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PUBLIC SECTOR JOBS:
Working in the public sector in Europe and the US[1]

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Abstract

This paper reviews recent theoretical and empirical work on public employment management and presents novel stylized facts on public sector jobs. In the first part, we examine the evolution of managerial practices in the public sector and discuss the contractual arrangement of public sector workers and the labor market institutions that are prevalent in this setting. We argue that, for public sector employees, standard incentive schemes have a low power and are generally less effective than in the private sector. In the second part, we use two international surveys (6th European Working Conditions Survey, covering 28 European countries, and 2nd American Working Conditions Survey for the United States) to investigate selection into public sector employment, public-private pay differentials, and differences in working conditions in Europe and the US. While in Europe the public-private earning gap is positive for low-skilled workers and turns negative for skilled individuals, the gap is negative and relatively flat over the skill distribution in the US. We also document a positive public-private earnings differential in healthcare and education services in Europe, and a negative differential, though not statistically significant, in the US. We find that, in the US, two out of three public sector employees are exposed to some performance-related pay scheme, while in Europe is less than one in four. We do not find evidence that the public sector ensures a fairer work environment, as instances of harassment, discrimination, and obnoxious behavior are widespread.

Keywords: Public sector, managerial practices, public-private pay differentials, working conditions

JEL: J45, J31, H50

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1. Introduction

The Covid-19 epidemic has served as a reminder that the public sector plays a unique role in coordinating activities, regulating market behavior, and mobilizing resources. Better understanding of the organizational structure of the public sector and its unique features may lead to improved decisions in resource allocation and public service provision.

The size and composition of the public sector vary significantly across countries and crucially depend on the mix of services it delivers. Governments often employ most of health care providers, teachers, and emergency workers and deliver these services directly. Some countries, however, have a much leaner public sector and provide healthcare, education, and security through a wide range of private-public partnerships (OECD, 2017). Most of the observed differences in size and composition can be traced back to historical reasons and cultural factors. Different preferences for inequality aversion and income redistribution translate into different evaluations of equality of opportunity and equality of outcomes (Alesina and LaFerrara, 2005; Alesina and Giuliano, 2015). Differences in preferences result in different approaches to the educational systems and a different public/private mix. Countries also vary in terms of risk aversion, which may affect the size of the health system, pension spending, and investment in disaster prevention (Kellenberg and Mobarak, 2007 and 2011).

This paper reviews recent theoretical and empirical work on public employment management and presents a set of novel cross-sectional stylized facts on public sector jobs.

In the first part of the paper, we start by examining the evolution of managerial practices in the public sector. Traditionally management practices used to be modeled off the Weberian model of bureaucracy: an apolitical and hierarchical organization governed by formal procedures aimed at limiting bureaucrats' discretion. During the 1990s public administration went through a deep transformation that gave rise to the so-called "New Public Management" (NPM), a set of managerial practices aimed at improving efficiency and reducing costs. We also discuss the contractual arrangements of public sector workers and the labor market institutions that are prevalent in this setting.

Next, we provide an overview of the theoretical considerations on public sector jobs and incentives. We examine the optimal design of public sector contracts in the presence of asymmetric information and multitasking and discuss the challenges related to measuring the performance of

government agencies. We show that standard incentive schemes, for public sector employees, have a low power and are generally less effective compared to the private sector. Lastly, we review the literature on the effectiveness of intrinsic motivation vs monetary and non-monetary incentives and examine their impact on recruitment. We conclude that given the challenges in designing effective pay-for-performance schemes for public sector workers, public agencies should aim at recruiting intrinsically motivated workers.

In the second part of the paper, we present a set of stylized facts on the differences between working conditions of public and private sector jobs. In the empirical analysis we use data from two international surveys: the European Working Conditions Survey (EWCS) and the American Working Conditions Survey (AWCS). These surveys present three main advantages: first, they provide nationally representative cross-country data on employment for a wide variety of working conditions and workers' perceptions; second, they are designed to be highly comparable across countries; third, they focus on aspects that have not been treated systematically in empirical research such as workplace practices, job satisfaction, routinization, diffusion of pay for performance, harassment, and discrimination.

When examining the determinants of selection into public sector employment, we find that in Europe public sector employees are more likely to be female, older and more educated than their private sector counterparts. The same pattern characterizes the United States although most of these differences are much less stark. Next, we investigate differences in earnings and working conditions. We distinguish between civil servants, who are typically hired for life, and other public sector employees, who are often hired through temporary contracts and whose working conditions are comparable to those in the private sector (Demmke and Moilanen 2012). In Europe the public-private earnings gap is found to be positive for low-skilled workers and turns negative for skilled individuals, while in the US the earnings gap is negative and relatively flat over the skill distribution. We document a positive public-private sector earnings differential in healthcare and education services in Europe, and a negative differential, though not statistically significant, in the US. We find that, in US, two out of three public sector workers are exposed to some performance-related pay scheme, while in Europe is less than one in four. Consistent with the stereotypes on public sector workers, in Europe government employees enjoy stronger perceived job security, work fewer hours per week, and are more likely to take sick leave than their private sector counterparts. In the United States, the results are qualitative similar although the coefficients are

typically smaller in magnitude and not statistically significant. Public- and private-sector employees express similar levels of overall satisfaction with respect to workplace conditions both in Europe and in the US. This appears to be driven by a mix of positive and negative feelings towards different job attributes. In Europe, public sector workers enjoy a slower-paced work environment with fewer tight deadlines, which they deem are more conducive to a good work-life balance. Public employees also report a greater level of autonomy in executing their tasks and a lower level of routinization. At the same time, they lament a lower level of involvement in decision making. Public sector workers are also more likely to feel that their work is "useful," probably reflecting sorting of prosocial individuals into the public sector. In the US, the qualitative pattern of the results is very similar, although the coefficients tend to be much smaller in magnitude and not statistically significant. Finally, we do not find evidence that the public sector ensures a fair work environment, as instances of harassment, discrimination, and obnoxious behavior are widespread.

The rest of the paper is organized as follows. In section 2, we review the literature on management practices in the public sector, contractual conditions of public sector workers, and unionization. In section 3, we discuss the personnel economics of the public sector. Section 4 presents the empirical analysis in which we study the selection into public employment, the public-private pay differential, differences in working conditions and employees' perception of fair treatment. Section 5 summarizes the main findings and concludes.

2. Managerial Practices and Labor Market Institutions

In this section, we discuss the evolution of managerial practices in the public sector, the contractual arrangements of public sector workers, and the labor market institutions that are prevalent in this setting (i.e., unions, job security, and collective bargaining agreements).

2.1 Managerial Practices in the Public Sector

Traditionally management practices in the public sector used to be modeled off the Weberian model of bureaucracy: an apolitical and hierarchical organization governed by formal procedures aimed at limiting bureaucrats' discretion and preventing corruption. In this framework, public sector officials are expected to implement policies in a uniform and efficient manner while employees enjoy strong job security (Wise, 1996). During the 1990s public administration went

through a deep transformation that gave rise to the so-called "New Public Management" (NPM) (Bach et al, 2000). The NPM is a set of managerial practices that resemble those employed in the private sector and are aimed at improving efficiency and reducing costs. The three key aspects of NPM are: (i) the strengthening of management functions, (ii) changes in the organizational structure, and (iii) market orientation. The first element of NPM is the strengthening of the role of public sector managers who were given greater discretionary powers and tighter control over personnel through performance targets and appraisals. In exchange, managers are expected to improve the efficiency and effectiveness of the organization they oversee and are held accountable for the organization performance. This shift was accompanied by a significant increase in pay levels relative to the median wage in the public sector. The second characteristic is the deep transformation in the organizational structure of public sector organizations that are no longer seen as monolithic agencies but as a collection of smaller and partially independent units, where managerial responsibilities are devolved from central government to the local level. The third dimension of NPM is a market orientation where competitive tendering and internal markets are used to increase competition across units belonging to the same organization. Although the NPM swept across all OECD countries, particularly in Nordic and Anglo-Saxon countries, few decades since its introduction there is a widespread feeling that the change fell short of expectations (Bloom et al. 2018).

