decreased in 2014 by 289,100, while females unemployed have only decreased by 151,600, due to a more jobs created occupied by men and a higher DWE for men, as we will see in the analysis.

Data on labor supply shows in Italy the presence of different trends: on one hand women are increasing their participation in the labor force and contributing to the decreasing inactivity trend in 2012 in 7 out 10 cases (Istat, 2013b). On the other hand, there is an increase in the discouragement in active search of employment especially for women in the South of Italy that has led to an increase in potential labor force (those who are inactive but state they are available for work and do not actively search or are not immediately available).

Table 1. Evolution of the labor market by country & gender, 2007-2012

Italy

Variables	Women						Men					
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012
Activity rate (15 to 64 years)	50,7	51,6	51,1	51,1	51,5	53,5	74,4	74,4	73,7	73,3	73,1	73,9
Employment rate (25-64 years)	51,5	52,2	51,6	51,4	51,9	52,7	78,5	78	76,6	75,8	75,7	74,8
Unemployment rate (25-64 years)	6,7	7,3	7,9	8,3	8,1	10,1	3,9	4,5	5,6	6,2	6,3	8,3
Part-time employment as % of total employment (25-64 years)	26,6	27,4	27,5	28,4	28,9	30,4	4,1	4,3	4,2	4,5	4,9	6,1
Underemployed part-time workers as % of total employment (25-74 years)		2,8	3	3,1	3,1	3,9		0,9	0,9	1	1,1	1,6
Discouraged workers as % of inactive population (25-74 years)	13	13,5	12,7	13,5	13,9	15,3	10,7	11,5	12,6	13,7	15	14,8

Spain

Variables	Women						Men					
	2007	2008	2009	2010	2011	2012	2007	2008	2009	2010	2011	2012
Activity rate (15 to 64 years)	61,4	63,2	64,8	65,9	67	67,9	81,4	81,8	81	80,7	80,4	80,1
Employment rate (25-64 years)	58,8	59,2	57,6	57,3	57,3	56,1	82,7	80,2	73,6	71,9	70,6	67,6
Unemployment rate (25-64 years)	9,5	11,5	16,5	18,7	20,2	23,2	5,3	8,6	15,6	17,6	19	22,5
Part-time employment as % of total employment (25-64 years)	21,8	21,5	22	22	22,2	23,3	2,8	2,9	3,7	4,1	4,8	5,5
Underemployed part-time workers as % of total employment (25-74 years)		7	8,7	9,3	10	11,8		1,2	2	2,5	3,1	3,8
Discouraged workers as % of inactive population (25-74 years)	7,3	7,6	9	9,7	9,8	11	3,9	4,4	5,8	6,3	6,2	6,8

Source: Eurostat, Labor Force Survey.

From the beginning of the crisis Istat (2013b) shows a sharp increase in female employment in less qualified jobs (employment in these jobs increased for women at a 24.9% rate from 2008 to 2012 against an increase by 10% for men) and more than triple as regards to the Trade and Services Sectors, where female employment increased by 14%, against a 4% increase of male employment.

4. A model of labor supply by gender during the Great Recession.

The model used to test the AWE and DWE hypotheses is a probit model of individual's labor supply. The labor supply variable Y is a dichotomous variable taking the value of 1 if the individual is in the labor force. Among the X regressors the partner's employment status has also been included and it is assumed that the model takes the form of:

$$Pr\ (Y = 1 | X)\ =\ \Phi\ (X'\beta)$$

where Φ is the cumulative distribution function of the standard normal distribution and β is estimated by using maximum likelihood.

To test the AWE versus DWE hypotheses, we have included in the model together with variables on education level, age and the presence of children aged less than 15, and health status, variables that account for the partner's employment status and regional unemployment rates. The two countries are characterized by a sharp heterogeneity in regional unemployment rates and by introducing dummies on gender specific regional unemployment rates we can take into account the discouraging effect connected with living in a region characterized by a higher probability to be unemployed.

Among the regressors, imputed wages have been included. In the case of women, they have been estimated by using a Heckman two-step model so as to take into account their non-random selection into employment (Heckman, 1979). Table A1 in the Appendix shows the results of the estimation for 2011.

