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Trust, Collaboration, and Policy Attitudes in the Public Sector

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Abstract

This paper examines new data on public sector employees from 18 Latin American countries to shed light on the role of trust in the performance of government agencies. We developed an original survey taken during the first COVID-19 wave that includes randomized experiments with pandemic-related treatments. We document that individual-level trust in coworkers, other public employees, and citizens is positively related to performance-enhancing behaviors, such as cooperation and information-sharing, and policy attitudes, such as openness to technological innovations in public service delivery. Trust is more strongly linked to positive behaviors and attitudes in non-merit-based civil service systems. High-trust and low-trust respondents report different assessments of their main work constraints. Also, they draw different inferences and prefer different policy responses when exposed to data-based framing treatments about social distancing outcomes in their countries. Low-trust public employees are more likely to assign responsibility for a negative outcome to the government and to prefer stricter enforcement of social distancing.

JEL classifications: D73, H83

Keywords: Trust, Cooperation, Policy attitudes, Public sector, Pandemic, Survey experiments

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1 Introduction

Public policies are implemented and public good delivery administered by a multitude of government agencies, staffed by public sector employees. The behaviors and attitudes of public employees are critical for the performance of government agencies, and ultimately for the capacity of the state to perform its functions (Best, Hjort, and Szakonyi, 2019). However, most jobs in public administration lack the individual-level output metrics necessary for extrinsic incentive schemes to work well in motivating high day-to-day performance.¹ For this reason, the literature has underlined the importance of selecting individuals into public service who have high intrinsic and prosocial motivation (Francois, 2000; Dixit, 2002; Banuri and Keefer, 2016). Civil service recruitment based on merit and professionalism is a key mechanism for achieving this type of selection. More recently, a third factor has gained increasing recognition, namely the culture of the organization or the workplace comprising the beliefs, norms and expectations of employees. For example, a culture of corruption can undermine productive work relationships and generates status quo bias stifling openness to innovation (Banerjee, Hanna, and Mullainathan, 2012; World Bank, 2017).

In this paper, we focus on a specific aspect of organizational culture, namely trust among public sector employees, which has received little attention in the economics literature. Trust can be conceptualized as an action whereby a trustor voluntarily places something of value at the disposal of a trustee, with no enforceable commitment from the trustee (Coleman 1990). Trust among public employees may influence their behaviors and attitudes, which in turn affects the performance of government agencies. This can occur through several channels. Trust can spur motivation to increase performance-enhancing effort, as the employee has confidence that their efforts will be recognized and rewarded. Second, trust reduces transaction costs in the workplace, fostering cooperation and coordination among coworkers. Third, trust, particularly in superiors, can reduce resistance to innovation and organizational change.²

We collect new data on public sector employees and document how individual-level trust in coworkers, other public employees, and citizens is related to performance-enhancing behaviors, such as cooperation and information-sharing, and policy attitudes, such as openness

¹Financial or non-financial compensation schemes are typically confined to frontline workers in service delivery or revenue collection (e.g., Gertler and Vermeersch, 2012; Khan, Khwaja, and Olken, 2016). Financial incentives, however, do play a role for *selection* of qualified personnel into the public sector (e.g., Dal Bo, Finan, and Rossi 2013).

²Another channel that we do not explore here may be through affecting employee identity, another possible determinant of workplace performance (Akerlof and Kranton, 2005).

to technological innovations in public service delivery, and perceptions of workplace constraints on agency mission. We developed an original survey and disseminated it to public sector employees in 18 Latin American countries through an online professional network. The final sample of 2,449 public sector employees covers all levels of government, national, state, and local, different positions ranging from executive to administrative staff, and different types of agencies, such as those overseeing citizen compliance, managing transfer programs, and providing public goods. As the survey was taken in June 2020, at a time during the COVID-19 pandemic when Latin America was experiencing its first wave of infections, we exploit the salience of the new policy environment by including two randomized survey experiments that register reactions to pandemic-related treatments. In the first experiment, to understand how work constraints in government agencies changed during the pandemic we randomize the context of the question, pandemic versus pre-pandemic. For the second experiment, we randomize exposure of survey respondents to different data-based scenarios of social distancing in their countries, one positive and one negative, and elicit their views on assignment of responsibility to government versus citizens and preference for future enforcement policy. For both experiments, we study how the treatment effects vary with our three measures of trust.

To summarize the results, we find that high-trust public employees have a more positive view of cooperation with coworkers on team projects and other shared tasks, and are more likely to rely on information obtained from coworkers. Similarly, high-trust employees are more supportive of online delivery of public services and report a higher level of effectiveness of their government agency for the year before the pandemic. Given the significant degree of heterogeneity in the quality of civil service systems in the region, one question is whether the strong positive associations between trust in peers and productive workplace behaviors and attitudes are driven by respondents working in merit-based systems, or those employed in civil service systems that are more politicized. Our data indicates the latter to be the case, suggesting that trust within government agencies may be a necessary substitute for a professionalized public sector.

When we examine work constraints, we find that high-trust respondents are more concerned with the lack of staff and less concerned with low professional quality of staff or lack of cooperation among staff. Using randomized framing treatments to identify the effect of the pandemic, the estimates show that the pandemic raised concerns among all public employees about inadequate IT resources, and lowered concerns about the low quality of staff, particularly among the low-trust respondents, increasing agreement with high-trust

respondents that budgetary constraints had become more important. We also find a gap between the high-trust and the low-trust respondents in how they react to a negative framing of social distancing in their country that suggests that it had been low relative to other countries. Respondents with low trust in coworkers are more likely to react to this scenario by assigning responsibility for the (bad) outcome to the government. In addition, they are more supportive of strengthening the level of government enforcement of social distancing.

We also exploit the data on individual-level covariates to identify predictors of trust. The main factors in our survey that correlate with trust in public sector peers are experience, current status, and gender. Trust in coworkers and other public employees is higher for workers with longer tenure in the public sector, for current employees than recently separated employees, and for males.

The importance of trust for economic performance has been increasingly recognized in the economics literature.³ Much of this literature looks at trust, in the form of interpersonal or generalized trust, as a cultural feature of a society or group, a key component of "social capital" that can stimulate entrepreneurship (Bauernschuster, Falck, and Heblich, 2010; Kim and Kang, 2014), increase stock market participation (Guiso, Sapienza, and Zingales, 2008), improve labor market regulation (Aghion et al., 2010), and foster economic growth (Knack and Keefer, 1996; Dearmon and Grier, 2009) by reducing transaction costs, uncertainty, and informational asymmetries, thus driving delegation of decisions and tasks within firms (Bloom, Sadun, and Van Reenen, 2012; Cingano and Pinotti, 2016) and facilitating cooperation and coordination within large organizations (La Porta et al., 1997). Interpersonal trust may also affect the economy through the political process, as it facilitates collective action among citizens to keep the government accountable for delivering necessary public goods in an efficient manner (Bjørnskov, 2010).⁴

These studies are based on aggregate-level measures of interpersonal trust. The literature exploring the behavioral and attitudinal implications of *individual-level* trust, and in particular trust in the workplace, is much more limited. Kurtulus, Kruse, and Blasi (2011), using data from the NBER Shared Capitalism Survey, find that workers with greater trust in coworkers and management have stronger preferences for output-contingent pay schemes. Brown et al. (2015), using the Workplace Employment Relations Surveys from the United Kingdom, which covers both the private and public sectors, find a positive relationship

³A survey of this literature is in Algan and Cahuc (2013).

⁴See also Keefer, Scartascini, and Vlaicu (2020), who link low interpersonal trust with electoral populism and unsustainable economic policies.

between employee trust in management and several measures of workplace performance. Bartling et al. (2018) show theoretically and experimentally, using a repeated gift-exchange game, that trust has a causal effect on the efficiency of within-group interactions, and its persistence depends on the institutional environment. Our contribution is to provide new data from an original multi-country survey measuring trust amongst public sector employees. We complement previous findings by documenting how interpersonal trust in public agencies is linked to performance-enhancing behavior and attitudes such as cooperation and openness to innovation. Our research design also contributes survey experiments that support the idea that high-trust and low-trust employees, when exposed to informational treatments, have differential responses in interpreting the data and in preferences for policy action.

The rest of the paper is organized as follows. In the next section we begin by describing our survey methodology and examine the properties of the sample. The section then describes the randomized experiments and lays out the empirical specifications used to analyze our data. The following section presents the results, beginning with the relationship between trust and collaboration, and continuing with the relationship between trust and policy attitudes. It then explores how trust matters for responses to treatments coming from the randomized experiments. It ends with an analysis of individual-level predictors of trust. The final section summarizes the findings and discusses directions for future research.

2 Data and Empirical Strategy

To obtain measures of trust, behaviors, and attitudes of public sector employees, we designed an original survey. The survey was administered online to public employees from 18 countries in Latin America. The sampling frame consisted of all registered members of the CoPLAC-MfDR Network (Community of Practice for Latin America and the Caribbean - Management for Development Results). This is an online platform established in 2005 and maintained by the IDB (Inter-American Development Bank) that connects public sector professionals in the LAC region. The goal is to strengthen public management practices through periodic events, such as workshops, seminars, courses, that disseminate best practices in the field of public administration. At the beginning of 2020, about sixteen thousand public sector professionals were registered members of the network.

In June 2020 we distributed the survey link to the entire CoPLAC-MfDR listserv, in three rounds spaced about one week apart.⁵ At the time, the coronavirus pandemic was in full

⁵The first round was the initial invitation to participate in the survey. The two subsequent rounds were

swing in Latin America, which put the region first in the world in the number of infections. Participation in the survey was voluntary and non-incentivized. The email invitation stated that the purpose of the survey was to offer the opportunity for expressing opinions about the public sector in the respondent’s country that would assist the IDB in better providing support to governments in the region.

2.1 Sample Properties

Not all registered members of the network were current employees in the public sector at the time we launched the survey. Some had worked in the public sector in the past, and a small subset had never worked in the public sector but had some connection with or interest in it, such as government contractors, independent consultants, and IDB and World Bank professionals. Since the online platform does not differentiate who is and who is not a current public employee, we designed a question placed at the beginning of the survey to screen out those who were not on the public sector payroll. More precisely, we retained respondents who were either current public sector employees or had left the public sector in the prior year 2019 or later. Of the individuals included in our final sample, 85.5 percent were current employees in the public sector; the rest had worked in the public sector until 2019 or 2020.

The country coverage of the data by survey round appears in Table 1. The total number of individual responses was 2,449, of which 2,210 were complete and 239 partial responses. The countries with the highest number of responses were Peru, with 698 (28.5 percent) of total responses, Mexico, with 365 (14.9 percent) of total responses, and Colombia, with 248 (10.1 percent) of total responses. The countries with the lowest number of responses were El Salvador, Venezuela, and Nicaragua. Initially, our target population was the 17 Spanish-speaking countries of Latin America. Therefore, in round one, we screened out respondents who selected a different country in the online survey. Nevertheless, since we received a sizable number of responses from Brazil, we opted to make available a Portuguese version of the survey for rounds two and three. Thus, the survey covers a total of 18 countries.⁶

The survey elicits respondents’ levels of trust in peers and citizens, their experience with collaboration in the workplace, and policy attitudes. In addition, it collects individual characteristics, such as age, gender, education, and experience in the public sector. The survey includes two randomized experiments that vary exposure to pandemic-related scenarios that

reminders sent to the subset of the listserv that had not already responded.

⁶A total of 4,270 individuals responded to the survey. This initial sample reduced to 2,449 after applying the filters mentioned above, current employment status and country of residence.

may affect work constraints and policy preferences.

