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WHY GO PUBLIC? A STUDY OF THE INDIVIDUAL DETERMINANTS OF PUBLIC SECTOR EMPLOYMENT CHOICE

by Lucia Rizzica*

Abstract

This paper investigates why workers choose the public versus the private sector to understand which aspects of public sector labour contracts should be improved to attract more high-skilled individuals. Using data from the 2014 wave of the Survey of Household Income and Wealth (SHIW), the paper finds that the public sector is generally chosen for its non-pecuniary aspects, and that for highly educated workers it presents a greater disadvantage in terms of salaries, career prospects and transparency of selection procedures, and a greater advantage in terms of work-life balance and job content, both in terms of social utility and closer relation to the field of study. For high-ability individuals, moreover, the public sector disadvantage deepens for career prospects while the advantage in terms of holding employment closer to the field of study increases. Estimates on actual sorting provide evidence that high-ability individuals are more likely to start a job in the private sector when the wage distribution in the public sector is more skewed, i.e. when the career prospects are less dynamic.

JEL Classification: J24, J28, J45.
Keywords: public sector labor markets, self-selection, sorting.

Contents

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1 Introduction[1]

Human capital is a key input in the production of public services, for this reason being able to rely on a well educated, skilled and motivated workforce is a necessary condition for the good functioning of a country's public administration. Moreover, given the quantitative relevance of public sector employment, about one fifth of the total in OECD countries (OECD, 2015a), its quality directly affects the functioning of the economy as a whole.

The observed composition of the public sector workforce is the result of the process of self selection of workers into public sector jobs (supply side) and of the way the public sector, as employer, chooses its employees (demand side). Assuming that the employer screens the applicants so as to select the most capable individuals, it follows that the observed composition of the workforce is mainly driven by self selection, the more capable workers choose to apply for a public sector job, the more the resulting workforce will be composed of high skilled workers.

As self selection is the main determinant of public sector employment composition, it becomes imperative to understand what are the drivers of workers' choices, who are the workers who prefer a public sector job over a private sector one and how changes in labour market conditions affect these choices. In this paper I provide evidence on these aspects for Italy, where the quality of public services is low relative to other OECD countries (World Bank, 2015), and therefore understanding if and how its human capital endowment can be improved is of high policy relevance.

The paper is based on a novel set of questions that have been included in the Bank of Italy Survey of Household Income and Wealth (SHIW) in 2015 to understand what are the most important motivations that have driven workers towards the public or the private sector. I analyse how these motivations differ between high and low education workers and between high and low ability ones so as to identify the point of weakness of the public sector in attracting the most talented workers.

I find that for the high educated the attractiveness of the public sector decreases in relationship to salaries, career prospects and transparency of selections and increases in relationship to work-life balance and to the intrinsic job content, both in terms of social utility and relevance to the field of study. Secondly, I find that the discouraging effect of career prospects and

[1]I wish to thank Giuliana Palumbo, Paolo Sestito and Marco Tonello for useful comments and discussions. The views here expressed are those of the Author and not do necessarily reflect those of the Bank of Italy.

the attractive power of holding employment closer to the field study significantly increase for high-ability workers, who thus appear to trade off a dynamic career with a job they like when choosing the sector of employment. I eventually provide evidence that this discouraging effect of slow career prospects is reflected in the actual sorting of workers between the public and the private sector, in that when the distribution of wages in one sector is more skewed high-ability individuals are more likely to start a job in the other one.

The remainder of the paper is structured as follows: in section 2 I provide an overview of the most relevant economic literature on the drivers of workers' sorting between the public and the private sector; in section 3 I introduce the data that I employ for the analysis; in section 4 I illustrate and motivate the empirical strategy adopted; in section 5 I present the results and in section 6 some robustness checks; section 7 contains an extension of the analysis to the effects of actual labour market conditions on workers' sorting; finally, section 8 concludes.

2 Related literature

It has been widely documented that the public sector workforce tends to be largely dominated by women, elderly and highly educated workers (Cowley and Smith, 2014; Tonin and Vlassopoulos, 2015). Even if at some points in time some of these characteristics were the result of specific affirmative action policies by which the government explicitly aimed at hiring underrepresented categories, for example women (Lewis, 1988), overall the main driver of this composition is widely recognized to be workers' self-selection (Blank, 1985).

Women prefer public sector jobs because these typically entail more flexible working hours (Goldin, 2014; Wiswall and Zafar, 2016) thus allowing those with child care responsibilities to spend more time with their children (Schone, 2015). In part, also, this sectoral segregation reflects the traditional occupational segregation by sex (Blau and Hendricks, 1979): teaching, nursing and social work, essentially public sector jobs, are, indeed, the most predominantly female occupations (Blau et al., 2013).[2]

The age composition of the public sector tends instead to reflect, at least partly, the fact that public sector positions typically require higher levels of education, so that workers who enter the labour market in the public sector do so at later ages than those who enter the private

[2]See for example Buser et al. (2014) on the causes of occupational segregation by sex.

sector. Moreover, because public sector jobs are generally more secure than private sector ones, the rate of turnover in the former is lower so there is less tendency for young workers to replace the older ones.

Finally, public sector workers are more likely to hold a higher education degree because they mainly take up high skill positions such as doctors, teachers or judges. While the educational composition of both the public and the private sector has changed over time, the gap between the two has remained essentially constant. For example, the existing evidence for the US shows that from the 70s the share of workers with a bachelor degree has increased much more in the private than in the public sector, whereas in the latter it was the share of workers with an advanced degree that increased significantly, thus the gap between the two sectors narrowed only marginally (Mayer, 2014).

Some literature has also focused on the differences between private and public sector workers in terms of skills. The earliest contributions stressed the idea that public sector jobs would be more attractive to low ability individuals in that, with higher levels of unionization, these would guarantee more standardized seniority ladders (Abowd and Farber, 1982). More recent studies, on the other hand, could rely on accurate measures of ability based on standardised cognitive test scores, for example the OECD Programme for the International Assessment of Adult Competencies (PIAAC), to trace the differences in terms of ability between public and private sector workers. The picture that is derived is one in which public sector workers display higher levels of cognitive skills than private sector ones (Hanushek et al., 2015) but these differences are mostly explained by the different composition of the samples. Indeed, alternative measures of ability, based for example on the amount of time employed to obtain a given degree, seem to suggest that public sector workers have on average lower ability than private sector ones (Rizzica, 2015).

Several other differences appear between public and private sector workers' unobservable characteristics: the former are generally more risk averse (Buurman et al., 2012; Dur and Zoutenbier, 2015), exhibit higher levels of trust (Brewer, 2003; Dohmen and Falk, 2010) and are more inclined towards pro-social behaviours (Gregg et al., 2011; Tonin and Vlassopoulos, 2015). On this respect, some recent literature emphasized the existence of a link between public sector choice and individual propensity towards corruption: Hanna and Wang (2013) and Banerjee

et al. (2015) suggested that those more prone to commit and accept illicit behaviours, hence less pro-social, would be more likely to choose the public sector in countries with high levels of corruption, while the opposite would be true in countries with low levels of corruption (Cowley and Smith, 2014; Barfort et al., 2015).

Evidence on what characteristics of the public sector attract what type of workers is instead quite scattered. Several studies have focused on wage differentials, Krueger (1988) for instance, showed that higher wages attract more high quality applicants, these being identified as those judged minimally qualified to perform their prospective job by the US Office of Personnel Management. Similarly, Propper and Van Reenen (2010) showed that in the UK, when the competitive private sector wage for nurses increased relative to the regulated public sector wage, the quality of the workers who remained in the public sector fell significantly.

Partly related to this literature is the work of Borjas (2002), who showed that the quality of new hires in federal jobs in the US increased when the distribution of wages in the sector was less skewed relative to the private. This would suggest that high-ability individuals are not only attracted by high expected wages but also by sufficiently dynamic career paths in which the most deserving individuals can be rewarded for their skills and effort. Luechinger et al. (2008) find, indeed, that, among German workers, those who attribute more importance to being successful in their career tend to self-select into the private sector. As a matter of facts, the literature suggests that wages in the public sector tend to be higher than in the private only at the lower tail of the distribution, and equal, or even lower, at the upper tail (Poterba and Rueben, 1994; Mueller, 1998; Jurges, 2002; Melly, 2005). This is in line with some studies that documented that the public sector exhibits lower returns to education (Poterba and Rueben, 1994) and to skills (Hanushek et al., 2015).

On the other hand, the public sector has traditionally had an advantage over the private in terms of job security, which is usually perceived higher than in the private sector (Clark and Postel-Vinay, 2009; Luechinger et al., 2008). In light of this "job security premium", more risk averse individuals would self-select into the public sector. Very little evidence exists, instead, on how perceived job security affects workers' self-selection in terms of skills and ability. Pfeifer (2011) provides some evidence that job security matters more for highly qualified than for low qualified individuals, while Rizzica (2015) shows that the same holds if one considers measures

of ability instead of education.

The other important advantage of the public over the private sector is the work specific content: Heywood et al. (2002), for instance, investigated the degree of job satisfaction of British workers and suggested that there is a positive difference in the level of job satisfaction between public and private sector workers, and that, despite being mainly due to sorting, this difference comes from "the work itself" and from "better relations with the boss", rather than from pay differentials. Similar evidence has been provided for Italy by Reyneri and Centorrino (2007) who showed that Italian young public sector workers are more satisfied than their private sector peers especially for what concerns the relevance of their studies for the job, the cultural interest of the job and its social utility. Ghinetti (2007), on the other hand, found no difference between public and private sector workers interviewed in the 1995 wave of the SHIW, regarding their stated level of interest for their job .

That social utility of public sector jobs is one of the aspects which most attracts workers has been documented in many studies (Finan et al., 2016). What is instead still debated is what kind of workers this attracts. To this respect, Ashraf et al. (2014) have provided interesting novel evidence from an experimental setting in Zambia. The authors compared health workers hired through a job ad that emphasized the social content of the job to workers hired through an ad that instead emphasized the associated career prospects. Their findings show that the latter channel attracted a pool of workers who were more skilled and equally pro-social, thus arguing that there is complementarity between intrinsic pro-social motivation and invidualistic career concerns.

The present paper aims to provide evidence on what job characteristics attract what type of workers. To this extent, various aspects of the job are analysed: earnings differentials, career prospects, job stability, working hours flexibility, intrinsic motivation, but also perceived transparency of the selection procedures.

3 Data and descriptive statistics

3.1 Data

The analysis is based on data from the 2014 wave of the Bank of Italy's Survey of Household Income and Wealth (SHIW). This is a biennial survey that contains information on about 8,000

Italian families, including individual characteristics such as age, education, work experience, occupation, earnings, working hours and working history. These data are particularly suitable to analyse differences between public and private sector workers because respondents are explicitly asked to report whether they work for a company in the private or the public sector, a piece of information which is missing in all other available individual surveys (for example the Labour Force Survey or the EUSILC).

The 2014 wave of the SHIW contains a set of questions explicitly aimed at capturing the motivations that led respondents to choose to work in either sector. All payroll or atypical employees, the currently unemployed and the retired payroll workers were asked to think of when they began their current or last job and state whether they had explicitly chosen the sector or had no other job opportunities. Then, if they declared having chosen the sector of employment, they were listed a number of reasons why one would choose the sector and asked to report how important each of these had been for their own choice. The reasons listed were:

1. Job stability ("stability");
2. Salary and other payments ("pay");
3. A more dynamic career path ("career paths");
4. Working hours fit in better with personal needs ("work-life balance");
5. Closest to home ("distance from home");
6. I want to do a job that is useful to society ("social utility");
7. Closest to my study and training path ("relevance to studies");
8. Transparency of the selection process ("transparency of selections")

To each of these reasons respondents had to give a score between 1 and 5, where 1 was "not at all important", 2 "not very important", 3 "a little important", 4 "fairly important" and 5 "very important".

