# Who attract the public sector compensation schemes?: evidence from Latin America

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Compensation schemes tend to differ markedly between public and private sector jobs, which can affect the relative preferences of potential employees towards those jobs. We explore this through two informational experiments embedded within a large household survey in ten Latin American cities. We focus on two of the most relevant features of compensation schemes: the wage level and the existence of pay-for-performance. We find that the common characteristics of public sector contracts—i.e. flat wages, a negative wage gap with respect to the private sector in the upper end of the distribution, and a low prevalence of pay-for-performance rules—diminishes the attractiveness of public employment among high-performing, high-ability individuals.

**KEYWORDS**
intrinsic motivation, public sector, worker selection

# ¿A quiénes atraen los esquemas de remuneración del sector público? Evidencia de América Latina

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Los esquemas de remuneración de los sectores público y privado se diferencian en dimensiones relevantes que pueden afectar las preferencias de los trabajadores por uno u otro sector. En este trabajo se explora cómo dos de las características más importantes de la forma de remunerar a los trabajadores –el nivel salarial y la existencia de pagos por desempeño– afectan las preferencias por el empleo en el sector público. Para ello, se realizan dos experimentos de información en el marco de una encuesta de hogares implementada en diez ciudades de América Latina. Se encuentra que las características típicas del empleo público –mayor compresión salarial y menor uso de esquemas de pago por desempeño que en el sector privado– disminuyen el atractivo del empleo público entre los individuos de alto rendimiento y alta capacidad.

**KEYWORDS**
motivaciones intrínsecas, sector público, selección

# 1 | INTRODUCTION

The first step to hire high quality individuals in any organization is to attract them. While there is a long list of attributes that affect preferences for jobs, compensation schemes are undoubtedly one of the most salient. The fact that the main role of compensation schemes is to attract talent and encourage performance is more readily accepted in private organizations. In turn, the setting of wages and benefits in the public sector is usually subject to many considerations other than the performance of specific agencies. For example, concerns about corruption and rent-seeking by bureaucrats, the crowding out of intrinsic motivations, equality among employees, as well as plain old politics, usually play a significant part in the decision making process. But in the end, compensation schemes should affect the attractiveness of public sector positions just like they do for private sector jobs, and that reality has ignited increasing scholar interest in recent years.

There tend to be marked differences between the compensation schemes of the public sector and the private sector. Generally speaking, the former are characterized by job stability, a compressed wage schedule and few variable benefits tied to performance; while the private sector has more rotation, higher potential for wage growth and relatively more variable components in the pay structure.

Compensation packages are complex objects with many elements that can affect the attractiveness of a job. In this paper, we focus on the of their most relevant components—the wage level and the existence of pay-for-performance schemes—and assess how they affect the relative preference of individuals for jobs in the public sector vis-à-vis the private sector. We do this through two survey experiments in ten Latin American cities.[1] In the first experiment, a random half of occupied individuals was given information about the wage gap between the public and private sectors for the average worker and for high earners. This information was given to them during the administration of the survey, before they were asked the question that elicits their preferences for public employment. The other half of occupied individuals -the control group-received no information at all. This first experiment was performed in four cities where the public wage premium is large and positive for the average worker but negative for high earners. In the second experiment, the intervention consisted in informing treated individuals that pay-for-performance schemes are more frequent in the private sector than in the public sector. Once again, the treatment took place in the middle of the survey and the control group received no information at all. This second experiment was done six cities.

We find that both factors affect the sectoral preferences of people in policy-relevant ways. First, the information about wage gaps heavily reduced the attractiveness of the public sector among high performing individuals (i.e. those in the top decile of the wage distribution in their city). The probability that a high performer declared that they would prefer looking for a job in the public sector (over the private) fell by 17 percentage points after the informational treatment. For those who are not high performers, the treatment had a milder effect in the opposite direction: the probability that they declared preferring to look for a job in the public sector increased by 8 percentage points, which is around 16% of the baseline probability. Taken together, these effects show that when people learn about the wage gap profile in these countries, the pool of individuals interested in public sector positions changes significantly, with a marked decrease in the share of high-performers in that pool. We also find that the effect of the wage gap treatment is concentrated among individuals with low levels of intrinsic public sector motivation (PSM). That is, variable that captures interest in public employment is more elastic to wages among low-PSM types than

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[1] In none of the cities did we run both of the experiments. Four of the cities were allocated to the first experiment, and the remaining six to the second experiment. More details in the section 2.1.

among high-PSM ones.

Turning to the second treatment, we find that informing about the low prevalence of performance pay in the public sector (relative to the private sector), has an effect on preferences that depends on the ability level of individuals. For high-ability individuals (i.e., those in the upper quartile of the distribution of crystallized intelligence) the informational treatment reduced the attractiveness of public employment: they became 5 percentage points less likely to prefer looking for a job in the public sector. For the rest of the sample—those in the bottom three quarters of the ability distribution—the treatment made the public sector more attractive. Thus, learning about the relative low prevalence of performance pay in public employment also changes the composition of individuals interested in that sector for the worse, according to our measure of ability. Interestingly, that effect is only exclusively driven by individuals with high levels of PSM. In turn, people with low intrinsic motivation for the public sector do not respond at all to the issue of performance pay.

These results show some of the costs of typical compensation schemes in the public sector in terms of talent attraction. The flatness of wage schedules and the lack of performance pay are two factors that reduce the interest of high-performing, high-ability potential employees. Of course, an overall assessment of these compensation schemes requires weighing these costs against their benefits; for example, there are important concerns about the introduction of performance pay is some public sector positions, especially when performance is hard to measure correctly and incentives can be distortive. Nevertheless, evidence on the cost of these features has thus far been scarce in the literature and should add to the debate. This paper is closely connected to the literature on personnel economics of the state, and specially to research on the role of financial incentives to recruit public officials. Empirical work on this started relatively recently. Some of the first causal studies looked at politicians and found that higher wages lead to better candidates for elected office (Ferraz and Finan, 2011; Gagliarducci and Nannicini, 2013). Later contributions shifted focus to appointed officials (bureaucrats). Dal Bó et al. (2013), in the context of a field experiment implemented to recruit community development agents, show that higher wages led to a better pool of candidates in terms of intelligence, occupational profile and earnings. Other authors have performed experiments were they vary the way in which public sector job are advertised, making the financial incentives more or less salient; and finding mixed effects on the ability and motivation of the applicant pool (Ashraf et al., 2020; Deserranno, 2019). Our results are consistent with previous findings in that higher wages tend to attract better candidates; but by using an informational treatment instead of exogenous changes in job offers, we are able to assess how existing wage policies shape the composition of potential public sector employees.