Next, we discuss the empirical evidence on the role of managers and managerial practices in the public sector. The presence of large productivity differentials between units operating in narrowly defined sector such as schools (Bloom et al 2015a), hospitals (Kessler and McLennan, 2000; Hall et al, 2007), and public offices (Fenizia, 2020) is a stylized fact that is robust across a wide set of countries and contexts. Managers and managerial practices are often brought forward as one of the main drivers of these productivity differentials, yet most of these claims are based on anecdotal evidence and case studies as opposed to systematic quantitative evidence (Bloom et al 2009). The causal impact of managers and managerial practices in the public sector is not well understood due to the difficulty of both measuring public sector output and finding sources of identifying variation. Bloom et al (2015a) focus on schools and document a tremendous variation in the basic managerial practices both within and across countries. Higher values of this management index correlate positively with pupil outcomes. Interestingly, there is a larger within-country variance in management in schools than in other sectors such as manufacturing; the

authors argue that differences in the institutional environment have much larger effects in the way schools are managed compared to private sector firms. Di Liberto et al (2015) corroborate this finding and document a large within-country variance in school managerial practices in Italy as well as a strong positive correlation between management scores and students' outcomes. Bloom et al (2009) also study hospital management practices and find that management scores correlate with a wide range of performance measures such as lower mortality rates from acute myocardial infarction and general surgery, shorter waiting lists, lower staff turnover, and better composite measures of performance. In a companion paper (Bloom et al, 2015b) the authors show that competition increases management quality and hospital performance. Two recent studies evaluate the impact of managers on the performance of public sector organization. Janke et al (2019) examine the impact of top managers on large and complex public sector hospitals in the UK. This is the ideal setting as hospitals approach management in a very decentralized fashion and CEOs are given full responsibility for the performance of their organization. The authors find that there are large pay differentials across CEOs reflecting the fact that the market perceives them as being differentiated. Yet, they appear to have a very limited impact on hospital performance across a wide range of indicators. This finding is at odds with previous literature that documents large impacts of principals on student performance. In line with previous studies, Fenizia (2020) finds that Social Security managers have a quantitatively meaningful impact on the performance offices they oversee.

2.2 Labor Market Institutions in the Public Sector

Trade unions are present in all OECD countries and union density is traditionally higher among public sector employees than in the private sector. In fact, 12.82% of US private-sector employees are unionized vs 23.19% of public sector workers. European countries display the same pattern although they exhibit higher unionization rates: 20% of private sector workers are unionized vs 46% of public sector employees.

Collective bargaining agreements can range from nation-wide contracts that cover all public sector employees in a country to decentralized agreements that cover one category of workers in a given administrative area. Centralized agreements are most common in countries that have a career civil servant system but have become less popular over time as it is believed that they lead to high wages, inflation, and unemployment (Ferreiro 2004, Campolieti et al 2016).

Decentralization allows for greater flexibility and the ability to tailor collective bargaining agreements to specific local labor markets or industries.

Considerable attention has been devoted to teachers as collective bargaining is a prevalent feature of the US education system and over 60% of teachers are covered by collective bargained contracts (Frandsen, 2016). While an earlier body of work has found mix results on the evidence of unions on teacher compensation (refer to Cowen and Strunk (2015) for a review of the literature), a set of recent studies exploit the changes in the ability of unions to negotiate contracts in several US states and find that weakening union bargaining power has negative consequences on teacher pay (Garcia and Han 2021).

In recent years, local politicians and commentators started calling for limits to the collective bargaining agreements and some US states have proposed or passed laws that eliminate or severely lessen union rights of state and local government employees (Katz, 2013). These trends have also contributed to increase segmentation between public sector employees protected by employment guarantees (insiders) and others who are not (outsiders), even within the same workplace. Some examples of this two-tier workforce can be found in the postal sector, local public transportation and hospitals (Schulten et al, 2008). In this process unions have often tried to protect the existing workforce and agreed in exchange to poorer working conditions for the new hires. This results in different employees performing the same tasks within the same organization being paid differently depending on the time of their entry into the company. Another factor that has contributed to the creation of a two-tier public sector labor market is the rise in outsourcing. In the last three decades the public sector started contracting out services that had traditionally been provided by public sector employees. The main reason for outsourcing was the widespread belief that the private sector was better equipped to provide such services in a cost-effective way. As a consequence, the workers employed in the contracted-out services were no longer covered by public sector collective bargaining agreements and often had to accept lower wages and worse working conditions (Schulten et al, 2008).

3. Personnel Economics of the Public Sector

In this section, we provide an overview of the theoretical considerations on public sector jobs and incentives. We first review the principal-agent problem in the context of public sector employment and the optimal design of contracts in the presence of asymmetric information and multitasking.

Next, we discuss the challenges related to measuring the performance of government agencies and review a broad set of creative measures that scholars used in the literature. Lastly, we evaluate the effectiveness of intrinsic motivation vs monetary and non-monetary incentives and examine their impact on the recruitment of public officials and front-line providers.

3.1 Principal-Agent, Observability, and Multitasking

For decades economists have been depicting public sector officers as malingering bureaucrats who face perverse incentives to inflate government budgets via corruption and/or patronage (Niskanen 1968). A more recent strand of literature argues, instead, that bureaucrats are the core of state capacity as they are ultimately in charge of implementing government policies and they are responsible for public service delivery across a wide variety of contexts. Best et al (2019) find that over 20% of the variation in quality-adjusted prices paid in Russian public procurement is driven by the officers who are in charge of procurement auctions. Removing the bottom 25% of bureaucrats and substituting them with officers in the 75th percentile of the effectiveness distribution would lower public procurement expenditure by 11% (or USD 13 billion) every year. Xu (2018) uses historical data to quantify the impact of political connections on the performance of British Empire officers. He shows that connected governors are more likely to be assigned to more prestigious posts although they provide higher tax exemptions, generate fewer revenues, and invest less. Interestingly, these substantial performance gaps vanish after the abolition of the patronage appointments.

Public sector employees often have considerable discretion in performing their tasks and possess specific information of the service they provide. The so-called "Principal-Agent Problem" is the textbook example of a situation in which the parties would like to design a contractual arrangement that addresses these informational asymmetries (see Heinrich and Marschke, 2010 and Burgess and Ratto, 2006).

Most Principal-Agent models assume that a risk-neutral employer (the principal) hires a risk-averse worker (the agent) and the employer cannot observe the effort that the agent puts into her job. Under a fixed wage, as effort is costly for the agent, she will exert a suboptimal level of effort, which will negatively affect the performance of the organization. The contracting problem arises from the fact that, as effort is unobservable, the principal cannot tie the agent's compensation to it.

Many incentive-pay-schemes try to address this issue by tying a fraction of the worker's compensation (bonus) to a performance measure. While this appears to be a simple and appealing solution, it is notoriously hard to design the contract in a way such that it aligns the incentives of the agent with those of the principal and effectively solves the above-mentioned contracting problem. Linear incentive schemes are extremely popular both in theoretical work and in practice due to their simplicity and transparency. Despite their attractiveness, they are optimal only under a set of fairly specific circumstances (Holmström and Milgrom, 1987). Another common type of pay for performance scheme rewards the agent if she achieves a given target (Holmström, 1979; Mirrlees, 1999). Baker (1992) focuses on the design of optimal contracts in organizations that, like government, lack a contractible performance measure. He argues that the agent's compensation should be more tightly linked to performance the more beneficial an increase in effort is. The intuition is that pay for performance is costly for the organization as it increases the worker's compensation, therefore it is worth engaging in it as long as the benefits outweigh the costs. Moreover, incentives should be stronger the greater the ability of agents to respond to them. In other words, incentive pay schemes might be ineffective in contexts where bureaucrats are highly constrained by procedural rules and cannot exert any discretion. Baker also observes that incentivizing workers on a given performance measure can introduce a significant distortion if this measure is not a good proxy for the value of the organization as a whole.

Related to this point, Holmström and Milgrom (1991) point out that public sector employees typically perform a wide variety of tasks and that they have discretion on how much effort to allocate to each of them. In this context, all tasks should be incentivized and the optimal contract should design weights that reflect the relative importance of those tasks. This is extremely hard to implement in practice as not all tasks are observable and often performance measures exist only for a subset of them (Jones et al. 2018). This problem is pervasive in public sector organizations as bureaucrats typically engage in several tasks that are not observable and hard to quantify ex-post. Some scholars have proposed using subjective measures of workers' performance as an input to the incentive pay-schemes. Some other have considered revealed-preference methodologies to reconstruct an ex-post aggregate measure of performance (Gutacker and Street 2018). While appraisals measures might be able to provide a more holistic evaluation of workers' performance, they are extremely problematic in the presence of implicit or explicit biases.

3.2 The Measurement Curse

Measuring the performance of government agencies is notoriously hard. First, there are many government services where the output is not easy to define (e.g., defense and public administration). Second, governments provide a wide variety of public services (multidimensional output) whose relative values are hard to assess. Third, many public sector services are exchanged in markets where prices are either absent (e.g., defense) or are heavily subsidized and do not necessarily reflect the value of the service provided (e.g., school tuitions). Fourth, it is typically hard to define what a "good outcome" is as governments do not have a single clear goal but often try to strike a balance between efficiency and equity. Fifth, performance data is typically available at the team level rather than at the individual level, which makes the design of the optimal contract more complicated. As a result, incentive pay schemes have not been used extensively in the public sector.

Scholars have tried to address these challenges by using a wide variety of objective and subjective measures to evaluate the performance of government agencies but the choice of the performance measure(s) is often constrained by the features of the context of study and by data availability. A recent set of papers has used objective service delivery indicators to study the quantity and quality of service provided. Propper et al (2007) use mortality rates for acute myocardial infarction to evaluate the performance of hospitals in the UK. In the context of schools, scholars typically use standardized test scores together with long-term student outcomes such as high school graduation, college enrollment, and adult earnings to rank schools and teachers' performance (Chetty et al 2014a; Chetty at al 2014b; Rothstein, 2017). Fenizia (2020) combines a complexity-adjusted task completion with a quality index to measure the performance of Italian social security offices. In a similar fashion, Atkins (2005) uses data from the national accounts and from the Office for National Statistics to construct a wide range of service delivery indicators standardized by budget expenditure aiming at quantifying government output and productivity in the UK.