Over 5,000 individuals were initially selected to answer this set of questions, but the sample was then significantly reduced because about half of the respondents declared that they had not chosen to work for the public or private sector explicitly, but just had no other job opportunities.

3.2 Descriptive statistics

The full sample of non self employed adult workers and retirees was made of 5,228 respondents. Their main observable characteristics are reported in table 1, comparing those employed in the private sector with those employed in the public sector.

Table 1: Descriptive Statistics, full sample.

	(1) Private	(2) Public	(3) (1)-(2)
Age	58.824	62.191	-3.367***
Women	0.382	0.425	-0.043**
Less than secondary education	0.560	0.284	0.275***
Secondary education	0.356	0.427	-0.072***
Tertiary education	0.085	0.289	-0.204***
Payroll employee	0.459	0.449	0.010
Atypical employee	0.006	0.002	0.004
Unemployed	0.081	0.012	0.068***
Retired	0.454	0.537	-0.083***
Years since started job	35.558	37.886	-2.328***
Yearly net earned income	16939.432	20564.799	-3625.367***
Working hours per week	36.928	34.592	2.336***
Married	0.595	0.618	-0.023
Household size	2.404	2.377	0.027
Children < 16	0.315	0.192	0.122***
Risk Aversion	3.496	3.392	0.104***
Observations	3690	1538	5228

Notes: Mean values reported. *** p<0.01, ** p<0.05, * p<0.1.

It clearly appears that public sector workers are, on average, older. This is due to late entry rather than early exit because retired workers are included in the analysed sample. The share of women is also slightly larger in the public sector, as suggested by the literature cited in section 2. The share of people holding a secondary education degree is higher as is that of workers holding a tertiary education degree. Looking at the composition of the two samples in terms of occupational status, it turns out that both for the private and the public sector, over a third of respondents were payroll employees at the time of survey and a negligible share were atypical workers, the unemployed were 6% in the private sector and 2% in the public, the retired were 36% in the private and 43% in the public. The preponderance of retired workers in the sample is, indeed, reflected in the very high average age reported in the table. Yearly earnings are considerably higher in the public, while the number of weekly working hours is lower. This is consistent with the findings in Depalo et al. (2015) by which there is a significant gap in public-private sector hourly wages. Finally, there appear no relevant differences in terms of household

structure: in both sectors almost half of the respondents were married and had children, but the number of these is higher in the private compared to the public sector, differently from what the literature usually finds for other countries (Schone, 2015).

Table 2: Descriptive Statistics, restricted sample.

	(1) Private	(2) Public	(3) (1)-(2)
Age	59.300	62.160	-2.860***
Women	0.341	0.423	-0.082***
Less than secondary education	0.453	0.266	0.186***
Secondary education	0.414	0.427	-0.013
Tertiary education	0.133	0.307	-0.174***
Payroll employee	0.472	0.446	0.026
Atypical employee	0.006	0.002	0.004
Unemployed	0.042	0.007	0.035***
Retired	0.479	0.544	-0.065***
Years since started job	36.127	38.096	-1.968**
Yearly net earned income	20596.936	21091.026	-494.090
Working hours per week	38.219	34.562	3.656***
Married	0.648	0.620	0.029
Household size	2.437	2.367	0.070
Children < 16	0.322	0.197	0.125***
Risk Aversion	3.391	3.397	-0.006
Observations	1436	1262	2698

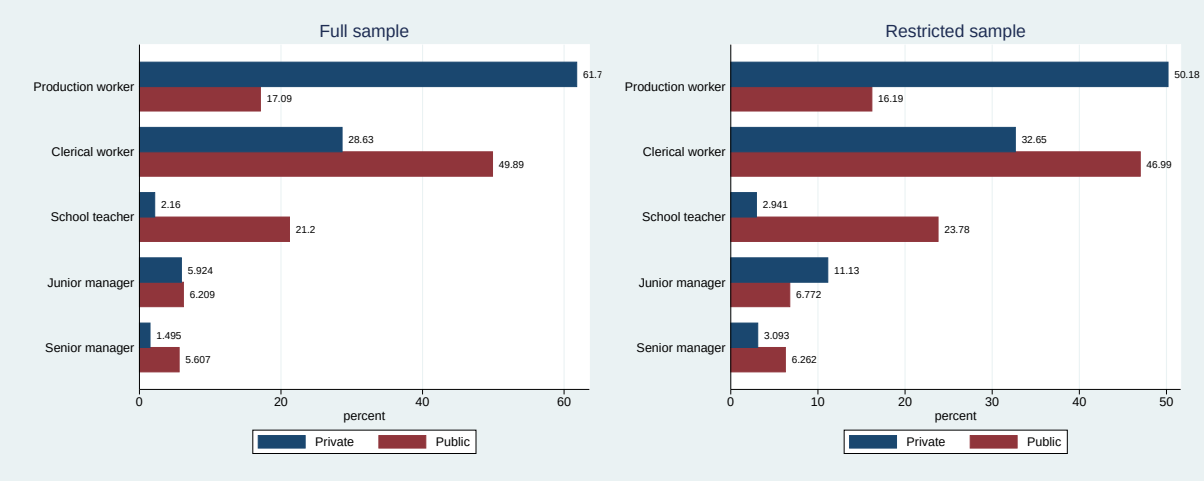
Notes: Mean values reported. *** p<0.01, ** p<0.05, * p<0.1.

In table 2 I report the same observable characteristics for the restricted sample of respondents who declared having chosen to work in the private or public sector explicitly. These are 82% of public sector workers and only 40% of private sector ones. Comparing tables 1 and 2, it appears that the attrition generated by the incidence of having no job alternatives eliminates from the sample the least educated workers, those who earned less, and a good share of unemployed. Therefore the analysis carried out in this paper will be based on a positively selected sample of relatively more skilled workers, especially for the private sector. Moreover it turns out that the most risk averse individuals who work in the private sector are more likely to drop out of the sample because they declare not having chosen their sector of employment. This is consistent with the job search literature (Pissarides, 2000) by which more risk averse individuals are more likely to accept lower pay jobs rather than wait for a better offer.

Other interesting dimensions of comparison between public and private sector workers concern the type of job and the field of study of workers in the tow sector. Figure 1 shows the

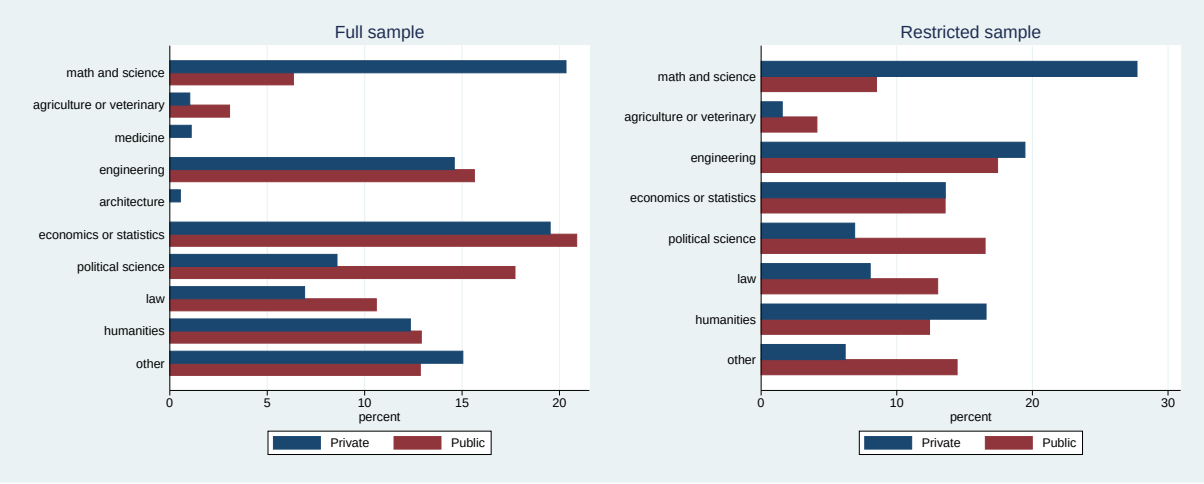
positions held by workers in the two samples. The figure is proposed both for the full and for the restricted sample. Note that in this case there is a further source of attrition in that the classification is only available for current payroll employees and excludes the atypical workers, the unemployed and the retired. What we learn, yet, is that the private sector disproportionately employs low skilled workers, while the public sector tends to employ primarily clerical workers. The share of production workers in the private sector decreases significantly when we consider the restricted sample of those who explicitly chose to work in the sector, but remains considerably larger than in the public. Also the share of managers is slightly higher in the public than in the private sector, both for junior and senior managers when we consider the full sample, only for senior in the restricted sample.

Figure 1: Type of job, full and restricted sample.



A final figure that conveys interesting information is that related to the composition of the two sectors in terms of field of study of those with tertiary education. To get two comparable samples I only consider here clerical workers and managers and exclude the sectors of health and education. The resulting picture, both for the full and for the restricted sample, is one in which the public sector displays an over-representation of political science and humanities graduates, and a significant under-representation of STEM (Science, Technology, Engineering and Mathematics) graduates.

Figure 2: Type of degree of tertiary educated workers.



Moving to the core of the analysis, table 3 shows how workers of the two sectors differ in the reasons why they chose their sector of employment. The first feature to note is that public sector workers assign more importance to essentially all job characteristics. This is in line with the finding reported by Ghinetti (2007) that public sector workers are more satisfied than their private sector peers along all job characteristics. Yet, there is one aspect for which workers show no preference for the public sector and that is the possibility of having a more dynamic career path. Looking at the magnitude of the differentials, the largest advantages of the public sector appear to be job stability and the social utility of the job.

Table 3: Descriptive evidence: motivation

	(1) Private	(2) Public	(3) (1)-(2)
Stability	3.653	4.293	-0.640***
Pay	3.655	3.765	-0.111**
Career paths	3.316	3.255	0.061
Work-life balance	3.398	3.850	-0.452***
Distance from home	3.366	3.383	-0.018
Social utility	3.204	3.976	-0.772***
Relevance to studies	3.368	3.797	-0.429***
Transparency of selections	3.265	3.520	-0.255***
Observations	2682		

Notes: Average of categorical variables with values 1-5, where 1 is "not at all important", 2 "not very important", 3 "a little important", 4 "fairly important" and 5 "very important".