Also related to this work is the literature on pay for performance in public organizations. Although it is uncommon, there are some examples of the use of performance pay in the public sector, and some papers show positive results of these schemes on the performance of frontline providers (Brown and Andrabi, 2021; Leaver et al., 2021; Muralidharan and Sundararaman, 2011; de Walque et al., 2015). Of course, many public sector jobs don't allow for easy measures of individual performance, which can difficult the task of designing pay for performance schemes that are not distortionary (Weibel et al., 2009); and even for service providers whose performance is somewhat measurable, the literature also shows a number of cases where the incentives don't work properly (Khan et al., 2015; Glewwe et al., 2010). Despite these limitations, it's important to note that most existing work on performance pay has focused on its effect on incumbent employees (Brown and Andrabi (2021) and Leaver et al. (2021) are two exceptions); and a more comprehensive assessment should also consider its effects through the selection channel, which may take time to accumulate. We contribute to this discussion by showing that the lack of performance pay is a factor that shapes the

attractiveness of the public sector and that tends to repel high-ability individuals.

The rest of this paper is organized as follows. Section 2 describes the data set and our experiment design while section 3 shows our empirical specifications. Section 4 presents our main results and section 5 concludes.

## 2 | DATA AND EXPERIMENTAL DESIGN

### 2.1 | Data

We use data from Encuesta CAF (ECAF), a yearly household survey in Latin American cities run by CAF-Development Bank of Latin America. The survey provides information on demographics and socioeconomic characteristics of the adult population. We specifically use data from the 2014 wave, which covered 9,600 households in 10 cities—Bogota, Buenos Aires, Caracas, La Paz, Lima, Mexico city, Montevideo, Panama City, Quito, and Sao Paulo— with a sample size of 1,000 households per city, except for Panama City, where the sample size is 600 households.[2]

The survey includes a rich set of questions to capture labor market information and career preferences. First, individuals report their current labor status. Our sample of analysis will be individuals in paid employment, and they represent 32% of surveyed persons. Further, individuals in paid employment report whether they work for a private company or for an institution of the public sector. On average, 27% of salaried workers are public employees.

Throughout the paper, our main outcome of interest is the relative preference towards public (vs private) employment. We capture these preferences through the following hypothetical question: *If you were to look for a job in the next few months, would you prefer to look for a job mainly in the public sector or in the private sector?* Importantly, this question is asked at the end of the survey, after any informational treatments have been administered to respondents. Based on the answer to this question, we construct a binary indicator that takes the value 1 if the individual responds that she would prefer to look for a job mainly in the public sector. 38% of paid workers prefer to look in the public sector.

Also from the survey, we obtain and employ measures of intrinsic motivation for public sector jobs, willingness to exert effort, and cognitive ability, among others. Intrinsic motivation for public employment is measured by means of the Public Service Motivation (PSM) scale, first developed by (Perry and Wise, 1990). Specifically, the ECAF survey uses a reduced PSM construct developed by Coursey and Pandey (2007), which consists of 10 questions that are answered in a Likert scale. The final individuals measure of PSM is the average value across the 10 answers, and it ranges from 1 (lowest PSM) to 5. The list of specific questions can be found in the Appendix. PSM is defined as the willingness to respond to motives present mainly in public sector institutions, such as public service, and is expected to be positively associated with both preference for public employment and better performance as a public servant.

We also use a measure of willingness to exert effort on the job developed by Leisink and Steijn (2009). This is obtained from a set of five questions (which can be found in the Appendix), answered in a Likert scale. The average of the five answers is the relevant measure, ranging from 1 to 5 (highest willingness to exert effort).

Finally, the Brief Verbal Conceptualization Test developed by Brenlla (2010) is used as a measure of cognitive ability. Verbal conceptualization is defined as the capacity to generalize, make abstractions, and find relationships among verbal concepts. The test is

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[2]The ECAF sample is probabilistic up to the level of the primary sampling units (PSUs), with systematic sampling of households within those PSUs. In 2014, the survey was applied to one individual aged 25 to 65 per sampled household. The data were collected from September to November 2014.

based on the Wechsler Adult Intelligence Scale III. We discuss the details of this are in the Appendix.

Figure 1 shows how the preference for a job in the public sector is correlated to individual characteristics of paid employees. We can see that females, high cognitive ability individuals, and those currently employed in the public sector are more likely to prefer a position in the public sector, while those with a college degree are less likely to do so. We find no statistically significant differences in those preferences in the rest of dimensions considered.
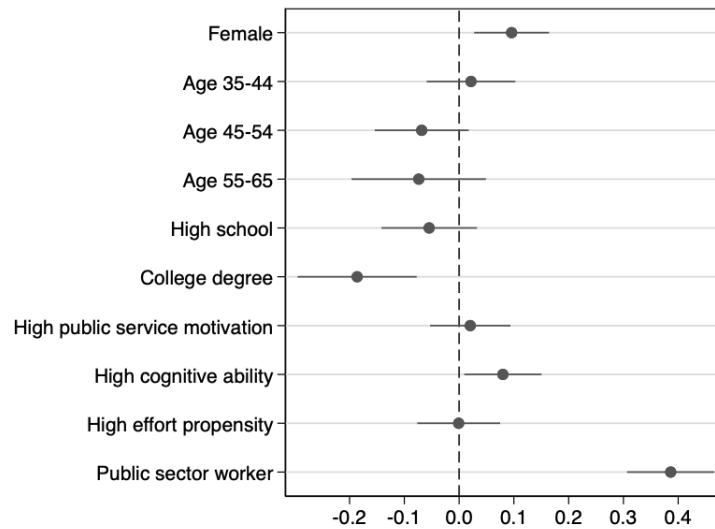


FIGURE 1   Correlates of preferences for a job in the public sector.

