Is There a Happiness Premium
for Working in the Public Sector? Evidence from Italy

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Abstract

Is there a happiness premium for working in the public sector? We explore this question using a large sample of Italian employees from 2004 to 2016. We find that happiness increases with economic status. Public employees enjoy a happiness premium compared to private employees, but only if they are of low economic status. Depending on the definition of economic status, their happiness gain is able to compensate half or all the gap these individuals face with respect to private employees of medium economic status. Our findings add to the relatively scant empirical literature on psychological well-being and public employment.

Keywords: Happiness; Public employment; Economic status; Wellbeing.
JEL Classification: D90; I31; Z13.

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1 Introduction

Working time is a significant portion of the day of a worker. It comes to no surprise that job satisfaction (Rice et al., 1980) and in general job characteristics, such as the number of working hours (Rätzel, 2012), have an impact on life satisfaction. Blanchflower and Oswald (1998) offer a seminal study on the impact of job type on life satisfaction. The authors find that self-employed individuals report higher levels of job and life satisfaction than employees. Given this premise, little is known on the difference in happiness between private and public employees. Higher job satisfaction of public over private employees has been documented in cross-sectional studies (Luechinger et al., 2008) and in several countries, including Germany (Luechinger et al., 2010b), Greece (Demoussis and Giannakopoulos, 2007), Italy (Ghinetti, 2007), Turkey (Özsoy et al., 2014), and United Kingdom (Clark and Senik, 2006; Heywood et al., 2002). One could wonder if the difference in job satisfaction translates into a difference about overall happiness.

In this paper, we focus on the differences in happiness between private and public employees in Italy. The Italian case is interesting for several reasons. Scoppa (2009) well exemplifies what is a commonly shared belief about Italian public employees: "Recent researches show that Italian public wages are about 20% higher than private wages; public employees are assured of employment until retirement; working hours are shorter. The great appeal of public sector jobs in Italy is confirmed by the very low turnover rates of public employees – for example, the probability of on-the-job search for a public employee is about 50% lower than for a private employee – and by anecdotal evidence about the huge number of applicants for entrance examinations to public sector jobs."

Available evidence for Italy shows that the allocation of public employment in Italy is an important source of geographical redistribution between regions, in particular between the North and the South (Alesina et al., 2001). Moreover, Scoppa (2009) showed that if the father is a public employee the probability of his child working in the same sector increases by a huge 44%, suggesting that there may be nepotism in public employment. This advantage is larger for low-ability individuals, "stayers" and Southern Italian residents. Given that public employment is apparently

highly sought-after in Italy, it comes as a natural question to ask if those who were actually able to get it are happier of their life.

We measure the impact of public employment on happiness of the Italian employees, using cross-sectional data from the Survey on Household Income and Wealth (SHIW). We find that, in general, happiness increases with economic status. Public employees are on average happier of their lives than private employees. However, this effect is observed only for individuals of low economic status. For individuals of medium or high economic status, we observe no difference in happiness between public and private employees. These results hold after controlling for demographic characteristics, and after running several robustness checks. We conclude that there is a happiness premium for working in the public sector, but only among individuals of low economic status. Depending on the definition of economic status we consider, their happiness gain is able to compensate half or all the gap these individuals face with respect to private employees with medium economic status. The happiness premium is around twice as big as the happiness premium of having a 5-year University degree vs having an upper secondary school diploma.

Our closest predecessor in the literature is Pacek et al. (2019). The authors ran an analysis at the individual and aggregate levels for the OECD countries. They found that, at the individual level, public sector workers are happier and more satisfied with their lives while, at the aggregate level, the subjective well-being in a country varies directly with the size of public sector employment in that country. However, there are two important differences between their work and ours. First, Pacek et al. (2019) look at the totality of the OECD countries, while we focus on Italy, which has some peculiarities and is interesting for its specific reasons as we have just pointed out. Second, our analysis is much more granular and deeper at the individual level, while their analysis is more insightful at the aggregate level. We dig into the differences induced by public employment for poorer and wealthier individuals, separately. We believe that there are at least two reasons why public employment can have a bigger impact on happiness for individuals of lower economic status. First, the higher job stability guaranteed by public employment (Ochsen and Welsch, 2012) should have a bigger impact on poorer and lower skilled individuals, while

it should have a lower value for richer, more skilled and better connected worker. Second, the higher social recognition enjoyed by public employees (White, 1932; Janowitz and Wright, 1956) should be more relevant for individuals of low social status, whose standing in the society is not guaranteed by their economic status.

The remainder of the paper is organized as follows. Section 2 briefly reviews the relevant literature, while Section 3 presents the data and Section 4 shows the methodology and the results. Finally, Section 5 concludes. The Appendix reports additional analyses.

2 Literature Review

This paper contributes to the literature on the consequences of economic status on happiness, to the literature on the differences between private and public employees and, more in general, to the literature on the determinants of happiness.

The impact of income and other economic characteristics has been a classical topic in the study of the economics of happiness. Several studies show that people with larger incomes tend to report greater evaluative well-being (Diener et al., 1993; Diener and Biswas-Diener, 2002; Frijters et al., 2006; Veenhoven and Hagerty, 2006; Gardner and Oswald, 2007; Deaton, 2008). It is also commonly accepted that the relationship between income and evaluative well-being is best described as concave (Kahneman and Deaton, 2010). The determinants of happiness amongst Italians had been already investigated by Scoppa and Ponzo (2008). The authors found that income and wealth increase happiness and that unemployment is extremely bad for subjective well-being. Moreover, they observed that income obtained by public transfers has a limited impact on subjective well-being; education increases happiness, even when controlling for income; Southern residents and individuals living in large cities are less happy; and social capital makes people happier. Finally, their work concludes that individuals care about relative income, in the sense that their happiness is negatively influenced by the income of others in their group of reference. On a similar note, a seminal paper by Clark and Oswald (1996) found that UK workers were less

satisfied with their job if their wage was lower with respect to that of workers in their comparison group[1]. This evidence points to the idea that relative comparisons are relevant and might drive differences between specific groups of workers, such as public and private employees. In particular we investigate if, once we control for economic status, there are still differences between public and private sector employees leading to different levels of happiness.

A stream of literature points to differences between public and private sector employees. Alesina et al. (2000) showed that US politicians use public employment as a redistributive device. Delfgaauw and Dur (2008, 2010) presented some theoretical models on self selection of public employees and optimal contracts in that domain. Buurman et al. (2012) showed that public sector employees are significantly more risk averse and, at the beginning of their careers, more prosocial than private sector employees. However, when tenure increases, this difference in prosocial inclinations disappears and, later on, even reverses. Using panel data for Germany and repeated cross-sectional data for the European Union and the United States, Luechinger et al. (2010a) found that the sensitivity of subjective well-being to fluctuations in unemployment rates is much lower in the public sector than in the private one. They suggested that increased economic insecurity constitutes an important welfare loss associated with high general unemployment. Dur and Zoutenbier (2015) found that, in Germany, public sector employees are significantly more altruistic and lazy than equivalent private sector employees. The differences are more pronounced among higher educated workers. The sorting of altruistic people to the public sector takes place only within the caring industries and the difference in altruism is already present at the beginning of peoplefis career, while the difference in laziness is only present for employees with sufficiently long work experience. Bullock et al. (2015) found, in several countries, that public employees expressed higher levels of public-service-oriented motives. In that study, public employees were more likely to say they receive rewards in the form of perceived social impact. Moreover, public employees placed less importance on high income as a reward and expressed higher levels of organizational commitment. It is possible that some of these differences might account for the

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[1]How individuals choose their comparison group has been modeled, for example, by Falk and Knell (2004).

gap in happiness between public and private sector employees, that we aim to investigate in this paper.

