

Who Serves the Poor? Surveying Civil Servants in the Developing World

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Abstract

Who are the civil servants that serve poor people in the developing world? This paper uses direct surveys of civil servants - the professional body of administrators who manage government policy - and their organizations from Ethiopia, Ghana, Indonesia, Nigeria, Pakistan and the Philippines, to highlight key aspects of their characteristics and experience of civil service life. Civil servants in the developing world face myriad challenges to serving the world's poor, from limited facilities to significant political interference in their work. There are a number of commonalities across service environments, and the paper summarizes these in a series of 'stylized facts' of the civil service in the developing world. At the same time, the particular challenges faced by a public official vary substantially across and within countries and regions. For example, measured management practices differ widely across local governments of a single state in Nigeria. Surveys of civil servants allow us to document these differences, build better models of the public sector, and make more informed policy choices.

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1 Introduction

The characteristics of a nation’s institutions have long been regarded as fundamental to national development. Appropriately designed public institutions are increasingly seen as key to prosperity (North, 1990; Finer, 1999; Acemoglu, Johnson and Robinson, 2005; World Development Report 2017). The organizations and individual public officials that make up those public institutions have recently been the subject of increasingly rigorous empirical investigation (Iyer and Mani, 2012; Dal Bo, Finan and Rossi, 2013; Bertrand, Burgess, Chawla and Xu, 2015; Finan, Olken and Pande, forthcoming). However, a broad or ‘thick’ description of these public organizations and officials based on rigorous data collection is absent from this literature.

Who are the bureaucrats that serve the world’s poorest people? What motivates them? What is their experience of being a public official in a developing country? There is little empirical evidence on civil servants in the developing world, despite their central role in the management of government policy there. Recent efforts to survey a relatively large number of civil servants in a few bureaucracies provides an opportunity to start building a picture of the way officials in poor countries work. By bringing together surveys of civil servants from across the developing world, this essay provides micro-evidence on the characteristics and experiences of public officials who serve the world’s poor.¹

These individuals matter to the macroeconomy. Public officials account for a third of paid employment in the developing world and their pay is a quarter of public sector spending. They implement the vast majority of public policy, and manage the regulation of the private sector. Their qualities and actions therefore have a direct impact on the working of a nation’s economy and welfare of its people. In terms of the production function of government, these individuals embody the human capital that is typically thought of as critical to productivity. The quality of the government’s organizational environment is akin to the technology term in a productivity decomposition.² Understanding the civil service is a window into the determinants of state capacity.

Despite their importance, it is only over the last ten years that efforts have been made to survey a representative sample of these officials, and go beyond basic personnel surveys to understand the daily experiences, challenges, and motivations of the individuals that execute national policy. This paper is thus a stocktaking of this first round of rigorous surveys of public officials.

Most of the surveys I discuss were undertaken by researchers working at, or in collaboration with, the World Bank. This is partly because the Bank provides a solid platform for engaging with governments across the developing world on a systematic basis. The median year of entry of the World Bank’s membership is 1963, implying the Bank has had relationships with its members for over 50 years on average. The Bank was also a global lead in early efforts at understanding and reforming the civil service. Internal reviews of this work, most famously IEG (2008), prompted the Bank to invest in architecture to improve the collection of data on particular civil services.

The intended purposes of the surveys and corresponding perspectives of the researchers are relatively diverse. By collating surveys undertaken by different research teams, this paper also provides an overview of the distinct approaches that have been taken in terms of surveying public officials on a scale sufficiently large for statistical analysis. This implies that the same information is not available for all of the

¹This paper utilizes surveys for which there is strong evidence that the sample used was representative of the underlying target population. Previous surveys of civil servants surveys, such as Meyer-Sahling and Sass Mikkelsen (2016), are based on internet- or postal-surveys with concerns over representativeness. We include one study here with a response rate below 90%, partly to outline concerns with surveys of this type, but a strength of the surveys used here is their high response rate.

²Best et al (2017) argue that the majority of the variation (60%) in state effectiveness, proxied by prices paid for public sector procurement, is due to the individuals and organizations there.

services covered. Rather, the paper provides snapshots of public service life in the six countries we study (Ethiopia, Ghana, Indonesia, Nigeria, Pakistan and the Philippines), making comparisons where possible. The topics surveyed in the paper are those covered in the underlying surveys, rather than a conscious choice to exclude other topics of interest.³

A lack of direct survey evidence on public officials has contributed to a homogenous and often undesirable view of officialdom. Some of the survey findings presented here are in accordance with this view, such as the fact that respondents state that 17% of officials work fewer than their contracted hours. Other findings contrast with this view, such as the fact that the same respondents report that 32% of officials regularly work more than their contracted hours. Similarly, though local governments generally score lower on the international management index that we employ than central authorities do, and thus could be seen as requiring centralized support, there are many such authorities that are better-managed than their central counterparts. Surveys of civil servants and public sector organizations provide the data required to test long-held views of the bureaucracy, and reject them when they are wrong.