*Notes:* The graph shows OLS coefficients (and 95 percent confidence intervals) of the correlates of the preference for a job in the public sector. The omitted category is male, 25 to 34 years, with less than high school, with low levels of public service motivation, lower cognitive ability, and currently employed in the private sector. The sample includes paid workers in the control group. Regressions include city fixed effects.

Providing information about compensation schemes in public and private sectors is expected to affect workers' preferences for public (vs private) sector jobs as long as such information leads to a change in beliefs. Importantly, the survey provides some evidence that the prior beliefs of individuals about compensation schemes are inaccurate. Only a minority of individuals (40%) correctly believe that public sector wages are higher than private sector ones. Moreover, the perceptions about relative compensation do not change with the wage level of the respondent (see Figure 2), despite the fact that the public-private wage gap decreases as we move to higher levels of the wage distribution. All this suggests that the treatment does indeed provide relevant information to update priors.

## 2.2 | Experimental design

We are interested in understanding how the characteristics of the compensation scheme in the public sector, vis a vis the one in the private sector, may affect the (self) selection patterns into public sector employment. In particular, we focus on two relevant facts about public sector pay schemes: (i) the public sector tends to pay more to low and medium skilled workers with respect to the private sector, whilst the reverse is true for high skilled workers (Lucifora and Meurs, 2006), and (ii) there is a relatively low incidence of performance-related pay in the public sector (Hasnain and Henryk, 2012).
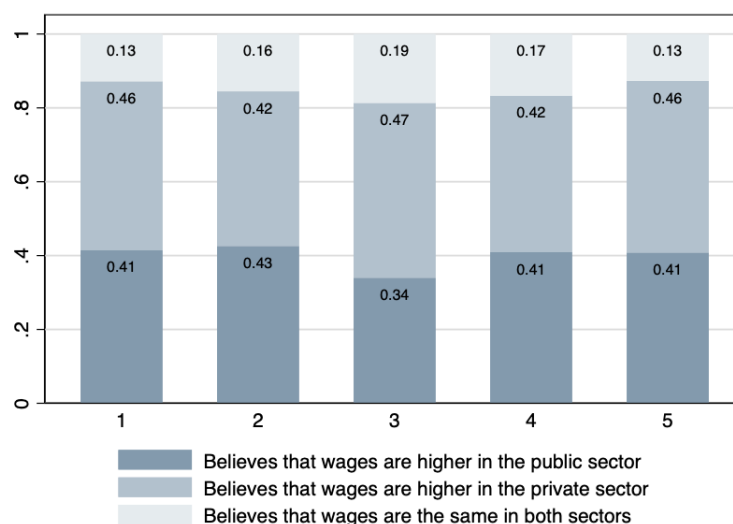
FIGURE 2   Workers' perception of wage levels in public and private sectors, by income quintile.

*Notes:* The graph shows workers' beliefs about wage levels in private and public sector jobs, by income quintile. Beliefs are captured through the following question: *Do you think that (i) wages in the public sector are higher than in the private sector, (ii) wages in the private sector are higher than in the public sector, or (iii) wages are the same in both sectors?* The sample includes all paid workers.

We perform two information experiments to analyze how these two facts affect the preference for a job in the public sector. We run the first experiment in the cities of Bogota, La Paz, Montevideo, and Quito. In this experiment, we randomly choose half of the survey respondents and provide them with information about the true public sector pay gap in their city of residence. In particular, we give them two pieces of information: the average public pay gap—i.e. the differential between the average wage in the public sector and the average wage in the private sector, and the public pay gap at the 90th percentile of the wage distribution. We compute these wage gaps by estimating Mincer equations with city specific data coming from the national household or employment survey of each country.[3] We have chosen these four cities because in these cities the private and public sector wage distributions are such that the public sector pays more on average, but the private sector pays more to high-performing workers.

The information about pay differentials is provided around halfway of the survey questionnaire by showing individuals in the treatment group the information card displayed in Figure A.1. This information card contains two graphs that depict (i) the average public wage gap and (ii) the public wage gap at the 90th percentile of the wage distribution, and two pieces of text describing these results. When we describe the wage gap for workers in the top 10% of the wage distribution we refer to them as "high performing workers". Individuals in the control group do not receive any information about pay gaps during the survey. We call this information shock Experiment1.

It is important to mention that both the average wage gap as well as the wage differential for high performers vary across cities. For instance, in Bogota, a typical public worker's

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[3]These surveys are the Gran Encuesta Integrada de Hogares for Bogota, the Encuesta de Hogares - MECOVI for La Paz, the Encuesta Continua de Hogares for Montevideo, and the Encuesta de Empleo, Desempleo y Subempleo for Quito. Also, the private sector considers only salaried workers in private firms with at least five employees, so we also refer to it as the formal private sector.

salary is 20% higher than the salary for a typical formal private worker; but for top perform-ers the public wage gap becomes minus 27%. These figures are, respectively, 16% and a -6% in La Paz, 7% and a -14% in Montevideo, and 22% and a -6% in Quito (Table 1).

T A B L E  1   Public sector wage gap for average and top performing workers, by city.

|  | Mean wage gap | Wage gap at 90th perc. |
|  | (1) | (2) |
| --- | --- | --- |
| Bogotá | 20% | -27% |
| La Paz | 16% | -6% |
| Montevideo | 7% | -14% |
| Quito | 22% | -6% |
| Average (unweighted) | 16% | -13% |

*Notes:* The table shows the estimates of the average public wage gap and the public wage gap at the 90th percentile of the wage distributed, based on an OLS regression of a mincer equation in each city. Data come from the Gran Encuesta Integrada de Hogares for Bogota, the Encuesta de Hogares - MECOVI for La Paz, the Encuesta Continua de Hogares for Montevideo, and the Encuesta de Empleo, Desempleo y Subempleo for Quito. In each city, the sample includes paid workers in the public sector and in the private sector in firms with at least five employees.