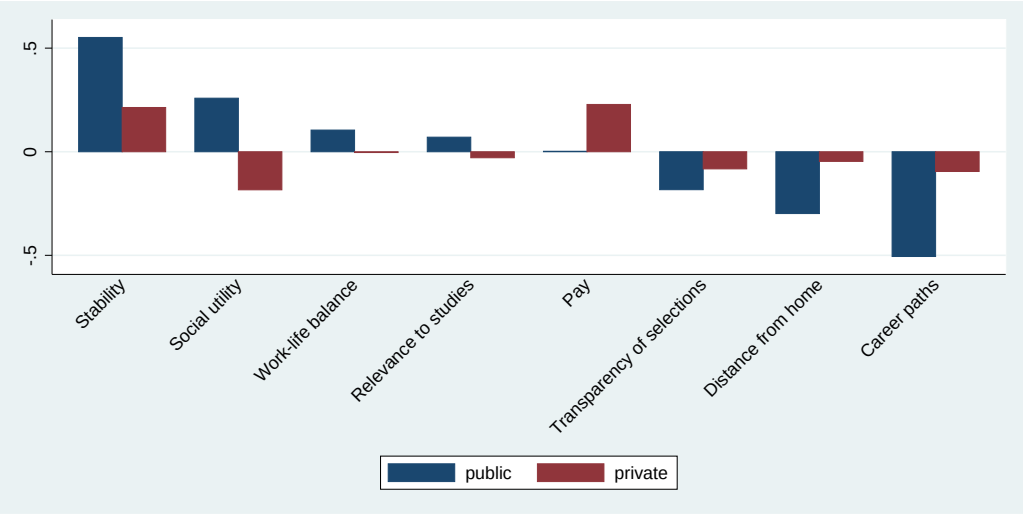
4 Empirical strategy

The empirical relation of interest is that between individual motivations and sector of employment, with a focus on heterogeneity by education and ability. Indeed, we want to understand (i) whether public sector workers are more or less likely to be attracted by certain features of the public or private sector; (ii) how these propensities change depending on the level of education or ability of individuals. The empirical specification adopted is the following:

$$(y_{ij} - \bar{y}_i) = \alpha + \beta_1 Public_i + \beta_2 (Public_i \times X_i) + \beta_3 X_i + \epsilon_i \tag{1}$$

The outcome variable is the difference between y_{ij}, the importance that individual i attributes to factor j in the choice of the sector of employment and $\bar{y}_i$, the average score that individual i attributes to the eight factors. Measuring individual motivations in terms of deviations from the mean allows me to scale them by an individual fixed effect so as to interpret all outcomes in terms of relative attractiveness. Figure 3 shows the distribution of these variables in the public and in the private sector, highlighting that the former is more likely to be chosen for non pecuniary aspects of the job, namely stability, social utility, work-life balance considerations and relevance of the job to the field of study, whereas salaries and career prospects are more attractive to private sector workers.

Figure 3: Influence of the various factors on the decision to work in the public and private sectors



Notes: Average deviation from individual mean score, by sector and motivation.

There are several dimensions of potential heterogeneity that are of interest. The first is age: the Italian public sector is characterized by a severe over representation of older workers; according to the EU Labour Force Survey (EULFS) data, in 2013 about 44% of italian public sector workers were aged 50 and above, while the same figures for Germany, France and UK varied between 32% and 35%. I is thus interesting to understand how individuals' labour supply decisions contribute to explain this stylized fact and what are the main motivational drivers of young workers' choices. The second dimension of interest is gender: as discussed in section 2 women predominantly sort in the public sector, but cross country comparisons show that this happens to a slightly lesser extent in Italy (OECD, 2015b), we want to understand why. Finally, what policy makers will be primarily interested in is having a highly educated and skilled public sector workforce. International comparisons reveal that Italian public sector workers are relatively less educated and skilled according to international standardised test scores, though this is primarily a fallacy of the economy as a whole, rather than of the public sector per se.

In this paper I thus look at differences in the importance given to the various job aspects depending on the level of education and on the level of ability. To measure the latter I propose two types of measures. The first is based on the grade obtained in the highest level of educational attainment achieved, the second on the time that each individual employed to obtain this degree. The former can be interpreted as a measure of individual preparation and knowledge, the latter as a measure of individual efficiency or ability to stay on target, thus incorporating also the non cognitive trait of *conscientiousness*, i.e. the tendency to show self-discipline, act dutifully, and aim for achievement. Table 4 reports various measures of ability that take into account either the grade or the time employed to obtain a degree. All measures are standardised between 0-1 so that higher values correspond to higher ability. The measures of ability based on time t to obtain a degree d are built according to expression (2):

$$Ability_i \equiv [1 + t_{id} - \min(t_d)]^{-1} \tag{2}$$

thus higher values correspond to less time to get the degree relative to individuals with the same degree (level of educational attainment), same degree and field of study, same degree and age, same degree and grade, same degree, age and grade.

Table 4: Descriptive evidence: measures of ability

	(1) Private	(2) Public	(3) (1)-(2)
A. Full sample			
Grade of degree	0.798	0.849	-0.051***
Grade of degree, by degree and field	0.841	0.879	-0.038***
Grade of degree, by degree, field and cohort	0.873	0.905	-0.032***
Time to degree, by degree	0.181	0.195	-0.014**
Time to degree, by degree and field	0.188	0.205	-0.018***
Time to degree, by degree and cohort	0.380	0.370	0.009
Time to degree, by degree and grade	0.333	0.314	0.019*
Time to degree, by degree, cohort and grade	0.717	0.685	0.032*
Observations			2289
B. Restricted sample			
Grade of degree	0.819	0.857	-0.037***
Grade of degree, by degree and field	0.857	0.885	-0.028***
Grade of degree, by degree, field and cohort	0.885	0.910	-0.025***
Time to degree, by degree	0.186	0.195	-0.009
Time to degree, by degree and field	0.191	0.206	-0.015*
Time to degree, by degree and cohort	0.377	0.365	0.012
Time to degree, by degree and grade	0.338	0.309	0.030*
Time to degree, by degree, cohort and grade	0.721	0.679	0.042*
Observations			1491

Notes: mean coefficients. *** p<0.01, ** p<0.05, * p<0.1.

The table shows that there is an advantage of public sector workers when we compare them in terms of grades,[3] time to obtain their degree by degree and time to obtain their degree by degree and field of study.[4] On the other hand, public sector workers appear to lose their advantage over private sector ones when I employ measures of ability that compare workers within cohort. Combined with the stylized fact that public sector workers are on average older, this suggests that there has been a worsening in the quality of public sector workers over time. Also controlling for the grade obtained leads to a reversal of the public sector ability advantage.[5]

[3]This is also mechanically due to the fact that competitive examinations for public sector jobs typically impose a minimum grade requirement to participate.

[4]These are classified into STEM (Science, Technology, Engineering, Mathematics), Economics and Social Sciences, Humanities, Other Tertiary for tertiary degrees and into Licei, Technical or Professional schools, and Other Secondary for secondary education degrees.

[5]Note that refining the ability measure by comparing individuals within thinner cells tends to artificially increase the average level of ability because the number of individuals to which each worker is compared becomes very small, so there is a trade off between the degree of refinement of the measure of ability and its reliability due to the relatively small sample size. In the regressions I will employ the raw measures based on grade and time to degree, by degree only and control for age. Different specifications will be presented in the robustness checks in section 6.

5 Results

I now turn to the description of the results obtained from the estimation of (1). In table 5 I show how the stated importance of each factor j, relative to individual specific mean scores, varies with her characteristics and to what extent it does so differently for the public and the private sector.

I find, as suggested by figure 3, that the public sector is generally preferred in terms of stability, work-life balance possibilities and social utility of the job. For all other job features, instead, the private sector is significantly more attractive than the public. In terms of observable characteristics, I find that youths tend to be less motivated by stability and relevance to the field of study than older workers, while they are keener on career prospects and social utility of their job. Women, instead, turn out to be significantly less concerned about salaries and career paths when choosing their job, the only aspects they value more than men are work-life balance considerations in terms of flexible working hours and distance from home. Finally, as the level of educational attainment increases, workers tend to put less weight on stability, salaries and work-life balance considerations, but more weight on social utility, relevance of the jobs to academic qualifications and transparent selections. Workers with a secondary education degree further appear to care more about career patterns.

When I look at how these results vary between the public and the private sector, i.e. I interact all these observable characteristics with a public sector indicator, I find that: (i) relative to older workers, youths in the public sector are significantly more likely to be attracted by the pay than youths in the private sector; (ii) the difference between women and men in the public sector is positive and significantly larger than in the private sector for salaries and relevance to the field of study, negative for social utility and transparency of selections; (iii) highly educated people who chose the public sector were, relative to those with lower educational attainment, less attracted by the pay, by the career prospects and by the transparency of the selection procedures and more attracted by work-life balance considerations (flexible working hours and distance from home) and from the job content (its social utility and its relevance to the field of study); (iv) among those with tertiary education, salaries and career prospects are eventually more attractive in the private than in the public sector.

Table 5: Importance of each motivation relative to average individual score. OLS regressions. Heterogeneity by educational attainment.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Stability		Pay		Career paths		Work-life balance		Distance from home		Social utility		Rel. studies		Transp. selections	
Public	0.341***	0.411***	-0.161***	0.024	-0.368***	-0.245***	0.136***	0.079	-0.207***	-0.288***	0.420***	0.289***	-0.068*	-0.322***	-0.092***	0.052
	(0.032)	(0.052)	(0.029)	(0.046)	(0.032)	(0.054)	(0.031)	(0.050)	(0.037)	(0.062)	(0.032)	(0.055)	(0.036)	(0.057)	(0.029)	(0.047)
Under 35	-0.167*	-0.171*	-0.025	-0.181**	0.209***	0.178**	-0.067	-0.026	-0.010	0.009	0.188**	0.180**	-0.204**	-0.092	0.076	0.101
	(0.090)	(0.093)	(0.079)	(0.090)	(0.073)	(0.081)	(0.075)	(0.083)	(0.095)	(0.105)	(0.077)	(0.081)	(0.092)	(0.101)	(0.080)	(0.088)
Female	-0.046	-0.029	-0.113***	-0.141***	-0.242***	-0.261***	0.178***	0.165***	0.199***	0.243***	0.014	0.055	0.029	-0.072	-0.021	0.041
	(0.031)	(0.044)	(0.028)	(0.037)	(0.032)	(0.042)	(0.030)	(0.041)	(0.036)	(0.046)	(0.031)	(0.041)	(0.035)	(0.048)	(0.029)	(0.039)
Secondary education	-0.036	0.020	-0.079***	0.013	0.109***	0.128***	-0.068**	-0.075*	-0.282***	-0.332***	-0.081**	-0.149***	0.384***	0.279***	0.053*	0.116***
	(0.033)	(0.044)	(0.030)	(0.039)	(0.034)	(0.043)	(0.032)	(0.041)	(0.039)	(0.048)	(0.034)	(0.043)	(0.037)	(0.048)	(0.031)	(0.040)
Tertiary education	-0.164***	-0.176**	-0.275***	0.035	0.010	0.320***	-0.148***	-0.270***	-0.634***	-0.773***	0.185***	-0.014	0.887***	0.661***	0.138***	0.217***
	(0.044)	(0.074)	(0.041)	(0.062)	(0.046)	(0.062)	(0.044)	(0.072)	(0.053)	(0.079)	(0.046)	(0.068)	(0.049)	(0.081)	(0.041)	(0.061)
Under 35 × public		0.007		0.506***		-0.038		-0.102		-0.018		0.138		-0.288		-0.204
		(0.257)		(0.184)		(0.173)		(0.189)		(0.237)		(0.212)		(0.245)		(0.205)
Female × public		-0.024		0.105*		0.071		0.017		-0.114		-0.117*		0.170**		-0.109*
		(0.062)		(0.056)		(0.066)		(0.061)		(0.073)		(0.063)		(0.069)		(0.059)
Secondary × public		-0.134**		-0.271***		-0.092		0.028		0.153*		0.207***		0.260***		-0.152**
		(0.067)		(0.061)		(0.072)		(0.066)		(0.082)		(0.070)		(0.076)		(0.064)
Tertiary × public		-0.010		-0.589***		-0.544***		0.206**		0.282***		0.393***		0.419***		-0.158*
		(0.093)		(0.082)		(0.091)		(0.093)		(0.109)		(0.094)		(0.103)		(0.083)
Constant	0.310***	0.283***	0.362***	0.300***	-0.058**	-0.099***	-0.015	0.006	0.094***	0.117***	-0.206***	-0.165***	-0.311***	-0.209***	-0.174***	-0.233***
	(0.027)	(0.033)	(0.024)	(0.028)	(0.027)	(0.032)	(0.026)	(0.030)	(0.030)	(0.033)	(0.027)	(0.031)	(0.029)	(0.033)	(0.025)	(0.029)
Observations	2699	2699	2699	2699	2699	2699	2699	2699	2699	2699	2699	2699	2699	2699	2699	2699
R^2	0.0485	0.0502	0.0481	0.0699	0.0777	0.0911	0.0230	0.0255	0.0871	0.0903	0.0883	0.0960	0.1219	0.1318	0.0075	0.0121

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

The second set of results are reported in tables 6 and 7 and show how the relative importance attributed to each job feature varies with individual ability, measured either in terms of grades (table 6) or in terms of time to get the degree (table 7). In both cases individuals are divided into high-ability and low ability depending on whether they are above or below the median value of the respective ability measure. Note that the sample here is restricted to those who hold an upper secondary or tertiary degree, as for the others no information on the time employed to get the degree is available. This implies that the effect that we find adds on that for highly educated individuals, indicating that among these there is a further differential effect depending on ability.