Three of the surveys we study take the civil service organization as the unit of observation, asking questions about organization-level features and practices. The 342 organization surveys were all undertaken in Nigeria and Ethiopia. Thus, section 3 on bureaucratic context is largely confined to discussion of these two countries. The average budget of these organizations is not dissimilar to that of an average African manufacturing firm, which does not seem large relative to the responsibility of their service. Many government organizations are poorly equipped to meet their responsibilities, and at the local government level across the two countries, less than 1 in 10 staff has access to a computer.

Five other surveys focus on the public official as the unit of analysis. Across the individual-level surveys, we study 13,591 officials in 204 organizations across 5 countries. The average civil servant in our data enters the service in their mid-twenties, spends a couple of years in an organization, and then transfers to the organization in which they spend over a decade, if not substantially more. Only for a small minority of civil servants is there much migration across organizations in the service. Those in central ministries have thousands of colleagues, many of whom they will never directly work with, while in local governments, the community of bureaucracy is much smaller. Across all of the organizations we study, officials in our data are organized into teams of seven staff who report to a manager. Three (40%) of the team are female and only two (25%) are dissatisfied with their job. Civil servants trust in colleagues is high relative to citizens' trust of each other.

These broad generalizations correspond to some startling similarities among the services we study. Such commonalities prompt a range of potential research questions. Which aspects of service life converge to a 'bureaucratic norm' and which others are highly dependant on context? Micro-level surveys also allow us to document variation in public sector life where it exists. The best-managed local government in our data physically neighbors others whose management quality is towards the bottom of the distribution of management quality, implying that good management practices are not disseminating through the public sector effectively. Similarly, while some local governments have computer and internet access most of the time, others do not have electricity any of the time. The stark differences that exist between neighbouring organizations and even neighbouring officials highlights how 'local' the public sector can be.

All of this points to the importance of generating a rich description of the civil service in the developing world that can identify similarities and differences. Homogenous stereotypes of public service life based

³While I am unable to make comparisons with a Latin American state due to data limitations, Corporación Andina de Fomento (2016) provides a complementary perspective. Banerjee and Duflo (2007) also provide an excellent overview of the world's poorest people, at whose service are the civil servants described here.

on limited empirical evidence will struggle to explain the underlying variation documented here, and will therefore be a poor framework for academic study and an ineffective guide to policy.

Since there exists limited data on any single service, there is a rationale for presenting data from a range of countries together. There are certainly limits to the extent that we can compare statistics from one civil service with those of another. Definitions differ across services, such as what makes an officer a manager, and what their responsibilities might be. The importance of concepts such as satisfaction for public sector productivity or culture will also vary depending on the context at hand. However, with a limited understanding of what the civil service looks like anywhere in the developing world, providing international comparisons provides us with benchmarks by which to navigate a single service. Commonalities in civil service characteristics across settings also inspire introspection as to whether aspects of bureaucratic structure transcend context. The set of surveys presented here allows us to see that there are both strong commonalities and differences between the services we study, motivating a comparative approach.

It is time we get to know the civil servants who manage the policies that underlie the economic development process. The next section outlines the surveys that underlie the discussion in this paper, and subsequent sections provide descriptions of the civil service in the developing world. A final section concludes with some broad ‘facts’ about the civil service reflected across the data sets we study.

2 Surveys of Civil Servants

In contrast to expert surveys of the public service as a whole, surveys of civil servants collect data from individual civil servants on their work, their divisions, or their organizations. This diversity allows us to map the variation across civil service life, as well as provide a far more detailed view of any specific area of government than broad aggregates can do. In contrast to administrative data, civil servant surveys collect diverse information on topics ranging from the nature of management practices to cultural norms. Variation provides the statistical power to undertake quantitative research within a single public sector setting, extending the set of questions that can credibly be investigated.

The last decade has seen a surge in the number of surveys focussed on civil servants or the organizations in which they work. An online appendix provides an overview of the major surveys of the last decade or so.⁴ Unfortunately, many of these surveys did not gather information from a representative set of officials, making interpretation of their findings challenging.⁵ The surveys included in this review are those with three features: i) they surveyed members of the body of professional administrators of government; ii) they surveyed a representative sample of the targeted sub-set of officials; and, iii) the underlying micro-data was available from the authors. These criteria leave eight surveys across six countries, described in

⁴See www.danrogger.com/papers.html for the online appendix.