3 Data

We use repeated cross-sectional data from the *Survey on Household Income and Wealth* (SHIW) of the Bank of Italy. The survey is conducted every two years among Italian households. We analyze data from 7 waves of the survey, covering the period from 2004 to 2016. The 2004 wave saw the introduction of the Happiness question and the 2016 one was the last wave available at the time of our study. The exact wording of the Happiness question is the following:

> Considering all the aspects of your life, how happy would you say you are? Please score on a scale from 1 to 10, where 1 means "extremely unhappy" and 10 "extremely happy", and the intermediate numbers serve to graduate the response.

Table 1 presents an overview of all our variables. Answers to our question of interest were collected alongside several demographic and economic variables. We focus on the sample of employees, either in the private or in the public sector, which includes 14,986 observations. The average response to the Happiness question is 7.34, with most answers concentrated in the range from 6 to 9. Figure 1 displays the distribution of happiness, separately by type of employment (public or private). We observe a significant difference between the two distributions according to a Kolmogorov-Smirnov test (p-value <0.01), with public employees showing slightly more happiness.

We derive a measure for the economic status through factor analysis, separately for each wave of the survey.[2] We will refer to this as the Economic Status index (ES index), while we will in general refer to this and alternative measures of economic conditions as economic status. To

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[2]Considering a separate factor analysis for each wave, rather than one single factor analysis common to all the waves, allows for more flexibility because the composition of the factor may change every time to accommodate, e.g., macro-economic shocks such as the 2008-9 economic crisis. Indeed, this approach removes potential aggregate shifts in the level of economic status of specific years. Estimates based on one single factor analysis common to all the waves, however, provide similar results (available upon request).

Table 1: **Summary statistics of the sample**

14,986 observations. Dummy variables are indicated with (d). Economic Status Index is obtained as a factor obtained from salary, total income and wealth.

| Variable	mean	std.dev.	max	min
Happiness	7.340	1.576	1	10
Public employment (d)	0.235	0.424	0	1
Economic Status (ES) index	0	1.004	-7.070	4.871
Log salary (in Euros)	9.656	0.550	4.605	12.206
Log total income (in Euros)	10.425	0.556	6.215	12.938
Log wealth (in Euros)	11.319	1.945	1.924	17.168
Socio-demographic controls				
Production worker or similar (d)	0.458	0.498	0	1
Clerical worker (d)	0.370	0.483	0	1
School teacher (d)	0.075	0.264	0	1
Junior manager/supervisor (d)	0.062	0.241	0	1
High skilled job (d)	0.035	0.183	0	1
Age	45.696	10.434	15	79
Age squared	2196.996	923.839	225	6241
Female (d)	0.409	0.492	0.000	1.000
Married or in civil partnership (d)	0.632	0.482	0	1
Single (d)	0.254	0.436	0	1
Separated/divorced (d)	0.093	0.291	0	1
Widow/er (d)	0.020	0.139	0	1
High school degree (perc.) (d)	0.574	0.495	0	1
Geographical dummies				
North West (d)	0.249	0.432	0	1
North East (d)	0.241	0.428	0	1
Center (d)	0.216	0.411	0	1
South (d)	0.200	0.400	0	1
Islands (d)	0.094	0.292	0	1
Year dummies				
Interviewed in 2004 (d)	0.077	0.267	0	1
Interviewed in 2006 (d)	0.083	0.275	0	1
Interviewed in 2008 (d)	0.083	0.276	0	1
Interviewed in 2010 (d)	0.014	0.116	0	1
Interviewed in 2012 (d)	0.157	0.364	0	1
Interviewed in 2014 (d)	0.315	0.465	0	1
Interviewed in 2016 (d)	0.271	0.445	0	1
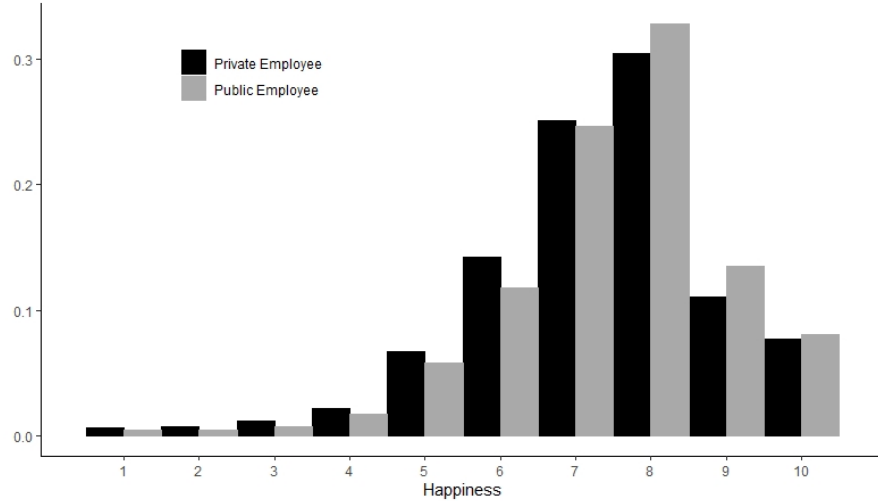
Figure 1: **Happiness density by employment type**
95% confidence intervals.

derive the ES index, we extract one factor from job salary, total income[3] and wealth[4]. This gives us a synthetic measure of economic status, in line with the literature (see, e.g., Bucciol et al., 2015)[5]. The main driver of the factor is total income, which shows a correlation of 0.87 with the factor[6] and a factor loading of around 1 for each of the seven waves where we calculate the factor.

Figure 2 shows boxplots of the distribution of happiness, separately for public and private employees, conditional on their level of the ES index. Additional plots conditioning on the level of salary, income and wealth are available in the Appendix (Figures A1 to A3). We split the sample in three groups, depending on whether the individual performs below the first tertile ("low" group), above the second tertile ("high" group) or between the two tertiles ("medium" group).[7] Tertiles are calculated separately for each year. Hence, an individual of low ES index in, say, 2004 corresponds to an individual in the lowest tertile of the distribution of the ES index in

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[3]This is given by the sum of payroll income, pensions and net transfers, net self-employment income and property income. Households with negative income were excluded from the analysis.

[4]This is given by the sum of real assets and financial assets minus financial liabilities. Households with negative wealth were excluded from the analysis.

[5]We use the OLS method to find the minimum residual solution and the varimax rotation to compute our factor. To be consistent with Bucciol et al. (2015), we also derived a factor from factor analysis based on job type in addition to job salary, total income and wealth. Since this factor is highly correlated (0.999) with our benchmark factor, we chose not to report it in our analysis.

[6]Correlation with wealth is 0.54 and correlation with job salary 0.35, all significant at $p < 0.01$.

[7]In the Appendix we split the sample in four groups. We decided to present in the main text the analysis for tertiles, since it is easier to follow.

2004.

The figure highlights that the distribution of public and private employees is always overlapped in the "medium" and "high" economic status groups, whereas in the "low" group the distribution for public employees dominates the one for private employees. This evidence, which holds for each definition of economic status (also see Appendix Figures A1 to A4), suggests that public employees endowed with a relatively low ES index, salary, income or wealth generally enjoy more happiness than private employees with a similar economic condition.