The results from the regression that employs grades as measure of ability delivers no significant differences: those with high grades are only less keen on stability than the others, with no significant difference between the private and the public sector. This suggests that there are no significant pros or cons of public employment for those with high grades, though the signs of the coefficients seem to suggest that those with high grades were more likely than those in the private to having chosen their sector of employment for salaries, career and relevance to the field of study, rather than for stability, flexible working hours or social utility.

In table 7, when looking at possible differential effects depending on individual ability to stay on target, i.e. time to get a degree, I find again no significant differences in the stated importance of each motivation between high and low ability individuals, averaging between the public and the private sector. Looking, instead, at public private differentials, I find that (i) career prospects are less important for individuals in the public sector and this difference is significantly larger for high-ability workers, (ii) public sector workers are less attracted than private sector ones by relevance to the academic qualifications if they are low ability, and significantly more attracted if they are high-ability.

Table 6: Importance of each motivation by ability in terms of grade of degree. OLS regressions. Heterogeneity by grade at degree.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Stability		Pay		Career paths		Work-life balance		Distance from home		Social utility		Rel. studies		Transp. selections	
Public	0.310***	0.310***	-0.338***	-0.350***	-0.500***	-0.439***	0.191***	0.184**	-0.117**	-0.060	0.536***	0.563***	0.081	-0.116	-0.162***	-0.091
	(0.044)	(0.071)	(0.041)	(0.068)	(0.045)	(0.075)	(0.044)	(0.074)	(0.054)	(0.091)	(0.046)	(0.076)	(0.051)	(0.086)	(0.043)	(0.074)
Under 35	-0.274***	-0.243**	-0.050	-0.210*	0.130	0.079	-0.056	-0.006	0.081	0.054	0.276***	0.255***	-0.168	-0.047	0.062	0.117
	(0.099)	(0.109)	(0.101)	(0.111)	(0.089)	(0.098)	(0.091)	(0.105)	(0.121)	(0.136)	(0.085)	(0.095)	(0.116)	(0.127)	(0.102)	(0.109)
Female	-0.029	-0.010	-0.088**	-0.167***	-0.255***	-0.334***	0.204***	0.227***	0.206***	0.346***	0.017	0.122*	-0.033	-0.232***	-0.022	0.047
	(0.043)	(0.072)	(0.040)	(0.061)	(0.046)	(0.067)	(0.042)	(0.067)	(0.052)	(0.077)	(0.045)	(0.070)	(0.048)	(0.077)	(0.042)	(0.060)
Tertiary education	-0.077	-0.170*	-0.155***	0.027	-0.129**	0.148**	-0.131***	-0.236***	-0.330***	-0.400***	0.291***	0.170**	0.446***	0.396***	0.085*	0.065
	(0.053)	(0.087)	(0.049)	(0.071)	(0.054)	(0.073)	(0.051)	(0.079)	(0.063)	(0.088)	(0.053)	(0.079)	(0.056)	(0.090)	(0.050)	(0.073)
High ability	-0.095*	-0.058	-0.025	-0.066	0.059	0.020	0.066	0.098	-0.034	-0.028	-0.044	-0.015	0.033	-0.015	0.039	0.066
	(0.052)	(0.074)	(0.046)	(0.063)	(0.052)	(0.068)	(0.048)	(0.065)	(0.060)	(0.078)	(0.050)	(0.071)	(0.054)	(0.075)	(0.049)	(0.066)
Under 35 × public		-0.100		0.633***		0.148		-0.179		0.033		0.056		-0.320		-0.271
		(0.293)		(0.220)		(0.201)		(0.213)		(0.291)		(0.210)		(0.303)		(0.260)
Female × public		-0.033		0.136*		0.134		-0.040		-0.236**		-0.175*		0.331***		-0.116
		(0.089)		(0.081)		(0.091)		(0.087)		(0.104)		(0.091)		(0.098)		(0.083)
Tertiary × public		0.161		-0.305***		-0.468***		0.180*		0.118		0.209*		0.068		0.036
		(0.111)		(0.097)		(0.105)		(0.104)		(0.125)		(0.107)		(0.115)		(0.101)
High ability × public		-0.074		0.079		0.085		-0.063		-0.014		-0.062		0.099		-0.050
		(0.103)		(0.092)		(0.102)		(0.096)		(0.119)		(0.100)		(0.107)		(0.098)
Constant	0.332***	0.331***	0.374***	0.381***	0.125***	0.094*	-0.142***	-0.140***	-0.246***	-0.273***	-0.356***	-0.368***	0.024	0.120**	-0.110***	-0.145***
	(0.041)	(0.051)	(0.040)	(0.050)	(0.042)	(0.049)	(0.041)	(0.052)	(0.050)	(0.062)	(0.044)	(0.055)	(0.049)	(0.060)	(0.041)	(0.050)
Observations	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489	1489
R^2	0.0471	0.0487	0.0699	0.0830	0.1169	0.1303	0.0358	0.0383	0.0424	0.0461	0.1220	0.1263	0.0643	0.0733	0.0138	0.0164

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

Table 7: Importance of each motivation by ability in terms of time to degree. OLS regressions. Heterogeneity by time to degree.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Stability		Pay		Career paths		Work-life balance		Distance from home		Social utility		Rel. studies		Transp. selections	
Public	0.304***	0.306***	-0.345***	-0.336***	-0.501***	-0.303***	0.197***	0.172**	-0.115**	-0.155	0.541***	0.533***	0.080	-0.184**	-0.161***	-0.033
	(0.045)	(0.084)	(0.041)	(0.079)	(0.045)	(0.087)	(0.044)	(0.086)	(0.054)	(0.107)	(0.046)	(0.091)	(0.051)	(0.093)	(0.043)	(0.084)
Under 35	-0.269**	-0.240**	-0.046	-0.207*	0.133	0.078	-0.060	-0.010	0.080	0.057	0.273***	0.259***	-0.171	-0.049	0.058	0.112
	(0.106)	(0.109)	(0.101)	(0.111)	(0.090)	(0.098)	(0.091)	(0.105)	(0.121)	(0.135)	(0.085)	(0.095)	(0.116)	(0.128)	(0.102)	(0.108)
Female	-0.036	-0.018	-0.093**	-0.171***	-0.247***	-0.345***	0.211***	0.236***	0.202***	0.357***	0.014	0.116*	-0.037	-0.218***	-0.014	0.042
	(0.043)	(0.073)	(0.040)	(0.061)	(0.046)	(0.066)	(0.043)	(0.068)	(0.052)	(0.076)	(0.045)	(0.070)	(0.049)	(0.078)	(0.042)	(0.061)
Tertiary education	-0.136***	-0.193**	-0.176***	-0.006	-0.109**	0.175**	-0.086*	-0.178**	-0.345***	-0.440***	0.278***	0.162**	0.468***	0.366***	0.106**	0.115*
	(0.046)	(0.079)	(0.044)	(0.072)	(0.048)	(0.070)	(0.046)	(0.079)	(0.056)	(0.089)	(0.048)	(0.076)	(0.052)	(0.088)	(0.045)	(0.070)
High ability	0.002	0.021	0.006	-0.007	-0.046	0.061	0.017	0.021	0.016	-0.071	0.031	0.022	-0.014	-0.112	-0.011	0.065
	(0.044)	(0.070)	(0.042)	(0.065)	(0.046)	(0.065)	(0.044)	(0.071)	(0.054)	(0.081)	(0.047)	(0.072)	(0.050)	(0.079)	(0.044)	(0.065)
Under 35 × public		-0.102		0.640***		0.184		-0.180		0.007		0.032		-0.326		-0.255
		(0.293)		(0.220)		(0.204)		(0.213)		(0.291)		(0.210)		(0.299)		(0.261)
Female × public		-0.031		0.135*		0.166*		-0.044		-0.261**		-0.170*		0.301***		-0.096
		(0.090)		(0.081)		(0.091)		(0.087)		(0.104)		(0.092)		(0.101)		(0.084)
Tertiary × public		0.095		-0.279***		-0.464***		0.151		0.155		0.191*		0.164		-0.013
		(0.096)		(0.089)		(0.094)		(0.098)		(0.115)		(0.098)		(0.108)		(0.091)
High ability × public		-0.034		0.021		-0.182**		-0.007		0.150		0.011		0.172*		-0.130
		(0.089)		(0.084)		(0.091)		(0.091)		(0.109)		(0.095)		(0.102)		(0.087)
Constant	0.303***	0.300***	0.367***	0.365***	0.171***	0.062	-0.138***	-0.127*	-0.267***	-0.238***	-0.392***	-0.386***	0.048	0.186***	-0.092**	-0.163***
	(0.047)	(0.061)	(0.045)	(0.060)	(0.047)	(0.062)	(0.048)	(0.065)	(0.058)	(0.078)	(0.051)	(0.068)	(0.052)	(0.069)	(0.046)	(0.059)
Observations	1484	1484	1484	1484	1484	1484	1484	1484	1484	1484	1484	1484	1484	1484	1484	1484
R^2	0.0443	0.0455	0.0739	0.0880	0.1175	0.1331	0.0365	0.0389	0.0418	0.0469	0.1256	0.1299	0.0653	0.0753	0.0133	0.0172

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

These results indicate thus that in order to discriminate between high and low ability individuals and induce the former to apply for a public sector job, the Public Administration should reinforce the career prospects for high-ability individuals and ensure a good match between workers' attitudes and skills and employers' mission (Besley and Ghatak, 2005) so as to fully exploit the attractive power of doing a job close to one's studies. Note also, that I find no evidence of substitution between skills (education or ability) and pro-social motivation. Indeed, high education individuals are more attracted by social utility than low education ones and there is no significant difference between high-ability and low ability workers.

6 Robustness checks

In this section I tackle several potential limitations of the empirical analysis to corroborate the main findings of tables 5 and 7. The first battery of checks will focus on the representativeness of the SHIW data employed in the analysis; secondly, I will concentrate on the issue of sample selection; finally, I will provide evidence to strengthen the validity of the measure of individual ability used and present results for varying definitions of ability.

6.1 Representativeness of the SHIW sample

Compared to the Labour Force Survey (LFS), the SHIW has a much smaller sample and may thus be little representative. To assess whether this is the case, I estimate the probability of working in the public sector in both the SHIW and the LFS 2014 (table 8). It appears that the overall picture that emerges from the two datasets is the same: public sector workers are generally older, more likely to be women and married and more educated, but not statistically different in terms of ability.[6] Yet, some differences appear between the SHIW and the LFS sample in the magnitude of the coefficients. Indeed, in the SHIW, public sector workers are slightly older and more educated.

[6]The definition of ability is that of equation (2), based on how long it took individual i to obtain her degree, given the degree.

Table 8: Sorting into the public sector, comparison between SHIW and LFS 2014 data.

