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THE INCREASE OF GENDER WAGE GAP IN ITALY DURING THE 2008-2012 ECONOMIC CRISIS

DANIELA PIAZZALUNGA and MARIA LAURA DI TOMMASO

The increase of gender wage gap in Italy during the 2008-2012 economic crisis[*]

Daniela Piazzalunga[†1] and Maria Laura Di Tommaso[2]

[1]University of Turin, CHILD Collegio Carlo Alberto, and LISER
[2]University of Turin, Collegio Carlo Alberto, and CHILD

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Abstract

The paper examines the gender wage gap in Italy during the 2008-2012 economic crisis, using cross-sectional EU-SILC data. The gender wage gap has increased from 4% (2008) to 8% (2012), but after 2010 the growth (and its unexplained component) was particularly pronounced in the upper part of the wage distribution, suggesting that two different patterns have been underway, depending on the period. In fact, in 2010-2011 a wage freeze in the public sector was introduced as an austerity measure, and the average public sector premium had a significant drop of 4%, even more pronounced for women. Using counterfactual analysis, we show that such wage freeze has been one of the major causes of the growth of the gender wage gap, disproportionately affecting women, who are more likely to be employed in the public sector. The 'policy effect' accounts for more than 100% of the increase between 2009 and 2011, while other changes, if anything, would have reduced the gender gap.

JEL: J31, J71, J16, J45

Keywords: Gender wage gap, Great recession, Public sector premium, Decompositions, Counterfactual analysis

1 Introduction

The gender wage gap (GWG) in Italy is lower than in other European countries. The unadjusted gender wage gap was 7.3% in 2013, while the European average was 16.4% (Eurostat, 2015). Some studies (e.g. Sierminska and Takhtamanova, 2010; Bettio et al., 2013; Ghignoni and Verashchagina, 2014) suggest that the impact of the current economic crisis has been less serious for women than for men. In US, men experienced higher probabilities to loose their jobs and higher unemployment rates than women (Sierminska and Takhtamanova, 2010). In Europe, Bettio et al. (2013) show that men had higher level of employment losses than women in countries with high level of gender segregation. Moreover, the gender pay gaps decreased for most European countries from 2007 to 2010. In Italy, unemployment rate is still higher for women (13.8% in 2014) than for men (11.9% in 2014), but the difference has decreased from 2008 until the end of 2013 (Istat, 2015).

Looking at the institutional context, Italy has a long history of gender discrimination. Female participation rate is only 53% in 2012, still very low with respect to other European countries. Among OECD countries, Italy has the highest gender gap in leisure time: Italian men enjoy 80 minutes more of leisure time per day than Italian women (OECD, 2009). In fact, Italian women perform 76.2% of domestic and care work (Istat, 2010). The 'double burden' for women and the lack of policies to support families with children has led to a low fertility rate (Di Tommaso, 1999; Del Boca et al., 2009). The 'double burden' has also historically hindered female political participation. The percentage of women is 31% in the National Parliament and 29% in the National Government (European Commission, 2014) due to a recent positive increase, but, until the 2013 elections, the percentage were much lower, respectively 21% and 16% (European Commission, 2013). These facts mirrors the opinions of Italians with respect to gender-related topics (European Commission, 2015): the opinion that 'men are less competent than women at performing household tasks' is more widespread in Italy (71%) than in every other European country. Similarly, more people in Italy than in the EU think that 'family life suffers when the mother has a full-time job' (72% vs. 60%) and that 'a father must put his career ahead of looking after his young child' (43% vs. 29%). Furthermore, in Italy gender mainstreaming is mainly absent from economic policies (Villa and Smith, 2010).

We explore the issue of gender earnings gap in Italy and its change during the current economic crisis. Relying on data from the European Union Statistics on Income and Living Conditions (EU-SILC) for Italy from 2004 until 2012, we analyse the earning disadvantage of women respect to men. Figure 1 shows that, in Italy, the unadjusted gender gap in hourly

wages has been decreasing from 9% in 2004 to 4% in 2008, when it reached the minimum level, after a very small increase between 2006 and 2007. However, since 2008, i.e. since the start of the economic crisis, the gender wage gap constantly increased, and in 2012 it almost reached the level of 2004 (8.1%)[1].

<div align="center">FIGURE 1 APPROXIMATELY HERE</div>

In this paper, we apply a quantile decomposition and we show that the growth of the gender wage gap after 2010 was particularly high in the upper part of the distribution.

During the economic crisis, countries with high levels of public debt, like Italy, were especially vulnerable, leading to cuts in public services and the freezing of public sector wages (a large employer of women). In 2010-11, public sector wages were frozen due to an austerity measure to reduce the public debt and the public sector premium had an average and significant drop of 4%, even more pronounced for women.

We utilise counterfactual analysis to show that such public sector wage freeze has been the major cause of the increase of the gender wage gap.

The paper is organized as follows: section 2 presents the literature and the public sector wage freeze. Section 3 describes the methodology, while section 4 illustrates the dataset and provides some descriptive statistics. Section 5 discusses the results and we conclude with section 6.

2 Background

Non-discrimination principles in Italy come both from the Italian Constitution[2] and from European laws[3]. The necessary process to implement those principles were long and laborious (Ballestrero, 1979; Barbera, 1991). The first law on the right of equal pay was adopted in 1977[4]. Only in 1991, the broader definition of 'indirect discrimination' was introduced[5] in

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[1]Estimations of the GWG from EU-SILC data, even though in line with those provided by (Eurostat, 2015), are not exactly comparable, because they latter is based on the Structure of earnings survey (SES) methodology.

[2]Art. 3, 37 and 51 of Italian Constitution. In particular, art. 37 of the Italian Constitution refers to 'equal pay for equal work' for women.

[3]Art. 153 and 157 of European treaty on the functioning of the European Union and following directives. In particular, art. 157 of the TFEU and directive n. 1975/117/EEC refer to equal pay for men and women, and 1976/207/EEC concerns equal treatment for men and women as regards access to employment, vocational training and promotion, and working conditions.

[4]Law n. 903/1977.

[5]Law n. 125/1991.

order to prevent apparently neutral behaviours. Finally, the Code of Equal Opportunities[6] was adopted in 2006 as a more general norm, and it is now the main instrument used to prevent and remove sex-based discrimination[7].

Despite the increased awareness of the European Union and of international organizations in monitoring the gender wage gap (e.g. Eurostat, 2015), economic research on the gender pay gap in Italy has been relatively scarce, although increasing in recent years. Some studies compare Italian gender pay gaps with other European countries (Olivetti and Petrongolo, 2008; Nicodemo, 2009; Christofides et al., 2013), others link gender pay gaps to educational attainments (Addabbo and Favaro, 2011; Mussida and Picchio, 2014), showing that the gender wage gap is larger among people with low education, while Del Bono and Vuri (2011) analyse how gender differences in job mobility affect the gender wage gap.

When the economic crisis arrived, Italy was quite timely in adopting austerity measures, many of them affecting public sector expenditures and public sector employment relations (Bordogna, 2013). The Italian public sector employment has been repeatedly a crucial target of austerity government measures from 2010 to 2014. Three main types of measures were adopted: cuts in the number of public employees; reform of the pension system; provisions targeted to wages and salaries of public employees, that also implied a freeze of the 2010-2012 bargaining round at national industry level, later extended to 2014, and, *de facto*, also a freeze of decentralised, company level wage negotiations. After a national level bargaining round in 2008-09 with very moderate wage increases, for the 2010-2012 wage round, collective negotiations at national level were simply cancelled by the decree law no. 78/2010 (law 122/2010, into force since January 2011). Later measures further extended this freeze of national level collective bargaining to 2013 and then to 2014. Wages and salaries of individual employees were forbidden to exceed in 2011-13 the level of 2010, freezing also the economic effects of career promotions, with the partial exception of the variable component linked to merit or performance pay. A provision introduced in 2011 allows the government to extend these freezes and constraints to the end of 2014 by simple administrative act, without further legislation. Similar rules were adopted also for the non-contractualized personnel (diplomats, prefects, university professors, police and armed forces, partly judges), freezing any salary increase due to seniority or career promotion for three-four years, without possibility to recover these losses at the end of the period and with effects also on future pension payments. Further measures regarded higher level salaries, with cuts by 5% for those with a gross salary

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[6]Decree n. 198 of 2006.
[7]See also Izzi (2005).

between 90 and 150 thousand euro a year, and by 10% for the part exceeding 150 thousand euro (Bordogna and Neri, 2012; Tronti, 2011)[8]. Most of the preceding measures have been unilaterally adopted by the government, without previous negotiations with trade unions and without searching union consent; in some cases, explicitly against trade union protests. Among employees at public schools and universities, the wage cuts were more severe. In addition to the above mentioned measures, automatic seniority wage increases were cancelled with the same law of 2010 (such increases were already abolished in the rest of the public sector at the end of the 90's).

As a result of these measures, the public sector hourly wages decreased on average by 9.1% between 2010 and 2012[9]: women's hourly wages decreased by 11.5% from 2010 to 2012, almost twice as much as for men, for whom it decreased by 6.2% in the same period (see Figure 2). The following sections analyse in details these changes and provides some possible explanations.

<center>FIGURE 2 ABOUT HERE</center>

3 Methodology

3.1 Oaxaca-Blinder and quantile decomposition

To analyse the evolution of the gender wage gap during the economic crisis, we start with the standard Oaxaca-Blinder decomposition (see Oaxaca, 1973; Blinder, 1973). To perform the Oaxaca-Blinder decomposition, we first estimate the following linear wage equation, for the pooled sample (p) and separately for men (m) and women (f):

$$\ln W_g^t = \beta_g^t X_g^t + v_g^t \tag{1}$$

where $t = 2004, 2005, ..., 2012$ and $g = \{p, m, f\}$.

The dependent variable is the log hourly wage, X_g^t is the vector of observable characteristics (age, age squared, experience, experience squared, region of residence, marital status, level of education, sector of employment (Nace), position, public sector, part-time job), and

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[8]In our data, 99.5% of men earn less than 90,000€ per year, and only the 0.03% earn more than 150,000€. 99.9% of women earn less than 90,000€and none earn more than 150,000€. Hence, only a very small percentage of people in our sample is concerned by those cuts. Still, if anything, they should have reduced the gender wage gap, since more men than women have top wages.

[9]As a term of comparison, in the same period, the private wages decreased by 0.7%.

<center>4</center>

β_g^t are the coefficients to be estimated with OLS. When we estimate the wage equation for the pooled sample, we also include a dummy variable for women among the control variables.

For the Oaxaca-Blinder decomposition, we apply the widely used specification suggested by Neumark (1988):

$$GWG^t = \ln(\overline{W}_m^t) - \ln(\overline{W}_f^t)$$
$$= (\overline{X}_m^t - \overline{X}_f^t)\hat{\beta}_*^t + [\overline{X}_m^t(\hat{\beta}_m^t - \hat{\beta}_*^t) + \overline{X}_f^t(\hat{\beta}_*^t - \hat{\beta}_f^t)] \quad (2)$$

where the non-discriminatory coefficients $\hat{\beta}_*^t$ are the coefficients estimated from the pooled regression, in which we also include the group indicator among the covariates, following Jann (2008)[10].

The first term of the decomposition is interpreted as the part of the gap due to differences in characteristics (explained component), while the second term is the so-called unexplained component, due to differences in returns.

We also isolate the return for working in the public sector (later referred to as γ_g^t) among the coefficients estimated with the wage equation 1, to verify if there is a discontinuity in the public sector premium because of the wage freeze of 2011.

We then apply a quantile decomposition, to investigate further the growth of the gender wage gap during the economic crisis (2008-2012) and analyse the changes at different point of the wage distribution. For the quantile decomposition, we follow Chernozhukov et al. (2013).

To perform the quantile decomposition, one needs to build the entire counterfactual distribution. $F_{Y\langle m|m\rangle}$ represents the actual distribution of wages Y for men, and $F_{Y\langle f|f\rangle}$ for women. $F(y|x)$ is the conditional distribution of wages given the individual characteristics x, and $F(x)$ represents the distribution of characteristics. Both the conditional distribution of wages and the distribution of characteristics are different for men and women.