We have drawn a sample of individuals living in a couple aged from 25 to 54 made up of 4,712 women and 4,135 men in Spain and 6,306 women and 5,383 men in Italy. Women are characterized by lower labor force participation and employment rates than men in both countries, with a higher gender gap in participation in Italy than in Spain. The gross wage differential at the disadvantage of women is higher in Italy. In both countries the percentage of graduated females is higher than males' one, however the percentage of individuals holding a degree is much lower in Italy than in Spain for both women and men. Unemployment rates are higher for women than men in both countries though the level of unemployment is higher (almost double) in the Spanish sample (Table 2). Women are more likely to be chronically ill in both countries. As far as the children in the household is concerned about 12% have at least one child aged less than 3 in both countries, 18% in Spain and 16% in Italy from 3

to 5, 27% in Spain and 25% in Italy from 6 to 10 and 18% in Spain and 20% in Italy from 11 to 14. The literature on labor supply shows the existence of a discouragement effect of the presence of small children on women's labor supply. The presence of child care services can mitigate the negative effect of young children on their mothers' labor supply; however, child-care services are not equally distributed across regions in both countries.

Table 2. Descriptive statistics on the sample by country and gender

	Italy				Spain			
Variables	Women		Men		Women		Men	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age	41,77	7,59	43,03	7,03	41,80	7,41	42,71	6,99
Wage	4,25	5,88	6,86	6,47	4,44	6,66	6,14	5,83
At least one child in the household aged less than 3	0,12	0,32	0,14	0,34	0,12	0,33	0,13	0,34
At least one child in the household aged 3-5	0,16	0,36	0,18	0,38	0,18	0,39	0,20	0,40
At least one child in the household aged 6-10	0,25	0,43	0,27	0,45	0,27	0,44	0,28	0,45
At least one child in the household aged 11-14	0,20	0,40	0,21	0,41	0,18	0,39	0,19	0,39
Elementary education	0,05	0,21	0,05	0,21	0,13	0,34	0,14	0,35
Secondary education	0,34	0,47	0,41	0,49	0,26	0,44	0,30	0,46
High school	0,44	0,50	0,41	0,49	0,24	0,43	0,25	0,43
University degree	0,15	0,36	0,12	0,33	0,35	0,48	0,29	0,46
Labor force rate	0,62	0,49	0,97	0,17	0,74	0,44	0,97	0,18
Employment rate	0,46	0,50	0,67	0,47	0,59	0,49	0,83	0,38
Unemployed rate (on the Labor force)	0,12	0,33	0,08	0,27	0,20	0,40	0,15	0,35
Chronic ill	0,15	0,36	0,14	0,35	0,14	0,35	0,12	0,33
Number of observations	6306		5383		4712		4135	

Source: Our elaborations from ES SILC and IT SILC 2011 microdata.

5. Labor supply models estimation results.

The results shown in Table 3 deliver a different outcome for the two countries, with Italian women living with a partner characterized by a higher discouraging and added worker effects than Spanish women, and by the predominance of the discouraging worker effect. Though women's labor force participation has increased to sustain the lack of household's income (Istat, 2013b), still women living in areas characterized by a higher level of women's unemployment are discouraged in their labor supply, whereas in Spain the added worker effect during the crisis prevails. The discouraging effect, though much lower than for women, is still prevalent also for men's labor supply in Italy. Married men show a low reaction (consistently with labor supply theory) to their partner's labor condition with respect to women in both countries.

Though the discouraging effect dominates in Italy, one should notice the higher impulse on women's labor supply when their partner is self-employed (+15%) or part-timer (+41%) as compared to what happens in the Spanish labor market (+9% if the partner is self-employed and +27% if the partner works part-time).

Consistently with the literature on labor supply, women's labor supply shows to be positively related to their level of education. Higher education has a higher positive effect for women than for their partners, the effect being approximately 10% higher for women's labor supply if they have secondary on tertiary education with respect to a lower level of education, whereas it is around 1-1.7% for their partners. Differently from Spain, Italian women's labor supply significantly decreases as other income of the household's increases and the effect is similar to the positive effect of their imputed wages on labor supply. This is also consistent with the results obtained on the effect of partner's type of work since part-time work is found to consistently reduce labor income.