	(1) SHIW	(2) LFS	(3) SHIW	(4) LFS
Age	0.014***	0.007***	0.018***	0.009***
	(0.000)	(0.000)	(0.002)	(0.000)
Female	0.048**	0.058***	0.087***	0.072***
	(0.020)	(0.002)	(0.029)	(0.003)
Married	0.019	0.021***	0.010	0.025***
	(0.020)	(0.002)	(0.029)	(0.003)
Secondary Education	0.179***	0.141***		
	(0.023)	(0.002)		
Tertiary Education	0.468***	0.337***	0.254***	0.164***
	(0.029)	(0.004)	(0.030)	(0.003)
High Ability			-0.007	0.001
			(0.030)	(0.004)
Observations	2382	152838	1370	103744

Notes: In all columns the dependent variable is the probability of being employed in the public rather than private sector. Self employed individuals are excluded from the analysis. In columns (1) and (2) the samples contain all workers currently employed, while in columns (3) and (4) the samples are restricted to workers with at least secondary education attainment. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

6.2 Attrition and sample selection correction

Although the SHIW sample is overall representative of the public sector workforce, the sample used for the regression may be biased because of the attrition generated by the absence of those who declare not having chosen their job. This aspect is investigated in tables 9 and 10. In the first table I analyse the characteristics of those who go public vis-a-vis those who choose the private and compare the restricted sample used in table 5 with several alternative samples. Column (1) contains the full sample of workers and retirees in the public and private sector; column (2) the sample used for the main regressions, i.e. those who declared having chosen their sector of employment; column (3) compares those who chose the public sector with those who did not choose it, either because they are employed in the private or because they had no other opportunity than the public sector job. Columns (4) to (6) replicate the same comparisons excluding retirees.

Table 9: Representativeness of the restricted sample of table 5.

	(1)	(2)	(3)	(4)	(5)	(6)
	All workers			Excluding retirees		
Age	0.007***	0.007***	0.005***	0.014***	0.016***	0.011***
	(0.000)	(0.001)	(0.000)	(0.001)	(0.002)	(0.001)
Female	0.040***	0.077***	0.025*	0.047**	0.080**	0.028
	(0.014)	(0.022)	(0.013)	(0.020)	(0.031)	(0.018)
Married	0.036***	0.010	0.031**	0.019	-0.007	0.013
	(0.014)	(0.022)	(0.013)	(0.020)	(0.032)	(0.018)
Secondary education	0.230***	0.185***	0.204***	0.179***	0.139***	0.153***
	(0.016)	(0.023)	(0.015)	(0.023)	(0.038)	(0.022)
Tertiary education	0.498***	0.378***	0.471***	0.469***	0.354***	0.420***
	(0.020)	(0.024)	(0.021)	(0.030)	(0.039)	(0.031)
Risk Aversion	-0.013	0.023	-0.004	0.003	0.046**	0.005
	(0.009)	(0.014)	(0.009)	(0.013)	(0.020)	(0.012)
Observations	5228	2699	5228	2382	1241	2382

Notes: Columns (1)-(3) all workers and retirees; columns (4)-(6) only current workers. In columns (1) and (4) $y = 1$ if employed in the public sector, $y = 0$ if employed in the private sector; in column (2) and (5) $y = 1$ if explicitly chose the public sector, $y = 0$ if explicitly chose the private sector; in column (3) and (6) $y = 1$ if explicitly chose the public sector, $y = 0$ if employed in the public sector without having explicitly chosen or employed in the private sector. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

These estimates reveal that the difference between public and private sector workers is larger in terms of education and smaller in terms of likelihood of being married when we exclude retirees from the sample. Secondly, the incidence of women in the public sector is significantly larger if we consider those who chose their sector of employment, both for the full sample and for the active only. Thirdly, differences in educational attainment are smaller if we consider only those who chose, because, as discussed above, those who did not choose were primarily low educated private sector workers. Finally, public sector workers are significantly more risk averse only if we condition on having chosen the sector. This happens because those who did not choose were more risk averse and more likely to work in the private sector, so that in the full sample this offsets the difference among those who chose.

In table 10 I replicated the same comparative exercise for the sample used in table 7. This table explores two important aspects of difference between public and private sector workers that are two measures of ability: the first is the grade an individual obtained at her degree relative to the maximum grade obtained by other individuals for the same type of degree; the second is the time the individual employed to obtain it relative to the minimum employed by others. As suggested in table 4, the two measures of ability push in different directions: those

with higher grades are more likely to work in the public sector, while those who managed to get their degree more quickly, i.e. those with a higher ability to stay on target, are more likely to work in the private sector.[7]

Table 10: Representativeness of the restricted sample of table 7.

	(1)	(2)	(3)	(4)	(5)	(6)
	All workers			Excluding retirees		
Age	0.012***	0.009***	0.010***	0.018***	0.017***	0.015***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)
Female	0.133***	0.181***	0.119***	0.083***	0.110***	0.066**
	(0.024)	(0.028)	(0.023)	(0.029)	(0.038)	(0.028)
Married	0.003	-0.023	-0.008	0.012	-0.032	-0.001
	(0.024)	(0.029)	(0.023)	(0.029)	(0.038)	(0.028)
Tertiary education	0.212***	0.173***	0.172***	0.222***	0.180***	0.168***
	(0.028)	(0.033)	(0.027)	(0.036)	(0.046)	(0.034)
Risk Aversion	0.011	0.047**	0.024	0.012	0.053**	0.015
	(0.015)	(0.018)	(0.015)	(0.019)	(0.024)	(0.018)
High ability (grade)	0.059**	0.025	0.092***	0.057*	0.015	0.086***
	(0.026)	(0.033)	(0.025)	(0.033)	(0.045)	(0.031)
High ability (time to degree)	-0.000	-0.008	-0.014	-0.006	-0.016	-0.001
	(0.023)	(0.028)	(0.022)	(0.030)	(0.039)	(0.027)
Observations	2277	1482	2277	1369	842	1369

Notes: Columns (1)-(3) all workers and retirees; columns (4)-(6) only current workers. In columns (1) and (4) $y = 1$ if employed in the public sector, $y = 0$ if employed in the private sector; in column (2) and (5) $y = 1$ if explicitly chose the public sector, $y = 0$ if explicitly chose the private sector; in column (3) and (6) $y = 1$ if explicitly chose the public sector, $y = 0$ if employed in the public sector without having explicitly chosen or employed in the private sector. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

To validate the results of the empirical exercise in section 5, taking into account the selective attrition generated by the non-choosers, I propose estimates based on Heckman (1979) procedure. The basic idea is that the observed outcome variable y_{ij} is not the real outcome of interest, which instead would be $\tilde{y}_{ij}$:

$$\tilde{y}_{ij} = \begin{cases} y_{ij}, & \text{if} \quad C_i = z_i'\beta_1 + u_i > 0. \\ y_{ij}^*, & \text{otherwise.} \end{cases} \tag{3}$$

where y_{ij}^* is not observable and u_i and ϵ_i are jointly normally distributed and homoscedastic, i.e. the probability that an individual declares having chosen his job ($C_i = 1$) is influenced by

[7] The coefficients become larger and statistically significant if I do not control for having a tertiary education degree, because this absorbs a lot of the variability of the ability measure.

unobservable variables that also influence the importance that each individual assigns to the motivation j. It follows that the coefficient of the OLS regressions will be biased. To correct this bias I propose the use of two alternative variables that I assume to influence the likelihood of choosing the job but are presumably unrelated to the importance given to each single motivation and I estimate a two step Heckman selection model.

The first excludable variable I use is a measure of risk aversion. This is a discrete variable that varies between 1 and 5, where 5 indicates most risk averse individuals. The intuition, suggested already in section 3, is that more risk averse individuals are less willing to refuse a job offer to search for another job so they tend to accept the first available job thinking that there was no other option available.

The same intuition applies to the second instrumental variable I use, which is a measure of individual impatience, or a discount factor. This is obtained from a battery of questions contained in the 2012 wave of the survey in which individuals were asked to state what share of a future imaginary inheritance they would be willing to give up in order to have the remaining share right away. The resulting variable, β, is an individual discount factor, the higher it is the more the individual is patient. A more patient individual will be more likely to declare that he chose his job explicitly because he will typically be more willing to reject an offer and wait for a better one (Pissarides, 2000). Results of the first stage probit regressions are reported in table 11. As predicted in section 3, those who explicitly chose are generally older, more educated, more likely to be men and, crucially, less risk averse or more patient.

In table 12, I show the estimates of regression (1) obtained through Heckman two step procedure, with risk aversion as instrument. The main coefficients of interest, i.e. those of the interaction terms between educational attainment and the public sector indicator, are very similar in magnitude and statistical significance to those of table 5. The results confirm, and strengthen, the finding that public sector highly educated workers are, relative to private sector ones, less attracted by salaries and career prospects and more attracted by the specific job content. The inverse Mills ratio coefficient is in most cases not significant, indicating that the selection bias was negligible. Similar findings come from table 13, which instead uses as instrument the individual discount factor β and is based on a smaller sample because not all individuals interviewed in 2014 were also interviewed in 2012. The inverse Mills ratio in this

Table 11: Selection into sector choice.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Risk Aversion	-0.091***	-0.148***			-0.090**	-0.203***		
	(0.027)	(0.031)			(0.039)	(0.048)		
β			1.756***	1.834***			1.863***	1.948***
			(0.291)	(0.342)			(0.463)	(0.599)
Public	1.057***	0.348	1.076***	1.573**	0.919***	-0.317	0.910***	1.203
	(0.045)	(0.232)	(0.060)	(0.625)	(0.062)	(0.281)	(0.081)	(0.911)
Under 35	-0.300***	-0.330***	-0.276**	-0.280**	-0.377***	-0.341***	-0.326**	-0.238
	(0.085)	(0.091)	(0.129)	(0.135)	(0.106)	(0.116)	(0.157)	(0.166)
Female	-0.146***	-0.161***	-0.204***	-0.238***	-0.122**	-0.268***	-0.180**	-0.397***
	(0.038)	(0.044)	(0.052)	(0.061)	(0.059)	(0.074)	(0.077)	(0.100)
Secondary education	0.332***	0.354***	0.358***	0.410***				
	(0.041)	(0.046)	(0.055)	(0.063)				
Tertiary education	0.653***	0.770***	0.629***	0.853***	0.316***	0.377***	0.267***	0.399***
	(0.063)	(0.081)	(0.084)	(0.114)	(0.064)	(0.085)	(0.086)	(0.120)
RA × public		0.231***				0.337***		
		(0.062)				(0.082)		
β× public				-0.349				-0.457
				(0.666)				(0.963)
Under 35 × public		-0.005		-0.315		-0.263		-0.661
		(0.274)		(0.458)		(0.301)		(0.510)
Female × public		0.082		0.143		0.395***		0.556***
		(0.089)		(0.117)		(0.123)		(0.160)
Secondary × public		-0.141		-0.278**				
		(0.100)		(0.133)				
Tertiary × public		-0.316**		-0.574***		-0.129		-0.273
		(0.132)		(0.175)		(0.131)		(0.174)
Constant	-0.068	0.119	-2.039***	-2.138***	0.320**	0.734***	-1.704***	-1.734***
	(0.101)	(0.116)	(0.273)	(0.320)	(0.135)	(0.165)	(0.439)	(0.568)
Observations	5228	5228	2874	2874	2282	2282	1298	1298

Notes: For all specifications y_i is the probability of having chosen the sector of employment explicitly ($C_i = 1$). Columns (1) and (2) are the first stage of regressions in table 12. Columns (3) and (4) the first stage of regressions in table 13. Columns (5) and (6) the first stage of regressions in table 14. Columns (7) and (8) the first stage of regressions in table 15. Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

case is almost never significant, while the interaction terms of interest are very similar to those of the OLS regression in table 5.