$F_{Y\langle m|f\rangle}$ is the counterfactual distribution of wages for women if they had faced the wage structure (conditional distribution function) of men[11]:

$$F_{Y\langle m|f\rangle}(y) = \int_{x_f} F_{Y_m|X_m}(y|x)dF_{X_f}(x) \quad (3)$$

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[10]Jann (2008) and Elder et al. (2010) show that if the group indicator is not included, the explained component is overestimated. In addition, we also perform the decomposition using $\hat{\beta}_m^t$ or $\hat{\beta}_f^t$ as the non-discriminatory coefficients, and results are very similar.

[11]By construction, the non-discriminatory coefficients for the quantile decomposition à la Chernozhukov et al. (2013) are male coefficients; the counterfactual distribution shown in eq. 3 corresponds to the counterfactual $X_f\beta_m$ in the standard Oaxaca-Blinder decomposition, where male coefficients are used as benchmark.

The above distribution is not observed: it is constructed by integrating the conditional distribution of wages for men ($F_{Y_m|X_m}(y|x)$) with respect to the distribution of characteristics for women ($F_{X_f}(x)$).

To retrieve the entire counterfactual distribution, we follow Chernozhukov et al. (2013) and estimate the conditional distribution of the outcome variable $F(y|x)$ using a quantile regression (Koenker and Bassett, 1978)[12]. Then, the overall difference in wages can be decomposed similarly to the traditional Oaxaca-Blinder decomposition as follows:

$$F_{Y\langle m|m\rangle} - F_{Y\langle f|f\rangle} = [F_{Y\langle m|m\rangle} - F_{Y\langle m|f\rangle}] + [F_{Y\langle m|f\rangle} - F_{Y\langle f|f\rangle}] \qquad (4)$$

The first term is the difference due to the wage structure (or differences in returns) and the second term is the difference due to characteristics.

One issue that can arise both in the Oaxaca-Blinder decomposition and in the quantile decomposition is self-selection. Indeed, it is widely recognized that the gender wage gap in Italy is also affected by the low participation of women into the labour market (Olivetti and Petrongolo, 2008): once that is taken into account, the gender wage gap is larger. A similar issue needs to be considered when estimating the public-private wage gap (e.g. Depalo et al., 2015): people may select themselves into the private or the public sector, depending on unobserved characteristics or preferences.

While correcting for self-selection is necessary to explain the wage penalty for women, or the public sector premium, we are more interested in providing an analysis of the trends of actual wages for employed individuals during the crisis - considering their choices as exogenous. We rely on the fact that both the choice of women to work and the choice of individuals to work for public or private sector didn't change over the 2008-2012 period. This assumption could be problematic for women's participation in the labour market because of the added worker effect: some women entered into the labour market to compensate for the job loss of their husbands (Bettio, 2013; Ghignoni and Verashchagina, 2014). Another issue - which may affect the gender wage gap - is that the characteristics of people losing their job (and in particular men) may not be random. Finally, individuals may have changed their preferences in choosing the private or public sector during the economic crisis. When we present the descriptive statistics (section 4), we will show that none of this three issues present a concern for our results. Moreover, these aspects are partially taken into account by the 'extended' Oaxaca-Blinder decomposition and the counterfactual simulation, both described in the next

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[12]Alternatively, Chernozhukov et al. (2013) suggest to use distribution regression methods.

section.

3.2 Extended Oaxaca-Blinder decomposition and counterfactual simulation

The second focus of the paper is to estimate if and how the wage freeze in the public sector affected the gender wage gap. The law was approved in 2010 and was implemented in January 2011: thus, we compare 2009 (pre-policy period) and 2011 (post-policy period).

We first apply an extension of the Oaxaca-Blinder decomposition, which accounts for changes over time. This methodology estimates how much of the change in the gender wage gap is due to changes in individual characteristics of employed men and women, and how much can be imputed to changes in the wage structures.

The standard Oaxaca-Blinder decomposition, as shown in equation 2, is usually applied to decompose the gender wage gap in a given year between men and women. On the other hand, it can also be used to decompose the change of wages over time for a given group, as follows:

$$
\begin{aligned}
\Delta \overline{W}_g &= \ln(\overline{W}_g^{11}) - \ln(\overline{W}_g^{09}) \\
&= (\overline{X}_g^{11} - \overline{X}_g^{09})\hat{\beta}_g^* + [\overline{X}_g^{11}(\hat{\beta}_g^{11} - \hat{\beta}_g^*) + \overline{X}_g^{09}(\hat{\beta}_g^* - \hat{\beta}_g^{09})]
\end{aligned}
\tag{5}
$$

where $g = \{m, f\}$, 11 refers to 2011 and 09 to 2009. $\hat{\beta}_g^*$ can be the coefficients estimated for 2009, for 2011, or from the pooled regression over the two years. Since we want to isolate the changes w.r.t. 2009, in this case we consider $\hat{\beta}_g^* = \hat{\beta}_g^{09}$ [13]. Hence, the previous equation simplify to:

$$
\begin{aligned}
\Delta \overline{W}_g &= \ln(\overline{W}_g^{11}) - \ln(\overline{W}_g^{09}) \\
&= (\overline{X}_g^{11} - \overline{X}_g^{09})\hat{\beta}_g^{09} + \overline{X}_g^{11}(\hat{\beta}_g^{11} - \hat{\beta}_g^{09})
\end{aligned}
\tag{6}
$$

The changes over time in the gender wage gap can be seen either as the difference among the GWG in 2011 and the GWG in 2009 ($\Delta \overline{GWG} = \overline{GWG}^{11} - \overline{GWG}^{09}$), or as the difference between changes in male wages and changes in female wages. Considering the second specification, and applying the Oaxaca-Blinder decomposition as in eq. 6, it is possible to estimate how much of the change in the gender wage gap between 2009 and 2011 is due to

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[13]Results with different benchmark coefficients are very similar (available from the authors upon requests).

changes of returns (for men and for women) and how much is due to changes in individual characteristics. We call this decomposition, summarized by the following equation, 'extended Oaxaca-Blinder decomposition':

$$
\begin{aligned}
\Delta\overline{GWG} &= (\ln\overline{W}_m^{11} - \ln\overline{W}_m^{09}) - (\ln\overline{W}_f^{11} - \ln\overline{W}_f^{09}) \\
&= [\underbrace{(\overline{X}_m^{11} - \overline{X}_m^{09})\widehat{\beta}_m^{09}}_{\substack{\Delta\text{ M wages due to}\\\text{changes in M char.}}} + \underbrace{(\widehat{\beta}_m^{11} - \widehat{\beta}_m^{09})\overline{X}_m^{11}}_{\substack{\Delta\text{ M wages due to}\\\text{changes in M return}}}] - [\underbrace{(\overline{X}_f^{11} - \overline{X}_f^{09})\widehat{\beta}_f^{09}}_{\substack{\Delta\text{ F wages due to}\\\text{changes in F char.}}} + \underbrace{(\widehat{\beta}_f^{11} - \widehat{\beta}_f^{09})\overline{X}_f^{11}}_{\substack{\Delta\text{ F wages due to}\\\text{changes in F return}}}]
\end{aligned} \tag{7}
$$

This decomposition enables us to isolate the changes in the wage structure from those in the individual characteristics, but it is not informative about the effect of the policy itself.

An additional step, to evaluate the direct impact of the wage freeze, is to estimate the counterfactual wages for men and female as if the wage freeze had never happen. Consider again equation 1, reformulated in order to isolate the coefficient associated with working in the public sector:

$$
\ln W_g^t = \beta_g^t X_g^t + \gamma_g^t PUBLIC_g^t + v_g^t \tag{8}
$$

where $t = 2009, 2011$, $g = \{m, f\}$, $PUBLIC$ is a dummy equal 1 if the person works in the public sector, γ is the coefficient associated with working in the public sector (i.e. 'public sector premium'), and X are the same controls as before.

The actual gender wage gap in 2009 is:

$$
\begin{aligned}
\overline{GWG}_{09,\gamma_{09}} &= \ln\overline{W}_m^{09} - \ln\overline{W}_f^{09} \\
&= (\widehat{\beta}_m^{09}\bar{X}_m^{09} + \widehat{\gamma}_m^{09}PU\bar{B}LIC_m^{09}) - (\widehat{\beta}_f^{09}\bar{X}_f^{09} + \widehat{\gamma}_f^{09}PU\bar{B}LIC_f^{09})
\end{aligned} \tag{9}
$$

And, similarly, in 2011:

$$
\begin{aligned}
\overline{GWG}_{11,\gamma_{11}} &= \ln\overline{W}_m^{11} - \ln\overline{W}_f^{11} \\
&= (\widehat{\beta}_m^{11}\bar{X}_m^{11} + \widehat{\gamma}_m^{11}PU\bar{B}LIC_m^{11}) - (\widehat{\beta}_f^{11}\bar{X}_f^{11} + \widehat{\gamma}_f^{11}PU\bar{B}LIC_f^{11})
\end{aligned} \tag{10}
$$

We can estimate two *counterfactual* gender wage gaps. The first one is the counterfactual gender wage gap in 2009, if the public premium would have been as in 2011, i.e. nothing else changed, only the return for working in the public sector:

$$
\begin{aligned}
\overline{GWG}_{09,\gamma_{11}} &= \ln\overline{W}_m^{09} - \ln\overline{W}_f^{09} \\
&= (\widehat{\beta}_m^{09}\bar{X}_m^{09} + \widehat{\gamma}_m^{11}PU\bar{B}LIC_m^{09}) - (\widehat{\beta}_f^{09}\bar{X}_f^{09} + \widehat{\gamma}_f^{11}PU\bar{B}LIC_f^{09})
\end{aligned} \tag{11}
$$

$\overline{GWG}_{09,\gamma_{11}}$ can be interpreted as the gender wage gap that we would have observed with the distribution of characteristics X of 2009, return to characteristics of 2009 (wage structure), distribution of people into the public and private sector of 2009, and public premium $\widehat{\gamma}$ of 2011[14]. We interpret the public premium of 2011 as a consequence of the wage freeze in the public sector, since nothing else changed between 2009 and 2011 that could have affected it.

The second counterfactual is the gender wage gap in 2011, if the public premium would have been as in 2009:

$$\begin{aligned}
\overline{GWG}_{11,\gamma_{09}} &= \ln \overline{W}_m^{11} - \ln \overline{W}_f^{11} \\
&= (\widehat{\beta}_m^{11} \bar{X}_m^{11} + \widehat{\gamma}_m^{09} PU\bar{B}LIC_m^{11}) - (\widehat{\beta}_f^{11} \bar{X}_f^{11} + \widehat{\gamma}_f^{09} PU\bar{B}LIC_f^{11})
\end{aligned} \tag{12}$$

$\overline{GWG}_{11,\gamma_{09}}$ is the counterfactual gender wage gap that we would have observed with the distribution of characteristics X of 2011, return to characteristics of 2011 (wage structure), distribution of people into the public and private sector of 2011, and public premium $\widehat{\gamma}$ of 2009 (in the absence of the wage freeze).

Given these counterfactuals, we can decompose the change in the gender wage gap between 2009 and 2011 in a 'policy effect' and 'other effects'. The 'policy effect' denotes the contribution to the total change in the gender wage gap of changes in the public sector premium (due to the wage freeze in public sector). Considering the first counterfactual gender wage gap, the policy effect corresponds to the difference between the actual gender wage gap in 2009 (eq. 9) and the counterfactual gender wage gap, where only the public premium has changed (eq. 11). On the other hand, 'other effects' refer to the change in the gender wage due to everything else, i.e. changes in the characteristics and in coefficients, except the public sector premium. Using the first counterfactual, it corresponds to the difference between actual gender wage gap in 2011 (eq. 10) and the counterfactual gender wage gap (eq. 11).