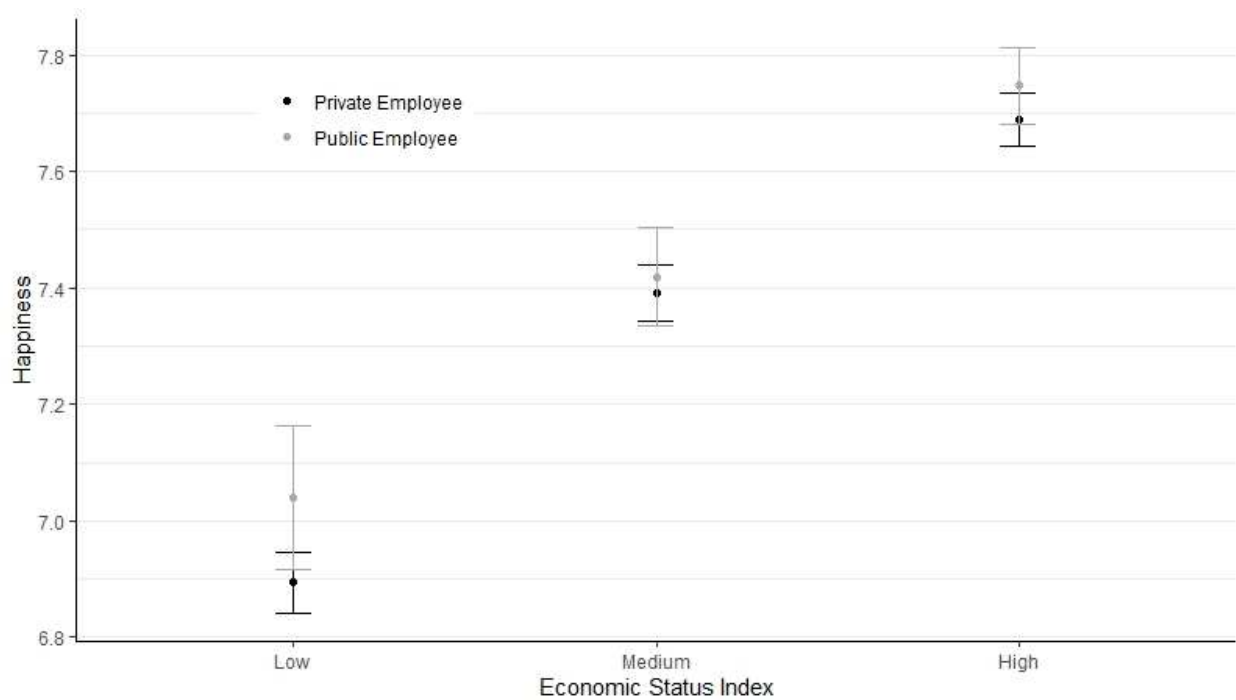Figure 2: **Happiness and economic status by employment type**
Economic Status Index is obtained as a factor from salary, total income and wealth. 95% confidence intervals.

4   Empirical analysis

In this section we perform econometric analyses to investigate if there is a happiness premium for public employment. As a general convention, we comment only on coefficients that are significant at least at the 5% level.

We consider two different specifications for individual i. First, we study the relationship between happiness (variable H_i), economic status (two dummy variables for middle and high status, respectively mES_i and hES_i; the reference category is low status) and public employment (dummy variable P_i for public employment). The purpose is to check if happiness is correlated with different categories of economic status and, separately, with public employment. We expect the high status group to exhibit more happiness than the middle status group, which in turn should exhibit more happiness than the low status group:

$$H_i = \beta_0 + \beta_1 mES_i + \beta_2 hES_i + \beta_3 P_i + \beta_4 SD_i + \beta_5 G_i + \beta_6 Y_i + \epsilon_i. \tag{1}$$

Second, we study the relationship between happiness and all possible combinations of public/private employment and economic status (low, medium or high). The purpose is to check if economic status and public employment play together to determine the correlation with happiness. To reach our goal we include in the specification the two dummy variables for economic status (mES_i and hES_i) and the interactions between the dummy for public employment (P_i) and the economic status dummies (mES_i, hES_i and, in addition, the dummy for low status, lES_i). Overall, six possible cases are possible: i) private employee with low ES index (our baseline); ii) private employee with medium ES (coefficient on mES_i); iii) private employee with high ES (coefficient on hES_i); iv) public employee with low ES (coefficient on $(P_i \times lES_i)$); v) public employee with medium ES (coefficient on mES_i plus coefficient on $(P_i \times mES_i)$); vi) public employee with high ES (coefficient on hES_i plus coefficient on $(P_i \times hES_i)$). Coefficients from β_1 to β_5 thus measure the effect of belonging to each group relative to the baseline case. In particular, coefficients from β_3 to β_5 inform on the additional effect of economic status for public employees relative to private employees.[8].

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[8]A different parameterization of this specification would replace variable $(P_i \times lES_i)$ with variable P_i. This parameterization would be observationally equivalent to ours. We prefer our parameterization as it allows the coefficients of the interaction terms to directly measure the additional impact of economic status for public employees.

$$H_i = \beta_0 + \beta_1 mES_i + \beta_2 hES_i$$

$$+\beta_3 \left(P_i \times lES_i\right) + \beta_4 \left(P_i \times mES_i\right) + \beta_5 \left(P_i \times hES_i\right) \tag{2}$$

$$+\beta_6 SD_i + \beta_7 G_i + \beta_8 Y_i + \epsilon_i.$$

In both Equation (1) and Equation (2) we include the set of socio-demographic (SD_i), geographical (G_i) and year (Y_i) control variables presented in Table 1. Finally, ϵ_i is the error term. Our models estimate the β parameters from the above equations.

We first analyze through linear regression if public employment leads to more happiness for different ES index categories. Second, we analyze through linear regression if public employment leads to more happiness for different salary, income and wealth categories. Third, we repeat our analysis on the relationship between public employment and happiness for different ES index categories by using an ordinal logistic regression. The choice between linear regression and ordinal logistic regression for happiness data has been at the heart of a recent debate. Although the validity of linear regression has been thoroughly defended (Chen et al., 2019), some recent works suggested to use ordinal logistic models for happiness data (Schröder and Yitzhaki, 2017; Bond and Lang, 2019). Fourth, we present the graphical results from a linear regression where the economic status enters as a continuous variable and it is interacted with both a public and a private employment dummy.

4.1 Main findings

The first set of results is shown in Table 2, where Column (3) reports the result from Equation (1) and Column (4) from Equation (2). The full output is available in Appendix Table A1. The effect of public employment alone on happiness is positive and significant (Column 1). However, it becomes weaker when we include economic status in the specification (Column 2), and even weaker when we control for other variables (Column 3). These models generally confirm our expectations and find happiness to increase with medium or (even more) high status. Focusing

Table 2: **Happiness and Economic Status Index**
Linear regression where the dependent variable is self-reported Happiness. Economic Status Index is obtained as a factor from salary, total income and wealth. Low, Medium and High refer to the three tertiles of each distribution, stratified per year. Public employment is a dummy equal to 1 if the individual is a public employee. Controls include job type, a squared polynomial on age, gender, marital status, education, macro-region.

| | | Dependent variable: | | |
| | | Happiness | | |
	(1)	(2)	(3)	(4)
Medium ES index		0.475***	0.264***	0.285***
		(0.033)	(0.033)	(0.036)
High ES index		0.779***	0.428***	0.448***
		(0.032)	(0.036)	(0.040)
Public employment	0.190***	0.069**	0.055*	
	(0.029)	(0.029)	(0.032)	
Low ES index *Public employment				0.142**
				(0.068)
Medium ES index *Public employment				0.020
				(0.050)
High ES index *Public employment				0.032
				(0.043)
Socio-demographic controls	NO	NO	YES	YES
Geographical dummies	NO	NO	YES	YES
Year dummies	NO	NO	YES	YES
Observations	14,986	14,986	14,986	14,986
R^2	0.003	0.043	0.098	0.098
Adjusted R^2	0.003	0.043	0.096	0.096

Note: *p<0.1; **p<0.05; ***p<0.01; Robust s.e. in parenthesis

on the model in Column 3, we see that a medium rather than low ES index increases happiness by 0.264 points, whereas earning a high status increases it by 0.428 points. The difference between the two effects is significant (F-test: 29.47; p-value <0.001).