⁵For example, the US Federal Government’s ‘Viewpoint Survey’ is a voluntary online survey that has had a response rate between 2010 and 2015 of approximately 50% (US Office of Personnel Management, 2015). The concern with directly extrapolating from the results of this survey is that the subset of civil servants that voluntarily respond are a non-random sample of those invited. This would matter less if the response rates were close to 100%, as the margin for bias would typically be small. To illustrate the issues with low response rates in environments of endogenous participation, we can assess the boundary values that the Viewpoint Survey’s Engagement Index could take that would be consistent with a 50% response rate. The Engagement Index is one of the central pillars of the survey and its dynamics are closely monitored. In 2015, the Engagement Index had a mean for the Federal Government as a whole of 64%. Over the past three years it has only ever moved 1 percentage point in any given year, but these movements have made up a central component of the discussion in the survey reports. If we assume that only those with the highest engagement with government fill in the survey, the lower bound on the true value of the index is 32%. Similarly, if we assume that the survey is only filled in by those with the most significant grudge against the government, and correspondingly with the lowest engagement score, then the value of the index could be as high as 82%. These feasible bounds eclipse the dynamics calculated from the sub-sample of US federal employees who regularly respond.

Table 1. The people, land and politics of the countries we study are briefly characterised in Table 2.⁶

Together, Nigeria and Ethiopia have a combined population of 250 million people (UN Population Division, 2015), with the two countries predicted to become the third and tenth most populous countries in the world by 2050 respectively. The surveys there therefore cover 30% of sub-Saharan Africa's current population and a set of public organizations that will be critical to efforts to serve the world's poorest people in the future. Adding to the populations of Nigeria and Ethiopia those of Ghana, Indonesia, Pakistan and the Philippines, the surveys documented here outline government organizations that serve 776 million people. Four of these countries are predicted to be in the top ten most populous in the world in 2050. Thus, understanding the challenges to improving the civil service in these countries is of substantial importance in itself and acts as a window into the world of the civil service in the developing world.

Three of the surveys we study take the civil service organization as the unit of observation, asking questions about organization-level features and practices. They focus on the institutional environment in which civil servants interact, and provide a description of the key mechanism that links the civil service rules to individual incentives. This allows an insight into the environment in which the bureaucracy operates. For example, the surveys provide evidence on the management practices used in civil service organizations. They highlight the usefulness of measuring the architecture of the civil service, rather than focussing on the perceptions of individual civil servants only. Surveys that focus solely on public employees' perceptions of their own experience provides a fragmented view of an organization. The same employee in multiple organizational environments may express the same level of engagement and satisfaction despite significant differences in managerial practice. Asking directors or other managerial staff to characterise the rules and informal practices that govern an organization provides a complementary perspective to those of individual civil servants. The structures on which officialdom is mapped are of particular importance given the systemic nature of the service. Public servants frequently face interlinked tasks that can be influenced by disparate actors throughout their service. Understanding the wider institutions that govern those interactions is of significant value.

The Ethiopian surveys take a representative sample of local-level governments - 248 woreda and city governments in the Woreda and City Benchmarking Survey (WCBS) and 368 organizations at a subset of 78 woredas in the Staff Turnover Study - with the survey focussing on staff turnover also surveying 10 federal organizations and 54 regional. Though we reach all regions, this is roughly a third of all woredas and a fraction of federal organizations. The WCBS is the fifth round of the Woreda and City Benchmarking Survey, and as stated by the researchers, is the strongest and most accurate of that series of surveys to date. It provides details of the facilities of each organization, how able the organization is to implement government policy in a range of sectors, and the degree of citizen involvement in government. The study was originally initiated as a means of monitoring the Public Sector Capacity Building Program, a donor-supported component of the Ethiopian Government's wider agenda of public service reform. However, the initial rounds of information the survey provided, particularly on the citizen's perspective on service delivery, generated demand for further rounds.

The turnover study overlaps in coverage with the WCBS but extends to more organizations. It is tightly focussed on staffing issues and the reasons for civil servants entering or leaving the service. The origin of the turnover study arose from the Government of Ethiopia's concern that turnover of staff in the public service was too high. Thus, in contrast to the donor-initiated WCBS, the second civil servants survey we use from Ethiopia arose out of a targeted demand for information on the service from within government.

⁶Though detailed background on the civil services studied here will not be provided in this paper, relevant discussions can be found in Federal Democratic Republic of Ethiopia, 2013 (Ethiopia); Eghan, 2008 (Ghana); Prasojo, 2010 (Indonesia); Barkan, Gboyega and Stevens, 2001 (Nigeria); Imtiaz, 2013 (Pakistan); and, Brilliantes and Soncu, 2010 (Philippines).

We will use the turnover and WCBS surveys interchangeably when discussing the characteristics of organizations in Ethiopia, making clear which statistics arise from which survey. The turnover study was targeted at a representative set of local government, region and federal organizations. However, the WCBS was undertaken at none of the regions and federal organizations.