Hence, considering the first counterfactual (from eq. 11), the decomposition is the following:

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[14]Estimated separately for men and women.

$$\Delta\overline{GWG} = \overline{GWG}_{11,\gamma_{11}} - \overline{GWG}_{09,\gamma_{09}} \qquad \text{(total change)} \qquad (13)$$
$$= (\overline{GWG}_{11,\gamma_{11}} - \overline{GWG}_{09,\gamma_{11}}) \qquad \text{(other effects (1))}$$
$$+ (\overline{GWG}_{09,\gamma_{11}} - \overline{GWG}_{09,\gamma_{09}}) \qquad \text{(policy effect (1))}$$

While in the following decomposition we employ the second counterfacutal (from eq. 12):

$$\Delta\overline{GWG} = (\overline{GWG}_{11,\gamma_{11}} - \overline{GWG}_{11,\gamma_{09}}) \qquad \text{(policy effects (2))} \qquad (14)$$
$$+ (\overline{GWG}_{11,\gamma_{09}} - \overline{GWG}_{09,\gamma_{09}}) \qquad \text{(other effects (2))}$$

Finally, since there is no reason to prefer one decomposition against the other one, we calculate the Shapley decomposition suggested by Shorrocks (2013), and estimate the average policy effect (P) and the average effect imputed to other changes (O):

$$P = \frac{1}{2}(\overline{GWG}_{09,\gamma_{11}} - \overline{GWG}_{09,\gamma_{09}}) + \frac{1}{2}(\overline{GWG}_{11,\gamma_{11}} - \overline{GWG}_{11,\gamma_{09}}) \qquad (15)$$
$$O = \frac{1}{2}(\overline{GWG}_{11,\gamma_{11}} - \overline{GWG}_{09,\gamma_{11}}) + \frac{1}{2}(\overline{GWG}_{11,\gamma_{09}} - \overline{GWG}_{09,\gamma_{09}})$$

3.3 Within public sector

As a final contribution, we analyse changes within the public sector. Given that the wage freeze policy was applied with some differences among public sectors (see par.2), we can expect that it had a different impact on the wages of individuals employed in different public sectors. In addition, since men and women have different probabilities of being employed in each sub-sector, we expect the wage freeze to affect also the gender wage gap among public sector employees.

We first compute the gender wage gap separately for the public and the private sector; then, we estimate separate wage equations (as eq. 1) for the public and private sector, controlling for the following sub-sectors: Public administration and Defence, Education, Health, and Other sectors.

4   Data and descriptive statistics

The analysis is based on the Italian sample of EU-SILC (European Union Statistics on Income and Living Conditions) for 2004-2012[15]. In the full sample there are about 40,000-50,000 observations per year. We select 20-65 years old employees, with Italian citizenship[16]. We exclude individuals who are inactive, unemployed, retired, self-employed, or family workers. In addition, among employees we also lose about 300 observations per year because the wage is missing. The final number of observations ranges between 16,635 (2004) and 11,722 (2012). Table A.1 in the Appendix summarizes the selection procedure.

The dependent variable is the (log) hourly wage, which is the gross monthly wage divided by the number of hours usually worked per month - included usual overtime - and it refers to the year of the survey. All wages are expressed in 2008 real prices. Table A.2 in the Appendix provides the detailed definitions of all dependent and control variables.

Tables 1 and 2 show descriptive statistics for the whole sample, by gender. Average real wages have constantly fallen since 2009, for both men and women. A larger share of women than men held a tertiary degree in 2004 (respectively 17% and 12%), and the gap in the education achievements widens even more over time: in 2012, 25% of women has a university degree, versus 15% of men.

<div align="center">TABLES 1 AND 2 ABOUT HERE</div>

The change in the composition of the labour force is one of the possible reasons suggested as a cause of the increase of the Italian gender gap (see, for instance, Bettio, 2013). This change could also arise some concerns for the estimation strategy because of self-selection into the labour force. As discussed above, this could happen through the added worker effect or if mainly low-paid men have lost their job during the crisis. Considering the average characteristics of working people (Tables 1 and 2), the main differences arise from the increase in average age (and consequently in experience) and in the level of education. The same patterns are also evident in the total population aged 20-65 (and not only among employed

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[15]While one of the best dataset to conduct labour market analysis would be the Italian Labour Force Survey (LFS), it does not provide good information to evaluate wages: in fact, wages in LFS are truncated from below at 250€ and at 3,000€ from above. However, to analyse the gender pay gap it is essential to have the whole distribution of wages and in particular the top ones.

[16]The gender wage gap for foreign people can be different (see, for instance, Piazzalunga (2015) for an analysis of the gender gap among immigrants in Italy). Moreover, non-Italian citizens cannot work in the public sector.

people)[17], which means that they mainly reflect the ageing of the population and its higher education. However, the increase in age is higher among working people: in the total population, individuals in 2012 are on average 1.6 years older than in 2004, while among employed people they are about 3 years older. Nonetheless, both in the total population and among employed people the trend is constant since 2004, and has not changed since 2008, i.e. with the economic crisis. Hence, it seems that older people - both men and women - have been slightly more likely to be employed than younger ones in the past decade, but there has been no change with the economic crisis. Overall, this suggests that, even though a (small) added worker effect took place (Bredtmann et al., 2014; Ghignoni and Verashchagina, 2014), it has not affected the average characteristics of the stock of working women.

Similarly, while it is true that at least in the first years of the crisis more men than women lost their job (Istat, 2015), there is no significant change in the composition of the stock of the labour force. Moreover, the distribution of wages for men did not change, as shown in Figure 3. If anything, the wage distribution changed for women: between 2008 and 2012, wages of women in the upper part of the distribution decreased. Since the average wages were stable for both men and women working in the private sector (Figure 2), these women are probably those employed in the public sector, disproportionately affected by the wage freeze of 2011. Indeed, more women are employed in the public sector than men (respectively about 35% and 24%). These percentages have been stable over time, even after the wage freeze of 2011, or the aforementioned reduction in hiring (Tables 1 and 2).

FIGURE 3 ABOUT HERE

When we consider only people employed in the public sector, the cumulative distribution functions show that wages for higher income individuals have been fallen between 2008 and 2012 for both men and women (Figure 4), but the difference for women is still larger. We will investigate these results in details in the next sections.

FIGURE 4 ABOUT HERE

Descriptive statistics for the public sector are shown in Tables A.3 and A.4. Both men and women are better educated than the total sample, and they are slightly older than averages: in 2012, 40% of women has a university degree, and 30% of men. Women are mainly employed in the Education sector (42% in 2012), while most men work in Public administration and defence (48% in 2012).

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[17]Descriptives not shown, available from the author upon request.

5 Results

5.1 Long-term changes in the gender wage gap

We apply the Oaxaca-Blinder decomposition (equation 2) to the data described above. The underline wage equations are shown in the Appendix (Tables A.5, A.6, and A.7).

TABLE 3 ABOUT HERE

Table 3 shows the Oaxaca-Blinder decomposition of the gender wage gap for the period 2004-2012. The gap in Italy is quite small, compared to other European countries (Eurostat, 2015), however it is completely unexplained by observable characteristics, in every year. The unexplained component has been decreasing between 2004 and 2008, and increasing from 2008 to 2009. Afterwards, it was large and stable. The explained component is negative: the difference in characteristics between men and women favours women, contributing to the reduction of the gender wage gap. It increased in absolute terms between 2008 and 2009, counterbalancing the increase in the unexplained gap. However, while the unexplained gap was stable, the explained one decreased in absolute terms, in 2011 and 2012, contributing to the increase of the total gap. Since the explained gap is equal to the difference in characteristics by the benchmark coefficients, it may change also if the difference in characteristics remained stable, but the coefficients changed for both men and women. This is what could have happened in Italy: working in the public sector is associated with significant higher wages (see Table A.5) and more women than men are employed in the public sector. The difference in the percentage of public sector employees between men and women remained stable, but the return decreased in 2011 and in 2012, reducing the explained gap.

We then apply a quantile decomposition of the gender wage gap according to equation 4. Figure 5 shows the results and it reveals some additional features of the gender wage gap in Italy and its evolution during the crisis. In 2008, the total GWG is decreasing along the wage distribution (from 12% to 2%), with an increase only at the very top. The unexplained component accounts for more than 100%, but it is larger at the bottom of the distribution, indicating the existence of sticky floor (Christofides et al., 2013). Both the total gender wage gap and the unexplained component widen in 2010, but their patterns along the wage distribution remain the same as in 2008. The growth of the GWG between 2008 and 2010 concerns all the working population, even though it is slightly larger for the middle and the top of the wage distribution.

FIGURE 5 ABOUT HERE

In 2012 the gender wage gap has a U-shape, and it is larger at the bottom (11.9%) and at the top of the wage distribution (12.9%). The total gap is even lower than in 2010 until the 60th percentile, but it is much larger for women with wages above that threshold. In 2012, also the unexplained component increased in the upper part of the wage distribution, and has a U-shape, indicating the existence of both a sticky floor and a glass ceiling, which was not present before. Hence, the increase of the gender gap for higher-income women is partially driven by changes in their wage structure relative to men. In addition, from the 20th percentile there is an increase between 2010 and 2012 also in the explained component (i.e. due to differences in characteristics).

5.2   Impact of the wage freeze

We argue that the increase in the GWG after 2010 is a consequence of the wage freeze in the public sector. Figure 2 above shows that hourly wages in the public sector are higher than in the private sector and that wages decreased after 2010.

Looking at the estimates of the wage equations utilised for the Oaxaca-Blinder decomposition (see Tables A.5, A.6, and A.7 in the Appendix), *ceteris paribus*, working in the public sector is associated with higher wages: in 2010 wages in the public sector were 15% higher than in the private sector. In particular for women, until 2010, the public sector premium was more than 20%, while for men it was slightly less than 10%. Figure 6 summarizes these parameters for the pooled sample, for men and for women.

<div align="center">FIGURE 6 APPROXIMATELY HERE</div>

The public sector premium decreased by 4% between 2010 and 2011 (statistically significant drop) and by 2% between 2011 and 2012[18]. For women, the coefficient associated with working in the public sector decreased from 0.21 to 0.15 (statistically different at 1%) between 2010 and 2011, and for men from 0.10 to 0.07 (not significant).

We cannot interpret as causal neither the coefficients associated with being a woman, nor those of the public sector variable: first of all because of the self-selection of women into the labour market and the self-selection of men and women into the public or private sector. Secondly, we cannot exclude omitted variable bias. However, they provide relevant clues that the increase of the gender wage gap was partially driven by the wage freeze. Indeed, being a

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[18]Since the wage freeze continued, one might expect the coefficient to fall also in the subsequent years.

woman is associated with a reduction in wages of about 10-11% (depending on the year), but the penalty is almost stable after 2009. On the other hand, there is an important reduction of the premium for working in the public sector, and mainly for women.

Considering 2009 (pre-policy) and 2011 (post-policy), we apply the so-called 'extended Oaxaca-Blinder decomposition' presented in Section 3.2: the aim of this decomposition is to analyse if there have been significant changes in the distribution of individual characteristics in the period around the wage freeze, which would have affected the gender wage gap. The Oaxaca-Blinder decomposition and the quantile decomposition are useful snapshots for each year, but they rely on the relative changes, exploiting the differences between male and female characteristics and between their returns. On the other hand, from the extended Oaxaca-Blinder decomposition we can isolate the changes over time in the characteristics (returns) of women, of men, and how they sum up.

For both men and women, the decrease in real (log) wages between 2009 and 2011 is entirely due to changes in the wage structures ('Δ returns' in (Table 4). This is not surprising, considering the descriptive statistics previously shown; indeed, it would take some time to change the average characteristics of the stock of working people. As a consequence, the increase in the gender wage gap of about 1% (from 6% to 7%) can be entirely attributed to the changes in the wage structures of both men and women.

TABLE 4 APPROXIMATELY HERE

Table 5 and 6 show, respectively, the counterfactual simulation - which allows us to isolate the impact of the wage freeze - and the related decomposition into 'policy effect' and 'other effects'.

TABLE 5 APPROXIMATELY HERE

Table 5 show the actual wage gaps in 2009 (6%) and in 2011 (7%), and the estimations of two counterfactuals, constructed as discussed above. $\overline{GWG}_{09,\gamma_{11}}$ is the gender wage gap that we would have observed in 2009 if the coefficient associated for working in the public sector was the same of 2011: $\overline{GWG}_{09,\gamma_{11}}$ is estimated to be 8% (Table 5), much larger and significantly different (at 1%) from $\overline{GWG}_{09,\gamma_{09}}$, the actual gender wage gap in 2009. Since we keep constant the individual characteristics, the rest of the wage structure, and also the proportion of people working in the public sector, the difference of 2% among the two wage gaps is entirely due to the wage freeze (Table 6).

The second counterfactual, $\overline{GWG}_{11,\gamma_{09}}$, represents the gender wage gap that we would have measured in 2011 with the public sector premium of 2009, and the distribution of

characteristics, the returns and the proportion of people working in the public sector of 2011. It is estimated at 5.1%, significantly smaller than the actual gender gap in 2011.