However, our goal is to understand if public employment plays a different role with different levels of status. For this reason, in Column (4) the specification is enriched with the interactions between the dummies on the low, medium and high groups and a dummy for being a public employee. The purpose of including these interactions is to understand if the effect of belonging to a given economic status group is altered by the public/private nature of the job. We expect public employees in the low category to generally exhibit more happiness.

Findings support this hypothesis. In particular, we observe that medium ES index further increases happiness by 0.285 points while high ES index increases it by 0.448 points. The two effects are statistically different (F-test: 21.47; p-value <0.001). Moreover, being a public employee with low ES index increases happiness by 0.143 points; this effect is statistically lower than that of a private employee with medium ES index (F-test: 4.51; p-value: 0.034).

In Table 3 we repeat the analysis of Table 2, Column (4), using alternative definitions of economic status. We focus on salary in Column (1), total income in Column (2) and wealth in Column (3). Regarding the interactions, we consistently find a significant effect only for the one involving the low group. For instance from Column (1), we learn that being a public employee and earning a low salary increases happiness by 0.206 points. This effect is not statistically different from the one of private employees with medium salary (F-test: 1.40; p-value: 0.236) but statistically lower than the effect of private employees with high salary (F-test: 10.03; p-value: 0.002). We obtain similar findings with the other economic status measures. Hence, our results indicate that, after controlling for a list of socio-demographic variables, public employees with low economic status enjoy a level of happiness comparable to the one of private employees with medium economic status.

In the Appendix (Table A2 and Table A3) we repeat the analysis of Table 2 and Table 3 splitting the sample in four rather than three groups of equal size based on their economic status measure.

Table 3: **Happiness and other measures of economic status**
Linear regression where the dependent variable is self-reported Happiness. Low, Medium-Low, Medium-High and High refer to the four quartiles of each distribution, stratified per year. Public employment is a dummy equal to 1 if the individual is a public employee. Each regression controls for job type, a squared polynomial on age, gender, marital status, education, macro-region and year.

	Dependent variable:		
	Happiness		
	(1)	(2)	(3)
Medium salary	0.286***		
	(0.037)		
High salary	0.420***		
	(0.041)		
Medium total income		0.298***	
		(0.036)	
High total income		0.461***	
		(0.039)	
Medium wealth			0.222***
			(0.036)
High wealth			0.329***
			(0.038)
Low salary *Public employment	0.206***		
	(0.066)		
Medium salary *Public employment	0.011		
	(0.051)		
High salary *Public employment	−0.019		
	(0.045)		
Low total income *Public employment		0.144**	
		(0.068)	
Medium total income *Public employment		0.012	
		(0.051)	
High total income *Public employment		0.035	
		(0.043)	
Low wealth *Public employment			0.268***
			(0.065)
Medium wealth *Public employment			−0.002
			(0.050)
High wealth *Public employment			0.001
			(0.045)
Socio-demographic controls	YES	YES	YES
Geographical dummies	YES	YES	YES
Year dummies	YES	YES	YES
Observations	14,986	14,986	14,986
R^2	0.096	0.098	0.094
Adjusted R^2	0.094	0.096	0.092

Note: $^*p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$; Robust s.e. in parenthesis

That is, we consider quartiles instead of tertiles. Our results are virtually unchanged. If anything, public employment increases happiness even more for individuals below the lowest quartile of the ES index than for individuals below the lowest tertile of the ES index. This suggests that the effect we found is concentrated at the lower end of the distribution and great attention should be devoted to those individuals in delivering welfare policies.

Our dependent variable (happiness) is discrete as it can only take the integer numbers from 1 to 10. In Table 4 we repeat the analysis of Table 2, Columns (3)-(4) using an ordered logit model instead of the OLS model. Since some outcomes (especially those at the bottom of the distribution; see Figure 1) are rare to observe in the dataset, we collapse them in four categories of similar size: 1 (including the original outcomes from 1 to 6), 2 (original outcome 7), 3 (original outcome 8) and 4 (original outcomes 9 and 10). The resulting variable then takes only integer numbers from 1 to 4. Table 4 shows average marginal effects on the probability of reporting the top outcome (4) and again confirms our previous findings, with happiness being greater with higher economic status, or with public rather than private employees when the ES index is in the lowest category.

In Figure 3 we fit squared polynomials of the economic status index and we interact them with both a public and a private employment dummy. More specifically, we fit the following model:

$$
\begin{aligned}
H_i = \beta_0 + \beta_1 P_i + \beta_2 \left(P_i \times ES_i \right) + \beta_3 \left(P_i \times ES_i^2 \right) + \\
\beta_4 \left(Pr_i \times ES_i \right) + \beta_5 \left(Pr_i \times ES_i^2 \right) + \epsilon_i.
\end{aligned}
\tag{3}
$$

P_i is a dummy for public employment, while $Pr_i = 1 - Pr_i$ is a dummy for private employment. This specification allows us to better appreciate non-linear effects of economic status on happiness for public and private employees, separately. The regression table is reported in Appendix Table A4. Figure 3 reports the predictions of the model and gives us the opportunity to clearly visualize our main conclusion, from a different perspective. As can be seen from the plot, the effect of the ES index is almost linear for the public employees, while it is concave for private ones. The curves confirm that the largest discrepancy in happiness is concentrated at the low

Table 4: **Ordered logit model**

Average marginal effects on the probability of reporting Happiness equal to 9 or 10. Economic Status Index is obtained as a factor from salary, total income and wealth. Low, Medium and High refer to the three tertiles of each distribution, stratified per year. Public employment is a dummy equal to 1 if the individual is a public employee. Each regression controls for job type, a squared polynomial on age, gender, marital status, education, year and macro-region.

	Dependent variable:	
	Pr(Happiness ≥ 9)	
Medium ES index	0.043***	0.049***
	(0.006)	(0.006)
High ES index	0.079***	0.082***
	(0.006)	(0.007)
Public employment	0.011*	
	(0.006)	
Low ES index *Public employment		0.030***
		(0.011)
Medium ES index *Public employment		−0.000
		(0.009)
High ES index *Public employment		0.010
		(0.009)
Socio-demographic controls	YES	YES
Geographical dummies	YES	YES
Year dummies	YES	YES
Observations	14,986	14,986
Pseudo-R^2	0.038	0.038

Note:	*p<0.1; **p<0.05; ***p<0.01 Standard errors in parenthesis

end of the economic status distribution, with private employees of low economic status showing particularly low levels of happiness.