We first describe the variables measured prior to the experiments. At the beginning of the survey three questions measure our key explanatory variables, namely trust in peers and trust in citizens. First, respondents are asked to express their agreement with the statement: *Most coworkers in my government agency can be trusted*. The answer options form a five-point scale: strongly disagree, disagree, neutral, agree, strongly agree. The other two trust questions ask whether *Most public sector employees can be trusted*, and whether *Most citizens in my country can be trusted*. Table 2 presents summary statistics for these variables. Normalizing the answers to the unit interval, with values ranging between 0 (strongly disagree) and 1 (strongly agree), average trust in coworkers, public employees, and citizens is 0.59, 0.45, and 0.54, respectively. This means that on average respondents express higher trust in coworkers than in public sector employees in general, and than in citizens. At the same time, they express more trust in citizens than in public sector employees.⁷

Figure 1 presents the full distribution of trust responses. It shows that the share of respondents who agree or strongly agree with the trust statements is 51.65 percent for coworkers, 25.49 percent for public employees, and 40.54 percent for citizens. Figure 2 summarizes the trust data by region. We note that trust is significantly lower in the Andean Region, compared with the Southern Cone and Central American countries.⁸

Also, prior to the experiments, several questions measured respondents views about work collaboration and policy attitudes. The cooperation question asked: *How does collaboration with your colleagues (team projects, shared tasks, meetings, etc.) affect your ability to do your job well?* This generates the variable *Cooperation* measured on a discrete scale from -5 to 5 , with -5 meaning reduces a lot and 5 meaning improves a lot. The question about information sharing asked: *In your daily work, how much do you rely on information obtained from your coworkers?* Based on the answers, we generate a variable *Info Sharing* measured on a four-point scale, with 1 meaning relying very little and 4 meaning relying much on information obtained from coworkers. The summary statistics in Table 2 show that a large majority of respondents are positive about the impact of cooperation on their work, and are relying to a considerable extent on information exchanged with coworkers.

⁷This pattern of relative trust resonates with findings from the World Bank’s bureaucracy surveys in Africa and Asia, although the trust *levels* we find in Latin America are generally lower. See World Bank (2019).

⁸The Latin American regions are defined as follows: Southern Cone (ARG, BRA, CHL, PRY, URY), Andean Region (BOL, COL, ECU, PER, VEN), Central America (CRI, DOM, SLV, GTM, HND, MEX, NIC, PAN).

Regarding policy attitudes, the survey asked about preferences for expanding online public services to citizens. This is captured in the variable *Online Services*, measured on a five-point scale, with 1 meaning strongly opposed and 5 meaning strongly in favor of expansion. Also, respondents were asked to assess their government agency’s performance in accomplishing its mission during 2019. The variable *Agency Effectiveness* is measured on a five-point scale, with 1 meaning very low performance and 5 meaning very high performance. The summary statistics in Table 2 show that most respondents are supportive of expanding online services. About 40.7 percent of respondents believed their agency’s performance was high or very high during the previous year 2019.

The survey also measured job-related individual characteristics of public employees. Among these variables, *Gov Level* captures whether the public employee works in the national, state, or local government. More than half of the respondents work at the national level (56.6 percent), followed by state (25.3 percent) and local (18.0 percent) levels. Figure 3 summarizes the trust data by government level. We notice that trust in coworkers and other public employees declines from the national to the local levels; trust in citizens, however, is roughly the same across the three levels.

The variable *Position* reflects an employee’s position in the organization, measured on a 1-6 scale, with 1 meaning executive and 6 meaning support position. About 30.1 percent of respondents work in executive or managerial positions, 50.7 percent in mid-level professional positions, and 19.1 percent in administrative, technical, or support positions. The survey asked respondents the nature of their agency’s mission. The categorical variable *Mission* captures three types of agencies according to their main mission: oversee citizen compliance (public safety, tax collection, regulatory agency, etc.), manage transfer programs (social security, unemployment insurance, cash transfers, etc.), and provide public goods (education, health, roads, statistical information, etc.). The breakdown according to agency mission is 20.9 percent, 14.6 percent, and 64.4 percent, respectively.

2.2 Randomized Experiments

In the second half of the survey, we implemented two randomized experiments. Each experiment had two treatment arms. The randomization assigns one of the treatment arms with equal probability and occurs at the individual level, within country-rounds. The two experimental randomizations were statistically independent of each other.

In the first experiment, the survey question asked about work constraints faced by the

respondent’s government agency. Specifically, the wording of the question was: *Your agency’s mission may have been constrained by several factors in 2019. One factor could be the budget. Compared to budget constraints, how much did the following factors hinder your agency’s mission during 2019 (during the COVID-19 pandemic)?* The constraining factors presented were: inadequate IT resources, lack of staff, low professional quality of the staff, limited discretion to innovate, and lack of cooperation among staff.⁹ The answer options were “Much less than budget,” “Less than budget,” “Same as budget,” “More than budget,” and “Much more than budget.” Half of the respondents were asked to assess how each of these constraints compared to budgetary constraints during 2019; the other half received a different time frame, namely the pandemic period. Based on the randomly assigned the time frame, we create a dummy variable *Pandemic Framing* that indicates whether the respondent received the question with the pandemic time frame. Of the five outcomes, lack of discretion to innovate was reported by the most respondents (39.7 percent) as a more or much more constraining factor than the budget; lack of staff was reported by the least respondents (29.2 percent) as a more or much more constraining factor than the budget.¹⁰

For the second experiment, one treatment showed respondents a bar chart with the level of social distancing in their country since the beginning of the pandemic, alongside the average level in the world, which at the time of the experiment was lower than in each of the countries in our sample.¹¹ Thus, in relative terms, this is a good scenario for social distancing in the respondent’s country. The other treatment showed a bar chart reporting social distancing in their country alongside the level in Spain, which at the time of the experiment had more social distancing than all the countries in our sample, without exception. Thus, relative to Spain, this is a bad scenario with low social distancing. We code assignment of the negative scenario in a dummy variable called *Negative Framing*.¹²

After viewing the graph, the survey respondents were asked two questions. The first question was: *In your view, which is more responsible for the level of social distancing attained so far in your country, government enforcement, or citizen compliance?* The answer options were a sliding discrete scale going from “Government Enforcement” (0) to “Citizen Compliance” (10). The second question was: *As social distancing needs to continue while*

⁹The order of these factors was randomized to avoid potential bias induced by the order of items.

¹⁰The actual statements and formats of the treatments used in Experiment I are included in Section A1 of the Online Appendix.

¹¹Nicaragua was an exception, in which case the national statistic was shown by itself.

¹²We generated the bar charts for each country based on data from Google’s COVID-19 Community Mobility Reports. Examples of the bar charts used in Experiment II are included in Section A2 of the Online Appendix.

the economy reopens, how should the authorities enforce social distancing? The answer options were a sliding discrete scale going from “No Enforcement Necessary” (0) to “Strict Enforcement Necessary” (10).

After the experiment, the survey elicited four individual characteristics. *Experience* measures years of service in the public sector. *Education* is measured on a discrete scale, with 1 meaning primary education and 7 meaning doctorate. The average respondent had worked in the government over 13 years. The average education level is high, at least a college degree. The average *Age* of public employee is around 46 years, and 43.4 percent are female.

2.3 Empirical Specifications

The empirical strategy to estimate the relationship between reported trust and public employee work and policy responses is based on regression specifications of the following form:

$$y_{ij} = \sum_{n=1}^3 \beta_n T_{nij} + \gamma' \mathbf{X}_{ij} + \delta_{jk} + u_{ij} \quad (1)$$

where y_{ij} is a variable measuring attitudes towards cooperation, information sharing, online public services, and agency effectiveness, for individual i from country j ; T_{nij} is a variable measuring trust in agent n , where $n = 1, 2, 3$, indicating respectively coworkers, public employees, and citizens; \mathbf{X}_{ij} is a set of individual characteristics that are not affected by trust, such as age, gender, and education indicators; δ_{jk} is a fixed effect for country j in survey round k , and u_{ij} is the error term.

The β_n coefficients measure the average change in the outcome y_{ij} associated with an increase in the trust variables T_{nij} from zero to one, namely from the lowest to the highest level of trust. The country-round fixed effects δ_{jk} keep constant factors that may vary across country-rounds, such as a change in the evolution of the pandemic in a country between the first round of the survey and the third round. We report standard errors clustered at the country-round level.

For some non-experimental outcomes we also study how their association with trust depends on country-level characteristics, such as the extent of merit hiring in the public sector. The empirical specification in this case is:

$$y_{ij} = \sum_{n=1}^3 (\beta_n T_{nij} + \beta_{n+3} T_{nij} \times Z_j) + \gamma' \mathbf{X}_{ij} + \delta_{jk} + u_{ij} \quad (2)$$

where Z_j is a dummy variable indicating the presence of an institutional characteristic in country j . The coefficients β_{n+3} on the interaction variables $T_{nij} \times Z_j$, where $n = 1, 2, 3$, capture the difference in the trust coefficients between countries with versus those without the institution indicated by Z_j .

In the case of the randomized experiments, we can estimate average treatment effects showing the impact of the framing treatments on respondent outcomes. Our primary interest, however, is how the average treatment effects vary with different trust measures. Therefore, the empirical model is the following regression specification that includes an interaction of treatment with trust:

$$y_{ij} = \sum_{n=1}^3 \beta_n T_{nij} + (\theta_1 F_{ij} + \theta_2 F_{ij} \times T_{nij}) + \boldsymbol{\gamma}' \mathbf{X}_{ij} + \delta_{jk} + u_{ij} \quad (3)$$

for $n = 1, 2, 3$, where y_{ij} is a variable measuring the outcome responses of individual i from country j ; F_{ij} is an indicator variable for the randomized framing treatment, $F_{ij} \times T_{nij}$ is the interaction between the framing treatment and one of the three trust variables. The rest of the terms have the same interpretation as in the equation (1). The coefficient θ_1 measures the framing effect for the lowest trust group; the coefficient θ_2 measures how the treatment effect changes with increases in trust. In the case of Experiment I on work constraints we also estimate treatment effects interacted with agency mission to check if different types of agencies respond differently to the pandemic framing.

3 Results

This section reports empirical findings based on the original survey data we collected on individual-level trust of public sector employees. The data allow us to explore how individual trust is related to workplace behavior and policy attitudes, such as collaboration with peers and openness to innovation, that should affect public sector performance.

3.1 Trust and Collaboration

Trust in peers should be conducive to more productive workplace interactions, by facilitating the cooperation and coordination necessary to undertake and complete complex tasks. Table 3 presents estimates of the empirical relationship between a public employee's trust levels and his or her collaborative behaviors. These behaviors are quantified by the variables

Cooperation, which measures the respondent’s attitude toward working in groups, and *Info Sharing*, which captures the respondent’s self-reported reliance on information obtained from coworkers. Both variables enter the empirical specification in standardized form, so that the trust coefficients have a standard deviation interpretation and are comparable between the two outcomes.

The upper panel of Table 3 reports estimates of the regression coefficients in equation (1) above. The estimates show that trust in coworkers is positively related to cooperation. Column (1) shows coefficients from a model with no fixed effects or covariates, and robust standard errors. Columns (2) and (3) add fixed effects and covariates that are unlikely to be influenced by current levels of trust, namely age, gender, and education. Column (4) restricts the sample to current employees. Respondents who strongly agree that coworkers are trustworthy are about 1.25 standard deviations more positive about engaging in group activities with colleagues compared to respondents who strongly disagree. For trust in public employees, the difference in positivity toward cooperation is less than half the size, between 0.54 and 0.59 standard deviations. For trust in citizens, the difference drops to about 0.20 standard deviations, and is only marginally significant in the more demanding specifications of columns (3) and (4).