Hence, even though the change between 2009 and 2011 is small, it is completely due to the changes in the return to the public sector - which we can interpret as the consequence of the wage freeze introduced by the government, partially compensated by other changes (Table 6). Moreover, an increase 1 percentage point on a gender wage gap of about 6-8% is a relevant growth, in particular when considering that the increase continued also in 2012, and probably in the following years.

TABLE 6 APPROXIMATELY HERE

When we estimate the counterfactuals, we make use of the public sector premium in 2009 and in 2011 to isolate the impact of the wage freeze on the gender wage gap. This relies on the assumption that between 2009 and 2011 nothing else changed, which could affected the public sector premium. It seems a realistic assumption, since there was no other policy, the proportion of people working in the public sector didn't change, and also the stock of working people was similar in the two periods. Hence, we can consider that the counterfactual analysis isolates the impact of the wage freeze on the gender wage gap.

On the other hand, we cannot claim that in the absence of such a policy everything else would have been as it is in 2011. The wage freeze was justified as one of the way to reduce public spending and improve the conditions of Italian economy. One could than claim that the government should have taken other measures in alternative to the wage freeze. Plausibly, that would have caused other changes on employment and on the wage structure - no matter if the policy would have been in the direction of cutting public spending (as the wage freeze) or in the opposite one. Taking these considerations to the extreme, one may want to ask - what if Italy would have failed in the absence of the wage freeze? More formally, we follow here a partial equilibrium approach, as it usually the case with decomposition and counterfactual methodologies, thus we cannot derive general equilibium considerations (Fortin et al., 2011).

5.3   Within public sector

Figure 7 shows the total gender wage gaps separately for private and public sector. First of all, the GWG within the private sector had been slightly decreasing over time, with small fluctuations. It is also worth noticing that the gender wage gap in the public sector is always

smaller than in the private one, a positive aspect for women which adds to the role of the public sector in the reconciliation between work and family (Solera and Bettio, 2013).

FIGURE 7 APPROXIMATELY HERE

Consider now the wage gap in the public sector in Figure 7. The wage freeze is supposed to increase the gender wage gap because a larger proportion of women than men is employed in the public sector, and hence affected by the policy. However, if that was the only mechanism in place, we would have expected the gender wage gap *within* the public sector to be much flatter (similar to the GWG in the private one) than it actually is. The gender pay gap decreased in 2006, remained not significantly different from 0 until 2010 included, and then it increased sharply reaching 5.9% in 2011 and 6.6% in 2012.

We suggest that this gap within the public sector emerged as a consequence of the sector-specific policy implementation, and the different distribution of men and women in each sub-sector (see Tables A.3 and A.4). As detailed in section 2, the wage freeze was applied in different ways, depending on the specific sub-sector. This is the consequence of the slightly different rules already governing each sub-sector, and it affected the implementation of the wage freeze, having unexpected consequences on the gender wage gap, even within the public sector. As shown in Figure 8, the wage freeze had larger impact in the Education sub-sector than in other sectors, for both men and women.

FIGURE 8 APPROXIMATELY HERE

Table 7 summarizes the trend in wages in the Education sector, highlighting the large drop in hourly wages in 2011. Working in the (public) Education sector had a positive impact on wages compared to other public sectors, but that premium dropped in 2011 and 2012 (Table A.8 for the pooled sample). This change is particularly remarkable for women (Table A.9), for whom the coefficient associated to working in Education dropped from 0.11 to 0.01 between 2010 and 2011. For men, the drop is from -0.00 to -0.04 (Table A.10). Among public sector female employees, 42% worked in the Education sector in 2012, compared to 16% of public sector male employees. On the other hand, 48% of the public sector male employees work in Public Administration and Defence, where male wages dropped much less than female wages (Fig. 8).

TABLE 7 APPROXIMATELY HERE

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6 Conclusions

Despite the Italian gender gap is much lower than the European average, and despite some studies and media discourse underline that the great recession in Italy had a less negative impact on women than on men, the gender pay gap increased from 4% to 8% between 2008 and 2012.

Using EU-SILC data we show that there were two different trends in place: between 2008 and 2010, the gender pay gap increased along the entire quantile distribution both in the explained and unexplained components. After 2010, the gender wage gap increased largely among people in the upper part of the wage distribution.

The counterfactual analysis shows that more than 100% of the GWG growth between 2009 and 2011 is due to the wage freeze in the public sector (introduced as an austerity measure during the economic crisis): it reduced the public sector premium and had a disproportionate impact on women. We might expect a further increase in the gender wage gap for the period 2012-2015, since the wage freeze has been extended until mid 2015. In June 2015, the Italian Constitutional Court declared that the public sector wage freeze is not legitimate. The decision will affect only the future wage bargainings, but it will not compensate for the previous losses (January 2011- June 2015).

Economic policies regarding public sector pay freezes and cuts in the service sector, implemented during this crisis, have serious gender side effects, that have often been disregarded. Similar policies have been introduced also in other European countries (Estonia, Greece, Hungry, Ireland, Latvia, Lithuania, Portugal, Czech Republic, Romania, Spain) (EPSU, 2012) and it would be interesting to estimate their effects comparing short term policies (e.g. wage cuts for one year) with medium term ones (e.g. wage freeze for several years). Possible future developments of this paper include a detailed analysis of the wages within the public education sector.

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Figures

Figure 1: Gender wage gap, trend 2004-2012
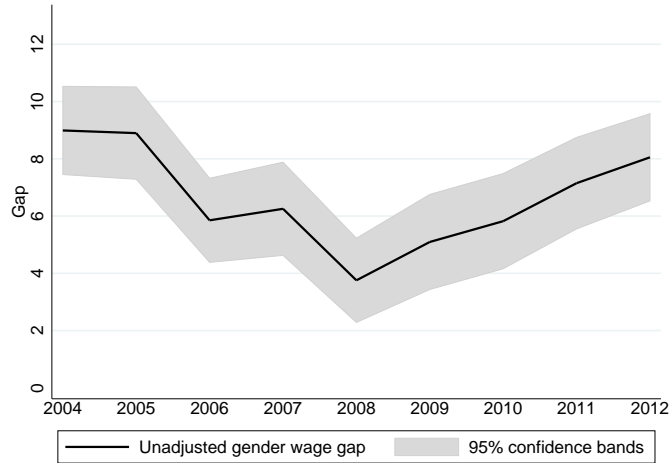
Gross wages per hour in 2008 real price.
Source: EU-SILC, own calculations.

Figure 2: Wages per hour in the public and private sector, by gender, trend 2004-2012
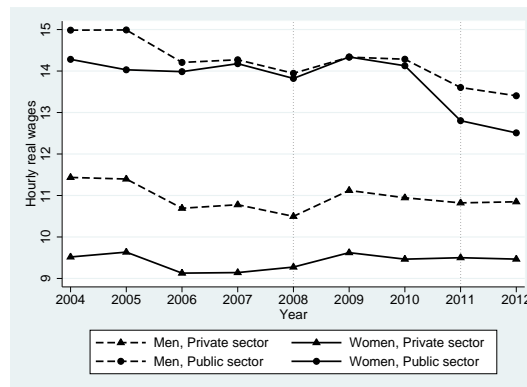
Gross wages per hour in 2008 real price.
The dotted vertical lines refer to the beginning of the economic crisis (2008)
and to the implementation of the wage freeze (2011).
Source: EU-SILC, own calculations.

Figure 3: CDF log wages, 2008-2012
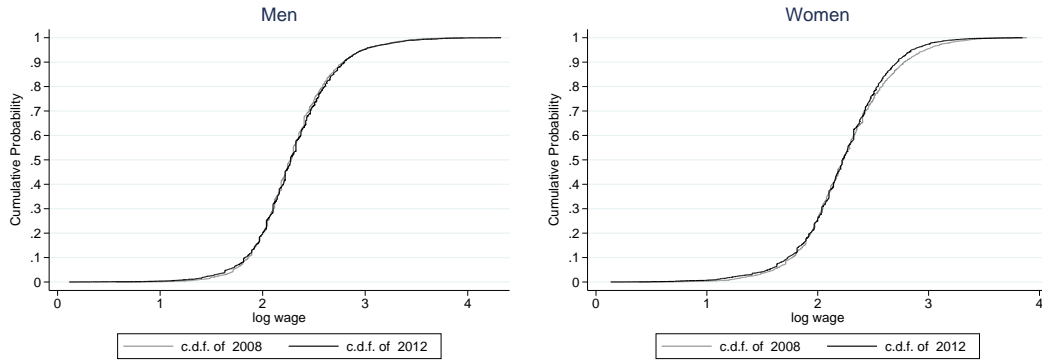
Log in 2008 real price.

Source: EU-SILC, own calculations.

Figure 4: CDF log wages, Public sector, 2008-2012
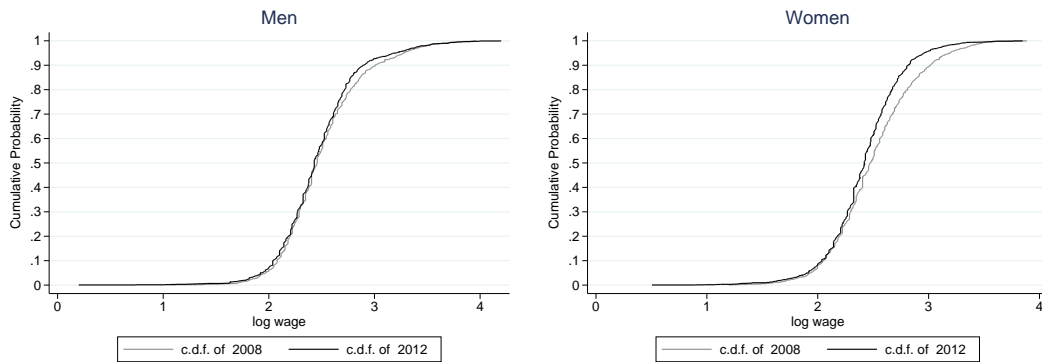
Log in 2008 real price.

Source: EU-SILC, own calculations.

Figure 5: Quantile decomposition
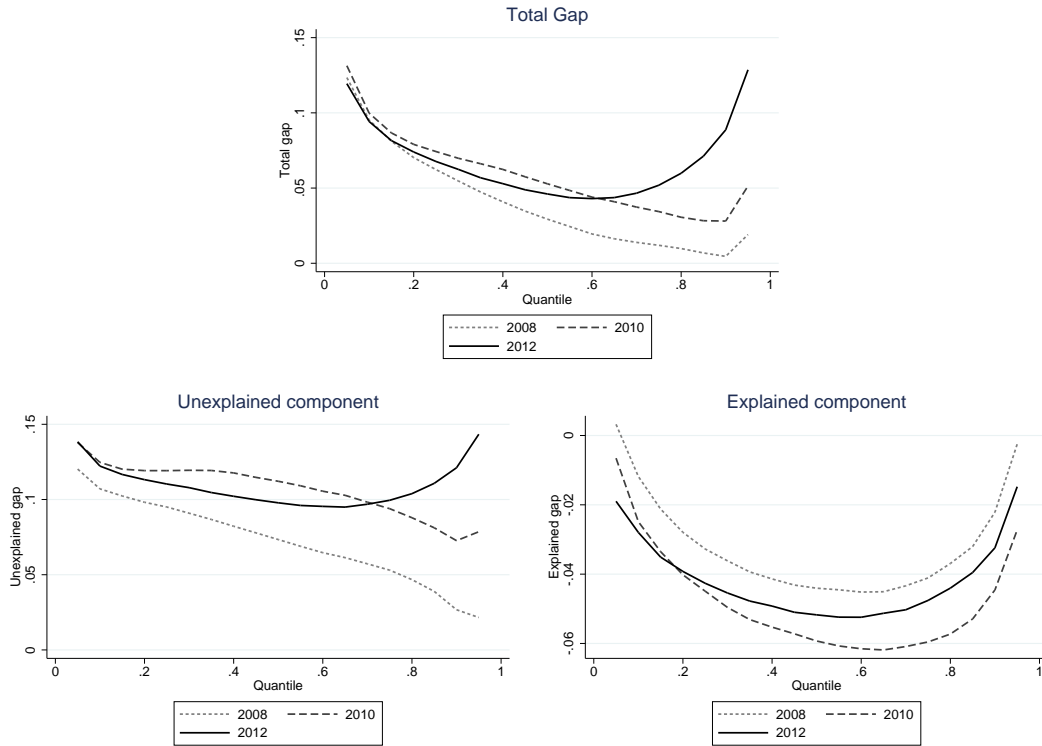
Log wages in 2008 real price.
Source: EU-SILC, own calculations.