Other researchers have used complexity-adjusted project completion rates (Rasul and Rogger, 2018; Rasul et al 2019) and quality-adjusted prices/road construction (Best et al, 2019; Lewis-Faupel et al, 2016). Rasul and Rogger (2018) exploit the public projects audit data collected during a period of sweeping reforms by the Nigerian government. These reports contained detailed information on the completion stage of each project as well as the experts' assessment of its inputs

and quality. Similarly, Rasul et al (2019) use quarterly and annual progress reports mandated by OHCS to the Ghanaian government to identify completion rates of projects undertaken by government agencies. Lewis-Faupel et al (2016) evaluate the effectiveness of public procurement in road construction combining administrative data on costs, quality, and delays with data scraped from several government agencies. Best et al (2019) are also interested in public procurement and develop a machine learning classifier to categorize purchases into homogenous bins and construct a quality-adjusted price index.

The use of mystery shoppers is an innovative and creative way to construct reliable measures of public sector output and quality in a variety of different contexts. This practice originated in the first half of the XX century in the private sector and has recently been applied to public sector organizations. Mystery shoppers impersonate a regular customer or citizen seeking assistance, they do not reveal their identity to the organization being evaluated, and they keep detailed records of the interaction. Sanchez de la Sierra and Titeca (2018) study corruption of traffic police officers and hire 160 mystery shoppers (including individuals inside the police hierarchy) who keep a record of when they observe police officers collecting bribes and their amounts. Importantly, police officers are unaware they are being monitored and mystery shoppers do not know that there is more than one of them at each site. Although quite costly, this method appears to give a reliable estimate of briberies as the information on the frequency and amounts of bribes collected by different agents displays a strong positive correlation. Similarly, Olken and Barron (2007) have disguised surveyors accompany truck drivers along their route and collect detailed information on illegal payments to corrupt officials. Bertrand et al (2007) study bureaucrats issuing driver licenses and re-test all driver license applicants to construct an indicator for error rate/corruption. A cheaper but less satisfactory approach to get proxies for the performance of public sector employees is the use of vignettes. In this case, each worker is presented with a stylized hypothetical situation (vignette) and she has to explain what procedure she would use. This method is often used to evaluate physician's competence (Das and Hammer 2007; Das et al, 2008; Mohanan et al, 2015). There are two downsides to this strategy: first, public sector employees are aware that they are evaluated and that they might change their behavior because of it (Hawthorne effects); second, the vignettes are highly stylized and do not capture the complexity of physicians' work and human interaction.

Another measure that is often used to evaluate organizational performance is subjective appraisals. Most studies using performance appraisal do not have rich survey data but rely on the assessment of one stakeholder (typically the boss or supervisor). In this context, one concern is that performance appraisals might reflect the worker's performance as well as her supervisor's perceptions and biases. Somani (2018) uses subjective evaluations of middle-tier supervisor to document a substantial amount of supervisor bias that leads to worse allocation of labor to tasks. Other scholars have used employee's assessment of organizational performance to construct proxies for organizational performance (Brewer and Selden, 2000; Kim, 2004; Kim, 2010). These measures have not gained much attraction in economics as most economists are quite skeptical of the extent to which they are able to capture actual performance. Finally, a set of studies uses citizen's satisfaction to evaluate the performance of local governments (Abelson et al, 2004; Andrews et al, 2005; Boyne, 2002; Olken, 2010). Although these measures somewhat reflect the quality and quantity of public service provided, they are not immune to (implicit and explicit) biases and selective non-response. In particular, it is often the case that the citizens who decide to participate in these surveys are a non-random subset of the population and they have often had a particularly positive or negative experience.

3.3 Monetary Incentives and Intrinsic Motivation

While intrinsic/pro-social motivation is often mentioned as a desirable attribute of public servants, little is known of recruitment on intrinsic motivation and whether this personality trait can be nurtured. In the Principal-Agent framework discussed in Subsection 3.1 incentives are crucial to elicit the desired level of effort from agents. If the interests of pro-socially motivated workers are naturally aligned with government objectives, the agents provide the Pareto optimal level of effort and there is no need for incentives. In this context, the use of financial incentives may even be harmful to the extent that they induce workers to misallocate their effort (Dixit, 2002) or crowds out employees' motivation (Bènabou and Tirole, 2006). For example, Bellé (2015) studies the role of intrinsic motivation among health workers in Italy and provides compelling experimental evidence that monetary rewards crowd out employees' motivation for prosocial behavior. A novel study by Meyer-Shaling et al (2019) addresses a related question by invesrigating the extent to which public service motivation (PSM) can be activated and used to promote ethical decision making among public servants. The authors design an experiment that primes a random subset of

Chilean public officials by asking them about PSM (activation) and then elicits reporting of unethical behaviors. They find PSM activation increases the willingness to report ethical problems to management.

One related strand of literature examines recruitment in the public sector and how to attract both talented and pro-socially motivated workers. Most economists agree that offering higher wages helps to recruit higher quality candidates; however, one concern is that if talent and pro-social motivation are negatively correlated, the government might attract one type of worker at the expense of the other (i.e., crowding out effect). Dal Bò et al (2013) study the recruitment of Mexican federal officials and is the most influential study in this literature thanks to its unique design. The authors experimentally randomize wage offers for the same position and show that higher wages attract more talented candidates and that this does not come at the cost of recruiting less pro-socially motivated workers. The authors conclude that, in this setting, the correlation between candidate quality and pro-social motivation is not negative enough to induce an overall crowding out of pro-socially motivated workers. As governments are typically not amenable to offer different wages for the same position, the researchers working in this space had to find creative solutions such as randomizing how positions are advertised (Ashraf et al, 2019) and the perception of expected earnings (Deserrano, 2019). Whether higher wages attract a more talented but less intrinsically motivated pool of applicants is highly context-dependent and ultimately hinges on the correlation of personal traits among applicants in a given setting.

Although public sector employees typically display higher levels of pro-sociality than private-sector workers (Finan et al, 2017), most economists believe that their incentives are far from aligned with the government's objectives. Scholars have focused on the role of monetary rewards as a way to improve government performance and public service delivery.

The evidence on the effectiveness of financial incentives in the public sector is overall mixed (refer to Dixit, 2002, Burgess and Ratto, 2003, and Finan et al., 2017 for a review of the literature). Among successful stories, high-powered financial incentives have been effective at increasing fines collected (Kahn et al, 2001), tax revenues, and taxpayer satisfaction (Kahn et al, 2016). In the context of schools rewarding teachers on student performance appear to have significantly improved students' outcomes (Lavy, 2009; Muralidharan and Sundararaman, 2011).

Another body of literature finds that pay-for-performance schemes are ineffective and at times even harmful in the public sector. Burgess at el (2017) study the introduction of team pay-

for-performance in the UK government and find that this scheme had no effect on average. Interestingly, the impact of the reform is larger for smaller offices and decreasing in office size, which is consistent with free-rider effects and peer monitoring. Baiker and Jacobson (2007) show that when US police departments are allowed to keep a share of the revenues obtained from the drugs they seize, they increase drug-related arrests but reduce arrest rates for petty crimes, suggesting that policemen selectively allocate their effort to the incentivized tasks. Glewwe et al (2010) examine incentives aimed at improving student learning and document that even carefully designed incentive schemes can generate perverse incentives.

Governments across the world have also resorted to non-monetary rewards to improve the performance of their employees such as performance-based posting and public awards. Khan et al (2019) study the performance-ranked serial dictatorship mechanism implemented in the Punjab property tax agency. In this context, the government uses postings to provide incentives to bureaucrats who sequentially choose their preferred locations in order of performance. This mechanism increases revenue growth by 30-41% over two years. However, not all studies on performance-based posting find large positive effects like those documented by Khan et al (2016). Banerjee et al (2014) examine the use of officer transfers triggered by severe police misconduct and find no effect on officers' performance. There are three main downsides to using performance-based positing as a form on non-monetary incentive: first, there may be non-negligible costs associated with bureaucrat rotation (e.g., disruption and relocation costs); second, there often are constraints to how often bureaucrats can be rotated or whether they can be forced to rotate at all; third, the government loses flexibility over officers' assignment, which becomes an issue if bureaucrats' preferences are not aligned with government's objective.

4. Public Sector Jobs

In this section we present a set of interesting stylized facts on public sector jobs using cross-country survey data on European countries and the United States. First, we characterize the selection into public employment. Next, we compare the characteristics of public and private sector jobs in terms of pay differentials, diffusion of pay for performance schemes, working conditions, job satisfaction, and discrimination and obnoxious behavior.