Table 14 reports the results for the estimation of the equation that looks at heterogeneity with respect to ability, it is thus the selection corrected version of table 7. The results, again, do not change significantly: higher ability individuals in the public are still more discouraged by career prospects, while attracted by the relevance of their studies to the job. This pattern is instead less clear in table 15 where the excluded instrument in the first stage regression is β. Indeed, the negative coefficient on carer patterns for public sector high-ability individuals is not anymore significant while that on relevance to the field of study is still significant.

Table 12: Importance of each motivation relative to average individual score. Heckman selection regressions with risk aversion as excluded variable.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Stability		Pay		Career paths		Work-life balance		Distance from home		Social utility		Rel. studies		Transp. selections	
Public	0.609***	0.614***	-0.849***	0.313	-1.325***	-0.360*	0.482***	0.077	0.321	0.087	0.868***	-0.100	0.282	-0.441*	-0.388**	-0.189
	(0.179)	(0.207)	(0.214)	(0.192)	(0.298)	(0.214)	(0.180)	(0.200)	(0.222)	(0.250)	(0.193)	(0.219)	(0.203)	(0.228)	(0.172)	(0.198)
Under 35	-0.245**	-0.231**	0.175	-0.266***	0.486***	0.212*	-0.167*	-0.025	-0.163	-0.101	0.057	0.295**	-0.305***	-0.056	0.161*	0.173*
	(0.097)	(0.109)	(0.117)	(0.101)	(0.163)	(0.113)	(0.097)	(0.106)	(0.121)	(0.131)	(0.105)	(0.115)	(0.109)	(0.121)	(0.093)	(0.104)
Female	-0.089**	-0.065	-0.003	-0.192***	-0.089	-0.241***	0.123***	0.165***	0.115**	0.177***	-0.058	0.123**	-0.027	-0.051	0.026	0.083
	(0.043)	(0.056)	(0.054)	(0.052)	(0.075)	(0.058)	(0.044)	(0.054)	(0.055)	(0.067)	(0.047)	(0.059)	(0.049)	(0.062)	(0.042)	(0.054)
Secondary education	0.065	0.101	-0.337***	0.127	-0.250**	0.082	0.062	-0.076	-0.084	-0.183*	0.087	-0.304***	0.516***	0.232**	-0.057	0.021
	(0.075)	(0.090)	(0.091)	(0.084)	(0.127)	(0.093)	(0.075)	(0.088)	(0.094)	(0.109)	(0.081)	(0.095)	(0.085)	(0.100)	(0.072)	(0.086)
Tertiary education	0.004	-0.018	-0.704***	0.262*	-0.587***	0.230	0.068	-0.271*	-0.304**	-0.481**	0.465***	-0.318*	1.105***	0.567***	-0.046	0.028
	(0.119)	(0.169)	(0.145)	(0.157)	(0.202)	(0.174)	(0.120)	(0.163)	(0.149)	(0.204)	(0.129)	(0.179)	(0.135)	(0.186)	(0.115)	(0.162)
Under 35 × public		0.028		0.536***		-0.050		-0.102		0.021		0.097		-0.301		-0.229
		(0.195)		(0.183)		(0.200)		(0.187)		(0.238)		(0.211)		(0.213)		(0.188)
Female × public		0.004		0.145**		0.055		0.017		-0.063		-0.170**		0.154**		-0.142**
		(0.069)		(0.065)		(0.071)		(0.067)		(0.084)		(0.074)		(0.076)		(0.067)
Secondary × public		-0.190**		-0.351***		-0.060		0.029		0.050		0.314***		0.293***		-0.085
		(0.090)		(0.084)		(0.093)		(0.087)		(0.109)		(0.096)		(0.099)		(0.087)
Tertiary × public		-0.120		-0.745***		-0.482***		0.207		0.079		0.605***		0.483***		-0.027
		(0.140)		(0.131)		(0.144)		(0.135)		(0.169)		(0.149)		(0.154)		(0.134)
Constant	-0.182	-0.034	1.621***	-0.152	1.694***	0.080	-0.648**	0.010	-0.873**	-0.468	-1.027***	0.444	-0.953***	-0.023	0.367	0.143
	(0.324)	(0.313)	(0.384)	(0.291)	(0.535)	(0.323)	(0.324)	(0.303)	(0.401)	(0.377)	(0.347)	(0.331)	(0.366)	(0.345)	(0.311)	(0.299)
Mills lambda	0.470	0.295	-1.206***	0.420	-1.676***	-0.167	0.605**	-0.004	0.925**	0.544	0.786**	-0.565*	0.614*	-0.173	-0.518*	-0.350
	(0.308)	(0.289)	(0.365)	(0.269)	(0.507)	(0.298)	(0.309)	(0.280)	(0.381)	(0.348)	(0.330)	(0.306)	(0.348)	(0.318)	(0.296)	(0.277)
Observations	5228	5228	5228	5228	5228	5228	5228	5228	5228	5228	5228	5228	5228	5228	5228	5228

Notes: Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 13: Importance of each motivation relative to average individual score. Heckman selection regressions with β as excluded variable.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Stability		Pay		Career paths		Work-life balance		Distance from home		Social utility		Rel. studies		Transp. selections	
Public	0.534***	0.702***	-0.415***	0.008	-0.663***	-0.344	0.347**	0.142	0.001	-0.185	0.220	-0.182	0.054	-0.277	-0.079	0.136
	(0.144)	(0.206)	(0.138)	(0.190)	(0.155)	(0.216)	(0.141)	(0.197)	(0.171)	(0.241)	(0.151)	(0.222)	(0.159)	(0.224)	(0.135)	(0.192)
Under 35	-0.161	-0.285*	0.126	-0.092	0.287**	0.232	-0.289**	-0.210	-0.098	0.002	0.278**	0.334**	-0.253*	-0.114	0.110	0.134
	(0.133)	(0.148)	(0.127)	(0.138)	(0.143)	(0.156)	(0.130)	(0.143)	(0.158)	(0.174)	(0.139)	(0.159)	(0.146)	(0.162)	(0.125)	(0.139)
Female	-0.124**	-0.163**	-0.106**	-0.256***	-0.199***	-0.243***	0.149***	0.152**	0.123**	0.202**	0.079	0.214***	0.048	0.007	0.030	0.088
	(0.051)	(0.076)	(0.049)	(0.071)	(0.055)	(0.080)	(0.050)	(0.073)	(0.061)	(0.089)	(0.054)	(0.082)	(0.056)	(0.083)	(0.048)	(0.071)
Secondary education	0.065	0.201**	-0.171**	0.039	0.024	0.136	-0.001	-0.055	-0.211**	-0.308***	-0.162**	-0.369***	0.422***	0.254**	0.034	0.101
	(0.071)	(0.100)	(0.068)	(0.093)	(0.076)	(0.105)	(0.070)	(0.096)	(0.084)	(0.117)	(0.074)	(0.107)	(0.078)	(0.109)	(0.067)	(0.093)
Tertiary education	-0.061	-0.020	-0.455***	0.016	-0.099	0.297	-0.026	-0.315*	-0.532***	-0.733***	0.102	-0.305	1.000***	0.783***	0.072	0.278*
	(0.100)	(0.179)	(0.097)	(0.165)	(0.108)	(0.187)	(0.098)	(0.171)	(0.119)	(0.209)	(0.105)	(0.194)	(0.110)	(0.195)	(0.094)	(0.166)
Under 35 × public		0.665*		0.693**		-0.273		-0.048		-0.341		0.258		-0.380		-0.575*
		(0.360)		(0.327)		(0.371)		(0.340)		(0.414)		(0.399)		(0.385)		(0.330)
Female × public		0.082		0.222***		0.035		0.031		-0.116		-0.222**		0.091		-0.122
		(0.094)		(0.086)		(0.098)		(0.089)		(0.109)		(0.104)		(0.101)		(0.087)
Secondary × public		-0.275**		-0.290***		-0.134		0.030		0.126		0.371***		0.282**		-0.110
		(0.116)		(0.106)		(0.120)		(0.110)		(0.134)		(0.127)		(0.125)		(0.107)
Tertiary × public		-0.089		-0.568***		-0.487***		0.341**		0.227		0.571***		0.289		-0.285*
		(0.173)		(0.158)		(0.179)		(0.164)		(0.200)		(0.190)		(0.187)		(0.160)
Constant	-0.000	-0.149	0.832***	0.294	0.348	-0.021	-0.380	-0.131	-0.279	-0.026	0.156	0.579*	-0.527*	-0.223	-0.151	-0.323
	(0.251)	(0.289)	(0.241)	(0.268)	(0.270)	(0.304)	(0.246)	(0.278)	(0.298)	(0.339)	(0.263)	(0.311)	(0.277)	(0.317)	(0.236)	(0.271)
Mills lambda	0.324	0.435*	-0.411*	0.056	-0.364	-0.065	0.344	0.143	0.342	0.117	-0.371	-0.719**	0.161	-0.046	-0.024	0.079
	(0.236)	(0.262)	(0.226)	(0.243)	(0.254)	(0.276)	(0.231)	(0.252)	(0.280)	(0.308)	(0.247)	(0.281)	(0.261)	(0.287)	(0.222)	(0.246)
Observations	2874	2874	2874	2874	2874	2874	2874	2874	2874	2874	2874	2874	2874	2874	2874	2874

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

Table 14: Importance of each motivation relative to average individual score. Heckman selection regressions with risk aversion as excluded variable.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Stability		Pay		Career paths		Work-life balance		Distance from home		Social utility		Rel. studies		Transp. selections	
Public	0.686***	0.324**	-0.950***	-0.283**	-1.577***	-0.295*	0.774**	0.282*	0.233	-0.089	0.859***	0.351**	0.109	-0.154	-0.133	-0.137
	(0.264)	(0.150)	(0.335)	(0.141)	(0.595)	(0.157)	(0.319)	(0.150)	(0.316)	(0.185)	(0.270)	(0.161)	(0.278)	(0.169)	(0.241)	(0.148)
Under 35	-0.455***	-0.249*	0.249	-0.234*	0.658*	0.074	-0.341*	-0.067	-0.090	0.024	0.118	0.352**	-0.185	-0.064	0.045	0.165
	(0.166)	(0.131)	(0.210)	(0.124)	(0.373)	(0.138)	(0.200)	(0.132)	(0.198)	(0.162)	(0.169)	(0.140)	(0.174)	(0.148)	(0.151)	(0.130)
Female	-0.090	-0.026	-0.007	-0.196**	-0.094	-0.349***	0.128*	0.184**	0.152**	0.326***	-0.031	0.202**	-0.042	-0.232**	-0.018	0.092
	(0.062)	(0.090)	(0.080)	(0.086)	(0.142)	(0.095)	(0.076)	(0.091)	(0.073)	(0.112)	(0.063)	(0.097)	(0.063)	(0.102)	(0.055)	(0.090)
Tertiary education	-0.010	-0.183*	-0.375***	0.025	-0.462**	0.180*	0.103	-0.114	-0.231*	-0.402***	0.382***	0.055	0.477***	0.384***	0.115	0.054
	(0.100)	(0.102)	(0.128)	(0.097)	(0.228)	(0.108)	(0.122)	(0.103)	(0.119)	(0.127)	(0.102)	(0.110)	(0.103)	(0.116)	(0.089)	(0.102)
High ability	0.001	0.021	0.008	-0.008	-0.042	0.061	0.015	0.021	0.015	-0.071	0.030	0.022	-0.014	-0.112	-0.011	0.065
	(0.044)	(0.067)	(0.053)	(0.063)	(0.094)	(0.070)	(0.050)	(0.066)	(0.054)	(0.082)	(0.046)	(0.068)	(0.050)	(0.075)	(0.043)	(0.065)
Under 35 × public		-0.104		0.636***		0.183		-0.189		0.002		0.047		-0.329		-0.247
		(0.229)		(0.216)		(0.240)		(0.231)		(0.283)		(0.247)		(0.259)		(0.228)
Female × public		-0.020		0.167		0.171		0.023		-0.222		-0.280**		0.319**		-0.158
		(0.117)		(0.110)		(0.122)		(0.117)		(0.144)		(0.126)		(0.132)		(0.116)
Tertiary × public		0.088		-0.299***		-0.468***		0.109		0.131		0.260**		0.153		0.027
		(0.103)		(0.098)		(0.108)		(0.104)		(0.128)		(0.112)		(0.117)		(0.103)
High ability × public		-0.034		0.021		-0.182**		-0.006		0.151		0.009		0.173*		-0.131
		(0.088)		(0.083)		(0.093)		(0.088)		(0.109)		(0.092)		(0.100)		(0.087)
Constant	-0.346	0.267	1.396**	0.268	2.002**	0.046	-1.120**	-0.330	-0.860	-0.358	-0.933**	-0.050	-0.001	0.130	-0.138	0.028
	(0.444)	(0.238)	(0.560)	(0.226)	(0.996)	(0.250)	(0.534)	(0.240)	(0.531)	(0.295)	(0.454)	(0.256)	(0.468)	(0.270)	(0.406)	(0.237)
Mills lambda	0.841	0.044	-1.335*	0.131	-2.372*	0.022	1.272*	0.273	0.769	0.162	0.702	-0.450	0.064	0.075	0.060	-0.256
	(0.570)	(0.309)	(0.718)	(0.292)	(1.277)	(0.325)	(0.685)	(0.311)	(0.683)	(0.382)	(0.583)	(0.332)	(0.603)	(0.350)	(0.523)	(0.307)
Observations	2282	2282	2282	2282	2282	2282	2282	2282	2282	2282	2282	2282	2282	2282	2282	2282