Turning to the presence of children in different age groups we notice that in both countries mothers' labor supply decreases with the presence of children while fathers' is father's one not significantly affected. Spanish mothers are more significantly discouraged than Italian mothers by the presence of 0 to 2 years old children. In Italy, though it increased since 2004, only 14% of children aged less than 3 had access to public kindergarten in 2010 (Istat, 2013a), with a much less coverage in the South of Italy, where only 5% of children aged less than 3 accesses kindergarten, against almost 18.6% in the Centre North. Maternity leaves are very generous in Italy, as they are compulsory and last for 5 months paying up to 80% of last wages for employees (Addabbo and Giovannini, 2013). In Spain, employed mothers are obliged to 6 weeks maternity leaves after childbirth with 100% of previous wages payment with a ceiling (€3,262.5 a month) and they can take other 10 weeks before or after childbirth (Escobedo and Meil, 2013).

On the other hand, mother's labor supply is more discouraged by the presence of children aged 11 to 14 in Italy than in Spain: the presence of a child in this age group decreases Italian mothers' labor supply by 13% and Spanish mothers' labor supply by 7%. In Italy, the secondary school schedule is not synchronized on average with the average paid working hours. Continuous school day is predominant in Spain and family networks play still a significant role of support, making it easier to balance paid work and care work.

TABLE 3. PROBIT MODELS ON THE LABOR SUPPLY PROBABILITY WOMEN AND MEN LIVING IN COUPLES 25-54 YEARS OLD - COEFFICIENTS AND MARGINAL EFFECTS EVALUATED AT THE SAMPLE MEAN BY COUNTRY, 2011

Variables	Italy				Spain			
	Coefficients		Marginals		Coefficients		Marginals	
	Women	Men	Women	Men	Women	Men	Women	Men
Age	0.108***	0.211*	0.0385***	0.00741	0,038	0.00981	0,0108	0.000193
	(0.0409)	(0.108)	(0.0146)	(0.00417)	(0.0459)	(0.112)	(0.0130)	(0.00222)
Age squared	-0.00154***	-0.00267**	-0.000549***	-0.0000940	-0.00102*	-0.000589	-0.000287*	-1.16e-05
	(0.000489)	(0.00126)	(0.000175)	(0.0000488)	(0.000547)	(0.00128)	(0.000154)	(2.66e-05)
Other member of the family equivalent income	-0.194***	-0.405***	-0.0695***	-0.0142***	-0.0450	-0.516***	-0.0127	-0.0102***
	(0.0389)	(0.0879)	(0.0138)	(0.00252)	(0.0390)	(0.116)	(0.0110)	(0.00215)
Imputed wage	0.202***	-0.0626***	0.0722***	-0.00220**	0.182***	0.0604	0.0515***	0.00119
	(0.0163)	(0.0170)	(0.00572)	(0.000680)	(0.0244)	(0.0733)	(0.00685)	(0.00152)
At least one child in the household aged less than 3	-0.0533	-0.00573	-0.0192	-0.000203	-0.327***	-0.0229	-0.101***	-0.000461
	(0.0954)	(0.223)	(0.0347)	(0.00792)	(0.0993)	(0.249)	(0.0330)	(0.00513)
At least one child in the household aged 3-5	-0.346***	0.22	-0.129***	0.00662	-0.418***	-0.00676	-0.130***	-0.000134
	(0.0761)	(0.219)	(0.0292)	(0.00582)	(0.0792)	(0.200)	(0.0265)	(0.00399)
At least one child in the household aged 6-10	-0.168***	-0.210	-0.0613***	-0.00832	-0.330***	-0.264*	-0.0988***	-0.00612
	(0.0627)	(0.148)	(0.0231)	(0.00638)	(0.0665)	(0.148)	(0.0208)	(0.00394)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
At least one child in the household aged 11-14	0.000396	-0.0660***	0.0204	-0.221***	0.00462	-0.133***	0,15	-0.358***
	(0.00294)	(0.0221)	(0.154)	(0.0710)	(0.00421)	(0.0245)	(0.140)	(0.0643)
Upper education (high school or degree)	0.0146**	0.105***	0.642***	0.362***	0.0172***	0.0904***	0.468***	0.251***
	(0.00602)	(0.0247)	(0.219)	(0.0839)	(0.00440)	(0.0237)	(0.119)	(0.0651)
Chronic ill	-0.0917***	-0.0968***	-1.313***	-0.315***	-0.0239**	-0.0446*	-0.469***	-0.122*
	(0.0187)	(0.0241)	(0.113)	(0.0732)	(0.00827)	(0.0264)	(0.115)	(0.0712)
Partner unemployed	0.00737***	0.212***	0.473***	0.942***	0.00903*	0.302***	0.327*	1.134***
	(0.00282)	(0.0131)	(0.149)	(0.0738)	(0.00390)	(0.0154)	(0.180)	(0.0877)
Regional unemployment rate	-0.0126	-0.181	-0.640	-0.639	-0.301***	-1.904***	-8.569***	-5.329***
	(0.0212)	(0.129)	(1.094)	(0.459)	(0.0720)	(0.213)	(1.735)	(0.591)
Partner part-timer	0.00875***	0.268***	0.769***	1.794***	0.0160***	0.405***	0.637***	1.696***
	(0.00299)	(0.0101)	(0.216)	(0.166)	(0.00426)	(0.0123)	(0.168)	(0.101)
Partner self employed	0.00804***	0.0925***	0.617***	0.365***	0.0156***	0.152***	0.588***	0.454***
	(0.00269)	(0.0165)	(0.150)	(0.0726)	(0.00410)	(0.0177)	(0.150)	(0.0565)
Constant			6.703**	-0.132			2.367	-1.078
			(2.984)	(1.005)			(2.55)	(0.913)
Observations	3,303	4,494	3,303	4,494	3538	5,755	3,538	5,755
Pseudo R2			0,34	0,21			0,22	0,29