The surveys we use from Nigeria were initiated by one of the Presidency's offices for public sector reform. Having trialled a number of approaches to civil service reform, such as improved training and monitoring infrastructure, the office decided it required more information on 'bottlenecks to service delivery' within the service, and in particular in the social sectors. It therefore engaged the Office of the Head of the Civil Service from within government, and agreed to fund a jointly implemented survey.

The Nigerian surveys concentrated on 65 social-sector oriented federal organizations out of the 383 federal ministries or agencies specialising in social sector service delivery such as water, health and education. It also sampled 11 randomly chosen state and 18 local government organizations out of 36 and 774 governments respectively. While the state governments are spread across the country, the local governments were sampled stratified by region and state. For each of Nigeria's six geo-political zones, one state was randomly chosen, and then two local governments within that state were selected. To investigate the diversity of governance within a single state, it was decided that six more governments would be sampled from within one state, the state of Kaduna. Kaduna is geographically close to the center of Nigeria and is sometimes referred to as a microcosm of the country. This sampling strategy requires us to appropriately weight the Kaduna local government statistics when creating aggregates for Nigeria's local government tier as a whole.

In each of the Nigerian organizations where an organization-level survey was undertaken, a sample of civil servants above Nigerian service grade level 7 were drawn from the nominal roll and invited to be interviewed (on average 13% of staff). Grade level 7 is the point at which the professional administrator classes begins, and thus it excludes drivers, porters, and other support staff. This provides us with both an organization-level survey and a survey of individual civil servants at each of 94 public organizations in Nigeria.

The other five surveys focus on the public official as the unit of analysis. What constitutes a civil servant, rather than a public servant or government employee, is hotly debated in the public administration literature (Gill, 2002; Daniel, Davis, Fouad and Rijckeghem, 2006; Pilichowski and Turkisch, 2008; Lienert, 2009). The specific subset of officials studied here varies across surveys depending on the focus of the research for which the survey was commissioned. In Pakistan, the focus is on public officials at the Ministry of Finance; in Nigeria the focus is on bureaucrats working in the social sectors; and in Indonesia, interviews were undertaken at both social sector organizations and the core finance agencies. However, all of the officials studied can be broadly categorised as members of the professional body of administrators who manage the implementation of government policy in lower middle-income and low income countries. This precludes many frontline service providers, such as teachers and nurses. Though they may be categorised as civil servants in some contexts, our focus here is on the middle layer of government, sandwiched between the politically appointed leadership and frontline staff. In most civil services, there is a formal 'cadre' system that denotes a specific category for each member of the civil service. Our respondents are universally in the professional administrator classes such as accountancy or management. Typically surveys of civil servants avoid the police and military, as do all of the surveys studied here.

These surveys focussed on issues best directed to the individual, and enumerated to a representative set of officials. An outlier in the time period we cover is the Ghanaian Governance and Anti-Corruption (GAC) Survey that was undertaken in 2000 and reflects early efforts of surveying civil servants at the World

Bank. The GAC surveys were initiated by the Bank to collect a uniform set of questions on governance across multiple countries. Though they were said to be ‘country-specific’, the final questionnaires are relatively standardised (see the example in the online appendix). This set of surveys were some of the World Bank’s first forays into surveying civil servants, along with the Public Officials’ Surveys.⁷ The GAC surveys therefore present the World Bank’s view at the start of the 21st century on the most important topics in governance. They emphasize corruption and mechanisms to reduce it, the private sector and its relationship with government, and the role of the citizen in restraining government.

The Ghanaian GAC survey has the lowest average number of interviews per organization (12) of all those we use. The ambition of the GAC researchers was to maximise the number of organizations included in the study at the cost of sample size within each organization. This reflected their interest in gaining a broad picture of government and its relationship to citizens and the private sector. The sample of organizations at which civil servants were interviewed is therefore a combination of central ministries, departments and agencies (631 officers), public service institutions (329) and quasi-government organizations (94). While these organizations are a broader mix of centralized institutions than in the other surveys, the officials they interviewed are all administrative staff and managers from technical cadres involved in the management of public policy.

The survey in Indonesia was implemented by World Bank researchers but originated from a request by government. The Government of Indonesia was keen to understand the impacts of their Bureaucracy Reform Initiative and therefore approached the Bank to support the survey process. The survey is therefore tailored to evaluating reforms after they had been enacted, asking civil servants their perceptions about the impact of the reforms, and how their work processes are now different. The Indonesia survey visited 14 government organizations at the center of government, including the Directorate Generals of Tax and Treasury, the Ministries of Administrative and Bureaucratic Reforms, Agriculture, and Education and Culture, the National Development and Planning Agency and the National Statistics Agency. All officers interviewed are from Indonesian service grades IVa, IIIa and IIIId, which are similar in nature to the grade levels in the other surveys.