The lower panel of Table 3 indicates that trust in coworkers is also positively related to information-sharing among public employees. For trust in coworkers and trust in public employees, coefficient magnitudes are measurably lower than for cooperation. Respondents who strongly agree that coworkers are trustworthy are about 0.40 to 0.44 standard deviations more likely to rely on information obtained from coworkers compared to respondents who strongly disagree. For trust in public employees, the difference is lower, about 0.26 to 0.30 standard deviations. Trust in citizens does not appear to be significantly related to demand for information-sharing in the workplace.¹³

Given that our data come from 18 different countries, with significant variation in institutions, it is worth exploring whether the institutional features of the civil service system in which a respondent operates matters for how trust relates to workplace collaboration. A relevant feature seems to be the rules governing selection into the civil service. Countries in the region vary in the degree to which they use a merit system for recruitment and retention. Based on the most recent assessment of civil service systems performed by the IDB, we

¹³While we see the main role of covariates as alleviating concerns about potential omitted variable bias and improving statistical precision, we mention that *Female* is positively associated with *Cooperation*, while *Education* is negatively associated with *Cooperation*, and positively associated with *Info Sharing*.

divide the sample into countries that significantly rely on merit criteria ($Merit = 1$), versus those where political criteria also play a significant role ($Merit = 0$). Figure 4 plots average trust by civil service system. We notice that all types of trust are higher in countries with stronger merit systems, with the difference particularly stark for trust in public employees, where it is higher by 21.1 percent. Trust in coworkers and in citizens is about 7.3 percent and 7.7 percent higher on average, respectively, in merit systems.¹⁴

One possibility is that civil service institutions and trust are complements, namely that trust is particularly valuable for workplace productivity when civil service rules promote competence through merit hiring. Another possibility is that civil service institutions and trust are substitutes: in the absence of impartial hiring rules, trust becomes necessary to make productive workplace interactions possible; conversely, with merit-based hiring rules, trust is less critical in supporting public sector collaboration.

In Table 4 we interact the trust variables with the dummy variable *Merit*. The formal empirical specification is in equation (2). The interaction coefficients indicate whether the strength of the relationship between trust and collaboration is higher or lower in merit systems. The columns follow the structure of Table 3, showing the same outcomes without merit system interactions. Since *Merit* varies at the country level, in the fixed effects specifications (2)-(4) its coefficient will drop out. In the upper panel, where the outcome variable is *Cooperation*, the interaction coefficients do not indicate significant differences. For *Info Sharing*, in the lower panel, trust in public employees is positively related with information sharing in non-merit systems, but not in merit systems: the interaction coefficients are negative and larger in magnitude than the non-interacted coefficients. This pattern suggests that trust and civil service institutions are substitutes: namely, trust may compensate for the absence of a professionalized merit-based civil service.

The relationship between trust and collaboration, by merit system, can be visualized in Figure 5. The figure plots raw data means for cooperation (panel A) and information-sharing (panel B) against the measures of trust. First, we notice the upward slope of the plotted relationships, particularly for the two types of trust pertaining to the workplace (coworkers, public employees), which are nearly monotonic and almost linear. Second, the first two figures in panel B display the pattern captured by the negative interaction coefficients with merit system. The solid line for $Merit = 1$ is flatter than the dotted line for $Merit = 0$,

¹⁴Countries are classified as $Merit = 1$ if their score in the merit subindex in the most recently available IDB assessment is 60 or higher. The countries that meet this threshold are: BRA, CHL, COL, CRI, PRY, and URY.

suggesting that in merit systems trust in peers matters less for willingness to engage in information sharing than in non-merit systems.

3.2 Trust and Policy Attitudes

In addition to exerting effort toward cooperation and information sharing, public employees can also increase the efficiency and effectiveness of their government agencies through their openness to innovation in public service delivery. One such innovation linked to public sector performance has been the transition of some public services online. The digital revolution provides an opportunity to streamline public service delivery. But it also requires adopting changes in the daily functioning of public agencies that employees have to adapt to, including re-trainings and re-assignments. These changes may be costly to undergo and may create resistance from staff. Mutual trust would promote an attitude of common mission to cowork in serving the public that would help alleviate some of these individual-level costs.

Table 5 presents estimates of the empirical relationship between a public employee's trust levels and his or her policy attitudes quantified by the variables *Online Services*, which measures the respondent's support for online provision of public services, and *Agency Effectiveness*, which captures the respondent's opinion about the performance of his or her government agency in the previous year 2019. Both variables are standardized, giving the trust coefficients a standard deviation interpretation and making them comparable between the two outcomes. Column (1) shows coefficients from a model with no fixed effects or covariates, and robust standard errors. Columns (2) and (3) add fixed effects and covariates that are unlikely to be influenced by current levels of trust, namely age, gender, and education. Column (4) restricts the sample to current employees.

The upper panel of Table 5 shows that trust in coworkers is positively related to openness to online services. Respondents who strongly agree that coworkers are trustworthy are between 0.31 and 0.36 standard deviations more positive about online services compared to respondents who strongly disagree. These differences are statistically significant at conventional levels. For trust in public employees, the difference is also positive but smaller, around 0.06 standard deviations and not statistically significant. The coefficients for trust in citizens are also positive, around 0.30 standard deviations, and statistically significant.

The lower panel of Table 5 indicates that a respondent's trust in coworkers is strongly positively related to a respondent's view of his or her agency's effectiveness. Respondents who strongly agree that coworkers are trustworthy are about 1.2 standard deviations more

likely to say their agency was effective is accomplishing its mission in the last year compared to respondents who strongly disagree. For trust in public employees, the difference is lower, around 0.37 standard deviations. Trust in citizens does not appear to be significantly related to a respondent’s assessment of their agency’s effectiveness.¹⁵

As before, we can check if the role of trust changes with civil service institutions. In Table 6 we interact the trust variables with the dummy variable *Merit*. The interaction coefficients indicate how the strength of the relationship between trust and policy attitudes varies with merit systems. The columns follow the structure of Table 5 and are based on the regression equation (2). In the upper panel, where the outcome variable is *Online Services*, trust in coworkers is positively related with support for online service delivery in non-merit systems, but not in merit systems: the interaction coefficients are negative and of about the same magnitude as the non-interacted coefficients. We saw this pattern previously for trust in public employees and information-sharing in Table 4. For *Agency Effectiveness*, in the lower panel, trust in peers does not have statistically different coefficients by merit system. Trust in citizens, on the other hand, is positively related with agency effectiveness in merit systems, but not in non-merit systems. A possible interpretation is that in merit systems public employees are more likely to view themselves as agents of the citizens compared to non-merit systems where appointments are also influenced by political parties; thus, in merit systems a higher level of trust in citizens should provide a stronger motivation to serve the public, which should translate into both actual and perceived effectiveness.

A visual representation of the relationship between trust and policy attitudes, by merit system, is presented in Figure 6. Each figure plots the raw data means of respondent support for online public services (panel A) and respondent perception of agency effectiveness (panel B) against the measures of trust. First, we notice the upward slope of the plotted relationships, particularly in Panel B. Second, the first figure in panel A displays the pattern captured by the negative interaction coefficients with merit system. The solid line for *Merit* = 1 is flatter than the dotted line for *Merit* = 0, suggesting that in merit systems trust in coworkers matters less for openness to digital services. Also, the last figure in Panel B shows the solid line with a steeper slope than the dotted line, suggesting that in merit systems trust in citizens matters more for agency effectiveness, as the positive interaction coefficient $Tr\ Citizens \times Merit$ confirmed.

¹⁵While we do not report the coefficients on covariates for reasons of space, we mention that *Female* is negatively associated with *Online Services*, while *Education* is positively associated with *Online Services*, and negatively associated with *Agency Effectiveness*.

3.3 Randomized Experiments

We now turn to an analysis of the data coming from the two randomized experiments included in our survey. The purpose of this exercise is twofold: first, to measure respondent reactions to pandemic-related treatments, which would provide insights into how work constraints and policy attitudes changed due to this shock, and second, to determine the extent to which public employees with different trust levels respond differently to these treatments, which would inform about whether trust matters for the beliefs and behaviors of public employees.

We begin by validating the outcomes of the random assignments. Table 7 presents covariate balance tests for each experiment. The columns report, for each covariate, its mean values in the treatment vs. the control groups, together with p-values for a t-test of equal means. The list of covariates includes all variables measured pre-treatment, as well as variables measured post-treatment that are pre-determined - specifically, the latter variables are *Experience, Education, Age, Female*. Overall, out of the list of 15 covariates, we find two marginally significant mean differences for Experiment I and one marginally significant mean difference for Experiment II. In all cases, the magnitude of the differences is small (less than a tenth of a standard deviation).

Table 8 presents estimates of the trust coefficients and the treatment variable coefficient, according to the regression equation (3). The top panel has no interactions, while the bottom three panels interact the treatment with one trust variable at a time. Each column corresponds to one of the five outcomes measured post-treatment. The outcomes measure respondents' perceptions of work constraints before and during the pandemic. The respondents are asked to rank these items relative to the benchmark of budgetary constraints. The first two constraints are more quantitative in nature: inadequate IT resources and lack of staff. The last three constraints are more qualitative: low professional quality of the staff, limited discretion to innovate, and lack of cooperation among staff. The dependent variable is a dummy variable that indicates a response above the median response in the full sample. All models include country-round fixed effects and covariates, and cluster the standard errors by country-round.¹⁶

We first focus on the trust coefficients. The estimation results indicate that respondents who trust coworkers more are more inclined to consider lack of staff to be a greater constraint than the budget; on the other hand, they are less inclined to consider the three qualitative constraints more important than the budget. For context, recall that lack of staff was

¹⁶We emphasize that the question asked respondents to assess each constraint relative to the budget; it did not ask respondents to rank the five constraints relative to each other.

the item chosen by the least number of respondents as a constraint more or much more important than the budget. Moving on to the next trust measure, respondents that trust public employees more are less concerned, relative to the budget, about limited discretion to innovate and lack of cooperation. Finally, respondents that trust citizens more are more inclined to report limited discretion to innovate to be a constraint more important than the budget.

The treatment in Experiment I is to frame the question in the context of the pandemic of 2020. The comparison group, on the other hand, was asked the question in the context of the previous year, 2019. The coefficient on the treatment variable *Pand Fr* is an unbiased estimate of the average treatment effect. Two outcomes have non-zero estimates of the average treatment effects. The pandemic framing induces an increase of 6.1 percentage points in the likelihood of considering inadequate IT a more important constraint than the budget. That seems reasonable, as the pandemic led many public agencies in the region to implement telework arrangements for their employees, which increased demand for IT tools. The pandemic framing also induced a 5.1 percentage points decrease in the likelihood of reporting low professional quality of the staff to be a greater constraint than the budget.¹⁷

We next ask to what extent the treatment effects depend on trust. In Table 8 the lower three panels report coefficients on the treatment variable *Pand Fr* in specifications where the treatment is interacted with the trust variables. These models also include the trust variables uninteracted but do not report their coefficients to conserve space. The pattern of unreported trust coefficients is very similar to the one shown in the top panel of the table.

Examining the coefficients in the interacted models, we notice that for *Inadeq IT* the treatment effect does not measurably depend on trust. All three interaction coefficients are small and statistically insignificant. In contrast, for *Low Qual* the treatment effect is largest for the lowest trust group, and declines with trust, as the interaction coefficient is positive. That is the case for all trust types. In the highest trust group, where trust is equal to one, the treatment effect is zero. A possible interpretation is that the pandemic made low-trust respondents downplay their concern with the professional quality of staff as budgetary constraints likely had become more salient. Figure 7 plots treated-control mean differences by trust, without adjusting for fixed effects or covariates. The visual representation supports the patterns observed in the regression coefficients. In addition, for *Lack Coop* we notice that respondents with high trust in public employees are less likely to mention this as a

¹⁷The exact language and format of the treatments in Experiment I are included in Section A1 of the Online Appendix.

constraint during the pandemic, implying that for these respondents the pandemic makes the budget a more constraining factor than lack of cooperation.

We also explore whether the pandemic treatment effect varies with the type of agency mission. In the data we observe three types of mission: oversee citizen compliance, manage transfer programs, and provide public goods. In Table 9 we include dummy variables for the latter two categories interacted with the treatment variable. Thus the excluded category is agencies overseeing citizen compliance. The coefficient estimates for *Inadeq IT* in column (1) indicate that the pandemic raised the importance of IT constraints particularly in agencies overseeing citizen compliance, and to a lesser extent in the other types of agencies. The coefficient estimates for *Low Qual* do not detect differences in the treatment effect on staff quality across agency types. The coefficient estimates for *Ltd Discr* in column (4) indicate that the pandemic induced an increase in reporting limited discretion to innovate as a more important constraint than the budget in agencies overseeing citizen compliance. The treatment effect is negative for agencies managing transfers ($.092 - .160 = -.068$) and is positive but much smaller for agencies delivering public goods ($.092 - .068 = .024$).