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

Table 15: Importance of each motivation relative to average individual score. Heckman selection regressions with β as excluded variable.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Stability		Pay		Career paths		Work-life balance		Distance from home		Social utility		Rel. studies		Transp. selections	
Public	0.521***	0.369*	-0.355**	-0.311	-0.656***	-0.436**	0.312*	0.116	-0.043	-0.164	0.179	0.311	0.235	0.020	-0.192	0.095
	(0.183)	(0.202)	(0.176)	(0.195)	(0.193)	(0.210)	(0.182)	(0.198)	(0.221)	(0.242)	(0.202)	(0.226)	(0.205)	(0.224)	(0.177)	(0.193)
Under 35	0.072	0.002	-0.044	-0.115	-0.105*	-0.010	0.019	-0.001	0.010	-0.121	0.085	0.212**	-0.034	-0.175*	-0.003	0.209**
	(0.058)	(0.089)	(0.057)	(0.088)	(0.062)	(0.098)	(0.058)	(0.093)	(0.071)	(0.113)	(0.061)	(0.086)	(0.065)	(0.102)	(0.057)	(0.089)
Female	-0.187	-0.233	0.066	-0.136	0.190	0.173	-0.241	-0.174	0.052	0.056	0.353*	0.353*	-0.371*	-0.265	0.138	0.226
	(0.176)	(0.183)	(0.170)	(0.178)	(0.186)	(0.192)	(0.175)	(0.181)	(0.213)	(0.221)	(0.192)	(0.202)	(0.197)	(0.204)	(0.170)	(0.176)
Tertiary education	-0.120*	-0.225	-0.110*	-0.359***	-0.244***	-0.356**	0.225***	0.300**	0.168**	0.373**	0.058	0.310*	-0.006	-0.185	0.029	0.141
	(0.067)	(0.143)	(0.064)	(0.138)	(0.070)	(0.149)	(0.066)	(0.141)	(0.081)	(0.171)	(0.076)	(0.161)	(0.075)	(0.159)	(0.065)	(0.137)
High ability	-0.097	-0.203	-0.220***	0.003	-0.117	0.140	-0.059	-0.313**	-0.342***	-0.472***	0.234***	0.107	0.564***	0.599***	0.037	0.138
	(0.079)	(0.149)	(0.075)	(0.144)	(0.082)	(0.154)	(0.078)	(0.145)	(0.094)	(0.177)	(0.089)	(0.170)	(0.088)	(0.165)	(0.075)	(0.142)
Under 35 × public		0.394		1.065**		-0.135		-0.054		-0.089		0.076		-0.486		-0.771*
		(0.465)		(0.449)		(0.481)		(0.454)		(0.552)		(0.530)		(0.515)		(0.443)
Female × public		0.185		0.364**		0.147		-0.083		-0.305		-0.418**		0.297		-0.188
		(0.180)		(0.173)		(0.185)		(0.175)		(0.213)		(0.206)		(0.199)		(0.171)
Tertiary × public		0.175		-0.266*		-0.358**		0.344**		0.162		0.164		-0.053		-0.168
		(0.156)		(0.150)		(0.160)		(0.151)		(0.183)		(0.181)		(0.172)		(0.147)
High ability × public		0.108		0.131		-0.143		0.020		0.208		-0.215*		0.239*		-0.349***
		(0.117)		(0.114)		(0.126)		(0.119)		(0.145)		(0.120)		(0.132)		(0.115)
Constant	-0.012	0.015	0.432	0.192	0.345	0.137	-0.300	-0.077	-0.398	-0.248	0.182	0.222	-0.258	-0.147	0.010	-0.094
	(0.297)	(0.319)	(0.286)	(0.309)	(0.312)	(0.333)	(0.295)	(0.314)	(0.358)	(0.382)	(0.327)	(0.357)	(0.332)	(0.355)	(0.286)	(0.306)
Mills lambda	0.392	0.503	-0.009	0.411	-0.139	0.017	0.158	-0.067	0.144	0.008	-0.796*	-1.021**	0.394	0.417	-0.143	-0.267
	(0.383)	(0.422)	(0.369)	(0.408)	(0.403)	(0.440)	(0.381)	(0.415)	(0.462)	(0.505)	(0.420)	(0.472)	(0.428)	(0.469)	(0.370)	(0.404)
Observations	1298	1298	1298	1298	1298	1298	1298	1298	1298	1298	1298	1298	1298	1298	1298	1298

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

6.3 Definition of ability and external validity

To assess the validity of the results on ability of table 7, in this section I compare the results obtained with the different definitions of ability presented in table 2 and the further compare the measure of ability as expressed in equation (2) with the more standard measures based on cognitive test scores. Table 16 reports the coefficient of the effect of the interaction between being high-ability and being public on the relative importance given to each factor for varying definitions of ability. It thus appears that the negative effect on career prospects and the positive one on relevance to the field of study remain quite stable across all specifications that use measures of ability based on time to degree (although they lack statistical significance in one specification). On the other hand, whenever I employ the measures of ability based on the grade obtained, all the coefficients are not statistically different from zero as in table 6. Although the coefficients are not statistically significant, the attractive power of relevance to the field of study remains stable even when considering as high-ability those with higher grades.

Table 16: Heterogeneity by ability using different measures of ability.

	(1) Stability	(2) Pay	(3) Career paths	(4) Work-life balance	(5) Distance from home	(6) Social utility	(7) Relevance to studies	(8) Transparency selections
High ability × public	-0.028	0.060	-0.122	-0.054	0.234**	-0.066	0.047	-0.071
(Grade of degree, by degree and cohort)	(0.089)	(0.083)	(0.091)	(0.089)	(0.108)	(0.095)	(0.101)	(0.086)
High ability × public	-0.074	0.079	0.085	-0.063	-0.014	-0.062	0.099	-0.050
(Grade of degree, by degree, field and cohort)	(0.103)	(0.092)	(0.102)	(0.096)	(0.119)	(0.100)	(0.107)	(0.098)
High ability × public	-0.084	0.002	-0.170*	-0.017	0.172	-0.007	0.217**	-0.113
(Time to degree, by degree and field)	(0.092)	(0.087)	(0.094)	(0.093)	(0.111)	(0.098)	(0.104)	(0.089)
High ability × public	-0.049	0.041	-0.123	-0.096	0.230*	-0.078	0.170	-0.095
(Time to degree, by degree and cohort)	(0.103)	(0.093)	(0.102)	(0.104)	(0.124)	(0.110)	(0.112)	(0.094)
High ability × public	-0.027	0.026	-0.196**	-0.014	0.128	-0.100	0.196*	-0.013
(Time to degree, by degree and grade)	(0.093)	(0.086)	(0.094)	(0.095)	(0.116)	(0.100)	(0.105)	(0.090)
High ability × public	0.124	-0.087	-0.335***	0.053	0.162	0.030	0.133	-0.080
(Time to degree, by degree, cohort and grade)	(0.095)	(0.087)	(0.099)	(0.093)	(0.118)	(0.102)	(0.103)	(0.090)

Notes: Each row reports the coefficient of the interaction term of a regression equivalent to that in table 6 with different measures of ability as reported in table 4. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

The results in table 16 thus suggest that the definition of the comparison group of each individual does not affect the internal validity of the estimates. On the other hand, the external validity of the results based on ability depends on the informative content of the measure employed. To assess this, I resort to the OECD PIAAC data on adult skills. The survey,

conducted in 2012, assesses the literacy and numeracy skills of the adult population in the OECD countries. I build the same measure of ability as in expression (2), comparing individuals by country, cohort and educational attainment and test the relationship between this measure and the PIAAC literacy and numeracy scores. Results are reported in tables 17 and 18, the first table exploits the full variability of the ability measure, whereas the second employs a binary variable for being above or below the median as in table 7. The results reveal the existence of a strong positive correlation between the ability measure based on time employed to obtain a degree and the PIAAC scores: increasing ability from zero to one, increases the PIAAC scores of up to 12 points from the average, which corresponds to an increase of 4 to 5 percent. Similar results hold in the case in which I consider the difference between being below or above the median in the distribution of ability (18).

Table 17: Relationship between the ability measure based on time to degree and PIAAC scores.

	(1) Lit	(2) Num	(3) Lit	(4) Num	(5) Lit	(6) Num	(7) Lit	(8) Num
Ability	2.395*	-0.219	12.096***	10.040***	12.305***	10.079***	3.778***	2.830**
	(1.277)	(1.273)	(1.236)	(1.245)	(1.242)	(1.245)	(1.332)	(1.336)
Secondary education			30.791***	34.457***	29.936***	34.415***	26.342***	32.869***
			(1.156)	(1.210)	(1.162)	(1.213)	(1.192)	(1.273)
Tertiary education			55.572***	60.112***	54.514***	60.586***	50.632***	59.627***
			(1.195)	(1.252)	(1.231)	(1.290)	(1.217)	(1.322)
Age					-0.337***	-0.189***	-0.381***	-0.235***
					(0.036)	(0.037)	(0.035)	(0.037)
Female					-2.988***	-10.144***	-1.649**	-9.029***
					(0.851)	(0.854)	(0.825)	(0.829)
Constant	279.894***	276.833***	236.122***	229.120***	251.668***	240.732***	260.689***	247.037***
	(0.796)	(0.772)	(1.203)	(1.261)	(1.984)	(2.108)	(2.105)	(2.254)
Observations	46635	46635	46635	46635	46635	46635	46635	46635
R^2	0.0004	0.0000	0.1647	0.1651	0.1733	0.1784	0.2382	0.2342
Country FE							y	y

Notes: PIAAC data, OECD 2012. *** p<0.01, ** p<0.05, * p<0.1.