Figure 6: Public sector premium
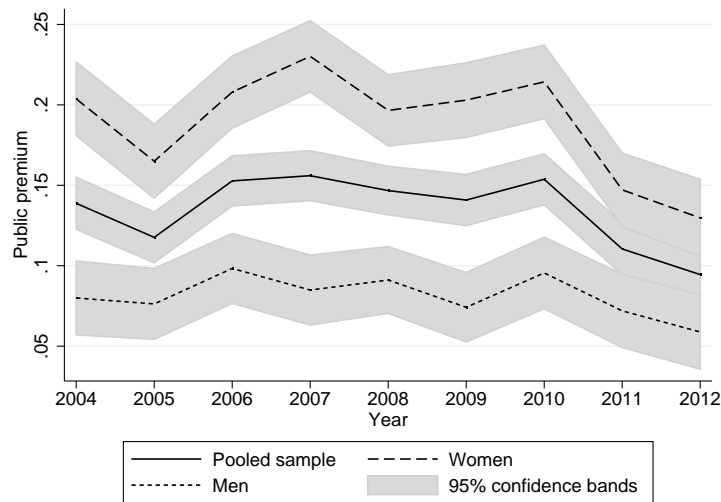
Parameters of public sector dummy in the wage equations. See Tables A.5, A.6, and A.7 in the Appendix.
Source: EU-SILC, own calculations.

Figure 7: Gender wage gap, public and private sector trend 2004-2012
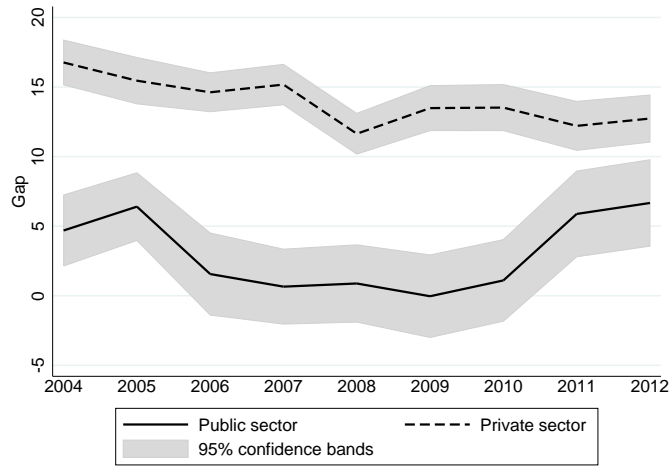
Gross wages per hour in 2008 real price.
Source: EU-SILC, own calculations.

Figure 8: Evolution of wages in the public sector, by gender and sub-sector of employment
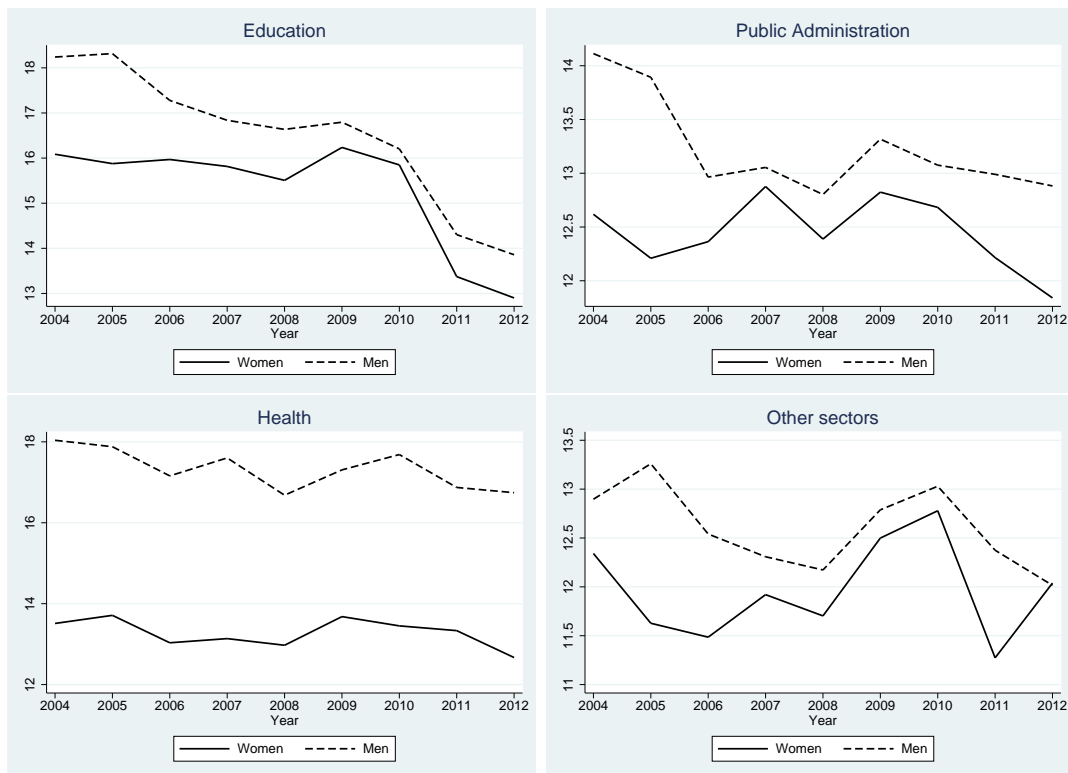
Gross wages per hour in 2008 real price.
Source: EU-SILC, own calculations.

Tables

Table 1: Descriptive statistics - women, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Monthly wage	1,600.64	1,598.22	1,542.89	1,551.08	1,544.89	1,609.68	1,581.46	1,551.68	1,546.60
Hourly wage	11.19	11.20	10.90	10.94	10.90	11.30	11.06	10.67	10.52
Log wage	2.31	2.32	2.29	2.30	2.30	2.33	2.31	2.28	2.27
Hours per week	34.34	34.24	34.02	34.10	33.97	33.91	34.07	33.99	34.30
Age	39.55	39.90	40.31	40.63	41.11	41.71	42.08	42.62	43.33
Experience	14.86	15.37	15.40	15.69	15.91	16.63	17.05	17.60	18.71
North	0.56	0.55	0.53	0.52	0.52	0.53	0.52	0.53	0.54
Centre	0.25	0.25	0.26	0.25	0.26	0.24	0.25	0.25	0.26
South	0.19	0.20	0.22	0.22	0.22	0.23	0.23	0.22	0.21
Married	0.57	0.56	0.56	0.56	0.56	0.56	0.55	0.56	0.55
Cohabiting	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.07	0.07
Other	0.39	0.39	0.39	0.39	0.38	0.37	0.39	0.37	0.38
Primary	0.07	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.04
Lower secondary	0.25	0.23	0.22	0.22	0.21	0.21	0.21	0.21	0.20
Upper sec	0.44	0.42	0.42	0.42	0.47	0.46	0.45	0.45	0.46
Post secondary	0.08	0.11	0.12	0.13	0.07	0.07	0.07	0.05	0.06
Tertiary	0.17	0.17	0.19	0.19	0.20	0.22	0.22	0.24	0.25
Agriculture	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02
Manufacture	0.20	0.20	0.19	0.18	0.17	0.17	0.17	0.14	0.14
Construction	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01
Commerce	0.19	0.18	0.18	0.20	0.20	0.20	0.22	0.22	0.21
Services	0.57	0.58	0.59	0.59	0.59	0.60	0.58	0.61	0.62
Managers	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Supervisors	0.07	0.07	0.06	0.07	0.07	0.07	0.07	0.05	0.06
White collar	0.54	0.56	0.57	0.57	0.59	0.58	0.57	0.61	0.62
Blue collar	0.37	0.35	0.35	0.34	0.32	0.33	0.33	0.31	0.31
Public sect	0.35	0.36	0.37	0.36	0.36	0.35	0.34	0.35	0.35
Part-time	0.21	0.21	0.21	0.22	0.23	0.23	0.22	0.28	0.26
Obs.	7,258	6,418	6,356	6,148	6,054	5,722	5,386	5,538	5,368

Gross wages in 2008 real prices.
Source: EU-SILC, own calculations.

Table 2: Descriptive statistics - men, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Monthly wage	2,120.92	2,107.25	1,986.63	2,002.32	1,948.18	2,007.29	1,992.17	1,974.55	1,959.44
Hourly wage	12.30	12.29	11.58	11.67	11.32	11.90	11.74	11.49	11.44
Log wage	2.40	2.41	2.36	2.37	2.35	2.39	2.38	2.35	2.35
Hours per week	40.66	40.41	40.43	40.47	40.49	39.50	39.88	40.13	39.95
Age	40.37	40.58	40.92	41.45	41.68	42.03	42.29	42.80	43.36
Experience	17.82	17.81	17.99	18.45	18.71	18.90	19.10	19.97	20.78
North	0.49	0.48	0.47	0.47	0.46	0.47	0.46	0.48	0.49
Centre	0.24	0.24	0.24	0.24	0.24	0.23	0.23	0.24	0.25
South	0.27	0.28	0.29	0.29	0.30	0.29	0.31	0.27	0.26
Married	0.60	0.59	0.60	0.60	0.59	0.59	0.58	0.59	0.59
Cohabiting	0.03	0.05	0.04	0.05	0.05	0.05	0.06	0.06	0.06
Other	0.37	0.36	0.36	0.36	0.36	0.36	0.37	0.35	0.35
Primary	0.10	0.09	0.07	0.06	0.06	0.05	0.06	0.05	0.05
Lower secondary	0.35	0.34	0.34	0.33	0.33	0.33	0.32	0.31	0.29
Upper sec	0.39	0.39	0.40	0.40	0.44	0.44	0.45	0.46	0.46
Post secondary	0.05	0.07	0.08	0.08	0.04	0.04	0.04	0.03	0.04
Tertiary	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.15	0.15
Agriculture	0.04	0.04	0.03	0.03	0.03	0.02	0.03	0.03	0.02
Manufacture	0.32	0.33	0.32	0.32	0.31	0.32	0.32	0.30	0.31
Construction	0.10	0.10	0.10	0.10	0.10	0.09	0.10	0.08	0.08
Commerce	0.20	0.19	0.19	0.20	0.20	0.21	0.21	0.22	0.23
Services	0.33	0.35	0.36	0.36	0.35	0.36	0.34	0.37	0.37
Managers	0.06	0.05	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Supervisors	0.08	0.08	0.08	0.08	0.09	0.09	0.08	0.08	0.08
White collar	0.32	0.33	0.34	0.35	0.35	0.36	0.36	0.37	0.38
Blue collar	0.55	0.53	0.54	0.53	0.53	0.51	0.52	0.52	0.51
Public sect	0.24	0.25	0.25	0.26	0.24	0.24	0.24	0.24	0.23
Part-time	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.05	0.04
Obs.	9,377	8,331	8,051	7,784	7,642	7,165	6,767	6,489	6,354

Gross wages in 2008 real prices.
Source: EU-SILC, own calculations.

Table 3: Oaxaca-Blinder decomposition of the gender wage gap, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Men	2.40***	2.41***	2.36***	2.37***	2.35***	2.39***	2.38***	2.35***	2.35***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)
Women	2.31***	2.32***	2.29***	2.30***	2.30***	2.33***	2.31***	2.28***	2.27***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Difference	0.09***	0.08***	0.06***	0.07***	0.05***	0.06***	0.06***	0.07***	0.08***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Explained	-0.04***	-0.04***	-0.04***	-0.03***	-0.04***	-0.06***	-0.06***	-0.05***	-0.04***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Unexplained	0.12***	0.13***	0.11***	0.11***	0.09***	0.12***	0.12***	0.12***	0.12***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	16,635	14,749	14,407	13,932	13,696	12,887	12,153	12,027	11,722

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Robust standard errors in parenthesis.

Controlling for age, experience, region of residence, marital status, level of education, sector of employment (Nace), position, part-time job, public sector. Log wages in 2008 real prices.

Benchmark coefficients: Coefficients estimated in a regression for the pooled sample, shown in Table A.5.