Next we discuss the results from Experiment II. Here the respondents were randomly assigned to one of two data-based treatments. The first is a positive framing, in the form of a chart and showing their country’s level of social distancing relative to the world average. At the time of the survey, the world average was low relative to every Latin American country in our sample, thus in relative terms this is a positive scenario.¹⁸ The second is a negative framing, where a similar chart was shown displaying the country’s level of social distancing relative to Spain. At the time of the survey Spain was the European country with the strictest rules on social gatherings, and its social distancing average was higher than in every Latin American country in our study, thus this is a negative scenario with relatively low social distancing.¹⁹

After viewing the chart, the respondents were asked two questions: first, whether the government or citizens are responsible for social distancing outcomes, and second, whether in the future social distancing should be more strictly enforced. The answer options were sliding discrete scales ranging between 0-10. Based on the answers, we created two outcome

¹⁸The exception was Nicaragua, in which case the bar chart showed the national data without comparison to the world average.

¹⁹Spain also happens to be a natural comparison country for historical and cultural reasons, helping make the negative framing treatment salient. All the countries in the sample, except Brazil, are Spanish-speaking countries. See Section A2 in the Online Appendix for how the Experiment II treatments looked for the country of Colombia.

variables, *Gov Responsible* and *Stricter Enforcement*, each of which is a dummy variable that indicates a response above the median response in the full sample.

For each outcome we present two specifications in Table 10, one with country-round fixed effects and another also with covariates. In all cases we cluster the standard errors by country-round. Focusing on the first panel of Table 10, where the treatment variable *Neg Fr* enters uninteracted, in columns (1)-(2) respondents with higher trust in citizens are less likely to assign responsibility for social distancing to the government. In columns (3)-(4) respondents with higher trust in public employees are more likely to prefer stricter enforcement of social distancing in the future. In contrast, respondents with higher trust in citizens are less likely to prefer stricter enforcement of social distancing. The average treatment effect, estimated by the coefficient on *Neg Fr*, is negative but small for *Gov Responsible*, and zero for *Stricter Enforcement*.

The three lower panels of Table 10 report coefficients for specifications where the treatment is interacted with each trust variable. These models also include the trust variables uninteracted, but do not report their coefficients to conserve space. When the trust measure is *Tr Coworkers*, the treatment effect on government responsibility is positive for the lowest trust group and negative for the highest trust group, suggesting that trust in coworkers helps shift the locus of responsibility for a negative social distancing outcome from the government to the citizens. In the case of stricter enforcement, the treatment effect is positive in the group with the lowest trust in coworkers, meaning that these respondents react to a negative social distancing outcome by increasing their support for stricter enforcement. Combined with the result for government responsibility, the implication is that a negative scenario is interpreted as ineffective government response to the pandemic by those with low trust in coworkers. In the group with the highest trust in coworkers the treatment effect is negative, indicating decreased support for stricter enforcement in response to negative framing. These high-trust respondents tend to assign less responsibility to the government for inadequate social distancing outcomes and believe that the government is doing enough enforcement.

When the trust measure is *Tr Publ Empl*, the differences in treatment effects between high and low trust respondents are less pronounced for *Gov Responsible*, and but follow the same pattern for *Stricter Enforcement*. Trust in citizens, on the other hand, is not associated with a differential response to negative framing. Figure 8 plots treated-control mean differences by trust, without adjusting for fixed effects or covariates. The visual representation generally conforms with the patterns highlighted in the regression coefficients.

3.4 Trust Predictors

Having documented empirical relationships between different measures of trust and public employees' attitudes and behaviors, we now turn to examining individual-level predictors of trust. The empirical model of trust has the following form:

$$T_{nij} = \gamma' \mathbf{X}_{ij} + \delta_{jk} + u_{ij} \quad (4)$$

where T_{nij} is trust of individual i from country j , and the subscript $n = 1, 2, 3$ indicates the type of trust: in coworkers, in public employees, and in citizens. The vector \mathbf{X}_{ij} is a set of individual characteristics, δ_{jk} is a fixed effect for country j and survey round k , and u_{ij} is the error term. Most characteristics \mathbf{X}_{ij} will be at the individual level; only a few are at the agency level, which we do not observe, and therefore for simplicity we represent with an i subscript.

The results are presented in Table 11. For each trust level, we present two specifications, one with a restricted set of covariates and another with a larger set. The covariates added in the second specification were measured in the second half of the survey, after the experiments, thus will have a somewhat lower response rate. All models include country-round fixed effects and cluster the standard errors by country-round.

We notice several consistent patterns. Trust in coworkers and public employees is lower in state and local governments, compared to the national government. Trust in public employees is lower among professional, technical and support staff, in comparison with executive staff. Trust in coworkers and other public employees is higher for current employees than for recent employees. This suggests that those that left the public sector recently may have done so because of problems with other staff. Having a laptop provided by the employer is associated with higher trust in both coworkers and other public employees. More experience in the public sector is associated with higher trust in public employees. And, female employees express lower trust in coworkers, public employees, as well as citizens, than their male counterparts. This may reflect experience with gender discrimination in the workplace and in society.²⁰

²⁰Alesina and La Ferrara (2002) studied General Social Survey data and found interpersonal trust to be lower for groups that claim to have been discriminated against, including women and Blacks. Buchan, Croson, and Solnick (2008) developed a lab experiment using the investment game with US students and found that males were more trusting in the exchange, while females were more trustworthy toward partners that showed trust to them.

4 Conclusion

The behaviors and attitudes of public sector employees affect the performance of government agencies and thus are a key element in the production function of the state. In this paper we document, using new data collected through an original survey, that performance-enhancing behaviors and policy attitudes of public employees are related to individual-level trust in coworkers, other public employees, and citizens. Important links between trust and attitudes are stronger in civil service systems without merit-based hiring, suggesting that trust may serve as a substitute for the lack of a professionalized public sector workforce. At the same time, our data shows that trust among public sector employees is less prevalent in non-merit-based civil service systems.

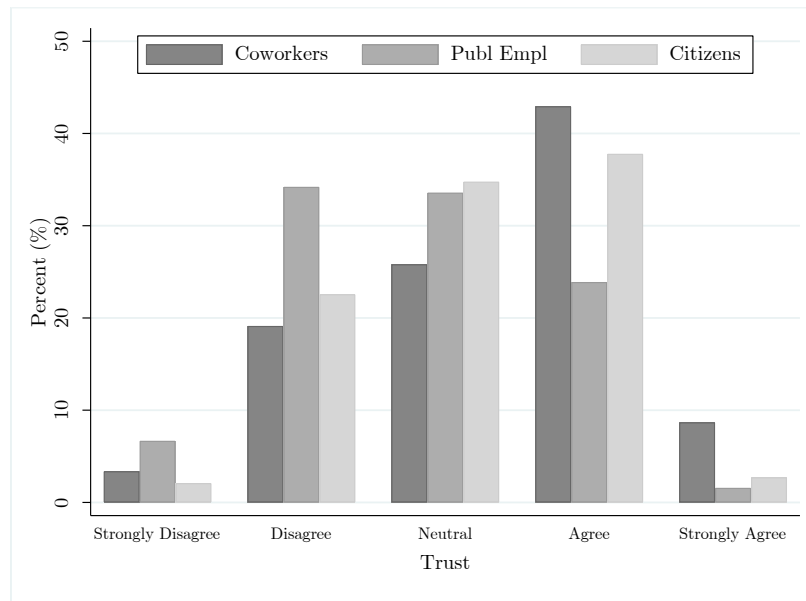
We find that public employees with different levels of trust have different assessments of their main work constraints, and how these changed due to the coronavirus pandemic of 2020. Our results also demonstrate that public employee trust can be linked to different inferences drawn from policy data and different recommendations for policy action. We designed randomized framing experiments to study reactions to pandemic-related treatments and found a gap between how high-trust and low-trust respondents respond to negative framing of social distancing in their country. Respondents with low trust in coworkers are more likely to react to this scenario by assigning responsibility for poor outcomes to the government. In addition, they express more support for stricter government enforcement of social distancing.

Our survey reveals several individual-level predictors of trust for public sector employees. Higher trust is expressed by those with more experience in the public sector, with a higher-level position, and by male employees. Our data are limited, however, in identifying workplace-level determinants of trust. Recent research has found an important role for management practices in raising the productivity of public employees (Rasul and Rogger, 2018) and management decisions are related to employee trust (Brown et al., 2015). Obtaining more granular data on workplace and managerial practices in the public sector, particularly in developing countries, would improve our understanding of the role of trust for state capacity and government performance.

Figures and Tables

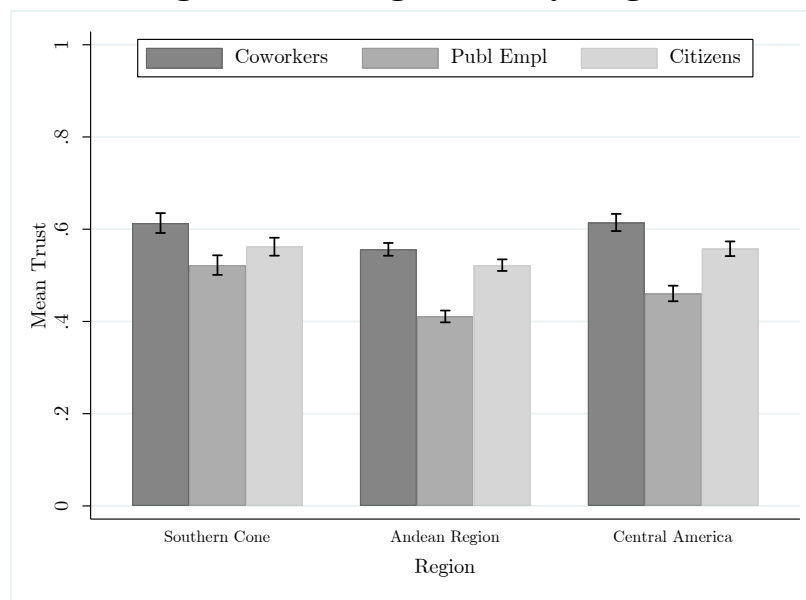
1. Figures

Figure 1. Trust Histograms



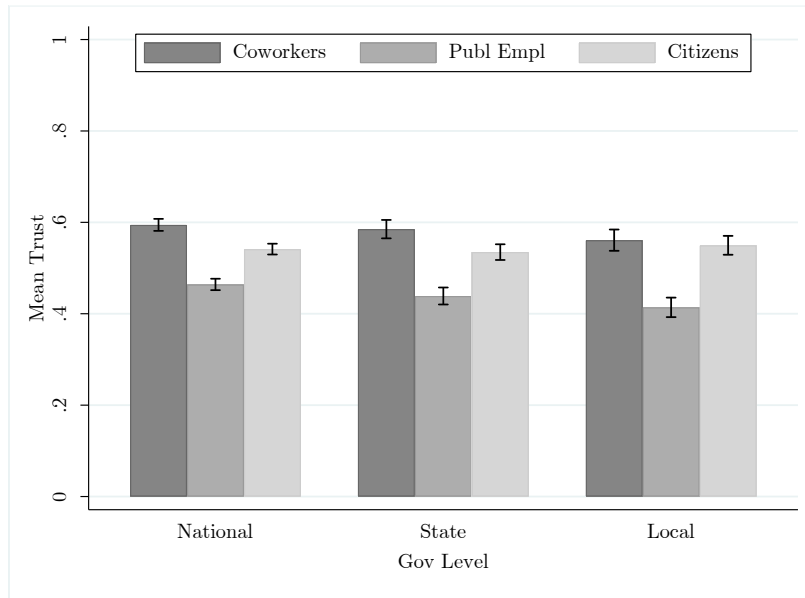
Note: Figure plots for each trust type the percentage of respondents at each trust level. Based on the full sample described in Table 1.