The same request arose from the Government of the Philippines, who were also keen to better understand the impacts of their own reform process. There are similarities between the Indonesia and Philippines surveys, partly driven by the overlap in research team but also due to the commonality of research focus. In the Philippines, the focus of the government was on those organizations that were thought to be of strategic economic importance: the Bureaus of Internal Revenue and Treasury and the Departments of Budget and Management, Finance, Trade and Industry, Labor and Employment, and Environment and Natural Resources. All officials are professional managers of public policy, at a Philippine service grade above 11. Thus, the surveys in Indonesia and the Philippines can be seen as reporting on civil servants at the very heart of central government.

In all of the surveys mentioned so far, survey enumeration was done through a combination of face-to-face interviews and classroom style written responses. The physical presence of enumerators in both cases was an important component of the high response rates of the order of 95% or above (see response rates in Table 1). The public sector setting in the developing world is one in which personal interaction facilitates successful action. In one survey that we include here, surveys were mainly enumerated through e-mail and by the dropping and picking up of surveys, with only a few classroom sessions. As can be seen from the response rate for the Pakistan survey, 37%, the lack of personal enumeration has affected the response rate significantly.

⁷More information about the GAC and Public Officials’ Surveys can be found at <http://go.worldbank.org/QFWZEIB1C0> and in Manning, Mukherjee and Gokcekus (2000) respectively. A wider discussion of the Bank’s governance diagnostic tools fielded at the start of the century can be found in Recanatini (2003).

In Pakistan, the survey was undertaken at a single body, the Federal Board of Revenue, across multiple regional revenue collection centers. The FBR is a semi-autonomous agency responsible for the collection of revenue on behalf of the Government of Pakistan. It is the third-largest federal (attached) department, with roughly 10,000 basic pay scale employees, and has regional and sub-regional offices across the country. The survey used in this paper interviewed officials between grades 17 and 22 in the regional tax offices in Karachi, Lahore, Faisalabad and Islamabad.

The management of the FBR opposed the use of random sampling and felt it necessary to invite all civil servants in the target offices to undertake the survey. The survey was thus enumerated through e-mail, outlined by the survey firm as a key reason for the low uptake. The survey is included here to illustrate three important aspects of the wider civil servant survey agenda. First, using existing administrative data on civil servants, the research team was able to argue that the sample of respondents was equivalent on observables to those staff who had not responded, and were in that sense ‘representative’. Second, the Pakistan survey focuses tightly on a single sector, tax collection, and is therefore able to ask questions that investigate the subtleties of the sector in a more detailed way than with a more general survey. Third, the surveys were spread across regions, but all within tax offices, and therefore the sample is concentrated within a small number of organizations. We will utilise this third feature later on to explore variation in service experience within the same umbrella organization. Despite the advantages of including the survey, it is important to keep in mind the low response rate when interpreting the Pakistan statistics.

The following sections utilise the variation within these surveys to provide within-survey or -country comparisons. To complement these, cross-country comparisons are also presented. Given the different motivations for undertaking the surveys we utilise here and the lack of coordination across surveys, there are differences in how questions are framed and the topics they cover. A key concern in this paper, and in international comparisons more generally, is the validity of comparing survey responses across countries. I aim to document differences in question design throughout. As will be seen in subsequent sections, where questions are more closely aligned, our ability to understand differences is enhanced. Greater harmonization of surveys across settings, rather than risking unreasonable comparisons, would substantially strengthen the basis on which to make such comparisons. A more unified framework for surveying civil servants would be a contribution to our knowledge of the differences among civil services, rather than a narrowing of the lens through which we view them.

However, it is the perspective of this paper that comparisons across the countries we study is a worthwhile exercise despite of the differences in the surveys. There exists very limited information on the internal workings of government in the developing world. Thus, there are few benchmarks that can be used to appreciate the scale or importance of a feature of a particular service. How should we judge the skill profile of a particular developing country government? What is a ‘high’ level of trust within a civil service? To what extent is there a disproportionate amount of political interference in the bureaucracy? Cross-country comparisons provide an input to our understanding of a specific civil service. Comparisons across countries also allow us to assess what aspects of bureaucracy are more likely to be homogeneous across settings, and those more likely to differ. This provides an input to our developing a broader understanding of bureaucratic institutions in the developing world.

3 The Bureaucratic Environment

The environment in which civil servants work varies significantly across the developing world, both within and across countries, and as we will see even within a single region. Rather than a homogenous stereotype, public service organizations are a mosaic of characteristics, facing distinct challenges. These

features are defining elements of a civil servant's work day, determining the resources she has to spend, or perhaps is mandated to spend, as well as the environment in which she must spend it.

Table 2 provides a broad description of the countries we study and the variation between them. They primarily employ presidential systems of governance that are regarded as democracies. The Polity IV Score, an aggregated index of positive indicators of democracy and negative indicators of autocracy ranging from +10 (which implies strongly democratic) to -10 (which implies strongly autocratic), for all but one of the countries is 7 or above. Only Ethiopia has a negative Polity IV score.