Table 18: Relationship between the ability measure based on time to degree and PIAAC scores. Binary variable.

	(1) Lit	(2) Num	(3) Lit	(4) Num	(5) Lit	(6) Num	(7) Lit	(8) Num
High ability	2.105**	0.260	8.123***	6.612***	8.358***	6.840***	2.784***	2.060**
	(0.869)	(0.872)	(0.833)	(0.845)	(0.835)	(0.847)	(0.878)	(0.893)
Secondary education			30.594***	34.291***	29.740***	34.255***	26.285***	32.824***
			(1.160)	(1.212)	(1.166)	(1.215)	(1.190)	(1.274)
Tertiary education			55.258***	59.825***	54.227***	60.349***	50.557***	59.564***
			(1.197)	(1.248)	(1.234)	(1.285)	(1.215)	(1.313)
Age					-0.339***	-0.190***	-0.382***	-0.236***
					(0.036)	(0.037)	(0.035)	(0.037)
Female					-3.136***	-10.265***	-1.698**	-9.065***
					(0.851)	(0.855)	(0.826)	(0.828)
Constant	280.025***	276.578***	238.365***	231.065***	254.005***	242.649***	261.302***	247.514***
	(0.626)	(0.606)	(1.095)	(1.159)	(1.931)	(2.030)	(2.006)	(2.143)
Observations	46635	46635	46635	46635	46635	46635	46635	46635
R^2	0.0006	0.0000	0.1642	0.1646	0.1730	0.1782	0.2383	0.2342
Country FE							y	y

Notes: PIAAC data, OECD 2012. *** p<0.01, ** p<0.05, * p<0.1.

7 Extension

As a final exercise, I provide some evidence on how these motivations relate to real labour market conditions and actual workers' choices. In particular, I investigate the impact of (i) expected job stability, (ii) expected wage differentials and (iii) expected career prospects in the public relative to the private sector, on the likelihood that an individual starts a job in the public sector. Using quarterly data from the Italian Labour Force Survey (LFS), and drawing from my previous work (Rizzica, 2015), I estimate an equation of the following type:

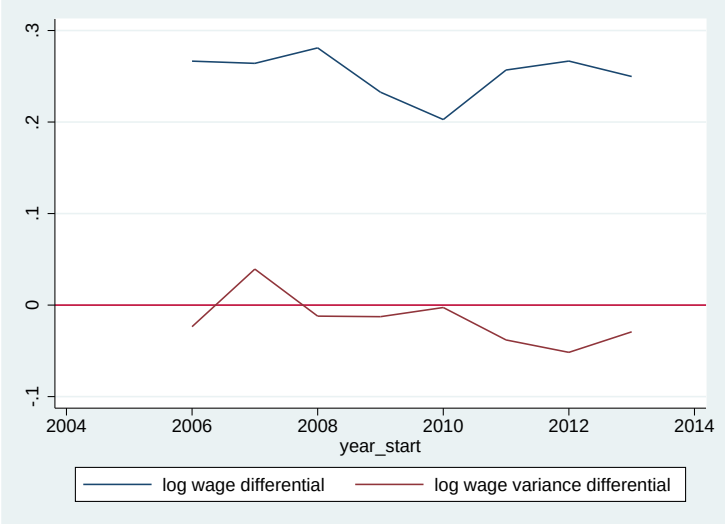
$$Pr(Pub_{it} = 1|NH_{it} = 1) = \alpha + \beta_1 q_{it} + \beta_2 LM_{it} + \beta_3 A_i + \beta_4 (A_i \times LM_{it}) + \beta_5 X_{it} + \gamma_r + \delta_T + u_{it} \quad (4)$$

The outcome variable is a binary variable for whether individual i starts a job at quarter t, i.e. is a new hired ($NH_{it} = 1$), in the public sector rather than in the private sector ($Pub_{it} = 1$). On the right hand side are: the expected relative probability of finding a job in the public rather than in the private sector, q_{it};[8] some labour market conditions of interest, LM_{it}, these will be

[8]Variables q_{it} and p_{it} are constructed as in Rizzica (2015), i.e they are the moving averages over the previous four quarters of respectively the ratio between the job finding rates in the public sector and in the private sector and the ratio between the probability that the job is a fixed term one in the public and that in the private sector.

the expected relative probability of getting a fixed term position instead of a permanent one in the public relative to the private, p_{it}, the expected earnings in the public relative to the private, $\Delta w_{i,r,T-1}$ and the expected variance of earnings in the public relative to the private, $\Delta Var(w_{i,r,T-1})$.[9] With respect to these last two measures, figure 4 shows that public sector wages are characterized by higher expected value and lower variance. Following Borjas (2002) this can be interpreted as evidence of more rigid career paths.

Figure 4: Wage premium and variance penalty, by year of starting a job.



Notes: Based on EU-SILC 2012 data. The expected wages for an individual starting a job in year T are the average of the wages paid in year $T-1$.

Equation (4) further includes a proxy for individual ability, which is constructed as in expression (2) but further including cohort effects, i.e. it is higher for those who spent less time to obtain their degree among individuals with the same degree and age.[10] As in the main specifications, the variable included in the regressions is a dummy for being above or below the median value of ability. The ability variable is then interacted with the labour market characteristics of interest to understand how these differentially affect the choices of high versus low skill individuals. Finally, I control for several individual observable characteristics, together with year and region fixed effects.

[9] Measures of earnings are built from EUSILC 2005-2012 data - as the LFS contains data on wages only from 2009 onwards - and vary at the level of gender (i), NUTS2 region (r) and year (T). Specifically, in each year individuals will expect the gap in earnings and variance of earnings to be the one observed in the previous year ($T-1$).

[10] The LFS data have a sample size that allows to refine the measure of ability at cohort level, this was not possible with the small sample of the SHIW.

Table 19: Probit results equation 4. Dependent variable: $Pr(Pub_{it}|NH_{it}=1)$.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
q_{it}	0.083***	0.031	0.054**	0.027	0.080***	0.027	0.055**	0.029
	(0.021)	(0.023)	(0.022)	(0.024)	(0.021)	(0.024)	(0.022)	(0.024)
Ability	0.052*	0.055*	0.006	0.009	-0.003	-0.002	0.062*	0.067**
	(0.028)	(0.028)	(0.013)	(0.014)	(0.006)	(0.006)	(0.032)	(0.032)
p_{it}	0.007	0.011					0.011	0.013
	(0.013)	(0.014)					(0.013)	(0.014)
Ability $\times\ p_{it}$	-0.049**	-0.050**					-0.050**	-0.050**
	(0.021)	(0.021)					(0.021)	(0.021)
$\Delta w_{i,r,T-1}$			0.108***	-0.071			0.094***	-0.082
			(0.029)	(0.056)			(0.031)	(0.056)
Ability $\times\ \Delta w_{i,r,T-1}$			-0.056	-0.065			-0.004	-0.020
			(0.042)	(0.043)			(0.047)	(0.047)
$\Delta\ Var(w_{i,r,T-1})$					-0.114	-0.035	-0.047	-0.028
					(0.077)	(0.088)	(0.081)	(0.090)
Ability $\times\ \Delta Var(w_{i,r,T-1})$					0.252***	0.253**	0.253**	0.229**
					(0.097)	(0.099)	(0.110)	(0.110)
Secondary education	0.044***	0.058***	0.047***	0.059***	0.045***	0.058***	0.047***	0.058***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Tertiary education	0.165***	0.218***	0.184***	0.221***	0.166***	0.219***	0.183***	0.219***
	(0.018)	(0.021)	(0.020)	(0.022)	(0.018)	(0.022)	(0.019)	(0.022)
Female	0.060***	0.061***	0.051***	0.072***	0.058***	0.065***	0.054***	0.075***
	(0.005)	(0.005)	(0.006)	(0.008)	(0.008)	(0.008)	(0.008)	(0.011)
Age	0.002***	0.002***	0.002***	0.002***	0.002***	0.002***	0.002***	0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	21764	21764	21764	21764	21764	21764	21764	21764
Year FE	y	y	y	y	y	y	y	y
Region FE		y		y		y		y

Notes: Robust standard errors in parentheses. Marginal effects reported. *** p<0.01, ** p<0.05, * p<0.1.

The results are presented in table 19. These show that: (i) higher ability individuals are less likely to sort into the public sector when the expected probability of getting a fixed term rather than a permanent position increases in the public relative to the private sector (Rizzica, 2015); (ii) that an increase in expected wages[11] has no differential effect on high and low ability individuals; (iii) that an increase in the expected variance of wages in the public relative to the private attracts significantly more high-ability individuals. This last piece of evidence allows me to conclude that stability and career prospects not only affect the motivations of workers, but are indeed reflected in their actual sorting as well.[12]

[11] The effects of wage differential, in expected values and in variances, are hardly detectable in the specifications which include region fixed effects, as these absorb most of the variability in wages.

[12] The same equation has been estimated focusing on education instead of ability, i.e. looking at how these labour market conditions affect the choices of higher (tertiary) educated individuals differently from low education

8 Conclusions

Understanding what drives workers towards the choice of a sector of employment is crucial to interpret the differences across countries and the evolution over time of the composition of the public sector workforce and of the resulting quality of public services provision.

This paper attempts to explain what features of the public sector are most attractive to workers, and especially to those who are most desirable from the employer's point of view, i.e. highly educated and high skilled ones. Using a novel set of questions contained in the 2014 wave of the SHIW, I manage to provide detailed evidence on the reasons why Italian workers choose to work in the public or in the private sector and combine it with information on the demographic characteristics and with measures of educational attainment and ability.

The main findings of the paper are that (i) on average, the public sector is preferred for stability, flexibility of working hours and social utility, while the private for salaries, career prospects, relevance to the field of study and transparency of selections; (ii) the public sector disadvantage is significantly larger among the highly educated for salaries, career prospects and transparency of selections, the advantage for work-life balance considerations and job content, both in terms of social utility and of relevance to the field of study; (iii) the disadvantage of the public sector increases even more for high-ability individuals, measured as those who employed less time to obtain their degree, in relation to the career prospects, while the advantage for them is larger in relation to the relevance of the job to the academic qualifications; (iv) no significant differences appear instead when defining high-ability individuals as those with high grades. Using supplementary data sources, I further showed that more rigid career prospects decrease indeed the probability that high-ability individuals start a job in the public rather than in the private sector.

In the light of the results of this analysis, one may suggest that there are margins for the Public Administration to design contracts that can discriminate between high education or high-

ones.

$$Pr(Pub_{it} = 1|NH_{it} = 1) = \alpha + \beta_1 q_{it} + \beta_2 LM_{it} + \beta_3 TE_i + \beta_4 (TE_i \times LM_{it}) + \beta_5 X_{it} + \gamma_r + \delta_T + u_{it} \quad (5)$$

The results, not reported but available upon request, only reveal a small adverse selection effect of expected wages, i.e. tertiary educated individuals (TE_i) are less likely to sort into the public sector when the expected wages are lower relatively to the private. Yet, the distinction on the basis of tertiary education, when we look at actual choices rather than motivation, is quite difficult in that the public sector typically sets stringent requirements in terms of educational attainment of applicants so that it is unlikely to observe supply side induced variation in the level of educational attainment of public sector new hires.

ability workers and the others. In particular, the result that for high education and even more for high-ability workers, the public sector has a significantly larger disadvantage over the private for the associated career patterns, would suggest that a more dynamic and meritocratic career scheme would be desirable. Secondly, because only high education and high-ability workers appreciate that the public sector allows them to do a job related to what they studied, it is crucial to maximize the *match* between workers' professional profiles and appointments.

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