Source: EU-SILC, own calculations.

Table 4: Change of wages and of gender wage gap, 2009-2011

Men			
2011 (a)	2.35***	(0.01)	
2009 (b)	2.39***	(0.01)	
Change (c)	-0.04***	(0.01)	
Due to Δ characteristics (d)	0.01**	(0.01)	-25.84%
Due to Δ return (e)	-0.05***	(0.01)	125.84%
Women			
2011 (f)	2.28***	(0.01)	
2009 (g)	2.33***	(0.01)	
Change (h)	-0.05***	(0.01)	
Due to Δ charact. (i)	0.01**	(0.01)	-27.66%
Due to Δ return (l)	-0.06***	(0.01)	127.66%
Gender Wage Gap			
2011 (a)-(f)	0.07***	(0.01)	
2009 (b)-(g)	0.06***	(0.01)	
Δ GWG (c)-(h)	0.01	(0.01)	
Total Δ characteristics (d)-(i)	-0.00	(0.01)	
Total Δ return (e)-(l)	0.01*	(0.01)	

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.
Robust standard errors in parenthesis. The standard errors for the change of the Gender Wage Gap are estimated with bootstrap. Log wages in 2008 real prices.
Benchmark coefficients: 2009.
Controlling for age, experience, region of residence, marital status, level of education, sector of employment (Nace), position, part-time job, public sector.
Source: EU-SILC, own calculations.

Table 5: Actual and counterfactual gender wage gaps, 2009 and 2011

Actual Gender Wage Gaps	Obs.	Mean	S.E.
$GWG_{09,\gamma_{09}}$	12,887	0.06***	(0.01)
$GWG_{11,\gamma_{11}}$	12,027	0.07***	(0.01)
Counterfactual Gender Wage Gaps			
$GWG_{09,\gamma_{11}}$	12,887	0.08***	(0.01)††
$GWG_{11,\gamma_{09}}$	12,027	0.05***	(0.01)†

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$;
† sig. different from $GWG_{11,\gamma_{11}}$ ($p < 0.05$);
†† sig. different from $GWG_{09,\gamma_{09}}$ ($p < 0.01$).
Source: EU-SILC, own calculations.

Table 6: Decomposing the change in the gender wage gap, 2009-2011

Total change	$GWG_{11,\gamma_{11}}$ - $GWG_{09,\gamma_{09}}$	0.01	(0.01)
Difference due to the policy (1)	$GWG_{09,\gamma_{11}}$ - $GWG_{09,\gamma_{09}}$	0.02***	(0.01)
Difference due to the policy (2)	$GWG_{11,\gamma_{11}}$ - $GWG_{11,\gamma_{09}}$	0.02***	(0.01)
Difference due to other changes (1)	$GWG_{11,\gamma_{11}}$ - $GWG_{09,\gamma_{11}}$	-0.01	(0.01)
Difference due to other changes (2)	$GWG_{11,\gamma_{09}}$ - $GWG_{09,\gamma_{09}}$	-0.01*	(0.01)
Shorrocks-Shapley decomposition			
Average difference due to the policy		0.02***	(0.00)
Average difference due to other changes		-0.01	(0.01)

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.
Bootstrapped standard error in parenthesis.
Source: EU-SILC, own calculations.

Table 7: Average wages in Education (Public sector), men and women

Women	2004	2005	2006	2007	2008	2009	2010	2011	2012
Hourly wage	16.09	15.88	15.97	15.82	15.51	16.24	15.85	13.37	12.9
Percentage change wrt previous year		-1.3%	0.6%	-0.9%	-2.0%	4.7%	-2.4%	-15.6%	-3.5%
Observations	1,090	953	991	985	934	808	728	775	770

Men	2004	2005	2006	2007	2008	2009	2010	2011	2012
Hourly wage	18.24	18.32	17.28	16.84	16.64	16.8	16.2	14.3	13.86
Percentage change wrt previous year		0.4%	-5.7%	-2.5%	-1.2%	1.0%	-3.6%	-11.7%	-3.1%
Observations	352	326	312	326	295	279	253	269	239

Gross wages in 2008 real prices.
Source: EU-SILC, own calculations.

A Appendix

Table A.1: Sample selection

Year	Initial sample	Only Italian	20-65	No retired	No unempl.	No inactive	Only employees	No missing wage Final Sample
2004	52,608	51,294	37,523	33,398	30,927	22,362	16,641	16,635
2005	47,899	46,747	33,916	30,400	28,183	20,480	14,798	14,749
2006	46,522	45,365	32,519	29,195	27,070	19,718	14,441	14,407
2007	45,133	43,617	31,077	27,977	26,090	19,058	13,967	13,932
2008	44,805	43,187	30,502	27,593	25,636	18,765	13,724	13,696
2009	43,636	41,974	29,509	26,733	24,567	17,961	12,910	12,887
2010	40,836	38,754	27,547	25,146	22,981	16,785	12,178	12,153
2011	40,496	38,862	27,644	25,003	22,603	17,007	12,055	12,027
2012	40,287	38,579	27,267	24,843	22,283	16,425	11,754	11,722
Total	402,222	388,379	277,504	250,288	230,340	168,561	122,468	122,208

Source: EU-SILC, own calculations.

Table A.2: Variables description

Variable	Description
Women	Dummy variable. 1 if woman, 0 otherwise.
Monthly wage	Gross monthly earnings for employees, before tax and contribution, in euro. It includes usual paid overtime, tips and commissions in euro (py200g). Reference period: year of the survey. Wages in 2008 real prices.
Hours per week	Number of hours usually worked per week, including usual extra hours (pl060). Reference period: year of the survey.
Hourly wage	Monthly wage divided by hours per week times 4.3.
Log hourly wage	Natural log of hourly wage.
Age	Year of interview - year of birth (rb080).
Experience	Number of years spent in paid work from the first job (maternity leave included) (pl200). Self-defined.
Public sector[a]	Dummy variable. 1 if working in the public sector, 0 otherwise. Self-defined. Available in the Italian sample (variable SETTOR).
Part-time	Dummy variable. 1 if working part-time (pl031). Self-defined.
Region	
North	Dummy variable. 1 if living in: Aosta Valley, Piedmont, Liguria, Lombardy, Trentino-Alto Adige, Veneto, Friuli-Venezia Giulia, Emilia Romagna, 0 otherwise.
Centre	Dummy variable. 1 if living in: Tuscany, Umbria, Marche, Lazio, 0 otherwise.
South	Dummy variable. 1 if living in: Abruzzo, Molise, Campania, Apulia, Basilicata, Calabria, Sicilia, Sardegna, 0 otherwise.
Education	*Highest ISCED level attained (pe040):*
Primary	Dummy variable. 1 if no education, pre-primary education or primary education (ISCED 0 and ISCED 1) - up to scuola elementare, 0 otherwise.
Lower secondary	Dummy variable. 1 if lower secondary education (ISCED 2) - scuola media inferiore, 0 otherwise.
Upper secondary	Dummy variable. 1 if upper secondary education (ISCED 3) - scuola media superiore, 0 otherwise.
Post-secondary	Dummy variable. 1 if post-secondary non tertiary education (ISCED 4) - Diploma post-maturità non universitario, 0 otherwise.
Tertiary	Dummy variable. 1 if first or second stage of tertiary education (ISCED 5 and ISCED 6) - laurea or more, 0 otherwise.
Marital status	
Married	Dummy variable. 1 if married (pb190=1) and she/he is not in consensual union without a legal basis (pb200≠2), 0 otherwise.
Cohabiting	Dummy variable. 1 if in consensual union without a legal basis (pb200=2), 0 otherwise.
Other	Dummy variable. 1 if single, separated, divorced, widowed ((pb190≠1) and not in consensual union without a legal basis (pb200≠2), 0 otherwise.
Sector (Nace)[b,c]	*The economic activity of the local unit of the main job for respondents at work: NACE rev.1.1 until 2008 (pl110); NACE rev.2 since 2011 (pl111).*
Agriculture	Dummy variable. 1 if NACE=1 to 5 (agriculture, hunting, forestry, fishing), 0 otherwise.
Manufacture	Dummy variable. 1 if NACE =10 to 41 (mining and quarrying, manufacturing, electricity, gas and water supply; waste management), 0 otherwise.
Construction	Dummy variable. 1 if NACE =45 (construction), 0 otherwise.
Commerce	Dummy variable.1 if NACE =50 to 64 (Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods; hotels and restaurants; transport, storage and communication), 0 otherwise.
Services	Dummy variable. 1 if NACE =65 to 99 (Financial intermediation; real estate, renting and business activity, public administration and defence, compulsory social security; education; health and social work; other community, social and personal service activities; private households with employed persons; extra-territorial organizations and bodies), 0 otherwise. In 2011 the definition for these categories are slightly different, but this main group covers the same as in 2008.
Position[b]	Using the variable posdip (available in the Italian sample)
Managers	Dummy variable. 1 if manager, 0 otherwise.
Supervisors	Dummy variable. 1 if supervisor, 0 otherwise.
White collar	Dummy variable. 1 if employee/clerical worker, 0 otherwise.
Blue collar	Dummy variable. 1 if workman, apprentice, or working from home for a company, 0 otherwise.

[a] To determine if the individual works in the public or in the private sector, we rely on individuals' replies (while this information is not available in the standard EU-SILC, it is an additional variable provided in the Italian sample). Cross-checking with the Nace classification is entirely reassuring: on average, more than 30% of people in the public sector work in Public administration and defence, about 30% in Education and 20% in Health and social work (See Table A.3 and A.4, respectively for women and for men).

[b] Both the Nace and the Isco classification changed during the period covered by our paper (2004-2012). While the new Nace classification, used since 2009, is very similar to the old one, and we can switch from one to the other one without any problem, this is not the case for the Isco classification. Some major changes where introduced since 2011 and the new classification is not entirely comparable with the old one. To avoid misinterpretation, we control for the position, instead of the type of occupation, which provides similar information.

[c] With respect to the Nace classification, when considering the full sample we aggregated the different sectors into Agriculture, Manufacture, Construction, Commerce and Services. For the analysis within the public sector, however, we aggregated the same sectors into Public administration and defence, Education, Health and social work, Other sectors. In fact, even though there are people employed in every sub-sector even within the public sector, the percentage of those employed in sectors different than those just listed was too small to perform a good analysis, in particular for women.

Table A.3: Descriptive statistics, public sector - women, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Monthly wage	1,921.69	1,883.15	1,858.75	1,882.05	1,851.12	1,942.14	1,927.92	1,851.83	1,840.97
Hourly wage	14.28	14.03	13.99	14.18	13.82	14.34	14.13	12.80	12.51
Log wage	2.58	2.57	2.56	2.57	2.55	2.58	2.57	2.48	2.47
Hours per week	32.53	32.52	32.32	32.28	32.46	32.69	33.02	33.81	34.36
Age	43.95	44.33	44.78	45.01	45.51	46.14	46.79	47.13	47.75
Experience	17.30	17.82	18.02	18.51	18.76	19.44	20.19	20.69	22.01
North	0.48	0.48	0.47	0.47	0.45	0.46	0.45	0.47	0.50
Centre	0.25	0.25	0.25	0.24	0.24	0.24	0.24	0.25	0.25
South	0.26	0.27	0.28	0.29	0.31	0.30	0.31	0.28	0.25
Married	0.64	0.63	0.63	0.64	0.63	0.63	0.63	0.63	0.62
Cohabiting	0.03	0.03	0.03	0.04	0.03	0.04	0.04	0.04	0.05
Other	0.33	0.33	0.33	0.32	0.33	0.33	0.33	0.33	0.33
Primary	0.03	0.04	0.02	0.02	0.02	0.02	0.02	0.03	0.02
Lower secondary	0.12	0.11	0.11	0.10	0.10	0.10	0.11	0.12	0.09
Upper sec	0.43	0.42	0.40	0.39	0.44	0.42	0.41	0.41	0.41
Post secondary	0.10	0.12	0.15	0.15	0.10	0.09	0.10	0.07	0.07
Tertiary	0.32	0.32	0.32	0.34	0.34	0.37	0.37	0.38	0.40
Public admin.	0.24	0.24	0.24	0.23	0.24	0.22	0.23	0.23	0.24
Education	0.43	0.42	0.43	0.45	0.43	0.40	0.40	0.39	0.42
Health & social work	0.23	0.23	0.24	0.24	0.25	0.24	0.23	0.24	0.25
Other sectors	0.10	0.11	0.09	0.08	0.09	0.14	0.15	0.14	0.10
Managers	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.04
Supervisors	0.13	0.12	0.12	0.12	0.12	0.13	0.13	0.09	0.11
White collar	0.68	0.70	0.70	0.70	0.73	0.72	0.71	0.71	0.74
Blue collar	0.14	0.13	0.14	0.13	0.11	0.11	0.12	0.14	0.11
Part-time	0.10	0.10	0.11	0.11	0.11	0.16	0.11	0.16	0.13
Obs.	2,547	2,284	2,324	2,195	2,159	2,031	1,838	1,965	1,854

Gross wages in 2008 real prices.
Source: EU-SILC, own calculations.