Figure 2. Average Trust by Region



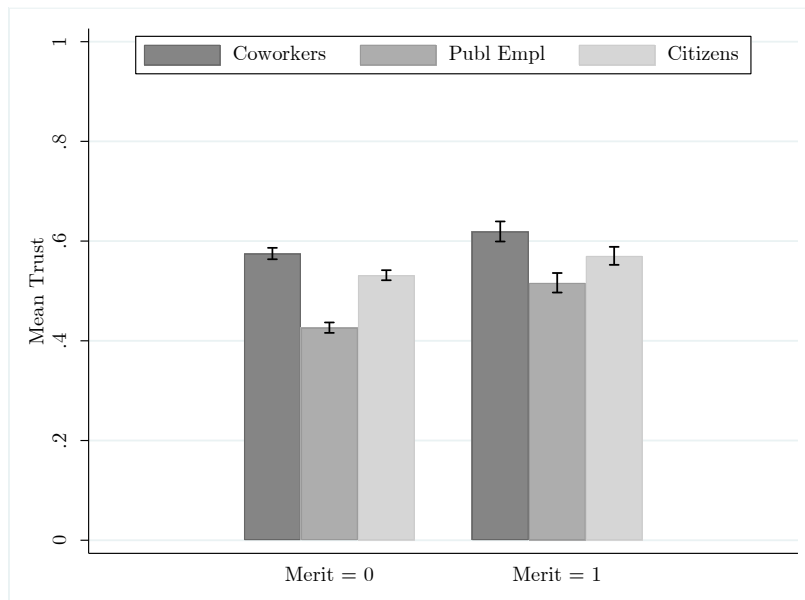
Note: Figure plots average trust by geographic region. Based on the full sample described in Table 1. Ranges at the top of bars are 95 percent confidence intervals.

Figure 3. Average Trust by Government Level



Note: Figure plots average trust by level of government. Based on the full sample described in Table 1. Ranges at the top of bars are 95 percent confidence intervals.

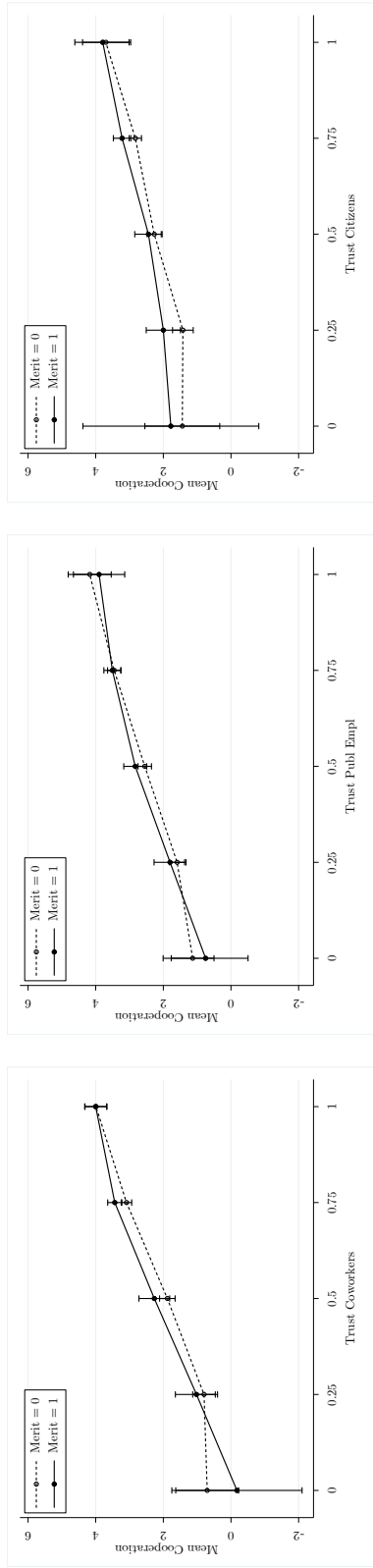
Figure 4. Average Trust by Civil Service System



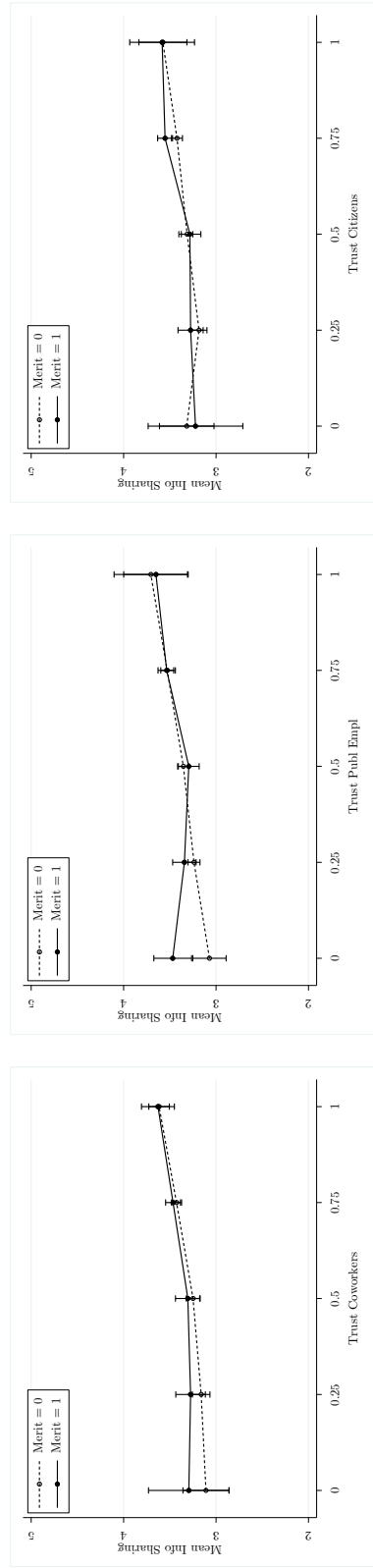
Note: Figure plots average trust by type of civil service system. *Merit* is one if being rated above 60 percent on the merit subindex in the latest available IDB civil service assessment. Based on the full sample described in Table 1. Ranges at the top of bars are 95 percent confidence intervals.

Figure 5. Trust and Collaboration

Panel A: Cooperation



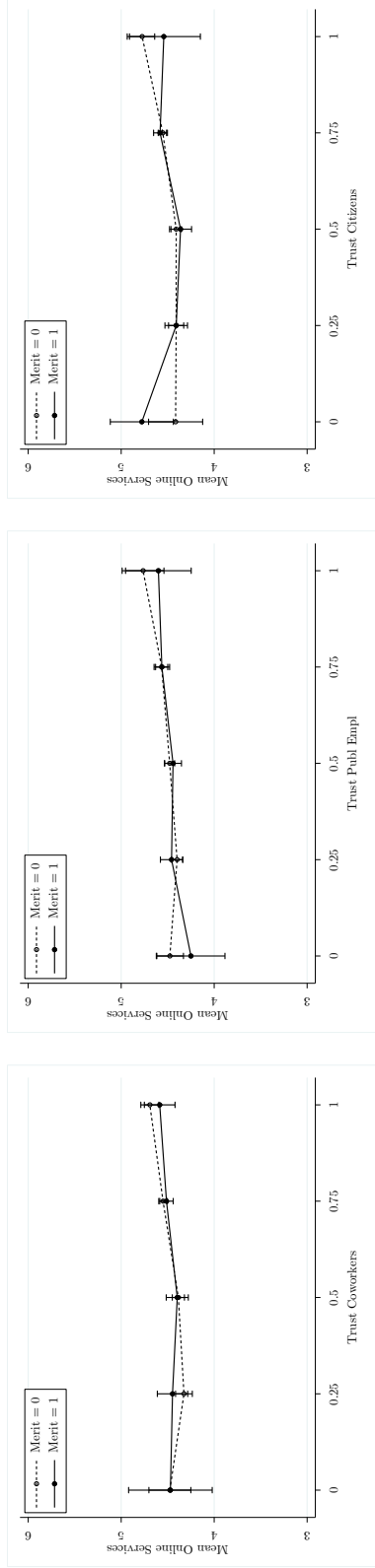
Panel B: Information Sharing



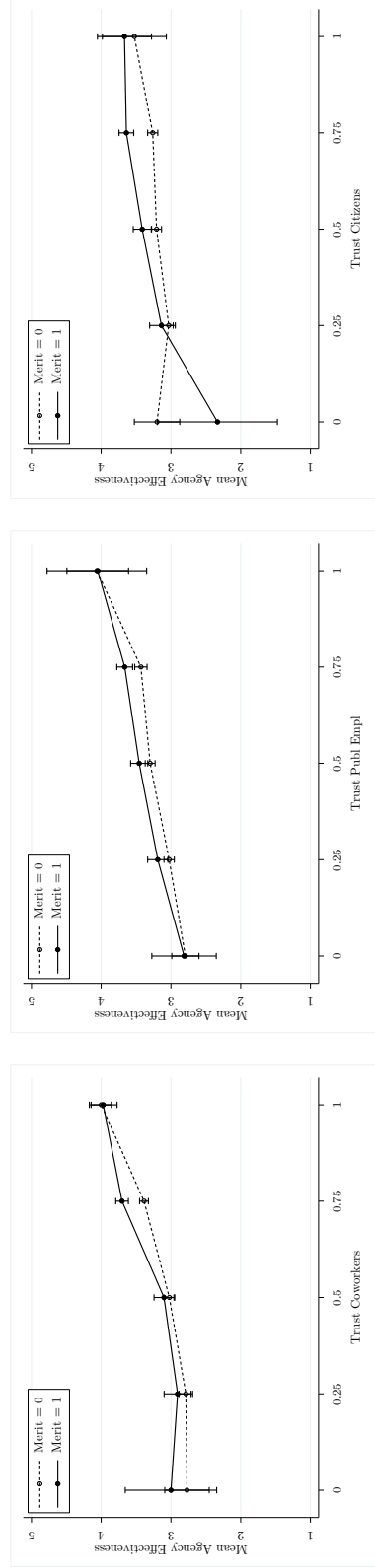
Note: Figures plot raw means, unadjusted, of the variables *Cooperation* (Panel A) and *Info Sharing* (Panel B) against trust in coworkers, public employees, citizens, by type of civil service system. Ranges around means are 95 percent confidence intervals.