We run the second experiment in the remaining six cities of the survey—Buenos Aires, Caracas, Lima, Mexico city, Panama City, and Sao Paulo. In this case, we randomly choose half of the survey respondents and give them information about the low prevalence of performance-pay in the public sector relative to the private sector. In particular, we show them an information card which says: *In many private sector firms, part of the salary is paid based on the effort and results achieved by the employee. Therefore, in these firms, the greater the effort, the greater the compensation obtained. In the public sector, on the other hand, the salary is generally a fixed amount, which is not directly linked to individual effort.* (See Figure A.2). Again, the information is provided to treated individuals around halfway of the survey questionnaire and individuals in the control group do not receive any information. We call this information shock Experiment2.

In both cases, we evaluate the impact of the treatment on the preferences for a public sector job, which we capture by the measure described in section 2.1. The question on which the measure of career preferences is based was asked towards the end of the survey, so it can be affected by the treatment.

We do consider that, although based on a hypothetical situation, our information ex-periment provides useful insights for understanding the connection between the public compensation scheme and the type of workers who self-select into the public employment.

Tables 2 and 3 show descriptive statistics and the balance of covariates between treatment groups for experiments 1 and 2, respectively. In each case, the sample is restricted to salaried workers in the cities where we run each experiment. Differences between groups are small and statistically insignificant, as expected given the random assignment. Also, about 42% (40%) of the salaried workers in the sample of cities covered by experiment 1 (2) are women, the average age is 39, 49% (59%) of them have a high school, 23% (18%) have college degree, and 27% of them work in the public sector.

TABLE 2  Summary statistics and balance of covariates between groups. Experiment 1

|  | Control | | Treatment - Control | |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| Female | 0.426 | (0.495) | 0.025 | (0.028) |
| Age | 38.733 | (10.134) | 0.234 | (0.565) |
| High school | 0.486 | (0.500) | 0.036 | (0.028) |
| College degree | 0.235 | (0.424) | -0.009 | (0.024) |
| High performer | 0.139 | (0.346) | -0.006 | (0.020) |
| High cognitive ability | 0.393 | (0.489) | -0.016 | (0.027) |
| High public service motivation | 0.279 | (0.449) | 0.035 | (0.026) |
| High effort propensity | 0.329 | (0.470) | -0.017 | (0.026) |
| Public sector worker | 0.275 | (0.447) | -0.010 | (0.025) |
| Observations | 662 | | 1,267 | |

*Notes:* The table shows summary statistics and the balance of covariates between experimental groups. Columns 1 and 2 present the mean and standard deviation, respectively, of each variable for individuals in the control group. Columns 3 and 4 show the mean difference and the corresponding t-statistics in parentheses, respectively. * significant at 10%, ** significant at 5%, *** significant at 1%. The last row shows the number of observations used for the calculation of each column's statistics: in Column 1 this corresponds to the size of control group, while in Column 3 it indicates the size of treatment and control groups together. The sample is restricted to salaried workers in Bogotá, La Paz, Montevideo, and Quito. Data come from ECAF 2014.

TABLE 3  Summary statistics and balance of covariates between groups. Experiment 2

|  | Control | | Treatment - Control | |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| Female | 0.396 | (0.489) | -0.019 | (0.023) |
| Age | 39.394 | (10.044) | -0.288 | (0.474) |
| High school | 0.588 | (0.492) | -0.043* | (0.023) |
| College degree | 0.183 | (0.387) | 0.027 | (0.019) |
| High performer | 0.148 | (0.356) | 0.005 | (0.019) |
| High cognitive ability | 0.339 | (0.473) | 0.031 | (0.023) |
| High public service motivation | 0.304 | (0.460) | -0.022 | (0.021) |
| High effort propensity | 0.289 | (0.454) | 0.011 | (0.022) |
| Public sector worker | 0.269 | (0.444) | -0.008 | (0.021) |
| Observations | 954 | | 1,804 | |

*Notes:* The table shows summary statistics and the balance of covariates between experimental groups. Columns 1 and 2 present the mean and standard deviation, respectively, of each variable for individuals in the control group. Columns 3 and 4 show the mean difference and the corresponding t-statistics in parentheses, respectively. * significant at 10%, ** significant at 5%, *** significant at 1%. The last row shows the number of observations used for the calculation of each column's statistics: in Column 1 this corresponds to the size of control group, while in Column 3 it indicates the size of treatment and control groups together. The sample is restricted to salaried workers in Buenos Aires, San Paulo, Lima, Caracas, Panamá City, and Mexico City. Data come from ECAF 2014.

## 3 | EMPIRICAL ANALYSIS

We are interested analyzing how the information about (i) wage gaps at two different moments of the wage distribution (Experiment 1) and (ii) the relative prevalence of P4P schemes (Experiment 2) affect the composition of those who would prefer a position in the public sector.

To capture the effect of providing information about the wage structure on the proportion of individuals who would prefer a position in the public sector we estimate the following equation:

$$Y_{ic} = \alpha + \lambda Wage\ Info_{ic} + \delta' X_{ic} + \theta_c + \mu_{ic} \tag{1}$$

where $Y_{ic}$ is our measure of preferences for public sector jobs for individual $i$ in city $c$. The treatment variable is $Wage\ Info_{ic}$ and takes value 1 if worker $i$ in city $c$ was (randomly) assigned to receiving the information. $X_{is}$ is a vector of individual controls and $\theta_c$ is a city fixed effect. The coefficient $\lambda$ captures the treatment effect of receiving information about public sector wage gaps on the preference for public sector jobs.

Our main interest lies in analyzing the effect of information on the composition of those who are interested in public employment. In experiment 1, the information provided has two components: there is a positive public sector wage gap for the average worker, and a negative public sector wage gap for high performers. Therefore, we expect that public sector jobs would become relatively more (less) attractive to workers who perceive themselves as an average (high-performing) worker.

To capture these heterogeneous responses according to workers' (self-perceived) performance, we estimate the following variation of equation 1:

$$\begin{aligned}
Y_{ic} = \alpha &+ \gamma High\ Performer_{ic} + \lambda Wage\ Info_{ic} \\
&+ \beta High\ Performer_{ic} \times Wage\ Info_{ic} \\
&+ \delta' X_{ic} + \theta_c + \mu_{ic}
\end{aligned} \tag{2}$$

where $High\ Performer_{ic}$ is a binary indicator that takes value 1 if worker $i$ is in the top decile of the wage distribution of city $c$. In equation 2, $\lambda$ captures the treatment effect of receiving information about public sector wage gaps on the preference for public sector jobs of average-performing workers (i.e. those outside the top decile of the wage distribution), while $\beta$ captures the corresponding effect for high performing workers. Because of random assignment, we interpret these coefficients as the causal effect of receiving such information.