Within each of these political entities is a state bureaucracy. A common indicator of the scale of a public sector bureaucracy is the proportion of total employment made up by the state. As Table 2 reports, in most of the countries we study, this proportion is below 10%. However, in Ethiopia the public sector is far larger, at 22% of total employment. Related to this is the fraction of government expenditure spent on civil servant and public sector wages. Table 2 shows how weakly public employment and wage bill figures are correlated, with the caveats on the reliability of government budget figures outlined in Baddock, Lang and Srivastava (2016). Ghana spends 36% of its government expenditures on wages, but with only 5% of employment in the public sector. Pakistan's wage bill, on the other hand, is only 4% of total expenditures, while public employment is 7% of total employment.

Within this wage envelope, civil servants get paid differentially depending on their position in the hierarchy and their sector. The extent of such wage inequality varies across countries, and is represented by the 'compression ratio'. Table 2 reports a compression ratio that is the ratio of the average total compensation of a senior official (a judge) versus that of a junior official (a secretary). In Indonesia, the compression ratio is 1.4, indicating relatively limited dispersion in the Indonesian civil service relative to that of the Philippines, with a compression ratio of 3.7.⁸ While there is likely to be a degree of misreporting here, existing evidence indicates that compression ratios are highly variable across countries.

Previous efforts at assessing the quality of these bureaucracies are also summarised in Table 2. Rauch and Evans (1999) used expert surveys to assess a sub-sample of the countries we study. They defined a 'Weberianness' index that aggregated questions on the degree to which core state agencies are characterized by meritocratic recruitment and offer predictable, rewarding long-term careers. Close to the bottom of their index (which scored countries from 1 to 13.5) was Nigeria, with a score of 3. Close to the top was Pakistan, with a score of 11.

Pakistan's success in the Rauch and Evans index did not carry through to the Worldwide Governance Indicators (WGI) created by Kaufmann, Kraay and Mastruzzi (2010). Again using expert surveys, the WGI's 'Government Effectiveness Score' presents a percentile ranking of countries on an aggregate measure of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Ghana, Indonesia and the Philippines score substantially higher than Ethiopia, Nigeria and Pakistan, indicating that the former are perceived as significantly more capable civil services.

Another area of bureaucratic quality that has been subject to international measurement and comparison is the area of corruption. Transparency International's Corruption Perceptions Index includes a measure of the perceptions of corruption among 'public officials/civil servants'. The figures in Table 2 describe the proportion of respondents that believe public officials/civil servants are corrupt or extremely corrupt. The correlation between 'government effectiveness' and 'corruption' in this country-level data is low, with

⁸International data on pay in the public sector are typically based on assessments by government-agencies that are skewed towards base pay net of allowances. Allowances can be a significant component of gross remuneration in the developing world's public sectors.

Ethiopia the least corrupt but the second least effective. Similarly, Indonesia’s civil service is believed to be both corrupt and effective.

The Responsibility of Service

The breadth of the responsibilities of a civil servant arises from her constitutional mandate to respect and maintain state institutions over time, leaving the service as the residual claimant on all of the polity’s activities that could affect the stability of the state. Unlike almost any other terms of reference, a civil servant’s terms frequently include a provision for ‘any other responsibilities delegated by the civil service hierarchy’. This ensures that when required, a civil servant can undertake activities that were not contractable on her entry to the service but are perceived by the state to be of net social benefit.

Since the state is the residual claimant on all of the polity’s activity, the breadth of a civil servant’s work can be as broad as the citizenry she serves. It is thus useful to understand the scale and geographic spread of the citizens an official serves. Returning to Table 2, we see that the countries for which we have surveys are typically large, both in terms of population size and land area. Senior civil servants in our data must make policy decisions across 100 million people or more, and in Ethiopia and Indonesia across thousands of square kilometers.

In many countries, this issue of scale is partly confronted by creating a federal structure for the state. Partially self-governing units that serve a fraction of the citizenry are argued to be closer to the population they serve. However, even at the state level officials must often serve very large populations. To explore this consideration, we turn to the two surveys that include surveys of state and local government officials: Nigeria and Ethiopia.

In the first row of Table 3, we display the average land area over which bureaucrats at the organizations we study work, and in the second row the average population that they are mandated to serve.⁹ On average, local governments in Nigeria are roughly the size of Greater London (1,569 square kilometers). This is therefore one way to appreciate the scale of geography across which officials working for a Nigerian local government must serve citizens. Continuing the analogy, and using statistics for all states, state government officials must serve an area equal to approximately 15 Londons, while Ethiopian regional officials serve citizens across an area equivalent to 56 Londons. Officials working in federal organizations of Nigeria and Ethiopia frequently face policy decisions that will impact citizens across the nation. For example, a director in the Ministry of Water must decide water supply policy that impacts on the nation as a whole, with its myriad water basins and hydrological areas.