Figure 6. Trust and Policy Attitudes

Panel A: Online Services

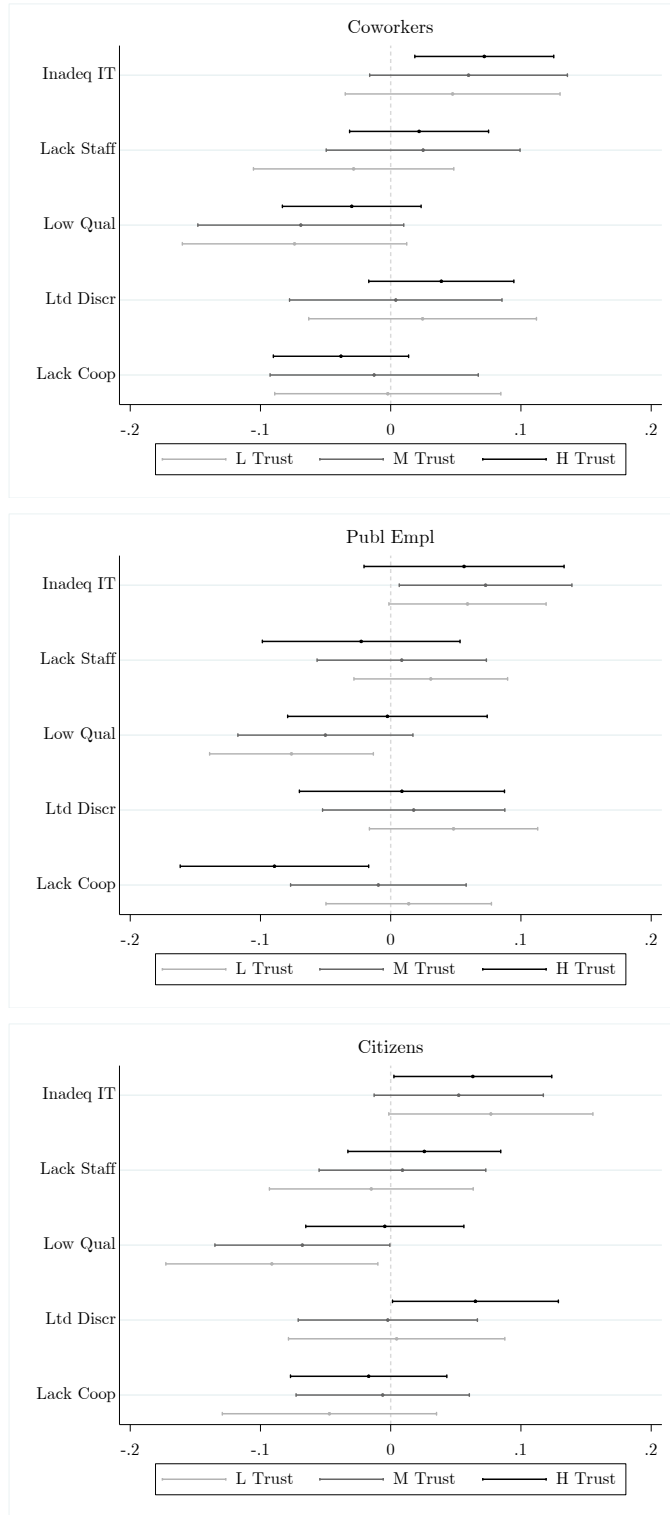


Panel B: Agency Effectiveness



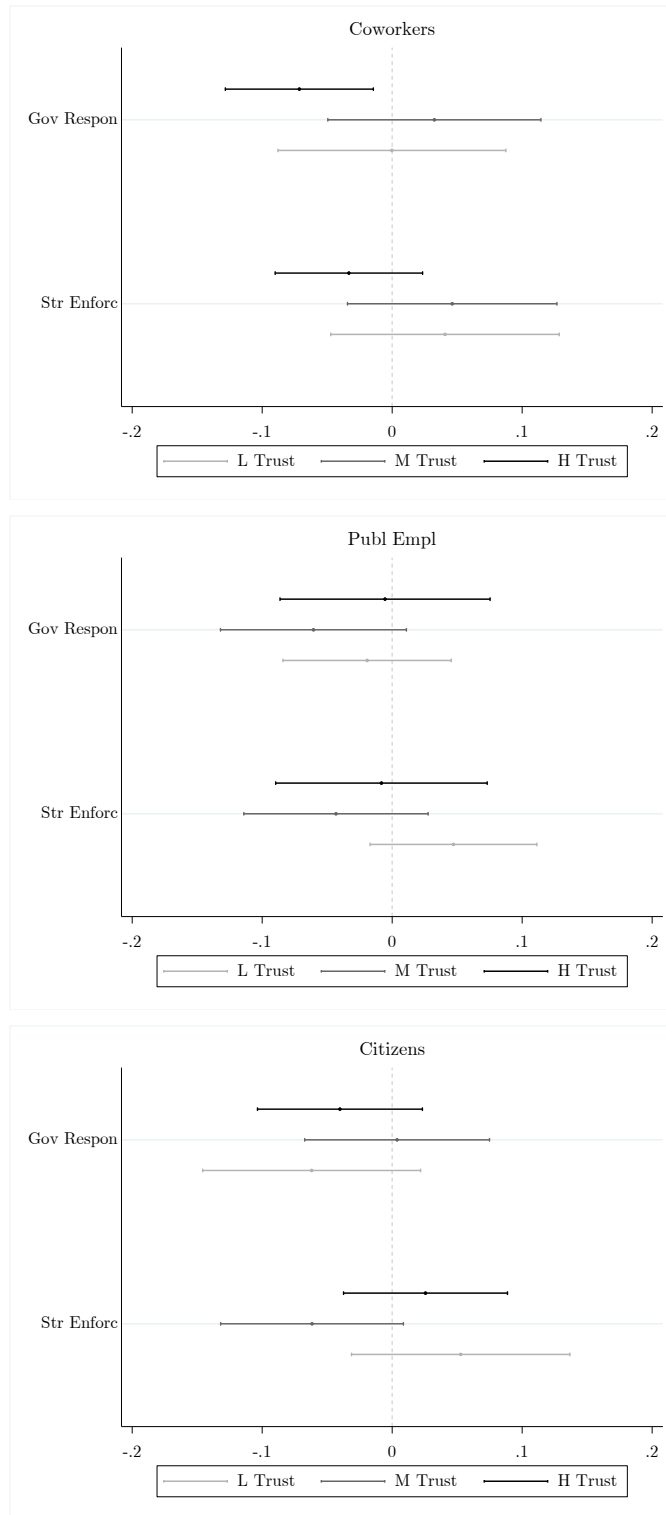
Note: Figures plot raw means, unadjusted, of variables *Online Services* (Panel A) and *Agency Effectiveness* (Panel B) against trust in coworkers, public employees, citizens, by type of civil service system. Ranges around means are 95 percent confidence intervals.

Figure 7. Exper I: Treated-Control Differences, by Trust



Note: Figures plot differences in average work constraints in Experiment I between the treated (pandemic framing) and control (regular year framing) respondents. Ranges are 95 percent confidence intervals.

Figure 8. Exper II: Treated-Control Differences, by Trust



Note: Figures plot differences in average policy views in Experiment II between the treated (negative framing) and control (positive framing) respondents. Ranges are 95 percent confidence intervals.

2. Tables

Table 1. Sample Coverage

	Code	Round 1	Round 2	Round 3	Total
Argentina	ARG	103	63	53	219
Bolivia	BOL	32	18	8	58
Brazil	BRA	–	46	16	62
Chile	CHL	35	13	16	64
Colombia	COL	110	67	71	248
Costa Rica	CRI	56	23	18	97
Dominican Rep	DOM	39	23	17	79
Ecuador	ECU	89	32	28	149
El Salvador	SLV	23	14	9	46
Guatemala	GTM	31	17	12	60
Honduras	HND	24	16	13	53
Mexico	MEX	170	95	100	365
Nicaragua	NIC	16	4	5	25
Panama	PAN	23	21	9	53
Paraguay	PRY	38	29	16	83
Peru	PER	341	164	193	698
Uruguay	URY	25	19	15	59
Venezuela	VEN	14	12	5	31
Obs	18	1,169	676	604	2,449

Note: The table reports sample size by country and survey round. Tabulation based on the full sample collected for the IDB Public Sector Survey in June 2020. The survey was launched in Portuguese after Round 1 was completed, hence the missing sample size for Brazil in Round 1.

Table 2. Summary Statistics

	Obs	Mean	Std Dev	Min	Max
<i>Trust Coworkers</i>	2,393	0.586	0.248	0	1
<i>Trust Publ Empl</i>	2,393	0.449	0.233	0	1
<i>Trust Citizens</i>	2,383	0.541	0.219	0	1
<i>Gov Level</i>	2,433	1.614	0.773	1	3
<i>Position</i>	2,423	2.890	1.161	1	6
<i>Cooperation</i>	2,370	2.400	2.705	-5	5
<i>Info Sharing</i>	2,362	3.350	0.798	1	4
<i>Online Services</i>	2,359	4.472	0.715	1	5
<i>Mission</i>	2,335	2.435	0.815	1	3
<i>Agency Effectiveness</i>	2,325	3.257	0.948	1	5
<i>Pandemic Fr</i> [Experiment I]	2,314	0.499	0.500	0	1
<i>Inadeq IT</i>	2,226	2.873	1.198	1	5
<i>Lack Staff</i>	2,226	2.833	1.163	1	5
<i>Low Qual</i>	2,226	2.924	1.219	1	5
<i>Ltd Discr</i>	2,226	3.068	1.254	1	5
<i>Lack Coop</i>	2,226	2.908	1.205	1	5
<i>Negative Fr</i> [Experiment II]	2,223	0.498	0.500	0	1
<i>Gov Responsible</i>	2,218	3.504	3.066	0	10
<i>Stricter Enforcement</i>	2,217	7.803	2.057	0	10
<i>Current</i>	2,449	0.853	0.355	0	1
<i>Experience</i>	2,213	13.420	9.039	1.5	25
<i>Education</i>	2,210	5.813	0.626	2	7
<i>Age</i>	2,212	45.580	10.736	18	79
<i>Female</i>	2,211	0.434	0.496	0	1

Note: See Section A3 in the Online Appendix for detailed variable definitions and measurement. Statistics computed for the full sample of eighteen countries included in the 2020 IDB Public Sector Survey; see Table 1. Sample size differs across variables due to incomplete or invalid responses to survey questions.

Table 3. Trust and Collaboration

Dep Var:	<i>Cooperation</i>			
	(1)	(2)	(3)	(4)
<i>Trust Coworkers</i>	1.240*** (.100)	1.246*** (.104)	1.241*** (.116)	1.256*** (.123)
<i>Trust Publ Empl</i>	.541*** (.099)	.536*** (.083)	.598*** (.083)	.539*** (.092)
<i>Trust Citizens</i>	.213** (.103)	.244** (.113)	.195* (.116)	.205* (.106)
Obs	2,370	2,370	2,210	1,899
Dep Var:	<i>Info Sharing</i>			
	(5)	(6)	(7)	(8)
<i>Trust Coworkers</i>	.435*** (.098)	.409*** (.128)	.406*** (.137)	.445*** (.139)
<i>Trust Publ Empl</i>	.308*** (.105)	.262** (.109)	.283** (.110)	.299** (.128)
<i>Trust Citizens</i>	.257** (.110)	.259* (.143)	.216 (.153)	.278 (.175)
Obs	2,362	2,362	2,210	1,899
Countries	18	18	18	18
Clusters	—	53	53	53
Fixed Eff	no	yes	yes	yes
Covariates	no	no	yes	yes
Sample	full	full	full	curr

Note: Table reports coefficients from regressions of the two collaboration variables *Cooperation* (upper panel) and *Info Sharing* (lower panel) on the three trust variables. Country-round fixed effects and covariates included as indicated at the bottom of the table. Covariates are: *Age*, *Female*, and a set of indicator variables based on *Education*. Last columns restrict the sample to current employees. Robust standard errors in parentheses in columns (1) and (5), clustered at the level of the fixed effects in all other columns. *** p < 0.01, ** p < 0.05, * p < 0.10.

Table 4. Trust, Collaboration, and Merit Hiring

Dep Var:	<i>Cooperation</i>			
	(1)	(2)	(3)	(4)
<i>Trust Coworkers</i>	1.220*** (.118)	1.218*** (.125)	1.209*** (.139)	1.251*** (.152)
<i>Trust Publ Empl</i>	.554*** (.121)	.557*** (.097)	.630*** (.095)	.564*** (.109)
<i>Trust Citizens</i>	.226* (.123)	.270** (.129)	.219 (.133)	.227* (.117)
<i>Tr Coworkers</i> × <i>Merit</i>	.095 (.216)	.121 (.199)	.141 (.217)	.018 (.237)
<i>Tr Publ Empl</i> × <i>Merit</i>	−.121 (.209)	−.093 (.173)	−.139 (.172)	−.097 (.188)
<i>Tr Citizens</i> × <i>Merit</i>	−.053 (.224)	−.101 (.253)	−.092 (.253)	−.086 (.248)
Obs	2,370	2,370	2,210	1,899
Dep Var:	<i>Info Sharing</i>			
	(5)	(6)	(7)	(8)
<i>Trust Coworkers</i>	.462*** (.114)	.430*** (.142)	.434*** (.154)	.467*** (.159)
<i>Trust Publ Empl</i>	.436*** (.128)	.389*** (.107)	.424*** (.112)	.478*** (.142)
<i>Trust Citizens</i>	.136 (.132)	.138 (.167)	.080 (.182)	.140 (.214)
<i>Tr Coworkers</i> × <i>Merit</i>	−.073 (.221)	−.059 (.303)	−.067 (.311)	−.040 (.318)
<i>Tr Publ Empl</i> × <i>Merit</i>	−.510** (.217)	−.495* (.272)	−.560** (.274)	−.678** (.300)
<i>Tr Citizens</i> × <i>Merit</i>	.436* (.234)	.461* (.259)	.527* (.274)	.505 (.329)
Obs	2,362	2,362	2,210	1,899

Note: Table reports coefficients from regressions of the two collaboration variables *Cooperation* (upper panel) and *Info Sharing* (lower panel) on the three trust variables and their interactions with the dummy *Merit* indicating merit hiring. *Merit* uninteracted also included in columns (1) and (5). Fixed effects and covariates as in Table 3. *** p < 0.01, ** p < 0.05, * p < 0.10.