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Our elaborations from ES SILC and IT SILC 2011 microdata.

6. Conclusions and policy implications.

Although female labor force participation in the Spanish and Italian labor markets has been predominantly positive since the 1980s due to their initial low levels and structural economic and demographic developments, there is also evidence that women's participation responds to the business cycle, because it still partly depends on their partners' labor position. Our analysis is consistent with this and shows the presence of AWE during the crisis, much more significant for women than for men both when the partner is unemployed and when he is part-timer (that, in the crisis, is more likely to be a sign of underemployment).

Our results are coherent with the studies carried out in Spain and Italy, which found a primacy of the AWE among Spanish women during the recent crisis, while Italy is one of the few OECD countries in which the DWE is stronger for women than the AWE.

One should notice also that an increase in female labor supply does not necessarily translate in higher employment, therefore limiting the decrease in income inequality effect that the predominance of AWE could imply. If 'inactive' women step into the labor force to be unemployed, this AWE poses the question on how the welfare system can protect their income, since they are also more likely to leave the labor force than their partners.

This also brings to the forefront the need to step up active labor market policies (ALMP) and to pay particular attention to reinforcing their coverage and effectiveness through a tailored approach to individual needs, including adapting ALMP to women's entry into the group of jobless searching for a job, since women continue to be the main caregivers, especially in familialistic welfare regimes (Gálvez, Rodríguez-Modroño and Domínguez, 2011). Thus, this unequal time allocation should be taken into account when devising the schedule for training courses and providing counseling in job search. Moreover, the larger DWE effect detected in Italy should be addressed not only for their impact on increased current income inequalities. Active labor market and social policies should extend their target to include also those who are not actively searching for a job and bear a higher risk of detachment from the labor market with scarring effects on their employment perspectives and wages profile.

Another important result reached by our focus on households with at least one child aged less than 14 is related to the positive impact of the presence of childcare services on women's labor supply. This positive and significant effect of the presence of childcare services on mothers' labor supply confirmed in this article is consistent with the literature (among others Baker, 2008; Brilli *et al.*, 2011; Del Boca *et al.*, 2009) and suggests the need to make a greater effort in the diffusion of childcare services. The availability, quality and affordability of childcare facilities remain a key driver to enhance women's employment and contribution to economic growth. Although some progress has been made since 2002 to meet the Barcelona targets for childcare, Italy and Spain have not yet achieved both targets (European Commission, 2013), and fiscal consol-

idated measures in Spain have even reversed the level of childcare provision for children older than 3 years old in 2011. Not only the quantity but the price of these services can also be an important obstacle for mothers who do not work or work part-time. Therefore, if the target is to reduce income inequality and to ensure an increase in female labor supply, no cut in social expenditure devoted to childcare should take place. Also, women have always suffered from an important gender wage gap and worse working conditions, which are hardening with the current crisis and labor reforms. Thus, if this recession is increasing the dependency of households on women's salaries, their risk of being poor will also rise. Therefore, special attention to improving female working conditions should be central for poverty alleviation policies. All these results are showing the need for more investment in labor market and welfare policies to avoid a deepening of income inequalities and discontinuity in female labor supply.