4.1 Selection into public employment

In this section, we use data drawn from two international surveys covering 28 European countries (6th European Working Conditions Survey) and the United States (2nd American Working Conditions Survey Data), both fielded in 2015. These surveys present three main advantages: first, they provide nationally representative cross-country data on employment for a wide variety of working conditions and workers' perceptions; second, they are designed to be highly comparable across countries; third, they focus on aspects that have not been treated systematically in empirical research such as workplace practices, job satisfaction, routinization, diffusion of pay for performance, harassment, and discrimination. We select workers aged between 20 and 60 employed in either the public or private sector, while we exclude the self-employed and those employed in the non-profit sector.

We start our empirical analysis by characterizing the selection into public sector employment. There are significant differences in the composition of public- and private-sector workers (Table 1). In Europe, public sector employees are more likely to be female, older and more educated than their private sector counterparts. The same pattern characterizes the United States although most of these differences are less stark. While in Europe public sector workers are more likely to be cohabiting than single and report on average higher net monthly earnings than private sector workers, the opposite is true in the US.

Table 1: Characteristics of private and public sector workers

	EU		USA	
	(1) Private	(2) Public	(3) Private	(4) Public
Female	0.46	0.60	0.39	0.55
Age	40.50	43.65	40.24	40.97
Family Size	2.88	2.92	2.44	2.59
Cohabiting	0.69	0.74	0.56	0.52
Native	0.90	0.94	0.90	0.90
Years of Education	12.19	13.54	14.53	14.53
Health	4.04	4.06	3.60	3.53
Net Monthly Earnings	1548.94	1724.81	5065.17	4659.09
Weekly Hours	37.01	35.31	41.08	39.41
Observations	13402	5466	651	670

Notes: EWCS and AWCS (2015). The full sample includes all employees in the public or private sector (excluding agriculture, farming, fishing, and forestry) between age 20 and 60. The number of observations for columns 1-4 for female are 13398, 5465, 651, and 670 respectively; for family size are 13357, 5453, 651, and 670; for health are 13390, 5463, 635, and 653; for net monthly earnings are 10547, 4316, 621, and 641; for hours are 13195, 5405, 645, and 660. All summary statistics are weighted using sampling weights. Health is a subjective assessment of overall health, which can range from 1 to 5. Net monthly earnings are reported in Euros in column 1 and 2 and are reported in USD in columns 3 and 4.

The fact that the public sector employs a larger share of women is a finding that is remarkably stable across countries (on average 58% of government workers in OECD countries are women). This can be explained by the fact that some government occupations, such as teachers or nurses, are historically female-dominated and that public sector jobs typically offer generous child and family-work reconciliation policies (OECD, 2017). However, despite the larger share of women employed in the public sector, they tend to be systematically underrepresented in senior management positions (OECD, 2017).

Next, we assess the main determinants of the likelihood of being employed in the public vs private sector in a regression analysis framework. We first focus on the distinction between European countries and the US, then we examine whether these determinants differ between European clusters. We estimate a linear probability model where we regress a public sector affiliation dummy on a vector of demographic characteristics and personality traits proxying for individuals' prosocial attitudes and their intrinsic motivation for doing "useful work". We proxy for pro-social attitudes using information about time-use on "voluntary or charitable activity" and "political or trade union activity". We construct a measure of intrinsic motivation from a detailed question eliciting respondents' perceptions about "doing useful work". As respondents may sort into the public sector based on their observable and unobservable traits, we view our findings as interesting conditional correlations and we do not wish to interpret them causally.

The main results are reported in Table 2. In line with the descriptive statistics presented in Table 1, women are more likely to work the public sector both in the US and in Europe (columns 1 and 2). In Europe public sector employees also appear to be more educated on average. Native-born respondents are more likely to work in the public- than in the private-sector in Europe while the opposite seems to be true in the US (although the latter is not statistically significant).

For illustrative purposes, we have grouped European countries according to an extension of the original threefold classification initially proposed by Esping-Andersen (1999) for welfare regimes. Welfare regimes are described as the articulation of welfare programs and institutions - including the state, markets, and households - insuring households against social risks, and therefore promoting and protecting welfare. Esping-Andersen distinguished three welfare state regimes in the OECD world, which he labeled liberal, conservative and social democratic. We have matched the liberal pattern with the Anglo-Saxon countries in our sample, the social-democratic with the Nordic model and we have partitioned the conservative model into a central, a southern and an

Eastern Europe. The underlying assumption is that different patterns of welfare provision call for different organization of the public sectors.

Table 2 – Determinants of Public sector employment (US and Europe)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	US	Europe	Nordic	Anglo-Saxon	Mediter-ranean	Continental Europe	Eastern
female	0.152***	0.105***	0.245***	0.164***	0.053**	0.093***	0.100***
	[0.045]	[0.013]	[0.024]	[0.002]	[0.013]	[0.008]	[0.013]
age	0.002	0.006***	0.004	0.006*	0.010***	0.004**	0.007***
	[0.002]	[0.001]	[0.001]	[0.001]	[0.000]	[0.001]	[0.001]
native	-0.004	0.080***	-0.073**	0.070***	0.143***	0.073***	0.081
	[0.072]	[0.013]	[0.009]	[0.000]	[0.010]	[0.014]	[0.114]
white	-0.078						
	[0.056]						
married / with	-0.031	0.015	0.001	0.059	0.013	-0.002	0.007
partner	[0.045]	[0.012]	[0.011]	[0.012]	[0.011]	[0.025]	[0.022]
years of	-0.003	0.033***	0.043**	0.029***	0.034***	0.032***	0.039***
education	[0.010]	[0.002]	[0.005]	[0.000]	[0.004]	[0.005]	[0.004]
prosocial	0.007*	0.040***	0.025*	0.056**	0.024***	0.042***	0.050**
behavior	[0.004]	[0.005]	[0.008]	[0.001]	[0.004]	[0.005]	[0.016]
intrinsic	0.022	0.038***	0.057**	0.030**	0.042*	0.025***	0.050***
motivation	[0.020]	[0.006]	[0.010]	[0.001]	[0.017]	[0.004]	[0.012]
country FE	no	yes	yes	yes	yes	yes	yes
Observations	1,257	18,661	2,058	1,785	4,309	6,228	4,281
R-squared	0.041	0.122	0.152	0.127	0.140	0.104	0.123

Note: EWCS and AWCS data (2015). The dependent variable is a dummy variable that takes value 1 if the respondent is employed in the public sector. Each regression is weighted using sampling weights and controls for gender, age, years of education, being born abroad, being white (in case of US) and country fixed effect (in case of Europe). The pro-social behavior variable refers to the answers to the question: "In general, how often (How many hours per week) are you involved in any of the following activities outside work?" with the following sub-items: "A - Voluntary or charitable activity" - "B - Political/trade union activity". The variable is computed as the sum of the hours devoted to activities A+B. The intrinsic motivation variable is drawn from respondents' answers to the question: "You have the feeling of doing useful work", defined on a 5-items Likert-type scale (ranging from 'always' to 'never'. "Nordic" includes Denmark, Finland, Norway and Sweden; "Anglo-Saxon" includes UK and Ireland; "Mediterranean" groups Greece, Italy, Spain and Portugal; "Continental Europe" contains France, Germany, Austria, Belgium, the Netherland and Luxemburg; eventually "Eastern" includes Bulgaria, Czech Republic, Hungary, Poland, Romania and Slovakia. Robust standard errors in brackets (clustered by countries in case of Europe). *** p<0.01, ** p<0.05, * p<0.1.

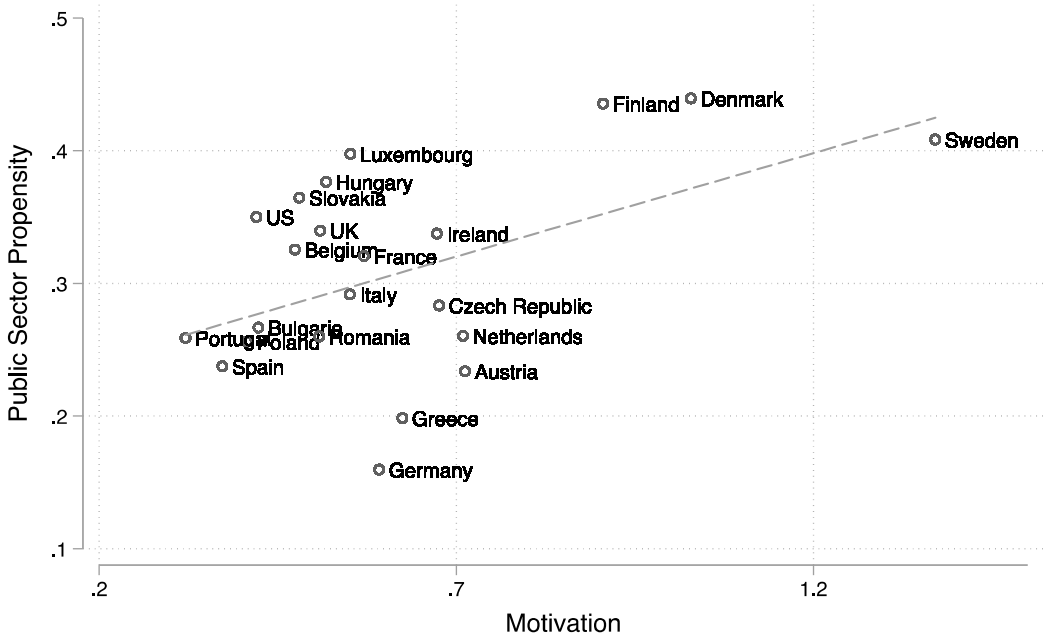
Evidence across the European country clusters confirms the above overall picture (columns 3 to 7): public sector employees are more likely to be women, native-born (except Nordic countries), and more highly educated. On average, the sorting of individuals on their observable attributes appears much more pronounced in Europe, with a higher fit in Nordic countries and a lower one in Mediterranean countries. In the US public sector employees appear to be less selected on observable characteristics. We also show that the probability of becoming a public sector employee, relative to working in the private sector, is correlated with individuals' behavioral traits.