Table A.4: Descriptive statistics, public sector - men, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Monthly wage	2,372.13	2,345.22	2,235.30	2,247.15	2,201.09	2,238.37	2,235.04	2,190.93	2,202.22
Hourly wage	14.99	14.99	14.21	14.27	13.95	14.33	14.29	13.60	13.40
Log wage	2.61	2.62	2.57	2.57	2.55	2.58	2.58	2.53	2.51
Hours per week	37.46	37.20	37.31	37.30	37.33	36.82	36.90	37.71	38.15
Age	44.56	44.74	45.14	45.86	46.37	46.74	47.01	47.07	47.37
Experience	20.23	20.13	20.30	20.83	21.63	21.85	21.95	22.74	23.41
North	0.39	0.36	0.37	0.35	0.34	0.34	0.33	0.36	0.38
Centre	0.24	0.25	0.24	0.25	0.24	0.25	0.25	0.26	0.28
South	0.37	0.39	0.39	0.40	0.41	0.41	0.43	0.38	0.35
Married	0.71	0.71	0.71	0.69	0.71	0.69	0.67	0.69	0.69
Cohabiting	0.03	0.04	0.04	0.04	0.03	0.04	0.04	0.05	0.05
Other	0.26	0.25	0.25	0.27	0.25	0.27	0.29	0.27	0.26
Primary	0.04	0.04	0.03	0.04	0.03	0.03	0.04	0.02	0.02
Lower secondary	0.25	0.25	0.23	0.22	0.22	0.23	0.22	0.22	0.21
Upper sec	0.41	0.39	0.40	0.39	0.45	0.43	0.44	0.43	0.43
Post secondary	0.06	0.09	0.11	0.11	0.05	0.05	0.05	0.03	0.05
Tertiary	0.23	0.23	0.23	0.25	0.25	0.26	0.26	0.30	0.29
Public admin.	0.44	0.45	0.47	0.45	0.48	0.38	0.40	0.46	0.48
Education	0.15	0.16	0.15	0.16	0.16	0.16	0.16	0.17	0.16
Health & social work	0.14	0.14	0.16	0.17	0.17	0.16	0.16	0.14	0.14
Other sectors	0.26	0.25	0.21	0.22	0.20	0.30	0.28	0.23	0.21
Managers	0.10	0.09	0.08	0.10	0.08	0.08	0.08	0.09	0.08
Supervisors	0.13	0.16	0.15	0.14	0.16	0.13	0.12	0.13	0.14
White collar	0.54	0.55	0.55	0.56	0.56	0.58	0.58	0.58	0.58
Blue collar	0.22	0.21	0.21	0.20	0.20	0.20	0.21	0.21	0.20
Part-time	0.03	0.02	0.02	0.03	0.04	0.05	0.02	0.03	0.03
Obs.	2,271	2,077	2,038	1,987	1,827	1,741	1,609	1,568	1,468

Gross wages in 2008 real prices.
Source: EU-SILC, own calculations.

Table A.5: Wage equation, pooled sample, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Women	-0.12***	-0.13***	-0.11***	-0.11***	-0.09***	-0.12***	-0.12***	-0.12***	-0.12***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Public sector	0.14***	0.12***	0.15***	0.16***	0.15***	0.14***	0.15***	0.11***	0.09***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Age	0.02***	0.03***	0.02***	0.02***	0.02***	0.02***	0.02***	0.03***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Age sq.	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Experience	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Exp. sq.	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Centre	-0.05***	-0.04***	-0.05***	-0.04***	-0.04***	-0.06***	-0.05***	-0.07***	-0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
South	-0.12***	-0.13***	-0.14***	-0.12***	-0.12***	-0.13***	-0.12***	-0.20***	-0.17***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Cohabithing	-0.04**	-0.03***	-0.01	-0.01	-0.01	-0.04***	-0.05***	-0.03**	-0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Other marital st.	-0.06***	-0.08***	-0.07***	-0.06***	-0.06***	-0.06***	-0.07***	-0.07***	-0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Lower secondary	0.10***	0.07***	0.06***	0.08***	0.06***	0.09***	0.04**	0.03	0.03*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)
Upper secondary	0.21***	0.16***	0.14***	0.19***	0.15***	0.18***	0.12***	0.13***	0.12***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)
Post-secondary	0.19***	0.13***	0.13***	0.18***	0.17***	0.20***	0.13***	0.12***	0.12***
	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Tertiary	0.38***	0.32***	0.31***	0.36***	0.30***	0.34***	0.27***	0.25***	0.25***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Agriculture	-0.22***	-0.23***	-0.21***	-0.19***	-0.17***	-0.17***	-0.17***	-0.18***	-0.21***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Construction	-0.04***	-0.03**	-0.02**	-0.00	-0.00	0.01	-0.01	0.00	-0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Commerce	-0.06***	-0.04***	-0.06***	-0.04***	-0.05***	-0.04***	-0.04***	-0.06***	-0.07***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Services	-0.04***	-0.02*	-0.04***	-0.04***	-0.03***	-0.03***	-0.03***	-0.04***	-0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Supervisors	-0.16***	-0.19***	-0.22***	-0.17***	-0.17***	-0.22***	-0.14***	-0.18***	-0.25***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)
White collar	-0.34***	-0.36***	-0.39***	-0.37***	-0.38***	-0.44***	-0.35***	-0.40***	-0.49***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Blue collar	-0.50***	-0.54***	-0.56***	-0.53***	-0.55***	-0.61***	-0.53***	-0.58***	-0.68***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)
Part-time	-0.03***	-0.05***	-0.05***	-0.05***	-0.04***	0.03**	-0.03***	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Constant	2.01***	2.02***	2.07***	2.03***	2.05***	2.10***	2.17***	2.01***	2.39***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)
R^2	0.39	0.43	0.44	0.44	0.44	0.43	0.42	0.43	0.43
N	16,635	14,749	14,407	13,932	13,696	12,887	12,153	12,027	11,722

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Robust standard errors in parenthesis. Excluded category: Man, Private sector, Northern Italy, Married, Primary education or less, Manufacture, Managers, Full-time.
Source: EU-SILC, own calculations.

Table A.6: Wage equation, women, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Public sector	0.20***	0.16***	0.21***	0.23***	0.20***	0.20***	0.21***	0.15***	0.13***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Age	0.01***	0.02***	0.02***	0.02***	0.02***	0.02***	0.01**	0.03***	0.01
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
Age sq.	-0.00**	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Experience	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Exp. sq.	-0.00***	-0.00***	-0.00*	-0.00	-0.00	-0.00**	-0.00***	-0.00	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Centre	-0.05***	-0.03***	-0.05***	-0.04***	-0.03***	-0.05***	-0.05***	-0.06***	-0.04***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
South	-0.09***	-0.09***	-0.11***	-0.10***	-0.10***	-0.12***	-0.10***	-0.19***	-0.15***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Cohabithing	-0.03	-0.01	0.02	0.03	0.04**	-0.00	-0.03	0.02	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Other marital st.	-0.04***	-0.06***	-0.06***	-0.04***	-0.05***	-0.04***	-0.06***	-0.04***	-0.03***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Lower secondary	0.10***	0.04*	0.05**	0.09***	0.08***	0.11***	0.06*	-0.03	0.04
	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Upper secondary	0.21***	0.14***	0.16***	0.21***	0.19***	0.23***	0.17***	0.09***	0.14***
	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Post-secondary	0.19***	0.11***	0.14***	0.21***	0.21***	0.26***	0.16***	0.09***	0.13***
	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Tertiary	0.38***	0.30***	0.32***	0.38***	0.34***	0.40***	0.31***	0.22***	0.28***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Agriculture	-0.22***	-0.24***	-0.19***	-0.14***	-0.13***	-0.16***	-0.17***	-0.15***	-0.15***
	(0.03)	(0.03)	(0.03)	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)
Construction	-0.06*	-0.01	-0.03	-0.01	-0.03	-0.01	0.01	-0.00	-0.07*
	(0.03)	(0.04)	(0.05)	(0.04)	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)
Commerce	-0.06***	-0.03**	-0.04***	-0.02	-0.02*	-0.02	-0.02	-0.03**	-0.03*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Services	-0.06***	-0.02	-0.02*	-0.03***	-0.03**	-0.02	-0.02	-0.02	-0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Supervisors	-0.14***	-0.17***	-0.22***	-0.21***	-0.09**	-0.23***	-0.10**	-0.19***	-0.29***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)
White collar	-0.33***	-0.32***	-0.37***	-0.39***	-0.31***	-0.42***	-0.28***	-0.39***	-0.48***
	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
Blue collar	-0.52***	-0.52***	-0.56***	-0.56***	-0.51***	-0.60***	-0.47***	-0.58***	-0.69***
	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)	(0.05)	(0.05)	(0.04)	(0.05)
Part-time	0.00	-0.01	-0.03***	-0.02*	-0.01	0.04***	-0.01	0.03**	0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Constant	2.05***	1.97***	1.96***	1.92***	1.85***	1.92***	2.04***	1.87***	2.32***
	(0.09)	(0.08)	(0.09)	(0.09)	(0.09)	(0.10)	(0.10)	(0.10)	(0.11)
R^2	0.41	0.42	0.44	0.45	0.43	0.43	0.41	0.41	0.40
N	7,258	6,418	6,356	6,148	6,054	5,722	5,386	5,538	5,368

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Robust standard errors in parenthesis.
Excluded category: Private sector, Northern Italy, Married, Primary education or less, Manufacture, Managers, Full-time.
Source: EU-SILC, own calculations.

Table A.7: Wage equation, men, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Public sector	0.08***	0.08***	0.10***	0.08***	0.09***	0.07***	0.10***	0.07***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Age	0.03***	0.03***	0.03***	0.02***	0.02***	0.02***	0.02***	0.03***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Age sq.	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Experience	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Exp. sq.	-0.00	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Centre	-0.04***	-0.05***	-0.04***	-0.04***	-0.06***	-0.06***	-0.06***	-0.07***	-0.08***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
South	-0.14***	-0.15***	-0.16***	-0.13***	-0.14***	-0.14***	-0.13***	-0.22***	-0.19***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Cohabithing	-0.05**	-0.05***	-0.03	-0.04**	-0.05***	-0.08***	-0.06***	-0.07***	-0.04***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Other marital st.	-0.06***	-0.09***	-0.09***	-0.09***	-0.08***	-0.09***	-0.07***	-0.11***	-0.10***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Lower secondary	0.11***	0.09***	0.07***	0.08***	0.05***	0.08***	0.03	0.07***	0.03
	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)
Upper secondary	0.19***	0.16***	0.12***	0.16***	0.12***	0.14***	0.09***	0.15***	0.10***
	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Post-secondary	0.18***	0.14***	0.10***	0.14***	0.13***	0.14***	0.10***	0.13***	0.10***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Tertiary	0.35***	0.31***	0.28***	0.32***	0.25***	0.26***	0.22***	0.27***	0.22***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)
Agriculture	-0.21***	-0.21***	-0.21***	-0.20***	-0.18***	-0.16***	-0.17***	-0.18***	-0.23***
	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Construction	-0.05***	-0.04***	-0.04***	-0.02**	-0.02*	-0.01	-0.03***	-0.01	-0.07***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Commerce	-0.06***	-0.04***	-0.07***	-0.04***	-0.06***	-0.05***	-0.05***	-0.07***	-0.09***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Services	-0.01	-0.00	-0.04***	-0.03**	-0.02**	-0.02*	-0.02	-0.04***	-0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Supervisors	-0.18***	-0.20***	-0.22***	-0.16***	-0.22***	-0.24***	-0.16***	-0.18***	-0.23***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
White collar	-0.37***	-0.40***	-0.42***	-0.38***	-0.43***	-0.49***	-0.40***	-0.41***	-0.51***
	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Blue collar	-0.49***	-0.55***	-0.58***	-0.53***	-0.58***	-0.64***	-0.56***	-0.58***	-0.68***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Part-time	-0.06**	-0.12***	-0.05**	-0.07***	-0.08***	0.07***	-0.03	0.01	0.02
	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)
Constant	1.90***	1.97***	2.11***	2.08***	2.15***	2.17***	2.19***	2.03***	2.36***
	(0.08)	(0.07)	(0.07)	(0.07)	(0.07)	(0.08)	(0.08)	(0.08)	(0.10)
R^2	0.38	0.44	0.44	0.44	0.45	0.44	0.43	0.45	0.45
N	9,377	8,331	8,051	7,784	7,642	7,165	6,767	6,489	6,354

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Robust standard errors in parenthesis.
Excluded category: Private sector, Northern Italy, Married, Primary education or less, Manufacture, Managers, Full-time.
Source: EU-SILC, own calculations.