In Italy, some positive signs can be found in recent policies implemented. To encourage women's employment, Law 92/2012 has introduced, in an experimental basis for 3 years, vouchers to use childcare services instead of parental leaves (Addabbo and Giovannini, 2013). However, only 1/3 of the 20 million euro devoted to this policy has been assigned in its first year (Prioschi, 2013), still it is to be determined if the lower number of vouchers is due to too strict criteria for eligibility or to a low number of applications. Paternity leaves have also been introduced in Italy, though just one day compulsory paternity leave plus two additional transferable days.

Austerity measures are focusing on the public sector and the social services, not only reducing the quantity and quality of women's jobs but also hampering women's opportunities to supply their labor in the same terms as men. Though the specific impact of the recession cannot yet be gleaned from time use data, the fall in the expenditure on goods and services for household provision, care services and meals has been sufficiently pronounced to support the hypothesis that unpaid women's work has primarily contributed to offset lower purchases (Bettio *et al.*, 2012). During recessions a substitution effect between consumption and domestic work takes place, which Aguiar *et al.* (2013) study amounts to around 30 per cent of hours in the market being allocated to domestic production, but with important gender differences, as Giménez-Nadal and Molina (2013) have shown in their study on the effects of regional unemployment on time allocation. While men increase mainly their time devoted to study, women raise their time devoted to household production. The danger being that this increase in women's unpaid work, as in other crises throughout history (Harcourt, 2009), might neutralize the better distribution of unpaid work between both genders observed in the last decade.

Thus, although evidence exists that austerity policies have not worked and indeed that the most important problems have not been adequately addressed, the approach currently adopted is to call for more austerity and with more intensity. The tackling of this crisis by the EU is posing a serious challenge to the European institutional capacity-building with uncertain consequences for its credibility among citizens. In addition to that, the increasing participa-

tion of women in the labor force due to the AWE effect reported in this paper-together with the difficulties that austerity measures have for female employment and employability-poses important challenges to the EU social model and its gender regimes, pushing women towards a part-time commitment to labor market without guaranteeing advances in gender equality included in its principles and legislation.

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Appendix.

Table A1. Wage equations by gender - individuals aged 25-54, Italy and Spain

Variables	Italy						Spain				
	Women			Men		Women			Men	
	Log Wage	Employment		Log Wage		Log Wage	Employment		Log Wage	
Age	0.0329*	0.155***		0.0852***		0.0347*	0.182		0.085	
	(0.0174)	(0.0353)		(0.0199)		(0.0179)	(0.0398)		(0.0185)	
Age squared	-0.000243	-0.00189***		-0.000816***		-0.000286	-0.000435		-1.23e-05	
	(0.000207)	(0.000425)		(0.000228)		(0.000216)	(0.000480)		(0.000220)	
At least one child in the household aged less than 3		-0.124					-0.0377			
		(0.0798)					(0.0874)			
At least one child in the household aged 3-5		-0.257***					-0.123*			
		(0.0684)					(0.0741)			
At least one child in the household aged 6-10		-0.144***					-0.144**			
		(0.0558)					(0.0597)			
At least one child in the household aged 11-14		-0.0893					-0.0866			
		(0.0565)					(0.0622)			
High school	0.262***	0.491***		0.215***		0.166***	0.384***		0.153***	
	(0.0297)	(0.0492)		(0.0214)		(0.0411)	(0.0599)		(0.0295)	
Degree	0.485***	0.917***		0.421***		0.563***	0.848***		0.417***	
	(0.0320)	(0.0682)		(0.0287)		(0.0699)	(0.0568)		(0.0254)	

Chronic ill		-0.123**		-0.200***		-0.668***
		(0.0588)		(0.0678)		(0.233)
Regional unemployment rate	-2.070***	-6.366***	-2.316***	-0.637*	-3.229***	
	(0.339)	(0.499)	(0.305)	(0.329)	(0.392)	
Constant	1.135***	-2.760***	0,12	0.947**	0,091	1.624***
	(0.358)	(0.717)	(0.434)	(0.370)	(0.809)	(0.387)
Observations	6,025	6,025	3,351	4,634	4,634	2,563
Heckman lambda	.051			0,023		
R2		0,14				0,16

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Source: Our elaborations from ES SILC and IT SILC 2011 microdata.

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