We find that pro-social behavior and intrinsic motivation are positively correlated to public sector affiliation in Europe, but only weakly correlated in the US, with a sizable heterogeneity across countries.

To investigate further how behavioral traits may shape the individual's decision to join the public sector, we compute a country-level synthetic indicator that captures both prosocial behavior and intrinsic motivation and we plot it against the (average) propensity score for public sector employment in Figure 1. The indicator of prosocial behavior and intrinsic motivation refers to the following questions: "*In general, how often (How many hours per week) are you involved in any of the following activities outside work? A - Voluntary or charitable activity; B - Political/trade union activity*"; and "*You have the feeling of doing useful work*", defined on a 5-items Likert-type scale (ranging from 'always' to 'never'). In practice, the synthetic indicator of prosocial behavior and intrinsic motivation is computed extracting the first component of a factor analysis from the indicators for "voluntary or charitable" and "political or trade union activity" as well as "doing useful work" (i.e. the factors extracted account for 0.41 and 0.33 of the total variance, respectively). The score is normalized to have an overall mean of zero and a unitary standard deviation. Figure 1 displays a positive relationship between these two variables, suggesting that in countries where commitment to societal problems and motivation to do useful work is stronger, the propensity to work in the public sector is higher. This is the case in Nordic countries that are positioned in the upper-right corner, while the opposite occurs with Mediterranean and Eastern countries. Anglo-Saxon countries exhibit little variation in public sector propensity, though Ireland shows a higher prosocial behavior and intrinsic motivation than the US.

The above evidence is particularly relevant for public sector recruitment criteria and public-private pay differentials, as with pro-socially motivated workers the need to provide incentives to elicit an optimal level of effort should be lower.

Figure 1 – Prosocial, intrinsic motivation and public sector employment score (European countries and US)

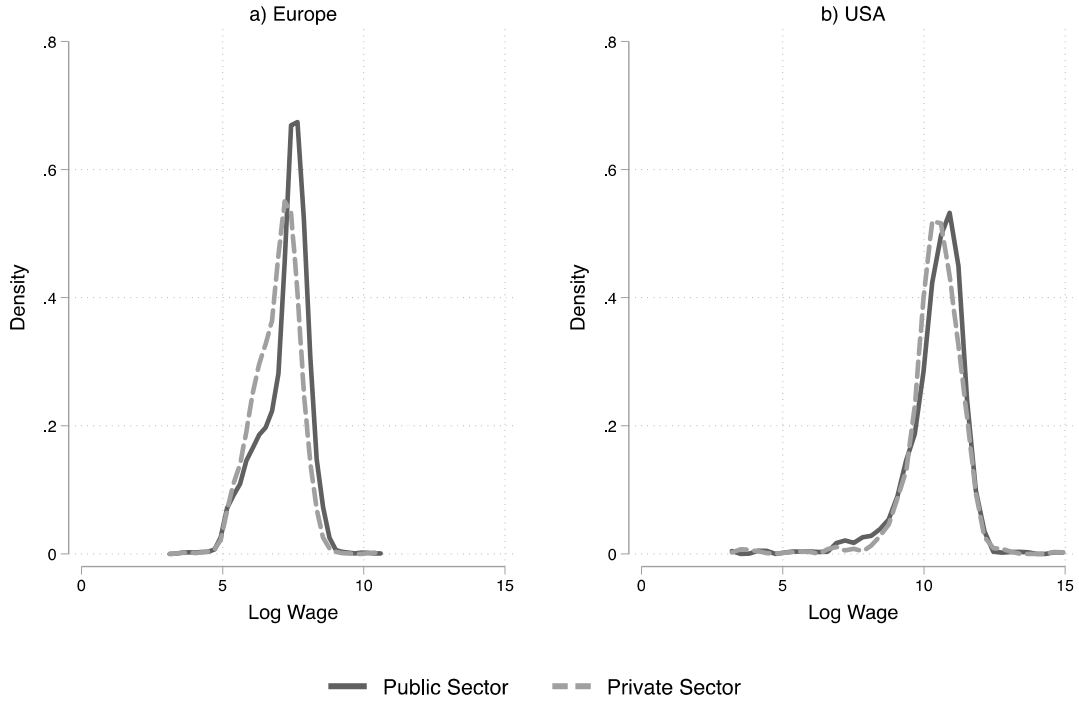


Source: AWCS and EWCS data

4.2 Pay Differentials

Having characterized the selection into public sector employment, we examine one of the most salient job attributes: earnings. Figure 2 compares the earnings distribution between the public and the private sectors. In Europe, these two distributions appear to be quite distinct: public sector jobs are characterized by higher average earnings and substantially lower variance than private sector ones. The standard deviation of log wages ranges from 0.3 to 0.6 in the public sector and from 0.4 to 0.7 in the private sector in European countries. In percentage terms, log wage dispersion is approximately 6 to 15 percent higher in the private sector. On the contrary, in the U.S. the distribution of earnings does not differ dramatically between the private and the public sectors, albeit the latter exhibits a slightly smaller variance and lower mean.

Figure 2– The earnings distribution in the public and private sector



Notes: AWCS and EWCS (2015).

In order to quantify the earnings differential between public and private jobs, we estimate a standard earnings regression:

$$\log earnings_{ic} = \alpha_c + \beta Public_{ic} + X'_{ic}\delta + \theta_c + \varepsilon_{ic} \qquad (1)$$

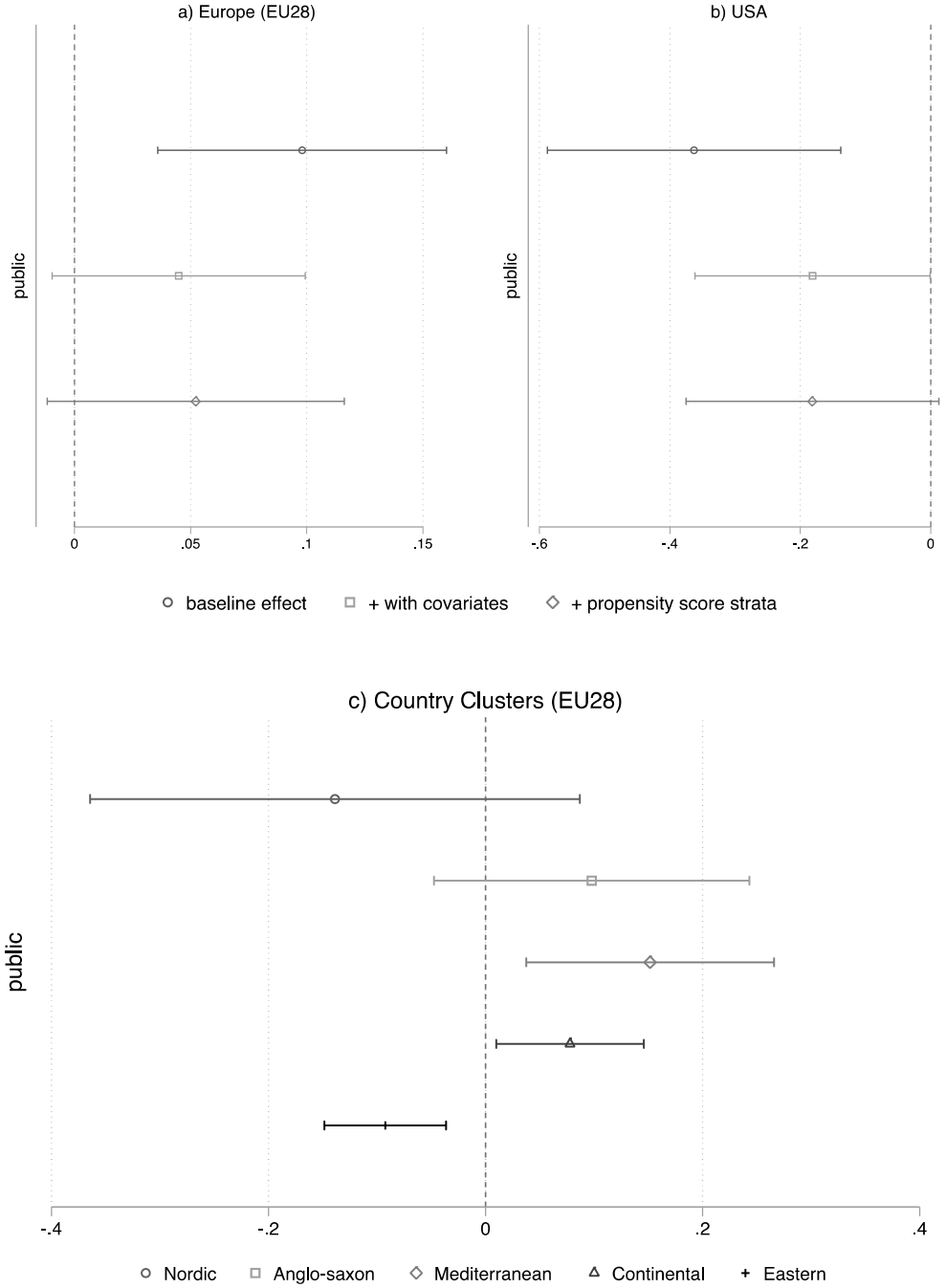
where $\log earnings_{ic}$ represents the outcome of interest for survey respondent i in country c. We include a set of country fixed-effects θ_c to account for heterogeneity in institutional settings across countries. $Public_{ic}$ is a dummy variable for public sector affiliation, while X'_{ic} is a vector of individual characteristics and job attributes (e.g., gender, age, citizenship, education, part-time, type of contract, main occupation and industry dummies). We estimate (1) separately for the US and for European countries and we omit country fixed effects when we limit our sample to the US. To further unpack regional differences across European countries, we estimate (1) separately by country clusters. We weigh all regressions using sampling weights and cluster the standard error by country (due to the small number of clusters standard errors tend to be rather large, see Angrist and Pischke, 2009). $\hat{\beta}$ is the main coefficient of interest and it identifies the public-private earning