The analysis of the results in experiment 2 is analogous to that of experiment 1 except for the fact that in this case we focus on the effect of information on the composition of the pool in terms of cognitive ability and the willingness to exert effort.

We first estimate the effect of providing information about the prevalence of pay-for-performance schemes in both sectors on the preference for public employment for the typical worker:

$$Y_{ic} = \alpha + \lambda P4P\ Info_{ic} + \delta' X_{ic} + \theta_c + \mu_{ic} \tag{3}$$

where the treatment variable is $P4P\ Info_{ic}$ and takes value 1 if worker $i$ in city $c$ was

assigned to receive information about the prevalence of pay-for-performance.

In this experiment, we expect that telling workers that in the private sector it is more likely to pay according to performance, while the public sector it is more likely to pay a fixed amount independently of worker performance, would make public sector jobs more (less) attractive to individuals with low (high) ability and low (high) propensity to exert effort.

To capture these potential heterogeneous responses to the treatment, we estimate the following two equations which are similar to equation 2 except for the treatment variable and the dimensions of worker characteristics we are interested in:

$$
\begin{aligned}
Y_{ic} = \alpha + \gamma \text{High Ability}_{ic} + \lambda \text{P4P Info}_{ic} \\
+ \beta \text{High Ability}_{ic} \times \text{P4P Info}_{ic} \\
+ \delta' \boldsymbol{X_{ic}} + \theta_c + \mu_{ic}
\end{aligned}
\tag{4}
$$

and:

$$
\begin{aligned}
Y_{ic} = \alpha + \gamma \text{High Effort}_{ic} + \lambda \text{P4P Info}_{ic} \\
+ \beta \text{High Effort}_{ic} \times \text{P4P Info}_{ic} \\
+ \delta' \boldsymbol{X_{ic}} + \theta_c + \mu_{ic}
\end{aligned}
\tag{5}
$$

where (in equation 4) $\text{High Ability}_{ic}$ is a dummy variable that takes value 1 if the worker has cognitive ability in the top quartile of the ability distribution of her city of residence, while (in equation 5) $\text{High Effort}_{ic}$ is a dummy variable that takes value 1 if the worker has an index of willingness to exert effort in the top quartile of the distribution of her city. We interpret the parameters $\lambda$ and $\beta$ in the same way as in equation 2, except for the fact that now the refer to the causal effect of information in terms of ability/effort.

Finally, we assess if the effect of information depends on the worker's intrinsic motivation towards public service. Since Perry and Wise (1990) developed the concept of PSM and hypothesized that PSM lead to preferences for employment in the public sector, many studies have investigated this relationship both theoretically and empirically (see Vandenabeele et al. (2014) and Ritz et al. (2016) for recent reviews of this literature). Those studies tend to support the premise that individuals with higher (lower) levels of PSM are more attracted to jobs that provide enhanced opportunities for satisfying intrinsic work motives—such as jobs in the public sector—and are less (more) responsive to extrinsic work motives. A natural implication of this relationship is that providing individuals with information on extrinsic rewards could have different effects depending on the level of intrinsic motivation. To test this hypothesis, we split the sample in low- and high-PSM individuals—using the median value of PSM in the sample as a cutoff—and estimate equations 2, 4, and 5 in each sub-sample.

## 4 | RESULTS

### 4.1 | Experiment 1: Wage gaps and preferences for public sector jobs

We first investigate how the public sector wage gap may affect the attractiveness of positions in public institutions for average versus high-performing workers. Table 4 reports the results of estimating equations 1 and 2. We start the analysis by showing the overall effect of providing information about public wage gaps—i.e. without distinguishing by worker

performance. These results are reported in Column (1). The wage information provided seems to have no effect on the preferences for public sector jobs on average (the point estimate of the effect is about 5 percentage points but it's not statistically different from zero). This non-result can mask heterogeneous effects of the treatment, since the information provided consisted of two different components—the average gap and the gap for high-performing workers—which might have opposite effects on job preferences depending on which information component workers consider relevant for themselves. To overcome this, in Columns (2) to (5) the treatment indicator is interacted with an indicator variable denoting high-performing workers.

Column (2) shows the heterogeneous results by worker performance when there are no covariates in the equation, besides city fixed effects. The information about public sector wage gaps increases the interest for public sector jobs in 8.4 p.p. among average workers and reduces the interest in public employment in 18.4 p.p. (8.4 - 26.8) among high-performing workers. This means that the differential effect the information about wage gaps for high performers with respect to the average performer is 26.8 p.p. Given a sample mean preference for a public sector job of about 50%, the effect of information is sizeable.

Column (3) shows the results when we control for sex, age dummies, and whether the individual is currently working in the public sector. The main results are not affected by the inclusion of additional covariates, as expected given random assignment and the consequent balance between treatment groups shown above. Given that the inclusion of covariates helps improve the precision of the estimates, we include them in the rest of columns.

We now analyze whether there are heterogeneous responses to information according to intrinsic motivations. Workers who are highly intrinsically motivated towards public service could be, in principle, less responsive to the level of wages when deciding to pursue a career in the public sector. On the other hand, individuals with low levels of intrinsic motivation for public employment should be more reactive to extrinsic incentives embedded in the compensation scheme. To test this hypothesis, in columns (4) and (5) we split the sample according to workers motivation for public service, as measure by the PSM scale. We find that the information about wage differentials affects preferences for public sector employment—attracting the average worker and discouraging high performers—only in the sub-sample of individuals with low levels of PSM—column (6).

To sum up, we find that providing workers with information about the public sector wage differentials—a positive wage gap on average that becomes negative at high levels of salary—changes the composition of those who prefer public over private employment: it attracts average workers and repels high-performing ones. We also find that this effect depends on workers intrinsic motivations, with information about wage levels being more relevant for those with low levels of intrinsic motivation for public service.