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Table A.8: Wage equations, public sector, pooled sample, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Women	-0.07***	-0.10***	-0.07***	-0.04***	-0.06***	-0.07***	-0.07***	-0.08***	-0.07***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Age	0.01	0.02***	0.02***	0.01**	0.02***	0.02***	0.01*	0.02***	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Age sq.	-0.00	-0.00***	-0.00***	-0.00**	-0.00***	-0.00***	-0.00	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Experience	0.02***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.01***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Exp. sq.	-0.00***	-0.00**	-0.00**	-0.00**	-0.00*	-0.00***	-0.00***	-0.00**	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Centre	-0.00	-0.00	-0.02	-0.01	-0.04***	-0.01	-0.02	-0.03***	-0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
South	-0.02	-0.05***	-0.07***	-0.05***	-0.06***	-0.06***	-0.08***	-0.13***	-0.09***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Cohabithing	-0.02	-0.07**	0.02	-0.00	0.04*	0.02	-0.03	0.02	0.00
	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)
Other marital st.	-0.04***	-0.07***	-0.05***	-0.07***	-0.06***	-0.05***	-0.06***	-0.05***	-0.04***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Lower secondary	0.12***	0.07**	0.02	0.08**	0.04	0.03	-0.11**	-0.08*	-0.02
	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)	(0.04)	(0.04)	(0.05)	(0.04)
Upper secondary	0.25***	0.15***	0.14***	0.18***	0.17***	0.12***	-0.00	0.00	0.06
	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.05)	(0.04)
Post-secondary	0.22***	0.15***	0.12***	0.17***	0.19***	0.14***	-0.00	0.03	0.07
	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)
Tertiary	0.44***	0.35***	0.33***	0.38***	0.34***	0.33***	0.18***	0.16***	0.21***
	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)
Public administration	-0.05***	-0.07***	-0.06***	-0.05***	-0.06***	-0.05***	-0.06***	-0.06***	-0.04***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
Education	0.07***	0.08***	0.11***	0.10***	0.11***	0.11***	0.08***	-0.00	-0.01
	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)
Other sectors	-0.06***	-0.05***	-0.05***	-0.02	-0.03*	-0.03	-0.02	-0.07***	-0.03*
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Supervisors	-0.22***	-0.23***	-0.26***	-0.23***	-0.22***	-0.30***	-0.22***	-0.28***	-0.31***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.03)	(0.04)
White collar	-0.34***	-0.34***	-0.38***	-0.36***	-0.39***	-0.41***	-0.32***	-0.42***	-0.45***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Blue collar	-0.50***	-0.53***	-0.54***	-0.56***	-0.57***	-0.61***	-0.53***	-0.62***	-0.62***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)	(0.04)
Part-time	-0.06**	-0.08***	-0.07***	-0.08***	-0.06***	0.13***	-0.01	0.01	-0.07***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Constant	2.31***	2.22***	2.18***	2.24***	2.10***	2.14***	2.42***	2.30***	2.42***
	(0.12)	(0.13)	(0.12)	(0.13)	(0.12)	(0.15)	(0.14)	(0.14)	(0.16)
R^2	0.35	0.38	0.38	0.37	0.39	0.39	0.34	0.38	0.37
N	4,818	4,361	4,362	4,182	3,986	3,772	3,447	3,533	3,322

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$. Robust standard errors in parenthesis.
Excluded category: Man, Northern Italy, Married, Primary education or less, Health and social service sector, Managers, Full-time.
Source: EU-SILC, own calculations.

Table A.9: Wage equations, public sector, women, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Age	0.00	0.01	0.03***	0.02***	0.03***	0.02*	0.01	0.02**	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Age sq.	-0.00	-0.00	-0.00***	-0.00***	-0.00**	-0.00	-0.00	-0.00**	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Experience	0.02***	0.01***	0.01	0.01**	0.01*	0.01***	0.01**	0.01**	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Exp. sq.	-0.00***	-0.00***	-0.00	-0.00	-0.00	-0.00**	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Centre	0.00	0.01	-0.03	-0.02	-0.04**	-0.00	-0.03	-0.02	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
South	0.01	-0.00	-0.06***	-0.02	-0.05***	-0.04**	-0.07***	-0.12***	-0.07***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Cohabithing	0.01	-0.08**	0.01	0.02	0.03	0.03	-0.05	0.04	0.01
	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.03)
Other marital st.	-0.02	-0.07***	-0.03**	-0.04**	-0.05***	-0.04**	-0.06***	-0.02*	-0.00
	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)
Lower secondary	0.02	-0.00	0.03	0.09	-0.01	-0.01	-0.12**	-0.12**	-0.03
	(0.04)	(0.04)	(0.05)	(0.06)	(0.06)	(0.06)	(0.05)	(0.06)	(0.06)
Upper secondary	0.22***	0.11***	0.19***	0.24***	0.19***	0.17***	0.06	0.01	0.08
	(0.04)	(0.04)	(0.05)	(0.06)	(0.06)	(0.06)	(0.05)	(0.06)	(0.06)
Post-secondary	0.17***	0.11**	0.18***	0.23***	0.23***	0.19***	0.05	0.05	0.09
	(0.05)	(0.04)	(0.05)	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)	(0.06)
Tertiary	0.39***	0.30***	0.38***	0.43***	0.35***	0.37***	0.24***	0.14**	0.23***
	(0.05)	(0.04)	(0.05)	(0.06)	(0.06)	(0.07)	(0.06)	(0.06)	(0.06)
Public administration	-0.09***	-0.11***	-0.06***	-0.04**	-0.06***	-0.07***	-0.06***	-0.08***	-0.07***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Education	0.08***	0.08***	0.13***	0.13***	0.12***	0.13***	0.11***	0.01	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Other sectors	-0.06**	-0.10***	-0.09***	-0.04	-0.06**	-0.04*	-0.01	-0.11***	-0.03
	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
Supervisors	-0.18***	-0.18***	-0.21***	-0.28***	-0.17***	-0.35***	-0.17***	-0.30***	-0.37***
	(0.04)	(0.04)	(0.04)	(0.05)	(0.05)	(0.06)	(0.06)	(0.05)	(0.05)
White collar	-0.31***	-0.28***	-0.32***	-0.41***	-0.35***	-0.44***	-0.25***	-0.42***	-0.45***
	(0.04)	(0.03)	(0.04)	(0.04)	(0.05)	(0.06)	(0.06)	(0.05)	(0.05)
Blue collar	-0.51***	-0.53***	-0.50***	-0.62***	-0.56***	-0.66***	-0.49***	-0.65***	-0.67***
	(0.05)	(0.04)	(0.04)	(0.05)	(0.05)	(0.06)	(0.06)	(0.05)	(0.06)
Part-time	-0.02	-0.05**	-0.07***	-0.04	-0.04*	0.13***	-0.00	0.03	-0.03
	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Constant	2.29***	2.27***	1.80***	1.95***	1.91***	2.11***	2.26***	2.25***	2.24***
	(0.18)	(0.17)	(0.18)	(0.19)	(0.18)	(0.22)	(0.22)	(0.20)	(0.21)
R^2	0.35	0.37	0.37	0.37	0.36	0.38	0.33	0.36	0.35
N	2,547	2,284	2,324	2,195	2,159	2,031	1,838	1,965	1,854

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.
Robust standard error in parenthesis.
Excluded category: Northern Italy, Married, Primary education or less, Health and social service sector, Managers, Full-time.
Source: EU-SILC, own calculations.

Table A.10: Wage equations, public sector, men, 2004-2012

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Age	0.01	0.03***	0.01	0.00	0.01*	0.02**	0.01	0.02**	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Age sq.	-0.00	-0.00***	-0.00	-0.00	-0.00	-0.00**	-0.00	-0.00**	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Experience	0.01**	0.01	0.01**	0.01***	0.01***	0.02***	0.02***	0.01***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
Exp. sq.	-0.00	-0.00	-0.00*	-0.00**	-0.00**	-0.00***	-0.00***	-0.00**	-0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Centre	-0.01	-0.02	-0.01	0.00	-0.03*	-0.02	-0.01	-0.04**	-0.05***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
South	-0.04**	-0.10***	-0.09***	-0.09***	-0.08***	-0.09***	-0.09***	-0.14***	-0.14***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Cohabithing	-0.05	-0.06	0.03	-0.03	0.06*	-0.00	-0.01	-0.01	-0.01
	(0.04)	(0.04)	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)
Other marital st.	-0.07***	-0.06***	-0.08***	-0.11***	-0.09***	-0.07***	-0.05***	-0.11***	-0.09***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Lower secondary	0.19***	0.11***	-0.01	0.07*	0.06*	0.03	-0.11*	-0.06	-0.02
	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.05)	(0.06)	(0.09)	(0.06)
Upper secondary	0.27***	0.18***	0.08	0.14***	0.15***	0.09*	-0.06	-0.00	0.03
	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.05)	(0.06)	(0.08)	(0.06)
Post-secondary	0.26***	0.17***	0.07	0.12***	0.13***	0.07	-0.07	-0.03	0.05
	(0.05)	(0.04)	(0.05)	(0.05)	(0.05)	(0.06)	(0.07)	(0.09)	(0.06)
Tertiary	0.51***	0.40***	0.29***	0.34***	0.35***	0.29***	0.14**	0.20**	0.18***
	(0.05)	(0.05)	(0.06)	(0.05)	(0.04)	(0.06)	(0.06)	(0.08)	(0.06)
Public administration	-0.02	-0.04*	-0.07***	-0.07***	-0.07***	-0.06**	-0.08***	-0.04	-0.04
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)
Education	0.03	0.04	0.05	0.05	0.06*	0.00	-0.00	-0.04	-0.05*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Other sectors	-0.05**	-0.02	-0.05*	-0.03	-0.04	-0.04	-0.05*	-0.03	-0.07**
	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Supervisors	-0.24***	-0.25***	-0.28***	-0.20***	-0.24***	-0.27***	-0.25***	-0.26***	-0.26***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)
White collar	-0.35***	-0.37***	-0.42***	-0.34***	-0.40***	-0.40***	-0.36***	-0.41***	-0.46***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)
Blue collar	-0.46***	-0.52***	-0.57***	-0.52***	-0.55***	-0.59***	-0.55***	-0.58***	-0.59***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)
Parttime	-0.16**	-0.17**	-0.03	-0.15***	-0.09*	0.23***	-0.01	0.03	-0.17***
	(0.07)	(0.07)	(0.06)	(0.06)	(0.05)	(0.06)	(0.07)	(0.07)	(0.06)
Constant	2.21***	2.09***	2.50***	2.54***	2.31***	2.17***	2.51***	2.31***	2.60***
	(0.18)	(0.19)	(0.18)	(0.18)	(0.17)	(0.20)	(0.19)	(0.21)	(0.24)
R^2	0.37	0.41	0.42	0.40	0.44	0.43	0.38	0.41	0.41
N	2,271	2,077	2,038	1,987	1,827	1,741	1,609	1,568	1,468

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Robust standard error in parenthesis.

Excluded category: Northern Italy, Married, Primary education or less, Health and social service sector, Managers, Full-time.

Source: EU-SILC, own calculations.