differential net of observable worker characteristics and country fixed effects. Obtaining a causal estimate of earnings differentials is challenging due to both heterogeneity in institutional settings and selection of workers into the public sector based on unobservable individual traits. We view the regression-adjusted findings as interesting stylized facts that should not be interpreted causally as we are unable to fully account for selection of workers across sectors.

To investigate the importance of observable worker characteristics and country heterogeneity in the estimation of pay differentials, we evaluate how $\hat{\beta}$ changes when we first estimate a parsimonious version of (1) and progressively include controls. Figure 3 reports the estimated earning differentials obtained using three different empirical specifications: in the baseline specification we regress log earnings on the public sector dummy and the country fixed effect (row 1); then we augment this regression by including individual level controls, job attributes, and industry dummies (row 2); finally, we control for the deciles of the propensity score obtained from columns 1 and 2 of table 2 (row 3).

The baseline public sector pay gap is positive for European countries (10 percent) and negative for the US (-36 percent). The former halves and becomes only marginally statistically significant when we condition on a basic set of covariates or on the propensity score strata (p-value 0.10), suggesting that a fair amount of the raw earnings gap is explained by differences in workers characteristics and job attributes (Figure 3, Panel A). Similarly, in the US, adding controls reduces the estimated public sector pay gap which remains negative but barely statistically significant (Figure 3, Panel B). To unpack regional differences across European countries, we group countries into five clusters (Nordic, Continental, Anglo-Saxon, Mediterranean and Eastern) following the literature on welfare regimes and estimate public-private earning gaps separately for each cluster (Esping-Andersen 1999). Results by country clusters are obtained using our preferred specification with a public sector dummy and a set of individual and job controls. Figure 3 Panel C reports the results and documents a substantial amount of heterogeneity in the public-private sector pay gap across country clusters: Nordic and Eastern countries display a negative pay gap (although the former is not statistically significant), while Anglo-Saxon (p-value 0.07), Mediterranean, and Continental countries display a positive gap. These results are interesting in so far as they suggest that – under the assumption that public sector jobs are comparable across countries – public sector employees are paid more than their private-sector counterparts in some countries but not in others.

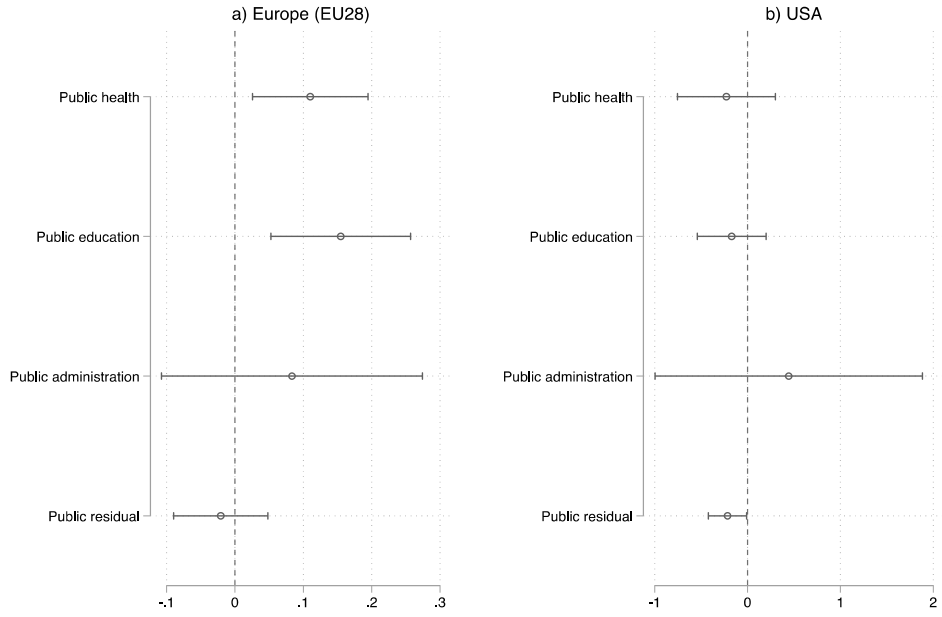
Figure 3 – Public and private sector pay gap



Notes: AWCS and EWCS (2015). Panel a) and b) report the estimated earning differentials for Europe and the US, respectively. The baseline model regresses log earnings on the public sector dummy and the country fixed effect; then we augment this model by including individual level controls, job attributes, and industry dummies ("+ covariates"); finally, we estimate a matching model and control for propensity score deciles ("+ propensity score strata"). Panel c) reports the estimates for the "+ covariates" model disaggregated by country cluster.

Next, we explore the extent to which the public-private earning gap differs across broad occupational groups. In our analysis, we cluster occupations into four sectors: education, healthcare, central administration, and a residual category. We estimate sector-specific pay gaps regressing log earnings on the public sector dummy interacted with the sector dummies and a dummy for female, white (for the US), native, sector, age, and coarse occupational categories. Figure 4 reports the main findings. The healthcare and education sectors display a positive public earnings gap in Europe (11 percent and 15 percent respectively), while these gaps are negative, albeit not statistically significant, in the US. The public sector pay gap for central administration appears to be positive but imprecisely estimated both in Europe and in the US (which is probably due to the large variability of pay across different levels of public administrations, where central administration typically pay higher salaries compared with peripheral ones), while residual category displays a negative pay gap (which is not statistically significant in Europe). Overall, these findings document some sector-specific heterogeneity in public earnings gaps across European countries, while the point estimates are relatively stable across broad occupation groups in the US.

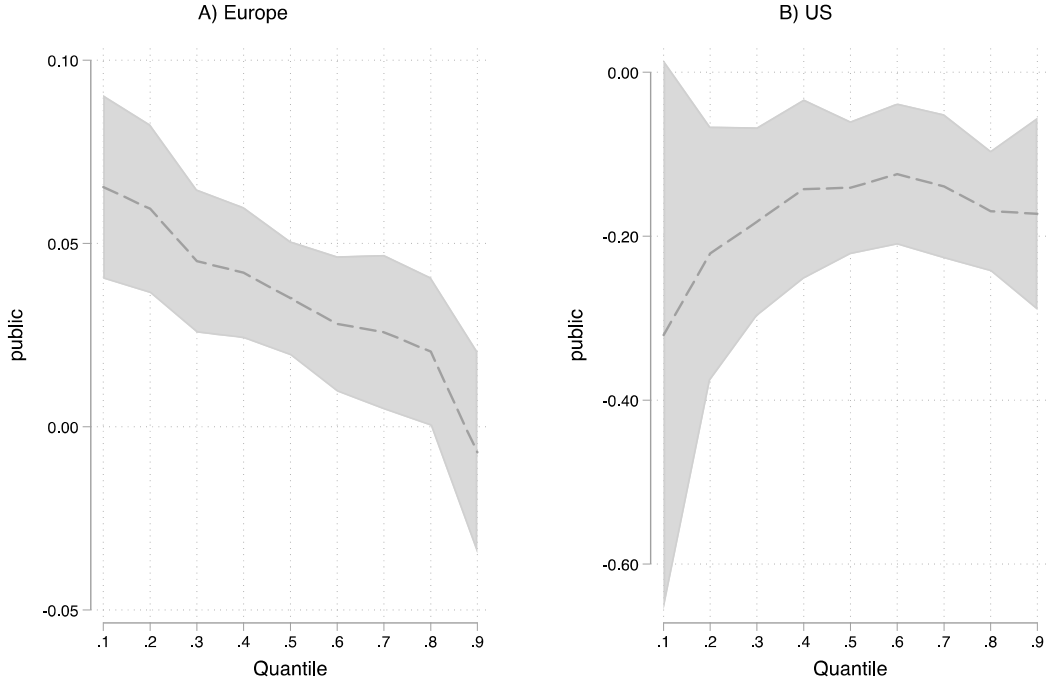
Figure 4 – Healthcare, Education and Public Administration pay gap



Notes: AWCS and EWCS (2015). This Figure reports the sector-specific pay gaps obtained regressing log earnings on the public sector dummy interacted with the sector dummies and a dummy for female, white (for the US), native, sector, age, and coarse occupational categories.