In the Appendix we investigate some potential extra heterogeneity in happiness premium and public employment, due to other demographic or socio-economic characteristics (Table A5). We find that the happiness premium for public employment is concentrated among those who have not completed at least the high school (while it is absent for more educated individuals) and among males (while it absent among females), although it is smaller in magnitude for this group. These pieces of evidence again suggest that the happiness premium for public employment is concentrated among more vulnerable individuals. In particular lower education is correlated to lower economic status and males are concentrated in low skilled jobs (and also enjoy a lower economic status but the difference is not as pronounced as the one between more and less educated individuals). Notably, we find no gender or regional differences in the relation between happiness and public employment. In an effort to address self-selection into public employment and to mitigate concerns of reverse causality, we also calculate a propensity score as the probability of having public employment and included it as a regressor in our main specification (again see Appendix Table A5). The analysis confirms our main result that happiness is higher for public employment of only low economic status and, interestingly, shows that the propensity score is not significantly different from zero. This suggests that our data do not exhibit selection bias.

We conclude the section trying to answer our original question. Is there a happiness premium for working in the public sector? Our analysis suggests that this is the case only for individuals of low economic status. Depending on the model we consider, their happiness gain is able to compensate half or all the gap they face with respect to private employees with medium economic status.

Our benchmark analysis is based on an indicator of economic status, which makes any comparison difficult. However, take for instance the analysis based on salary (Table 3). The low salary category has a median annual salary of € 11,000, while the medium salary category has a median salary of € 17,000. Our results suggest that public employees earning € 11,000 per year are as
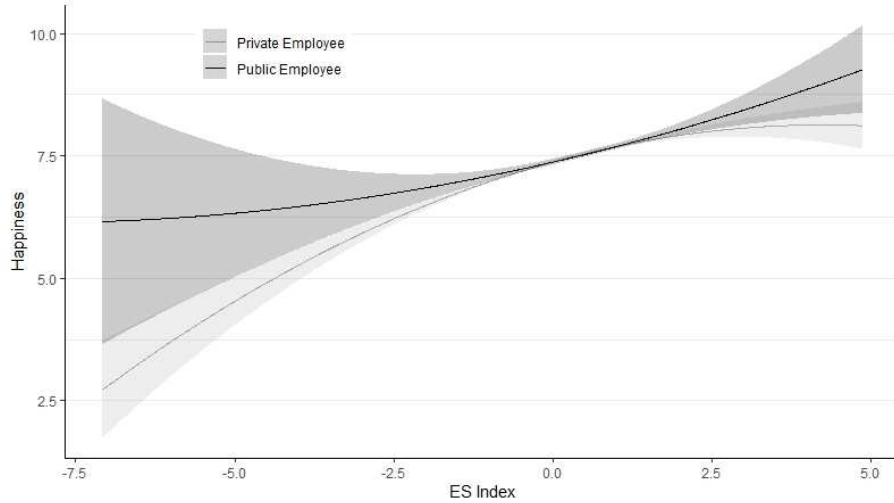
Figure 3: **Happiness and economic status index**
Predictions of a regression of happiness on a squared polynomial of the economic status index interacted with both private and public employment (95% confidence intervals in shaded areas; results in Appendix Table A4).

happy as private employees earning € 17,000 per year. That is, the difference in annual salary (€ 6,000) measures the compensating monetary amount that low-salary public employees would need to be given in order to offset the loss in happiness if they went to the private sector. In contrast, there is no compensating amount at higher salaries.

Moreover, the happiness premium for working in the public sector, enjoyed by low economic status employees is around twice as big as the happiness premium of having a 5-year university degree vs having an upper secondary school diploma (see Appendix Table A1 for the full regression output).

5   Conclusion

We investigated the difference in happiness between Italian public and private employees. We observed that public employees are on average happier than private employees, if their economic status is low. Our result remained valid using alternative measures of economic status, controlling for individual demographic characteristics and performing several robustness checks. We then conclude that there is a happiness premium for working in the public sector, but only among

individuals of low economic status. Depending on the definition of economic status we consider, their happiness gain is able to compensate half or all the gap these individuals face with respect to private employees of medium economic status.

Although we understand that this is not a final word on the causal relationship from public employment to happiness, we can advance some possible explanations. The first relates to job security. Luechinger et al. (2010a) found that the sensitivity of subjective well-being to fluctuations in unemployment rates is much lower in the public sector than in the private one. This might be due to the fact that, when the economic situation is severe and the probability of losing a job is high, public employees do not worry as much as private employees because they have higher job security. Ochsen and Welsch (2012) found that more employment protection increases life satisfaction. These effects can be only exacerbated for workers of low economic status. Middle to upper class individuals are on average more skilled and they might not be worried of losing their jobs in case of adverse economic fluctuations, independently from being in the public or private sector. However, lower economic status individuals might face economic uncertainty in very different ways, depending if they are private or public employees. Private employees will have much higher chances of unemployment.

A second explanation relies on a more psychological channel. Middle to upper class individuals are likely more skilled and the probability that they self-selected in public or private employment might be higher. On top of that, they may enjoy some "social prestige" given by their occupation, independently from that being in the public or private sector. We have no reason to expect, for example, that the social standing of a full professor in a public or private university should differ. However, for low skilled jobs, social consideration might play a big role. Since in both cases we are talking about individuals of low economic status, the marginal increase in social prestige given by being a public employee – found by White (1932) and Janowitz and Wright (1956) – might be relatively important for the happiness of that individual. Moreover, it might be more likely that those individuals were less likely to self-select into public employment. As Scoppa (2009) noticed, the probability of nepotism in public sector jobs is higher for low-ability

individuals. Hence, it is totally possible that individuals with low economic status who were able to get a public sector job are "luckier" than those who were not able and might want to have it.

Ideally, if a question on job satisfaction and/or job stability had been asked in all waves of the survey, we could have analyzed if answers diverged following the same pattern we observe for happiness. Unfortunately, such a question was not available in all the waves of the survey we analyzed. However, in some years, some questions which hint at job stability and satisfaction were included, with different formulations in some years. In Appendix Table A6 we try to explore these channels. We find that: (i) public employees with low economic status were less likely of having done anything to find a job or change job in the last 12 months (question asked in 2004 and 2006); (ii) declared a higher perceived probability of keeping their job in the next 12 months (2016); (iii) were less likely to plan to take any steps to change job in the next 12 months (2016); (iv) for a group of individuals declaring they did not want to become an entrepreneur, enjoyed higher job satisfaction (2014). These results do not represent conclusive evidence on the channel for happiness premium but they clearly hint that job stability and job satisfaction are part of the explanation. We leave further exploration of these avenues for future research.

The main limitation of our work rests on the fact that we could not identify a causal link, which goes from public employment to happiness. Although we have proposed several alternative modelling strategies for our result, a causal link needs to be established. It is still possible, for example, that individuals who are happier with their life, are more likely to self select into public employment at the low end of the economic scale. This might be due, for example, to the fact that individuals happier with their life are more likely to take the effort of going through the selection process needed to land into public employment. This should not be a concern for medium and high economic status individuals, since the effort needed to get a medium to high status jobs is probably comparable in the private and in the public employment. A final thought relates to the fact that, in our sample (and in the society in general), there are many more production workers in the private than in the public sector (6,492 as opposed to 371). Those jobs are correlated to a lower happiness, which can partly explain our result. However, we control for employment type

and, moreover, job type seems to be only marginally relevant to describe economic status.

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A   Appendix

A.1   Additional results

We replicate the evidence presented in Figure 2 in the main text using different definitions of economic status. Figure A1 plots the relationship between employment type and happiness, stratifying for salary, while Figure A2 does it stratifying for total income and Figure A3 does it for wealth. In general, the gap in happiness between public an private employees is strongest at the lowest level of the distributions, with the effect being particularly relevant for low levels of wealth.