Table 5. Trust and Policy Attitudes

Dep Var:	<i>Online Services</i>			
	(1)	(2)	(3)	(4)
<i>Trust Coworkers</i>	.367*** (.100)	.345*** (.128)	.312** (.120)	.320** (.136)
<i>Trust Publ Empl</i>	.060 (.107)	.057 (.138)	.056 (.122)	.058 (.145)
<i>Trust Citizens</i>	.254** (.109)	.272** (.104)	.280*** (.100)	.323*** (.115)
Obs	2,359	2,359	2,210	1,899
Dep Var:	<i>Agency Effectiveness</i>			
	(5)	(6)	(7)	(8)
<i>Trust Coworkers</i>	1.258*** (.102)	1.217*** (.090)	1.231*** (.096)	1.254*** (.101)
<i>Trust Publ Empl</i>	.438*** (.114)	.387*** (.130)	.368** (.140)	.351*** (.126)
<i>Trust Citizens</i>	-.083 (.108)	-.082 (.131)	-.056 (.134)	.048 (.139)
Obs	2,325	2,325	2,210	1,899
Countries	18	18	18	18
Clusters	—	53	53	53
Fixed Eff	no	yes	yes	yes
Covariates	no	no	yes	yes
Sample	full	full	full	curr

Note: Table reports coefficients from regressions of the two policy attitude variables *Online Services* (upper panel) and *Agency Effectiveness* (lower panel) on the three trust variables. Country-round fixed effects and covariates included as indicated at the bottom of the table. Covariates are: *Age*, *Female*, and a set of indicator variables based on *Education*. Last columns restrict the sample to current employees. Robust standard errors in parentheses in columns (1) and (5), clustered at the level of the fixed effects in all other columns. *** p < 0.01, ** p < 0.05, * p < 0.10.

Table 6. Trust, Policy Attitudes, and Merit Hiring

Dep Var:	<i>Online Services</i>			
	(1)	(2)	(3)	(4)
<i>Trust Coworkers</i>	.472*** (.116)	.457*** (.148)	.411*** (.143)	.423** (.168)
<i>Trust Publ Empl</i>	-.001 (.121)	.006 (.149)	.010 (.133)	-.018 (.165)
<i>Trust Citizens</i>	.255** (.127)	.247* (.127)	.278** (.126)	.334** (.146)
<i>Tr Coworkers × Merit</i>	-.456** (.231)	-.483** (.220)	-.424** (.192)	-.417* (.238)
<i>Tr Publ Empl × Merit</i>	.294 (.266)	.247 (.330)	.228 (.290)	.324 (.313)
<i>Tr Citizens × Merit</i>	-.009 (.247)	.089 (.204)	-.014 (.175)	-.065 (.204)
Obs	2,359	2,359	2,210	1,899
Dep Var:	<i>Agency Effectiveness</i>			
	(5)	(6)	(7)	(8)
<i>Trust Coworkers</i>	1.271*** (.119)	1.219*** (.103)	1.234*** (.108)	1.239*** (.122)
<i>Trust Publ Empl</i>	.438*** (.137)	.399** (.164)	.396** (.172)	.363** (.156)
<i>Trust Citizens</i>	-.289** (.127)	-.279** (.125)	-.257* (.130)	-.188 (.139)
<i>Tr Coworkers × Merit</i>	-.023 (.225)	.005 (.195)	.023 (.220)	.105 (.212)
<i>Tr Publ Empl × Merit</i>	-.209 (.245)	-.046 (.242)	-.119 (.249)	-.067 (.235)
<i>Tr Citizens × Merit</i>	.769*** (.239)	.775** (.291)	.802*** (.298)	.904*** (.262)
Obs	2,325	2,325	2,210	1,899

Note: Table reports coefficients from regressions of the two collaboration variables *Cooperation* (upper panel) and *Info Sharing* (lower panel) on the three trust variables and their interactions with the dummy *Merit* indicating merit hiring. *Merit* uninteracted also included in columns (1) and (5). Fixed effects and covariates as in Table 5. *** p < 0.01, ** p < 0.05, * p < 0.10.

Table 7. Covariate Balance

	Experiment I			Experiment II		
	Treatment	Control	p-val	Treatment	Control	p-val
<i>Trust Coworkers</i>	0.59	0.58	0.228	0.59	0.59	0.683
<i>Trust Publ Empl</i>	0.45	0.45	0.686	0.45	0.45	0.996
<i>Trust Citizens</i>	0.54	0.54	0.529	0.54	0.54	0.737
<i>Gov Level</i>	1.59	1.63	0.143	1.60	1.62	0.515
<i>Position</i>	2.91	2.87	0.426	2.84	2.92	0.110
<i>Cooperation</i>	2.36	2.45	0.430	2.49	2.33	0.166
<i>Info Sharing</i>	3.37	3.33	0.277	3.35	3.36	0.750
<i>Online Services</i>	4.47	4.48	0.840	4.47	4.49	0.376
<i>Mission</i>	2.45	2.42	0.441	2.44	2.42	0.693
<i>Agency Effectiveness</i>	3.26	3.25	0.931	3.22	3.29	0.085*
<i>Current</i>	0.84	0.87	0.081*	0.85	0.87	0.287
<i>Experience</i>	13.62	13.22	0.294	13.73	13.10	0.101
<i>Education</i>	5.82	5.81	0.855	5.81	5.81	0.959
<i>Age</i>	45.99	45.17	0.072*	45.75	45.41	0.457
<i>Female</i>	0.42	0.44	0.318	0.45	0.42	0.263

Note: Table reports for each experiment means of the variables listed in the first column, for treatment and control groups, followed by the p-value of the t-test for mean equality, assuming equal variances. Treatment in Experiment I is pandemic framing, control is pre-pandemic framing. Treatment in Experiment II is negative framing, control is positive framing. *** p <0.01, ** p <0.05, * p <0.10.

Table 8. Experiment I: Pandemic Crisis and Work Constraints

Dep Var:	<i>Inadeq IT</i>	<i>Lack Staff</i>	<i>Low Qual</i>	<i>Ltd Discr</i>	<i>Lack Coop</i>
	(1)	(2)	(3)	(4)	(5)
<i>Tr Coworkers</i>	-.063 (.040)	.098** (.044)	-.130*** (.045)	-.098** (.042)	-.179*** (.041)
<i>Tr Publ Empl</i>	.027 (.045)	.011 (.050)	.002 (.050)	-.127** (.053)	-.101* (.059)
<i>Tr Citizens</i>	.046 (.051)	-.064 (.049)	-.017 (.059)	.117** (.046)	-.021 (.056)
<i>Pand Fr</i>	.061*** (.021)	.007 (.019)	-.051** (.023)	.025 (.023)	-.026 (.024)
Obs	2,210	2,210	2,210	2,210	2,210
<i>Pand Fr</i>	.057 (.064)	-.026 (.071)	-.099* (.059)	.009 (.071)	.004 (.052)
<i>Pand Fr</i> × <i>Tr Coworkers</i>	.008 (.112)	.056 (.110)	.081 (.086)	.028 (.100)	-.050 (.070)
Obs	2,210	2,210	2,210	2,210	2,210
<i>Pand Fr</i>	.070 (.046)	.062 (.045)	-.100** (.045)	.049 (.056)	.041 (.060)
<i>Pand Fr</i> × <i>Tr Publ Empl</i>	-.019 (.090)	-.123 (.085)	.108 (.085)	-.052 (.093)	-.149 (.110)
Obs	2,210	2,210	2,210	2,210	2,210
<i>Pand Fr</i>	.069 (.063)	-.037 (.056)	-.120*** (.044)	-.034 (.055)	-.037 (.056)
<i>Pand Fr</i> × <i>Tr Citizens</i>	-.013 (.107)	.082 (.086)	.126 (.081)	.109 (.091)	.021 (.097)
Obs	2,210	2,210	2,210	2,210	2,210
Countries	18	18	18	18	18
Clusters	53	53	53	53	53

Note: Table reports regression coefficients for trust variables, the treatment variable *Neg Fr*, and interactions. Dependent variables converted to dummies that indicate response above median. Models with interactions also include all three trust variables, not reported. All models include country-round fixed effects and covariates. Covariates are: *Age*, *Female*, and a set of indicator variables based on *Education*. Standard errors in parentheses clustered by country-round. *** p < 0.01, ** p < 0.05, * p < 0.10.

Table 9. Experiment I: Pandemic Crisis and Agency Mission

Dep Var:	<i>Inadeq IT</i>	<i>Lack Staff</i>	<i>Low Qual</i>	<i>Ltd Discr</i>	<i>Lack Coop</i>
	(1)	(2)	(3)	(4)	(5)
<i>Trust Coworkers</i>	−.063 (.040)	.099** (.044)	−.130*** (.044)	−.097** (.043)	−.180*** (.040)
<i>Trust Publ Empl</i>	.027 (.045)	.007 (.050)	.002 (.050)	−.127** (.053)	−.099* (.058)
<i>Trust Citizens</i>	.038 (.051)	−.067 (.048)	−.020 (.060)	.109** (.047)	−.023 (.055)
<i>Pand Fr</i>	.156*** (.050)	.030 (.041)	−.028 (.041)	.092* (.049)	.016 (.051)
<i>Pand Fr × Transfers</i>	−.103* (.057)	−.032 (.080)	−.031 (.082)	−.160** (.076)	.020 (.065)
<i>Pand Fr × Publ Goods</i>	−.125** (.060)	−.028 (.038)	−.030 (.046)	−.068 (.049)	−.069 (.051)
<i>Transfers</i>	.038 (.046)	−.069 (.051)	−.033 (.052)	.007 (.049)	−.044 (.052)
<i>Public Goods</i>	.033 (.032)	−.037 (.034)	−.000 (.033)	.007 (.040)	.035 (.030)
Countries	18	18	18	18	18
Clusters	53	53	53	53	53
Obs	2,210	2,210	2,210	2,210	2,210

Note: Table reports regression coefficients for trust variables, the treatment variable *Neg Fr*, and interactions. Dependent variables converted to dummies that indicate response above median. Base category for agency mission is *Citizen Compliance*. All models include country-round fixed effects and covariates. Covariates are: *Age*, *Female*, and a set of indicator variables based on *Education*. Standard errors in parentheses clustered by country-round. *** p < 0.01, ** p < 0.05, * p < 0.10.

Table 10. Experiment II: Social Distancing and Government Policy

Dep Var:	<i>Gov Responsible</i>		<i>Stricter Enforcement</i>	
	(1)	(2)	(3)	(4)
<i>Tr Coworkers</i>	−.008 (.044)	−.002 (.045)	−.020 (.053)	−.013 (.054)
<i>Tr Publ Empl</i>	−.024 (.062)	−.019 (.060)	.072* (.042)	.074* (.042)
<i>Tr Citizens</i>	−.089* (.048)	−.086* (.047)	−.169*** (.055)	−.166*** (.053)
<i>Neg Fr</i>	−.026 (.024)	−.027 (.024)	.003 (.021)	.005 (.021)
Obs	2,218	2,210	2,217	2,210
<i>Neg Fr</i>	.049 (.038)	.055 (.039)	.099** (.041)	.108*** (.039)
<i>Neg Fr</i> × <i>Tr Coworkers</i>	−.129** (.058)	−.139** (.060)	−.163** (.073)	−.175** (.071)
Obs	2,218	2,210	2,217	2,210
<i>Neg Fr</i>	−.007 (.047)	−.005 (.047)	.055 (.037)	.062* (.037)
<i>Neg Fr</i> × <i>Tr Publ Empl</i>	−.044 (.104)	−.050 (.102)	−.115 (.072)	−.128* (.073)
Obs	2,218	2,210	2,217	2,210
<i>Neg Fr</i>	.006 (.052)	.001 (.053)	.008 (.066)	.010 (.066)
<i>Neg Fr</i> × <i>Tr Citizens</i>	−.060 (.086)	−.052 (.087)	−.009 (.104)	−.009 (.106)
Obs	2,218	2,210	2,217	2,210
Countries	18	18	18	18
Clusters	53	53	53	53
Covariates	no	yes	no	yes

Note: Table reports regression coefficients for trust variables, the treatment variable *Neg Fr*, and interactions. Dependent variables converted to dummies that indicate response above median. Models with interactions also include all three trust variables, not reported. All models include country-round fixed effects. Covariates as in Table 6. Standard errors in parentheses clustered by country-round. *** p < 0.01, ** p < 0.05, * p < 0.10.