Understanding how public-private earnings differentials change along the earnings distribution is important as earnings gaps affect labor supply decisions and sorting of workers into the public sector. To shed some light on this topic, we estimate equation (1) using quantile regression and evaluate pay gaps at each decile of the earnings distribution separately for the US and Europe. Panel A of Figure 5 documents that in Europe public sector jobs pay higher wages than private sector ones. This gap is larger for low skilled employees, progressively fades away as we move along the earnings distribution, and turns negative (and statistically significant) at top deciles (Campos et al. 2017, De Palo et al. 2013). This graph suggests that the public sector is likely to have a hard time recruiting and retaining high-skilled individuals in Europe, while it may look especially attractive for low-skilled individuals.

Figure 5 – Public-private sector pay gap in Europe and the United States



Notes: AWCS and EWCS (2015). This Figure reports the pay gaps evaluated at each decile of the earnings distribution. The pay gaps are obtained estimating model (1) via quantile regression separately for Europe (Panel a) and the US (Panel b). Each regression controls for gender, education, native, sector, age, contract type, and country fixed effects (for Europe).

Consistently with the analysis above, Panel B displays a different pattern: in the US the public sector pay differential is negative and essentially flat over the skill distribution. This may be indicative of the public sector not being able to pay competitive wages.

4.3 Pay for Performance

Scholars focused on the role of monetary rewards as a way to improve government performance and public service delivery (Section 3.3); yet, there is little systematic evidence on how diffused financial incentives are across countries. Here we discuss the use of different types of pay-for-performance schemes across European countries and the US and documents several stylized facts. First, financial incentives are less popular in the public than in the private sector. This reflects the challenges in measuring output in the public sector we discussed in Section 3.2. Second, there is a striking difference in the popularity of financial incentives between the two sides of the Atlantic: in the US, two out of three workers are exposed to some performance-related pay scheme, while in Europe this figure is one out of four. Interestingly, the diffusion of individual performance schemes appears to be driving this stark difference. In this respect, there is also a fair amount of variation across European regions: continental Europe (including the UK and Ireland) and the Mediterranean area are characterized by the lowest diffusion of performance-related pay schemes; this is especially true in the public sector, where only one out of ten workers are exposed to monetary incentives. Third, most workers are rewarded on the basis of their individual performance both in the private and public sectors as opposed to team performance or company performance. Fourth, incentive pay schemes that reward the performance of the whole organization or involve profit sharing are much more common in the private than in the public sector.

One may argue that the adoption of performance-related schemes may be driven by compositional effects, including company size. Table 3 reports the regression-adjusted probability differential for having any type of pay-for-performance compensation and then decomposes this effect into three components stemming from three types of incentive schemes: monetary incentives rewarding individual performance, group performance, and company performance. Adjusting for observable characteristics and company size, the probability of having any performance related pay is 20 percentage points higher in the private than in the public sector in Europe (column 4 of

Table 3), while it is not statistically different from zero in the US. This is mostly driven by collective incentives (columns 2 and 3) rather than individual ones (column 1). Unions typically push strongly against the adoption of performance pay schemes and they may be an important factor that may be driving these differentials. In line with our expectations, column 5 shows that public/private differential in union presence is negligible in US, while it is significant in the case of Europe. Moreover, most organizations adopt more than one type of incentive scheme and larger organizations are more likely to adopt monetary incentives.

Table 3 - Public-private differential in performance related pay – 2015 – linear probability

	1	2	3	4	5
	individual performance	group performance	company performance and/or profit sharing	any performance related pay	union presence
			Europe		
public-private	-0.077***	-0.077***	-0.187***	-0.194***	0.241***
	[0.017]	[0.012]	[0.035]	[0.033]	[0.033]
company size(000)	0.240***	0.251***	0.468***	0.560***	1.389***
	[0.042]	[0.038]	[0.101]	[0.096]	[0.099]
			United States		
public-private	0.046	-0.071**	-0.121***	-0.054	0.057
	[0.045]	[0.028]	[0.042]	[0.044]	[0.038]
company size(000)	0.108	0.094**	0.277***	0.197***	0.195***
	[0.076]	[0.040]	[0.061]	[0.074]	[0.058]

Notes: EWCS and AWCS (2015). Each regression is weighted using sampling weights and controls for gender, age, years of education, being born abroad, being white (in case of US) and country fixed effect (in case of Europe). Robust standard errors in brackets (clustered by countries in case of Europe). *** p<0.01, ** p<0.05, * p<0.1.-

Earnings and compensation structure are two salient aspects of a job but certainly not the only attributes workers care about. Next, we explore how other job attributes vary between the public and private sectors.

4.4 Working Conditions and Job Satisfaction

We exploit a unique set of questions eliciting self-reported assessments of working conditions to study job attributes that have not been treated systematically in empirical research such as workplace practices, routinization, diffusion of pay for performance, harassment, and discrimination and how they translate to overall job satisfaction.

We regress the self-reported assessment of working conditions on a dummy variable that indexes public sector employment and the usual set of covariates. Tables 4 and 5 report the coefficients associated with the public sector dummy across several outcomes; these estimates identify the difference in the subjective assessment of working conditions between private and public sector employees net of differences in demographic characteristics and country-specific institutional settings.

Our empirical analysis of contractual arrangements is limited to European countries because the AWCS does not collect data on contract types. A large share of European public sector employees enjoys a permanent contract, however, the difference in permanent contract utilization does not differ between the public and private sectors (Table 4 column 1). Consistent with the stereotypes on public sector workers, in Europe government employees perceive stronger job security (column 2), work fewer hours per week (column 3), and are more likely to take sick leave than their private sector counterparts (column 4). Public employees also believe they are more likely to find another job with a similar salary (column 5) but have worse career prospects (column 6). In the United States, the coefficients display a similar pattern although they are typically smaller in magnitude and not statistically significant.

Table 4 – Public-private differential in employment prospects and absenteeism

	1	2	3	4	5	6
	permanent contract [0,1]	perceived job insecurity [scale 1-5]	worked hours	absenteeism	finding another job [scale 1-5]	career prospects [scale 1-5]
			Europe			
public-private	-0.001	-0.224***	-1.690***	0.004**	0.101***	-0.207***
	[0.016]	[0.056]	[0.275]	[0.001]	[0.033]	[0.057]
N	18,796	17,178	18,532	17,296	18,138	17,525
			United States			
public-private		0.114	-0.687	-0.002	0.048	-0.19
		[0.111]	[0.972]	[0.010]	[0.131]	[0.116]
N		1,287	1,305	1,283	1,287	1,287

Notes: EWCS and AWCS (2015). Column 1 estimates a linear probability model where the dependent variable is one in presence of a permanent contract. Columns 2-5-6 analyze the answers to the following statements: "To what extent do you agree or disagree with the following statements about your job? g) I might lose my job in the next 6 months; h) If I were to lose or quit my current job, it would be easy for me to find a job of similar salary; b) My job offers good prospects for career advancement" (question Q89 in EWCS, Q77 in AWCS). The proxy for absenteeism (column 4) is computed by normalizing to 365 the answers to the corresponding question: "Over the past 12 months how many days in total were you absent from work due to sick leave or for health-related reasons?" (question Q82 in EWCS, Q72 in AWCS). Each regression is weighted using sampling weights and controls for gender, age, years of education, being born abroad, being white (in case of US) and country fixed effect (in case of Europe). Robust standard errors in brackets (clustered by countries in case of Europe). *** p<0.01, ** p<0.05, * p<0.1.

Next, in table 5 we explore job satisfaction and we investigate workers' sentiments about a set of key job attributes that are likely to contribute to overall job satisfaction. Public- and private-sector employees express similar levels of overall satisfaction with respect to workplace conditions on both sides of the Atlantic (column 1). This appears to be driven by a mix of positive and negative feelings towards different job attributes. In Europe, public sector workers enjoy a slower-paced work environment with fewer tight deadlines (columns 2 and 3), which they deem are more conducive to a good work-life balance (column 4). Public employees also report a greater level of autonomy in executing their tasks (column 5) and a lower level of routinization (column 6). At the same time, they lament a lower level of involvement in decision making in the work place (column 7). Public sector workers are more likely to feel that their work is "useful," probably reflecting sorting of prosocial individuals into the public sector (columns 8 and 9). In the US, the qualitative pattern of the results is very similar, although the coefficients tend to be much smaller in magnitude and not statistically significant.