TABLE 4    Effects of information about public sector wage gaps.

| | Dep. Var.: 1=If I had to, I would look for a job in the public sector | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Wage Info | 0.049 | 0.084* | 0.082* | 0.126** | 0.044 |
| | (0.043) | (0.046) | (0.044) | (0.060) | (0.063) |
| High performer | | 0.102 | 0.072 | 0.094 | 0.025 |
| | | (0.088) | (0.083) | (0.116) | (0.119) |
| Wage Info x High performer | | -0.268** | -0.250** | -0.333** | -0.141 |
| | | (0.122) | (0.110) | (0.144) | (0.163) |
| Control variables | No | No | Yes | Yes | Yes |
| Sample | All employees | All employees | All employees | Low PSM | High PSM |
| Mean of Dep. Var. (control) | 0.504 | 0.504 | 0.504 | 0.468 | 0.553 |
| Observations | 1100 | 1100 | 1100 | 609 | 491 |
| R-squared | 0.027 | 0.036 | 0.102 | 0.098 | 0.142 |

*Notes:* The table shows the OLS estimates of equations 1 and 2. The dependent variable is a binary indicator that takes the value one (zero) if the individual says she would prefer to look for a job mainly in the public (private) sector in case she had to look for a job in the next few months. The treatment variable, $WageInfo$, is a binary indicator that takes the value 1 for respondents who received the information about public sector wage differentials. Column (1) shows the results for the sample of employees without any control variables besides city fixed effects (FE). Columns (2) to (5) show the results when the treatment indicator is interacted with an indicator variable for being a high-performing worker. Column (2) does not include control variables besides city FE. Column (3) shows the results when we control for sex, age, and whether the individual currently works in the public sector, plus city FE. Columns (4) and (5) show the results for the subsamples of individuals with low and high levels of public service motivation, respectively. Robust standard errors are in parentheses. * significant at 10%, ** significant at 5%, *** significant at 1%. Data come from ECAF 2014.

## 4.2 | Experiment 2: Pay for performance and preferences for public sector jobs

Now we turn to explore how the preference for a public sector job is affected by the information shock regarding the prevalence of pay for performance schemes.

We expect heterogeneous effects of this treatment according to worker characteristics. Those with less ability and with a low propensity toward exerting effort, are less likely to achieve high performance and hence, may prefer a fixed wage scheme. In contrast, workers with high ability and prone to exert high levels of effort may prefer pay for performance schemes.

We first focus on cognitive ability and estimate equation 4 for different samples. Results are shown in Table 5. In the first two columns, we do not include controls other than city fixed effects. In column (1) we estimate the effect of the treatment without interacting with worker ability; that is, we impose $\beta = \gamma = 0$ in equation 4. In this specification, the coefficient of the variable *P4P info* is positive but not significant. This could happen because, as argued, the sign of the effects of the treatment may depend on workers' type. In column (2) we explore whether the effect is heterogeneous in terms of worker ability. Here, we estimate a positive coefficient for the information treatment variable ($\lambda$) and a negative coefficient for the interaction term ($\beta$); but again, none of these coefficients are significant. As in Experiment 1, in order to increase the precision of the estimates, we introduce a gender dummy, age dummies, and a dummy variable that reflects whether the individual is currently working in the public sector. These results are shown in columns (3) to (5). Now, when focusing in all employees —column (3)—we find that the treatment increases

the preference for public jobs in workers with low ability but reduces it for workers with high ability: the coefficient of the interaction *P4P info x High ability* is negative and larger, in absolute terms, than the coefficient of the treatment alone. In this whole sample of workers, the treatment increases the preferences for public jobs in 7.8 p.p among low ability workers. Among high ability workers, the treatment reduces the preferences for a public job in about about 4.8 pp (0.126-0.780).This means that the differential effect of the treatment for high ability workers with respect to low ability ones of 12.6 p.p.

TABLE 5 Effects of information about the prevalence of pay-for-performance schemes. According to cognitive ability

| | Dep. Var.: 1=If I had to, I would look for a job in the public sector | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| P4P Info | 0.024 | 0.055 | 0.078** | 0.021 | 0.142** |
| | (0.031) | (0.038) | (0.037) | (0.046) | (0.057) |
| High ability | | 0.093** | 0.065 | 0.013 | 0.109* |
| | | (0.046) | (0.043) | (0.057) | (0.064) |
| P4P Info x High ability | | -0.099 | -0.126** | 0.005 | -0.260*** |
| | | (0.065) | (0.062) | (0.081) | (0.092) |
| Control variables | No | No | Yes | Yes | Yes |
| Sample | All employees | All employees | All employees | Low PSM | High PSM |
| Mean of Dep. Var. (control) | 0.317 | 0.317 | 0.317 | 0.280 | 0.362 |
| Observations | 1730 | 1730 | 1730 | 951 | 779 |
| R-squared | 0.056 | 0.061 | 0.166 | 0.160 | 0.178 |

*Notes:* The table shows the OLS estimates of equations 3 and 4. The dependent variable is a binary indicator that takes the value one (zero) if the individual says she would prefer to look for a job mainly in the public (private) sector in case she had to look for a job in the next few months. The treatment variable, P4PInfo, is a binary indicator that takes the value 1 for respondents who received the information about different prevalence of pay-for-performance schemes. All columns include city fix effects and columns (3)-(5) also include controls for gender, age groups and for the case the individual currently works in the public sector. * significant at 10%, ** significant at 5%, *** significant at 1%. Data come from ECAF 2014.

In columns (4) and (5) we split the sample according to the level of PSM. Interestingly, the results found in column (3) are fundamentally driven by the results in the sample of workers with high public sector motivation. In fact, among individuals with low public sector motivation—column (4)— the effects are not significantly different from zero for either high or low ability workers. In contrast, when focusing on workers with high public sector motivation—Column (5)— the information about lack of pay for performance in the public sector increases the preference for public sector jobs in about 14.2 p.p among low ability workers and reduces the interest for public jobs in almost 12 p.p among high ability workers (0.142-0.26). This means that the differential effect of the treatment for high ability with respect to low ability is 26 p.p. Given the baseline preference for a public sector, both effects are very sizeable.