Table A1 reports the full regression output from Table 2. The table informs, for instance, that the happiness premium enjoyed by low economic status workers in public employment (0.142) is around twice as big as the happiness premium of having a 5-year university degree vs having an upper secondary school diploma (0.078).
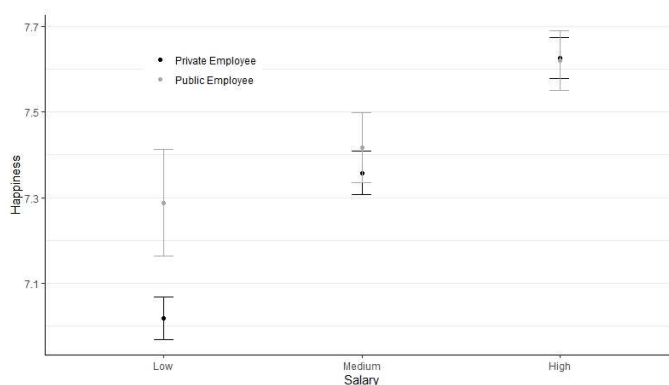
Figure A1: **Happiness and salary by employment type**
95% confidence intervals

A.2   Four economic status groups

We repeat the analysis of the main text using a different categorization of economic status. For each measure of economic status we split the sample in four groups, depending on whether the individual performs below the first quartile ("low" group), above the third quartile ("high" group) or between the two quartiles ("medium-low" and "medium-high" groups). Quartiles are calcu-

Table A1: **Happiness and Economic Status Index**

This table reports the full set of regressors for Table 2. High skilled jobs include senior manager, senior officer, school head, director of studies, university teacher, magistrate.

|	Dependent variable:			
	Happiness			
	(1)	(2)	(3)	(4)
Medium ES index		0.475^{***}	0.264^{***}	0.285^{***}
		(0.033)	(0.033)	(0.036)
High ES index		0.779^{***}	0.428^{***}	0.448^{***}
		(0.032)	(0.036)	(0.040)
Public employment	0.190^{***}	0.069^{**}	0.055^{*}	
	(0.029)	(0.029)	(0.032)	
Low ES index *Public employment				0.142^{**}
				(0.068)
Medium ES index *Public employment				0.020
				(0.050)
High ES index *Public employment				0.032
				(0.043)
Job type (ref: Clerical worker)				
Production worker or similar			-0.221^{***}	-0.217^{***}
			(0.035)	(0.035)
School teacher			0.032	0.037
			(0.052)	(0.052)
Junior manager/supervisor			0.036	0.036
			(0.047)	(0.047)
High skilled job			0.195^{***}	0.200^{***}
			(0.064)	(0.064)
Region (ref: North West)				
North East			-0.013	-0.013
			(0.034)	(0.034)
Center			0.072^{**}	0.073^{**}
			(0.035)	(0.035)
South			-0.361^{***}	-0.359^{***}
			(0.039)	(0.039)
Islands			0.002	0.003
			(0.047)	(0.047)
Marital status (ref: Married)				
Single			-0.549^{***}	-0.552^{***}
			(0.034)	(0.034)
Separated/divorced			-0.617^{***}	-0.619^{***}
			(0.049)	(0.049)
Widow/er			-0.903^{***}	-0.904^{***}
			(0.101)	(0.102)
Female			-0.067^{**}	-0.065^{**}
			(0.027)	(0.027)
Education (ref: Upper secondary school diploma)				
None			-0.469	-0.468
			(0.318)	(0.318)
Primary school certificate			-0.318^{***}	-0.316^{***}
			(0.082)	(0.082)
Lower secondary school certificate			-0.118^{***}	-0.118^{***}
			(0.037)	(0.037)
Vocational secondary school diploma (3 years of study)			0.034	0.034
			(0.046)	(0.046)
3-year university degree/higher education diploma			-0.002	0.0003
			(0.082)	(0.082)
5-year university degree			0.075^{**}	0.078^{**}
			(0.038)	(0.038)
Postgraduate qualification			0.008	0.012
			(0.097)	(0.097)
Wave (ref: 2012)				
2004			-0.217^{***}	-0.218^{***}
			(0.055)	(0.055)
2006			-0.417^{***}	-0.418^{***}
			(0.052)	(0.052)
2008			-0.141^{***}	-0.143^{***}
			(0.050)	(0.050)
2010			0.120	0.119
			(0.103)	(0.103)
2014			-0.149^{***}	-0.150^{***}
			(0.039)	(0.039)
2016			-0.012	-0.012
			(0.040)	(0.040)
Age			-0.028^{***}	-0.028^{***}
			(0.009)	(0.009)
Age squared			0.0001	0.0001
			(0.0001)	(0.0001)
Constant	7.295^{***}	6.906^{***}	8.682^{***}	8.666^{***}
	(0.015)	(0.025)	(0.218)	(0.218)
Observations	14,986	14,986	14,986	14,986
R^2	0.003	0.043	0.098	0.098
Adjusted R^2	0.003	0.043	0.096	0.096
Note:			$^{*}p<0.1; ^{**}p<0.05; ^{***}p<0.01$; Robust s.e. in parenthesis	
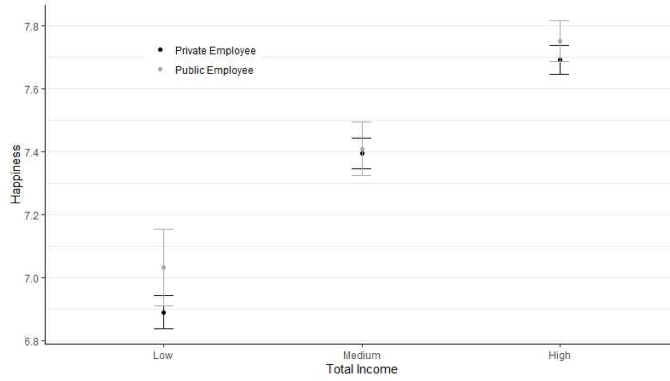
Figure A2: **Happiness and total income by employment type**
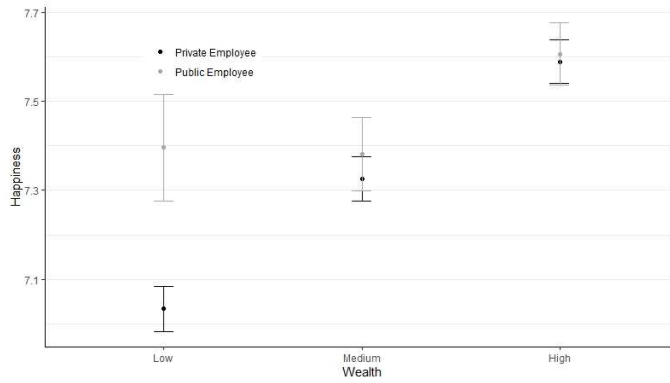95% confidence intervals.

Figure A3: **Happiness and wealth by employment type**
95% confidence intervals.

lated separately for each year. Hence, an individual of low economic status index in, say, 2004 corresponds to an individual in the lowest quartile of the distribution of the economic status index in 2004.

Figure A4 mirrors Figure 2 in the main text. Table A2 mirrors Table 2 and Table A3 mirrors Table 3. Our main conclusion that happiness is higher for public employees, only at the lowest level of economic status, remains unchanged. The effect is actually slightly stronger for the lowest quartile of the ES index (0.212) than for the lowest tertile of the index (0.142). In general, the effect seems to be concentrated at the lower end of the distribution, as also Figure 3 confirms.