Table 5 – Public-private differential in job quality and working conditions

	1	2	3	4	5	6	7	8	9
	Work satisfaction [scale 1-4]	Working high speed [scale 1-7]	Tight deadlines [scale 1-7]	Work-life balance [scale 1-4]	Autonomy	Routine	Involvement	Doing useful work [scale 1-5]	Meaningfulness
					Europe				
public-private	0.041	-0.413***	-0.435***	0.086***	0.096***	-0.187***	-0.060***	0.167***	
	[0.025]	[0.067]	[0.067]	[0.015]	[0.026]	[0.037]	[0.021]	[0.028]	
N	18,746	18,719	18,700	18,746	182,61	18,261	17,189	18,732	
					United States				
public-private	-0.009	-0.025	0.012	0.041	-0.158*		-0.173**	0.125	0.102
	[0.058]	[0.161]	[0.167]	[0.070]	[0.091]		[0.079]	[0.113]	[0.094]
N	1,287	1,293	1,294	1,300	1,294		1,289	1,265	1,245

Notes: EWCS and AWCS (2015). The outcome variable in column 1 is the answer to the question is "On the whole, how satisfied are you with the working conditions in your main paid job?" (question Q88 in EWCS, Q76 in AWCS). The outcome variable in column 2 is the answers to the question "Does your job involve working at very high speed" (question Q49a in EWCS, Q45a in AWCS), while the one in column 3 reflects the question "Does your job involve working to tight deadlines" (question Q49b in EWCS, Q45b in AWCS). The outcome variable in column 4 is the answer to the question "In general, do your working hours fit in with your family or social commitments outside work" (question Q44 in EWCS, Q41 in AWCS). The dependent variables of columns 5 and 6 correspond to the first two principal components extracted from the following items: "Generally, does your main paid job involve: a) meeting precise quality standards; b) assessing for yourself the quality of own work; c) solving unforeseen problems on your own; d) monotonous tasks; e) complex tasks; f) learning new things" (question Q53 in EWCS, Q49 in AWCS). The explained variances are 35% and 18% in the European sample, while in the American sample only one component emerges explaining 30% of the variance. The first component ("autonomy") is mostly correlated with items b-c-e-f, while the second one ("routine") has positive loadings from item a-d. The outcome variable in column 7 is the first principal component extracted from the following items: "For each of the following statements, please select the response which best describes your work situation: c) you are consulted before work objectives are set; d) you are involved in improving work organization or work processes of your department or organization; e) you have a say in the choice of working partners; f) you can take a break when you wish" (question Q61 in EWCS, Q49 in AWCS). The variance explained is 53% in EWCS and 59% in AWCS. The dependent variable in column 8 is the answer to the question "You have the feeling of doing useful work" (question Q61J in EWCS, similar wording in question

N3F in AWCS). In the American sample we also explored the potential differences in the first component extracted from the following items (question N3): "In general how often does your work provide you with the following? a) opportunities to fully use talents; b) make positive impact on community/ society; c) sense of personal accomplishment; d) goals to aspire to; e) satisfaction of work well done; f) feeling of doing useful work", but we could not find any statistically significant difference between sectors (see column 9). Each regression is weighted using sampling weights and controls for gender, age, years of education, being born abroad, being white (in case of US) and country fixed effect (in case of Europe). Robust standard errors in brackets (clustered by countries in case of Europe). *** p<0.01, ** p<0.05, * p<0.1.

4.5 The State as a fair employer: Discrimination and obnoxious behaviors

Having examined how working conditions differ between the public and the private sector, we investigate whether these two working environments are differentially conducive to episodes of discrimination and obnoxious behavior. One may think that the State may be a fairer employer than the typical private sector firm as hiring and promotions are subject to strict regulations and unions often negotiate all aspects of worker compensation (e.g., pay, hours, holidays, shifts, training). Yet, we know little about it.

To shed light on this issue, we explore whether incidence of self-reported episodes of discrimination and harassment differ between public and private sector employees. Although it is challenging to get credible measures of discrimination, fairness in the workplace, and obnoxious behavior, our survey design mitigates some of the concerns that plague previous studies. In particular, as the surveys are carried out by reputable external organizations and do not take place on the employer's premises, survey respondents have fewer incentives to misrepresent their perceptions about fairness and obnoxious behavior.

Table 6 shows that discrimination appears to be a serious problem in the US and especially so in the public sector where the incidence rate of discrimination is almost twice as large as in the private sector (Panel A). Europe is characterized by a much lower incidence of this phenomenon and much more muted differences between the private and the public sectors. Moreover, harassment appears to be slightly less prevalent in Europe than in the US, although this is not true for all categories (Panel B). The public sector displays higher incidence of verbal abuse and threats than the private sector both in Europe and in the US. These findings suggest that the State does not appear to enforce fairer labor practices than the typical private sector firm. A caveat to this analysis is that, as we use self-reported measures of discrimination and harassment, the stylized facts discussed in this section could potentially be driven by differences across these two sectors in social norms surrounding reporting episodes of discrimination and obnoxious behavior.

Table 6 – Incidence of self-reported discrimination and harassment

	United States		Europe	
	Private (percent)	Public (percent)	Private (percent)	Public (percent)
Panel A: discrimination due to				
Age	3.61	8.05	2.98	3.06
Race/ethnicity	4.50	5.39	1.87	1.48
Nationality	3.08	5.62	1.90	1.09
Sex	4.21	8.58	1.90	2.72
Religion	2.83	7.42	0.93	0.66
Disability	3.64	8.17	0.84	1.31
Sexual orientation	2.59	7.20	0.69	0.39
N	634	652	13,746	5,760
Panel B: Harassment				
Verbal abuse - last month	4.90	5.33	10.30	18.31
Unwanted sexual attention - last month	9.16	5.91	1.76	1.64
Threats - last month	6.07	8.95	3.78	7.97
Humiliating behavior - last month	8.06	6.86	5.57	6.83
Physical violence - last year	6.74	3.97	1.32	4.53
Bullying/harassment - last year	3.48	4.74	5.07	6.63
Sexual harassment - last year	7.09	3.64	0.80	0.82
N	594	599	13,730	5,754

Notes: EWCS and AWCS (2015). Summary statistics are weighted using sampling weights.

5. Concluding remarks

This paper reviews and discusses recent theoretical and empirical work on human resources management and managerial practices in the public sector. Using data drawn from the European Working Conditions Survey and the American Working Conditions Survey it presents new stylized facts on pay and working conditions. The paper has two main takeaways. First, as monetary and non-monetary incentives are often low-powered in the public sector, intrinsic motivation and soft skills play a particularly important role in the performance of public sector workers. We believe that these skills should play a more prominent role in the recruitment process. While in most countries the recruitment of public sector employees typically occurs through open competitions and relies on observable workers' characteristics – such as admission tests, educational credentials, seniority, experience, and sometimes quotas (gender, minorities, disabilities) –, also non-readily observed characteristics – such as social skills and motivation -- should be taken into account. The main challenge is that intrinsic motivation, pro-social attributes and soft skills are hard to measure in standardized open competitions. We speculate that intrinsic motivation and pro-social attitudes can be evaluated through long probation periods (like the tenure system) and through mentoring by senior colleagues. There is some evidence on the effectiveness of this type of selection among teachers, where the attractiveness of the profession is affected not

only by monetary rewards but also by the social prestige granted by the public opinion (Braga et al. 2020). Still, little is known about how to recruit workers on prosocial attitudes and we view this as a promising area for future research.

Second, there is no "one size fits all" public sector. Our results show stark geographical differences between the United States and European countries in terms of public-private pay differentials and working conditions. Our grouping of countries does not contradict a five broad models of public employment management that are often discussed in the sociological literature (Esping-Andersen, 1999; Ebbinghaus, 1999; Jepsen, 2005): a *Nordic model* (high selectivity at entry, high salaries, limited pay-to-performance, and great autonomy in job execution), an *Anglo-Saxon model* (low selectivity at entry, absence of public-private differential in pay due to cream-skimming and competition from the private sector, pay to performance and limited autonomy), a *Continental Europe model* (high selectivity at entry, higher wages than the private sector to preserve a higher status of public officers, and limited autonomy), a *Mediterranean model* (low selectivity at the entry, public jobs act as public subsidies, low wages, large public sector size, and limited autonomy) and a *Eastern Europe model* (selectivity at the entry, lower wages due to shrinking public sector, and limited autonomy). Our results are descriptive and call for further research on the relationship between welfare state models and the structure of public sector organizations (Buhr and Stoy, 2015). Are there universal best practices in the public sector? Should we instead think of these five models of public employment management as institutions that reflect differences in preferences across countries? We leave these questions as scope for future research.

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