Now we explore the effect of the treatment according to the willingness to perform high effort by estimating equation 5. Table 6 shows the results. Results are similar to those found for ability. Among workers with high PSM—column (5)—the treatment increases the preferences for public jobs among workers with low propensity to effort and reduces the appeal of public jobs among workers with high propensity to exert effort. Again, the

size of the effects is sizeable: the treatment increases the preference for a public job in 13.7 p.p. among workers with low attitude toward effort, and reduces it in about 7 p.p among workers with high propensity toward effort; a differential effect of the treatment of 22 p.p. between types.

TABLE 6  Effects of information about the prevalence of pay-for-performance schemes. According to willingness to exert effort

| | Dep. Var.: 1=If I had to, I would look for a job in the public sector | | | | |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| P4P Info | 0.024 | 0.052 | 0.065* | 0.021 | 0.137** |
| | (0.031) | (0.037) | (0.035) | (0.043) | (0.057) |
| High effort propensity | | 0.012 | 0.004 | -0.040 | 0.026 |
| | | (0.046) | (0.044) | (0.065) | (0.060) |
| P4P Info x High effort propensity | | -0.093 | -0.097 | 0.011 | -0.219** |
| | | (0.066) | (0.064) | (0.091) | (0.090) |
| Control variables | No | No | Yes | Yes | Yes |
| Sample | All employees | All employees | All employees | Low PSM | High PSM |
| Mean of Dep. Var. (control) | 0.317 | 0.317 | 0.317 | 0.280 | 0.362 |
| Observations | 1730 | 1730 | 1730 | 951 | 779 |
| R-squared | 0.056 | 0.059 | 0.166 | 0.160 | 0.180 |

*Notes:* The table shows the OLS estimates of equations 3 and 5. The dependent variable is a binary indicator that takes the value one (zero) if the individual says she would prefer to look for a job mainly in the public (private) sector in case she had to look for a job in the next few months. The treatment variable, P4PInfo, is a binary indicator that takes the value 1 for respondents who received the information about different prevalence of pay-for-performance schemes. All columns include city fix effects and columns (3)-(5) also include controls for gender, age groups and for the case the individual currently works in the public sector. * significant at 10%, ** significant at 5%, *** significant at 1%. Data come from ECAF 2014.

Overall, the results from this experiment suggest that the low incidence of pay for performance schemes in public sector jobs may be attracting less talented workers and repelling workers with high ability and with high disposition toward effort. Moreover, this seems to be the case especially among high public sector motivation individuals. Hence, the exercise suggests that the lack of pay for performance in the public sector may limit the the ability to attract high quality public servants.

## 5 | CONCLUSIONS

The compensation scheme of the public sector is an important determinant of its attractiveness to potential employees. The experiments presented in this paper explored how two relevant features of typical public sector compensations schemes affect the type of individuals who become interested in public employment.

The first feature is the wage gap with respect to the private sector, which is positive and large through most of the wage distribution, but becomes small or even negative at the high-end of the distribution. Our informational treatment shows that this wage profile increases the attractiveness of the public sector to average workers, but repels the highest performing individuals, who can get expect to get better salaries in the private sector. Moreover, we find that the effect is concentrated among individuals with low levels of intrinsic public sector

motivation (PSM); while people with high PSM are much less responsive to the wage level.

In the second experiment we explore the effect of the low prevalence of performance pay in the public sector. This feature reduces the attractiveness of the public sector among high ability and high propensity-to-effort individuals; while making average ability and average propensity-to-effort types more interested in the public sector. These effects interact with the level of intrinsic PSM in interesting ways. In particular, the effect of performance pay comes exclusively from individuals with high PSM. In turn, people with low PSM don't respond much to the use of performance pay.

Taken together, these results have important implications for compensation policies in the public sector. First, in order to attract high ability individuals, both an increase in top wages and the inclusion of performance pay can be effective tools. If instead the main objective is to attract people with high PSM, the wage does not seem to be an effective lever at the current values of the relevant variables. Performance pay schemes do affect the preferences of high PSM types, but in a non monotonous way: namely, it attracts some (the high-ability types) but repels others (the low-ability ones). Thus, the overall effect of performance pay schemes on the PSM of potential applicants to the public sector will depend on how the details of such schemes balance those opposing effects.

Finally, our results suggest that performance pay can be a useful policy to attract individuals who are both high-ability and high-PSM. Nevertheless, two notes of caution are necessary. First, the intersection of high-ability and high-PSM (as we define it) contains a relatively low share of the population, which may be insufficient compared to the employment needs of the public sector. Second, and most importantly, performance pay schemes are in many occasions difficult to implement in public sector organizations, and can be distortionary when workers have multiple relevant tasks and outcomes are hard to measure. These costs have to be weighed against the potential recruiting benefits of performance pay.

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## A.1 | ADDITIONAL FIGURES AND TABLES