Apart from bureaucrats in Nigeria’s Lagos state, the *population* local government officials must serve in our focus countries is far smaller than London’s. In Nigeria, the average population of a local government is 180,000 and in Ethiopia is 101,000. At the state level in Nigeria officials must serve an average population of 3 million people, and in Ethiopia, given the relatively large size of its regions, officials must serve 8 million people. In the most recent data available before the surveys, federal officials in Nigeria and Ethiopia served populations of 140 million and 74 million respectively; populations which are increasing at some of the highest rates in the world.¹⁰

⁹To understand the representativeness of this sample of organizations for Nigeria, and for a wider sense of the context, we can compare the figures in Table 3 to the corresponding figures for all states and local governments. The average population being served across all states is 3.78 million, with a corresponding standard deviation of 1.71 million, and across all local governments is 0.18 million with a standard deviation of 0.1 million, coinciding exactly with our sample. The land area covered averaged across all states is 24,635 square kilometers, with a standard deviation of 18,202, and across local governments is 1,177 square kilometers with a standard deviation of 1,405. Thus, the figures provided in Table 3 closely resemble those of Nigeria as a whole.

¹⁰At the same time these surveys were undertaken, China had 5 regions (provinces) whose populations were greater than

These numbers vary in their significance depending on the nature of the work of the public official. However, given the constitutional role of the civil service, they indicate the magnitudes of population and geography that officials govern. Civil servants must therefore negotiate the diversity of the citizenry that they serve as well as confront the sometimes large geographic distances between them. The quality of quantitative data to support their decision making across these populations is often poor, and of far poorer quality than that which assists public officials in the developed world.

Financial Resources

Faced by a downstream responsibility to serve rather large, at times disparate populations, civil servants also face an upstream responsibility to spend the capital investments allocated to them by the public budget process. Conversely, the public budget process is the means through which public officials obtain capital to fulfill their responsibilities to citizens. A mismatch between these pressures confronts public officials with significant challenges. Different officials will have varying degrees of involvement in developing an annual budget proposal, but the organization as a whole is mandated with its expenditure.

The surveys for which we have federal, state and local government data were also those surveys focussed at the level of the organization. Table 3 provides descriptive statistics for the 520 organizations in Nigeria and Ethiopia for which we have organization-level surveys, and therefore concrete budget numbers. It outlines the total budgets of the organizations we survey, including capital and recurrent expenditure. Federal government agencies have budgets of the order of tens or hundreds of millions of dollars, particularly in infrastructure-heavy sectors such as works (which traditionally includes the building of major roads) and water. Local governments have far smaller budgets, but state/regional governments can have budgets that exceed those of federal organizations.¹¹ Though the state may separate implementation across sectoral agencies like at the federal level, there is often a greater degree of centralisation of budget authority within a centralized state secretariat. Thus, civil servants at centralized state agencies can control substantial budgets relative to their local and even federal government counterparts.

To put the scale of these budgets into perspective, we use the Centre for the Study of Africa's public-access manufacturing firm data (CSAE, 1998). This is now almost two decades old, but has the advantage of providing capital measures for African firms. The median capital budget of the sample of firms they survey in Cameroon, Ghana, Kenya, Zambia and Zimbabwe is USD28m. Thus, this data implies that an employee working at a median manufacturing firm in sub-Saharan Africa works in a more resource-rich environment than a local government official. State level governments have budgets more in the order of the 75th percentile of firms. Given that the age of the firm data imply these are upper bounds, these do not seem large resource envelopes with which to govern the large, potentially disparate populations described above. These averages mask some significant outliers, such as the oil-rich Delta states in the south of Nigeria whose organizations are wealthy relative even to the 90th percentile of firms in the CSAE data. However, there are many government organizations in our data, particularly at the local level, who have a significant responsibility of service and a limited accompanying budget.

Ethiopia's as a whole - Guangdong (94,500,00), Shandong (93,700,000), Henan (93,600,000), Sichuan (81,300,000) and Jiangsu (76,300,000) - and whose average land area was not that different from an Ethiopian region. Chinese provincial officials therefore faced a similar order of magnitude of citizen complexity in their daily work as an Ethiopian federal civil servant.

¹¹The organizational budgets assessed in Federal Government of Nigeria (2010) give a figure for total state budgets of USD622m, so almost equivalent to that of our sample.

Equipment at Work

Perhaps the most important tool of a civil servant's job is the file. Processing paper work contained in files is the core work of many civil servants. The information technology revolution of the past two decades could therefore be seen as a revolution in the tools of the bureaucratic trade. To what extent have computers penetrated the developing world's bureaucracies?