Table A2: **Happiness and Economic Status Index**
Linear regression where the dependent variable is self-reported Happiness. Economic Status Index is obtained as a factor from salary, total income and wealth. Low, Medium-Low, Medium-High and High refer to the four quartiles of each distribution, stratified per year. Public employment is a dummy equal to 1 if the individual is a public employee. Controls include job type, a squared polynomial on age, gender, marital status, education, macro-region.

	Dependent variable:			
	Happiness			
	(1)	(2)	(3)	(4)
Medium-Low ES index		0.414***	0.414***	0.290***
		(0.039)	(0.039)	(0.042)
Medium-High ES index		0.694***	0.694***	0.436***
		(0.037)	(0.037)	(0.043)
High ES index		0.900***	0.900***	0.567***
		(0.036)	(0.036)	(0.045)
Public employment	0.190***	0.055*	0.055*	
	(0.029)	(0.029)	(0.029)	
Low ES index *Public employment				0.212***
				(0.082)
Medium-Low ES index *Public employment				0.061
				(0.064)
Medium-High ES index *Public employment				0.005
				(0.054)
High ES index *Public employment				0.003
				(0.048)
Socio-demographic controls	NO	NO	YES	YES
Geographical dummies	NO	NO	YES	YES
Year dummies	NO	NO	YES	YES
Observations	14,986	14,986	14,986	14,986
R^2	0.003	0.047	0.047	0.100
Adjusted R^2	0.003	0.047	0.047	0.098

Note: *p<0.1; **p<0.05; ***p<0.01

Table A3: **Happiness and other measures of economic status**
Linear regression where the dependent variable is self-reported Happiness. Low, Medium-Low, Medium-High and High refer to the four quartiles of each distribution, stratified per year. Public employment is a dummy equal to 1 if the individual is a public employee. Each regression controls for job type, a squared polynomial on age, gender, marital status, education, macro-region and year.

	Dependent variable:		
	Happiness		
	(1)	(2)	(3)
Medium-Low salary	0.248***		
	(0.041)		
Medium-High salary	0.393***		
	(0.044)		
High salary	0.501***		
	(0.047)		
Medium-Low total income		0.293***	
		(0.042)	
Medium-High total income		0.428***	
		(0.043)	
High total income		0.574***	
		(0.045)	
Medium-Low wealth			0.161***
			(0.041)
Medium-High wealth			0.290***
			(0.041)
High wealth			0.373***
			(0.043)
Low salary *Public employment	0.180**		
	(0.084)		
Medium-Low salary *Public employment	0.122**		
	(0.061)		
Medium-High salary *Public employment	−0.018		
	(0.055)		
High salary *Public employment	−0.030		
	(0.050)		
Low total income *Public employment		0.222***	
		(0.082)	
Medium-Low total income *Public employment		0.059	
		(0.064)	
Medium-High total income *Public employment		0.004	
		(0.054)	
High total income *Public employment		0.003	
		(0.047)	
Low wealth *Public employment			0.269***
			(0.081)
Medium-Low wealth *Public employment			0.113*
			(0.061)
Medium-High wealth *Public employment			−0.013
			(0.054)
High wealth *Public employment			−0.019
			(0.051)
Socio-demographic controls	YES	YES	YES
Geographical dummies	YES	YES	YES
Year dummies	YES	YES	YES
Observations	14,986	14,986	14,986
R^2	0.097	0.100	0.094
Adjusted R^2	0.095	0.098	0.092

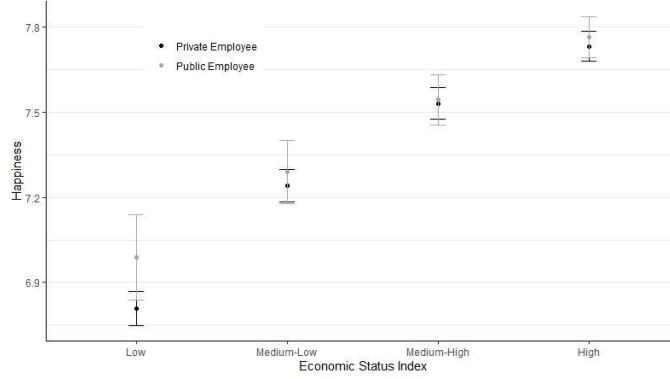Note: $^*p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

Figure A4: **Happiness and economic status by employment type**
Economic Status Index is obtained as a factor from salary, total income and wealth. 95% confidence intervals.

A.3 Continuous ES index

In Table A4 we report the regression corresponding to Figure 3. The underlying model is the following:

$$
\begin{aligned}
H_i = \beta_0 + \beta_1 P_i + \beta_2 \left(P_i \times ES_i \right) + \beta_3 \left(P_i \times ES_i^2 \right) + \\
\beta_4 \left(Pr_i \times ES_i \right) + \beta_5 \left(Pr_i \times ES_i^2 \right) + \\
+ \beta_6 SD_i + \beta_7 G_i + \beta_8 Y_i + \epsilon_i.
\end{aligned}
\tag{4}
$$

P_i is a dummy for public employment, while $Pr_i = 1 - P_i$ is a dummy for private employment. As before, we include the set of socio-demographic (SD_i), geographical (G_i) and year (Y_i) control variables presented in Table 1. Finally, ϵ_i is the error term. In this specification, we include the ES index as a continuous variable and we also include its square. This offers a different perspective on the non-linear effect of economic status and employment type on happiness. The effect is well approximated with a linear trend for public employees, with happiness increasing with economic status. This is clear from the fact that the coefficient of the interaction of the ES index squared and public employment is not significant. Since the coefficient of the ES Index interacted with private employment is positive but the coefficient of the square of the index interacted with

private employment is negative, we conclude that the effect of economic status on happiness is also positive for this category, but it flattens at high levels of economic status, as could be easily noticed in Figure 3.

Table A4: **Happiness and Economic Status Index (continuous)**
Linear regression where the dependent variable is self-reported Happiness. Economic Status Index is obtained as a factor (separately derived for each wave of the survey) from salary, total income and wealth. Public employment is a dummy equal to 1 if the individual is a public employee. Controls include job type, a squared polynomial on age, gender, marital status, education, macro-region.

	Dependent variable:	
	Happiness	
	(1)	(2)
Public employment	0.001	0.008
	(0.036)	(0.037)
ES index *Public employment	0.300***	0.149***
	(0.034)	(0.032)
ES index squared *Public employment	0.018	0.021
	(0.023)	(0.015)
ES index *Private employment	0.358***	0.228***
	(0.014)	(0.016)
ES index squared *Private employment	−0.042***	−0.046***
	(0.010)	(0.010)
Socio-demographic controls	NO	YES
Geographical dummies	NO	YES
Year dummies	NO	YES
Observations	14,986	14,986
R^2	0.058	0.107
Adjusted R^2	0.057	0.105

Note: *p<0.1; **p<0.05; ***p<0.01; Robust s.e. in parenthesis

A.4 Heterogeneous effects

In Table A5 we explore other possible heterogeneous effects in the relation between happiness and public employment. We find no interaction effect of age and public employment on happiness and (not shown) no geographical differences either. However, we find that the happiness premium

given by public employment is concentrated among males (Column 1) and among individuals who did not complete high school (Column 3). As we pointed out in Section 4, lower education is correlated to lower economic status and males are concentrated in low skilled jobs (and also enjoy a lower economic status but the difference is not as pronounced as the one between more and less educated individuals). Hence, this evidence complements our main result and urge policy makers to target these more vulnerable categories. Finally, we recognize that public employees may be intrinsically different from private employees. This may generate a selection bias in our analysis. We acknowledge this in Columns (4)-(5) of Table A5, where we repeat our benchmark analysis, from Columns (3) and (4) of Table 2, including in the specification a propensity score (Rosenbaum and Rubin, 1983). Unfortunately we were unable to find in the SHIW dataset a variable suited to describe the probability to be a public employee, without describing happiness. We then obtain the propensity score as the probability of having public employment, given the following covariates: salary, total income, wealth, job type, a squared polynomial on age, gender, marital status, education, macro-region and year. The analysis confirms our previous results and, interestingly, shows that the propensity score is not significantly different from zero. This suggests that our data do not seem to exhibit selection bias.