(a) Bogotá
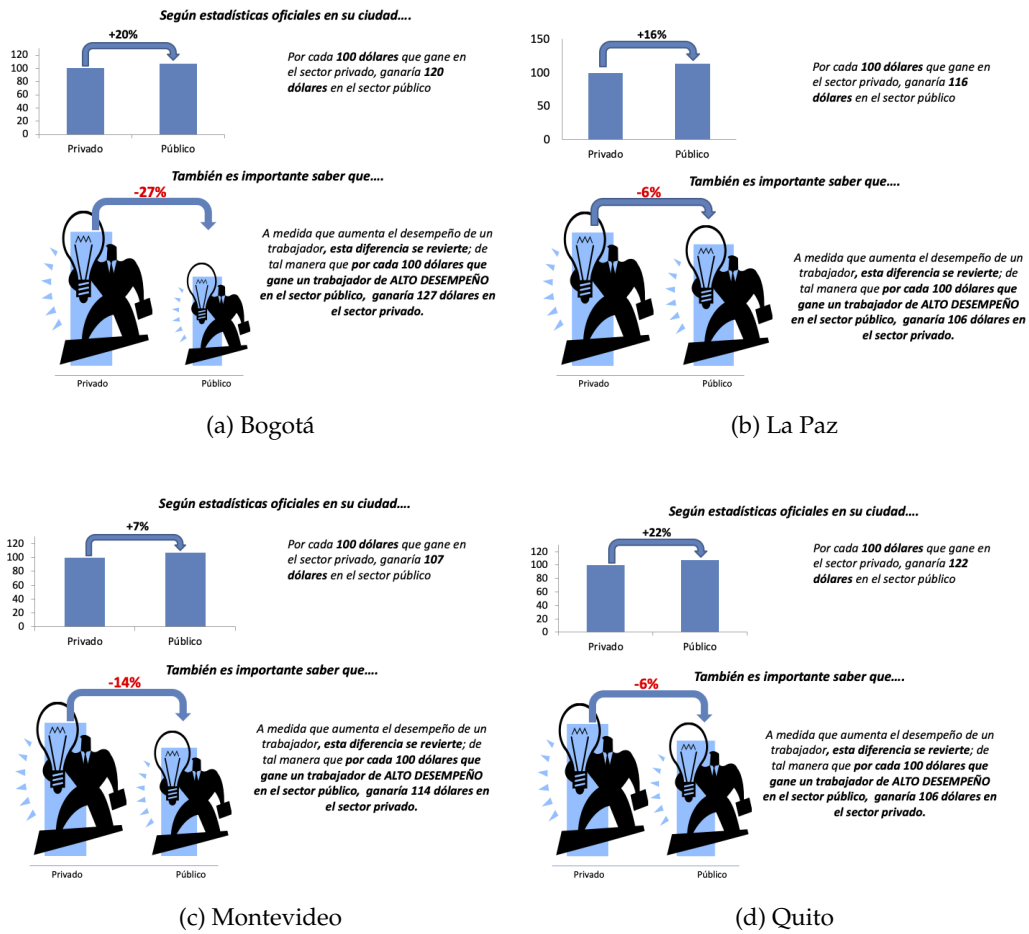


(b) La Paz



(c) Montevideo



(d) Quito

FIGURE A.1 Information cards for Experiment 1.

*Notes:* The figure shows the information cards with the average wage gap and the high performers' wage gap that were shown to respondents in the treatment group in each of the four cities of tretament 1: Bogotá in panel (a), La Paz in panel (b), Montevideo in panel (c), and Quito in panel (d). Wage gaps for each city were computed using the official household surveys. The wage gap for high performing workers are those which correspond to the ninety percentile of the wage distribution.

*Source:* Own elaboration based on the official household survey of each country.

FIGURE A.2   Information cards for Experiment 2.

*Notes:* The figure shows the information card shown to respondents in the treatment 2 group in the cities of Buenos Aires, Caracas, Lima, Mexito city, Panama city, and Sao Paulo.

*Source:* Own elaboration.

## A.2 | MEASURES OF SKILLS AND MOTIVATIONS

### A.2.1 | Intrinsic motivations

**Public service motivation (Perry and Wise, 1990).** Motivation for public service is defined as "the willingness of an individual to respond to motives present principally or solely in public institutions or bodies". Motivation for public service is associated with a preference for working in public institutions and with better individual performance in such organizations. As well, public organizations can require fewer extrinsic incentives to attract workers with these motivations. The measurement is based on a reduced construct of ten items developed by Coursey and Pandey (2007):

1. "Politics" is a dirty word.
2. I don't care much for politicians.
3. The give and take of public policy-making does not appeal to me.
4. I unselfishly contribute to my community.
5. Meaningful public service is very important to me.
6. I would prefer seeing public officials do what is best for the whole community even if it harmed my interests.
7. I consider public service my civic duty.
8. It is difficult for me to contain my feelings when I see people in distress.
9. I am often reminded by daily events how dependent we are on one another.
10. I have little compassion for people in need who are unwilling to take the first step to help themselves.

### A.2.2 | Crystallized intelligence

**Brief Verbal Conceptualization Test (Brenlla, 2010).** Verbal conceptualization is defined as the capacity of the individual to generalize, make abstractions and find relationships among verbal concepts. It is based on the similarities and differences of objects the test subject has

assimilated, in the facts or ideas that surround him/her and in her/his skills to order and classify the similarities. In turn, they demand the use of memory, understanding and the capacity for associative and inductive thought. This test evaluates the ability to produce verbal concepts inductively. It is designed for use in the context of surveys. The task consists of making inferences, based on the presentation of stimuli (in this case two concepts, for example "table – chair"), the relationship or rule that joins them and is expressed verbally (response: "both are furniture"), which supposes putting into practice the three basic steps of inductive reasoning: coding, inference and mapping. The test consists of a selection of items of the "Analogies" sub-test of the Wechsler Adult Intelligence Scale III (WAIS-III). The items were selected taking the first and last items of those considered easy, the first two items with moderate difficulty and the first two items from maximum difficulty. The selected items are:

1. Dog – lion
2. Boat – car
3. Table – chair
4. Democracy – monarchy
5. Egg – seed
6. Vapor – fog

The responses are classified as "abstract correct"; "correct but functional or concrete" and "incorrect". For example, for the item dog – lion, responses like "they are animals", "quadrupeds" or "mammals" receive 2 points (abstract correct). In contrast, the responses "they have hair", "they have teeth", "they have claws", are scored with 1 (correct but functional or concrete but functional) and answers like "they are aggressive" or "dangerous" are treated as incorrect and receive a score of 0. The scoring of the test is the simple sum of all the coded items, the score of which can be 0 (incorrect), 1 (correct but functional or concrete) and 2 (abstract correct). Consequently, the total score can range between 0 and 12. Non-responses are eliminated because there are no criteria defined for assigning another value.

### A.2.3 | Attitudes and preferences

**Willingness to make efforts (Leisink and Steijn, 2009)**. This contains several questions about attitudes toward work that can be interpreted as measures of the willingness to make efforts. In particular, the respondent should indicate how much she/he is in agreement with a series of statements on a scale from 1 (totally disagree) to 5 (totally agree). The statements are:

1. I help new workers, although I am not obliged to do so.
2. I stay late if it is necessary to help out.
3. I make suggestions for improvements.
4. I avoid additional tasks and responsibilities (inverse scale).
5. I seek training to improve my performance at work.