Table 11. Predictors of Trust

Dep Var:	<i>Trust Coworkers</i>		<i>Trust Publ Empl</i>		<i>Trust Citizens</i>	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Ind(Gov Level)</i>	-.026	-.023	-.038**	-.042**	-.005	-.012
2 <i>State</i>	(.018)	(.018)	(.016)	(.016)	(.013)	(.013)
	-.039**	-.033*	-.044***	-.042***	.012	.012
3 <i>Local</i>	(.016)	(.017)	(.012)	(.014)	(.013)	(.013)
<i>Ind(Position)</i>	.006	.001	.022	.017	.002	-.002
2 <i>Managerial</i>	(.017)	(.017)	(.016)	(.016)	(.021)	(.021)
	-.029*	-.023	-.042**	-.038***	-.028	-.026
3 <i>Professional</i>	(.015)	(.014)	(.015)	(.014)	(.017)	(.018)
	.009	.022	-.027	-.029	-.001	-.003
4 <i>Administrative</i>	(.024)	(.023)	(.023)	(.023)	(.020)	(.018)
	.003	.011	-.049***	-.044**	-.023	-.029
5 <i>Technical</i>	(.020)	(.019)	(.017)	(.017)	(.023)	(.023)
	-.023	-.004	-.047	-.067**	-.084*	-.072
6 <i>Support</i>	(.038)	(.039)	(.034)	(.030)	(.046)	(.052)
<i>Current</i>	.053***	.051***	.049**	.039**	.009	.012
	(.013)	(.015)	(.014)	(.015)	(.014)	(.015)
<i>Work Laptop</i>	–	.032**	–	.022**	–	.001
		(.012)		(.010)		(.011)
<i>Experience</i>	–	.001	–	.002***	–	-.000
		(.001)		(.001)		(.001)
<i>Education</i>	–	.004	–	-.010	–	.004
		(.008)		(.008)		(.006)
<i>Age</i>	–	-.000	–	.000	–	.000
		(.001)		(.000)		(.001)
<i>Female</i>	–	-.031***	–	-.028***	–	-.034***
		(.009)		(.010)		(.010)
Countries	18	18	18	18	18	18
Clusters	53	53	53	53	53	53
Obs	2,393	2,210	2,393	2,210	2,383	2,210

Note: Table reports coefficients from regressions of trust variables on public employee characteristics. All models include country-round fixed effects. Standard errors in parentheses clustered at the level of the fixed effects. Base category for *Gov Level* is *National*, Base category for *Position* is *Executive*. *** p < 0.01, ** p < 0.05, * p < 0.10.

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Online Appendix (Not for Publication)

A1 Experiment I: Treatments

Pre-Pandemic Treatment

En comparación con las limitaciones presupuestales, ¿en qué medida los siguientes factores dificultaron la misión de su organización **durante el 2019**?

	Mucho menos que presupuesto	Menos que presupuesto	Igual que presupuesto	Más que presupuesto	Mucho más que presupuesto
Recursos informáticos inadecuados	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Baja calidad profesional del personal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Falta de personal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Falta de cooperación entre el personal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Baja discreción del personal para innovar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

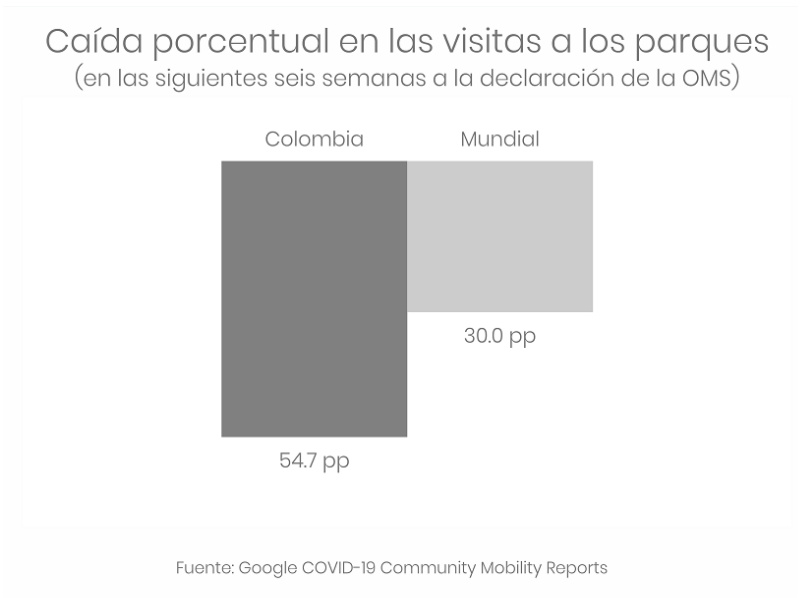
Pandemic Treatment

En comparación con las limitaciones presupuestales, ¿en qué medida los siguientes factores dificultaron la misión de su organización **durante la pandemia del COVID-19**?

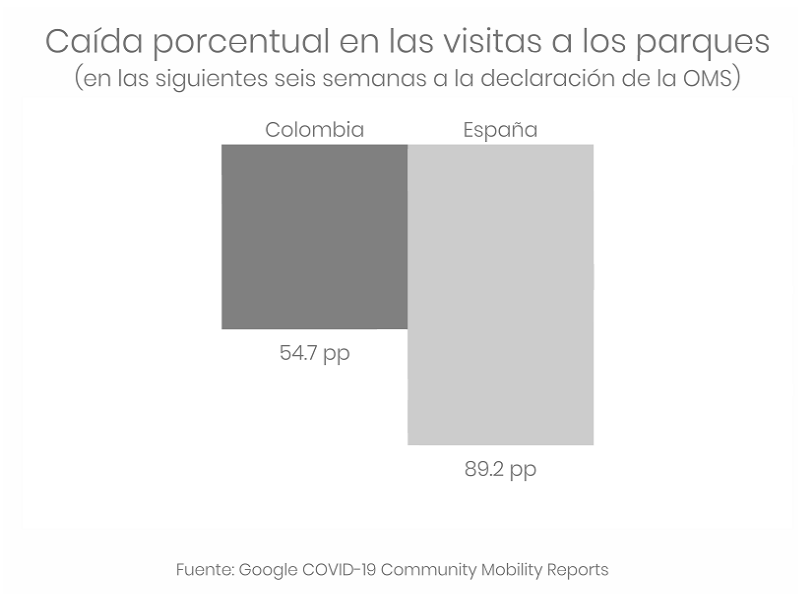
	Mucho menos que presupuesto	Menos que presupuesto	Igual que presupuesto	Más que presupuesto	Mucho más que presupuesto
Recursos informáticos inadecuados	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Falta de personal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Baja calidad profesional del personal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Falta de cooperación entre el personal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Baja discreción del personal para innovar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A2 Experiment II: Treatments

Positive Framing



Negative Framing



A3 Variables: Definitions and Sources

Below is the complete list of variables used in the paper with details on measurement. The full list of variables come from the IDB Public Sector Survey 2020. The variables appear in the order of Table 2 of summary statistics.

Trust Coworkers: Categorical variable measuring public employee’s agreement with the statement “Most coworkers in my government agency can be trusted.” Low values represent mistrust, and high values represent trust in their coworkers. *Scale:* 0,0.25,...,1.

Trust Publ Empl: Categorical variable measuring public employee’s agreement with the statement “Most public sector employees can be trusted.” Low values represent mistrust, and high values represent trust in public sector employees. *Scale:* 0,0.25,...,1.

Trust Citizens: Categorical variable measuring public employee’s agreement with the statement “Most citizens in my country can be trusted.” Low values represent mistrust, and high values represent trust in citizens. *Scale:* 0,0.25,...,1.

Gov Level: Categorical variable that arranges public employee’s agency level in three categories: national, state or local. *Scale:* 1,2,3.

Position: Categorical variable that arranges public employee’s position inside agency into six categories: executive, managerial, professional, administrative, technical or support. *Scale:* 1,2,...,6.

Cooperation: Categorical variable measuring the public employee’s perception of collaboration with colleagues (team projects, shared tasks, meetings, etc.) affect the ability to do their job well. Low values represent that collaboration reduces a lot, and high values represent that improves a lot. *Scale:* -5,-4,...,5.

Info Sharing: Categorical variable measuring the public employee’s perception of rely on information obtained from their coworkers. The lowest value represents rely very little, the highest value represents rely much on information from coworkers. *Scale:* 1,2,...,4.

Online Services: Categorical variable measuring the public employee’s view of expanding the online provision of public services to citizens. Low values represent aversion, and high values represent preference to provide public services online. *Scale:* 1,2,...,5.

Mission: Categorical variable that arranges public employee agency’s reported mission into three categories: oversee citizens compliance, manage transfer programs, provide public goods. *Scale:* 1,2,3.

Agency Effectiveness: Categorical variable measuring the public employee’s perceived agency effectiveness in accomplishing its mission during 2019. Low values represent modest

agency performance, and high values represent very good performance. *Scale: 1,2,...,5.*

Pandemic Fr: Indicator variable that takes the value one if the public worker was assigned to the pandemic framing group, zero otherwise. *Scale: 0,1.*

Inadeq IT: Categorical variable that captures if inadequate IT is perceived a work constraint more salient than budget by the public worker. Low values represent inadequate IT as less salient than budget, and high values represent more salient than budget. *Scale: 1,2,...,5.*

Lack Staff: Categorical variable that captures if lack of staff is perceived a work constraint more salient than budget by the public worker. Low values represent lack of staff as less salient than budget, and high values represent more salient than budget. *Scale: 1,2,...,5.*

Low Qual: Categorical variable that captures if low professional quality is perceived a work constraint more salient than budget by the public worker. Low values represent low professional quality as less salient than budget, and high values represent more salient than budget. *Scale: 1,2,...,5.*

Ltd Discr: Categorical variable that captures if low discretion to innovate is perceived a work constraint more salient than budget by the public worker. Low values represent low discretion as less salient than budget, and high values represent more salient than budget. *Scale: 1,2,...,5.*

Lack Coop: Categorical variable that captures if lack of cooperation is perceived a work constraint more salient than budget by the public worker. Low values represent lack of cooperation as less salient than budget, and high values represent more salient than budget. *Scale: 1,2,...,5.*

Negative Fr: Indicator variable that takes the value one if the public worker was assigned to the negative framing group, zero otherwise. *Scale: 0,1.*

Gov Responsible: Categorical variable that captures if the public employee agrees that the social distancing results are government or citizens responsibility. Low values give responsibility to the citizens, and high values give responsibility to the government. *Scale: 0,1,...,10.*

Stricter Enforcement: Categorical variable showing public employee's preference for increasing the enforcement level of social distancing policies. Low values represent no enforcement necessary, high values represent strict enforcement necessary. *Scale: 0,1,...,10.*

Current: Indicator variable that takes the value one if the public employee has been working during 2020 in the public sector, zero if worked in the public sector during 2019 or 2020. *Scale: 0,1.*

Experience: Categorical variable that groups public employees reported years of experience into six categories: less than 3 years, 3-6 years, 6-9 years, 9-12 years, 12-15 years and more than 15 years. *Scale:* 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25.

Education: Categorical variable that arranges public employees reported education level into seven categories: none, primary, secondary, technical, undergraduate, master or doctorate. *Scale:* 1,2,3,4,5,6,7.

Age: Integer variable recording the age reported by the public worker in the survey. *Scale:* 18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78.

Female: Indicator variable that takes the value one if the public worker reports being a female, zero otherwise. *Scale:* 0,1.

Merit: Indicator variable that takes the value one if the public employee serves in a country with meritocratic hiring system, zero otherwise. The criterion is a score of 60 or higher in the latest IDB assessment of a country's civil service. *Scale:* 0,1.