A.5   Job satisfaction and stability

In Table A6 we explore some tentative explanations for our main result that happiness is higher for public employees, but only for a low level of economic status. We suggested that possible explanations have to do with higher job security and "prestige" of public employment with respect to private employment, an effect which is probably more decisive for happiness of low skilled workers. Unfortunately, there is no homogeneous variable measuring job stability or job satisfaction for all the waves of the survey we investigate. However, there are some proxies in some waves. In 2004 and 2006 participants were asked if they had done anything to find a job or change job in the last 12 months. We interpret this as a measure of job instability or also job dissatisfaction, since the need and/or willingness to search for a new job can be motivated by

Table A5: **Alternative heterogeneous effects**

Economic Status Index is obtained as a factor (separately derived for each wave of the survey) from salary, total income and wealth. Public employment is equal to 1 if individual is a public employee. Controls include job type, a squared polynomial on age (not in column 2), gender, marital status, education (not in column 3), macro-region. Propensity score is the probability of having public employment, given the following covariates: salary, total income, wealth, job type, a squared polynomial on age, gender, marital status, education, macro-region and year.

	Dependent variable:				
	Happiness				
	(1)	(2)	(3)	(4)	(5)
Medium ES index	0.264***	0.271***	0.275***	0.267***	0.289***
	(0.033)	(0.033)	(0.033)	(0.033)	(0.036)
High ES index	0.429***	0.446***	0.442***	0.434***	0.454***
	(0.036)	(0.036)	(0.036)	(0.036)	(0.040)
Public employment				0.065**	
				(0.033)	
Propensity score				−0.379*	−0.377*
				(0.199)	(0.199)
Female	−0.051*	−0.067**	−0.063**	−0.062**	−0.060**
	(0.031)	(0.027)	(0.027)	(0.027)	(0.027)
High school			0.124***		
			(0.036)		
Male *Public Employment	0.085**				
	(0.041)				
Female *Public Employment	0.017				
	(0.046)				
40 to 50		−0.266***			
		(0.036)			
Over 50		−0.418***			
		(0.039)			
Below 40 *Public employment		0.057			
		(0.066)			
40 to 50 *Public employment		0.097*			
		(0.051)			
Over 50 *Public employment		0.010			
		(0.045)			
No high school *Public employment			0.182***		
			(0.061)		
Completed high school *Public employment			0.014		
			(0.036)		
Low ES Index *Public employment					0.152**
					(0.068)
Medium ES Index *Public employment					0.030
					(0.051)
High ES Index *Public employment					0.043
					(0.043)
Constant	8.669***	7.850***	8.555***	8.738***	8.722***
	(0.218)	(0.059)	(0.221)	(0.219)	(0.219)
Socio-demographic controls	YES	YES	YES	YES	YES
Geographical dummies	YES	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES	YES
Observations	14,986	14,986	14,986	14,986	14,986
R^2	0.098	0.096	0.096	0.098	0.098
Adjusted R^2	0.096	0.095	0.095	0.096	0.096

Note:	$^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$; Robust s.e. in parenthesis

these reasons. We observe that the probability is lower for public employees with low economic status. The effect is around 4% although, when we include controls the p-value is between 0.05 and 0.1 (Columns 1-2 of Table A6).

In 2016 there were two questions related to job security and/or job satisfaction. Respondents were asked the subjective probability of keeping the job (0 to 100) in the next 12 months and this is 7 points higher for public employees with low economic status, although the p-value is between 0.05 and 0.1 when we include controls (Columns 3-4 Table A6).

Respondent were also asked if they were planning to take any steps to change job in the next 12 months (dummy 1/0). This probability is significantly lower for low public employees with low economic status, since they show a probability of taking any steps to change job of about 9% lower with respect to private employees (Columns 5-6 Table A6).

Finally, in 2014, the group of respondents who said they did not want to become entrepreneurs, was asked to state their job satisfaction. For this specific group of respondents, job satisfaction is 0.656 to 0.818 points higher (on a scale from 1 to 5) for low economic status public employees.

To sum up, we cannot conclude that we proved that low economic status public employees enjoy higher perceived job stability and job satisfaction in our entire sample. However, some (even quite large) subsamples of respondents declare that they are either more likely to keep or more satisfied of their job if they are public employees of low economic status. These effects are not present for public employees of higher status.

Table A6: **Job satisfaction and stability**

Dependent variables are: Searched diff. job is a dummy equal to 1 if respondent did anything to find a job or change job in the last 12 months; Prob. keep job is the respondent's subjective probability of keeping the job in the next 12 months (0 to 100); Will. to change job is a dummy equal to 1 if the respondent plans to take any steps to change job in the next 12 months; Job satisfaction (no entrepreneur) is job satisfaction (1 to 5) for those respondents who answered "No" to the question if they want to become an entrepreneur in the next 2 years. Controls include job type, a squared polynomial on age, gender, marital status, education, macro-region.

	Dependent variable:							
	Searched diff. job		Prob. keep job		Will. to change job		Job satisfaction (no entrepreneur)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Medium ES index	−0.076***	−0.064***	8.835***	6.979***	−0.111***	−0.109***	0.386***	0.325***
	(0.013)	(0.013)	(1.215)	(1.280)	(0.011)	(0.011)	(0.052)	(0.054)
High ES index	−0.094***	−0.078***	11.651***	8.290***	−0.136***	−0.131***	0.818***	0.656***
	(0.012)	(0.013)	(1.214)	(1.376)	(0.010)	(0.012)	(0.050)	(0.057)
Low ES index *Public employment	−0.042**	−0.038*	7.030**	5.799*	−0.091***	−0.087***	0.837***	0.661***
	(0.021)	(0.021)	(3.079)	(3.123)	(0.024)	(0.024)	(0.084)	(0.088)
Medium ES index *Public employment	−0.021*	−0.021	−0.057	−0.202	−0.014	−0.008	0.429***	0.293***
	(0.013)	(0.013)	(2.231)	(2.331)	(0.015)	(0.016)	(0.070)	(0.074)
High ES index *Public employment	−0.006	−0.005	−0.830	−1.173	0.005	0.013	0.151**	0.079
	(0.010)	(0.011)	(1.760)	(1.893)	(0.012)	(0.013)	(0.059)	(0.063)
Constant	0.158***	0.275***	76.842***	73.914***	0.238***	0.443***	3.169***	2.513***
	(0.010)	(0.091)	(0.893)	(7.083)	(0.009)	(0.059)	(0.037)	(0.336)
Socio-demographic controls	NO	YES	NO	YES	NO	YES	NO	YES
Geographical dummies	NO	YES	NO	YES	NO	YES	NO	YES
Year	2004/6	2004/6	2016	2016	2016	2016	2014	2014
Observations	5,774	5,774	3,880	3,880	9,695	9,695	3,172	3,172
R^2	0.018	0.028	0.026	0.045	0.024	0.031	0.117	0.146
Adjusted R^2	0.017	0.024	0.025	0.039	0.024	0.028	0.115	0.139

Note: $^*p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$; Robust s.e. in parenthesis