Though we do not have information on equipment for the federal and state levels in Ethiopia, Table 3 provides rates of penetration for the other tiers. Managers were asked to specify the proportion of staff with access to a computer. This did not imply that each official had their own computer, but rather they had a computer that they had regular permission to use for their work. The numbers are not particularly high. Even at the federal level in Nigeria, only 38% of staff have regular access. Where penetration is strikingly low is at the local level. In both countries the rate is below 8%, indicating that the information technology revolution has not really reached local government in the developing world. This is despite many social services being the responsibility of local governments.

The Ethiopia survey asked the manager to assess the biggest bottleneck to the organization being better able to utilise information technology. Three-quarters of the respondents stated that the absence of equipment, or funding for that equipment, was the major issue. The implication of these responses was that, rather than a skills shortage (highlighted by 13% of respondents) or an inability to manage the technology (highlighted by only one respondent), public sector managers in Ethiopia believe they simply do not have sufficient resources to equip their staff and could use more.

Even a small number of computers can revolutionise a government's communication with the rest of government and the outside world if they are connected to the internet. Table 3 once again implies a significant inequality across tiers of government in access to the internet. In Nigeria, local governments stated that they had internet access on only 3% of days, an average that masks a large number of governments that had no access at all. The Ethiopian local governments do better, with 21% of days with access, partly due to the efforts of the Ethiopian Government to extend 'WoredaNet' to that tier of government. However, this still amounts to one day in a working week.

Throughout the surveys there are frequent references to how the general environment of government is lacking in resources, a trend which is particularly acute at the local government level. At 5 of the 18 local governments surveyed in Nigeria, managers stated that they never had access to electricity, and half the organizations only had power for half the day on average. Across our local-level surveys, three officers out of ten are said to have access to vehicles for work, despite many local government officials being a key liaison with the community.

Thus, across multiple indicators of equipment, civil servants in the developing world seem to have limited access to infrastructure to aid them in their daily duties. This is most acute at the local government level, but even at the federal level, where staff are most bound to the processing of files, less than half of staff have access to a computer.

To what extent is this simply a product of regional inequalities? It is certainly true that more remote parts of Nigeria and Ethiopia have less access to resources, and this is as true for governments there as it is for citizens. However, we can study this question in a little more detail by looking to the Kaduna local government data in Nigeria. Within the state of Kaduna, the organization-level survey was undertaken at six separate local governments. Restricting analysis to these local governments only, we still see significant variation. The number of hours of electricity available during a typical working day goes from 0 in one local government to continuously available in another. Similarly, the proportion of officers with access to a computer varies almost uniformly throughout the distribution from 0 to 0.6. Hours with

access to the internet is a little more bimodal, with half the organisations having zero access and the other three having at least 15 hours a day. Each of these statistics echoes the high degree of heterogeneity in facilities across local governments, even within a single state covering an area of 46,000 square kilometers.

There is long debate on whether public sector organizations like these would be more productive with greater resources. A common refrain from public officials is that resources of all types (their salaries, funds for projects they are working on and information technology to help them spend those funds well) are insufficient, uncertain, and released late. As discussed in the World Development Report (2016), rigorous evidence on the impacts of information technology on public administration across government in the developing world - such as a 'one laptop per bureaucrat' initiative - would be useful in influencing this debate.¹²

Colleagues

Who does the civil servant see as they walk into the office each day? We saw in Table 2 how the proportion of the population employed by the public sector varies considerably across countries. However, to understand the physical environment of the bureaucracy, we require numbers on the number of officials a bureaucrat works with in the same office. Table 3 provides estimates of the number of officials in each of the organizations we study for which we have organizational data (Nigeria and Ethiopia). These figures aim to reflect the number of officials who work in the same office or compound, and thus are in some sense 'colleagues'. They do not include traditional service providers such as nurses or teachers working in external facilities, whose numbers can be extremely large. For example, at the regional level in Ethiopia, including service providers in the education sector would increase average staff numbers by roughly 20,000 per organization.

The staff numbers vary significantly across tiers of government. At the federal level, the other members of your organization number in the thousands, with divisions and sub-divisions of officials in the same organization that have no interaction in their daily work. The experience of being a federal civil servant is, on this margin at least, the closest to the stereotype of the army of bureaucrats working as a tiny cog in a giant organization. Returning to the CSAE manufacturing firms data, not even firms at the 95th percentile have employees on the scale of an average federal ministry. Rather, working for a federal organization implies that a bureaucrat is working for one of the largest organizations in the country.

The numbers shrink at the state and local levels. These organizations are still relatively large employers, averaging an employment rate akin to manufacturing firms in the 80th percentile. However, they are more collegial affairs. Here many of the organizations in the data are of the order of a hundred employees or so. It would likely be easier for a civil servant at the local government level to interact with most of her colleagues with some regularity.

It is informative to look at the number of citizens per civil servant at the local level, which is 279 in Nigeria and 716 in Ethiopia. Local government officials are often seen as a liaison between citizens and the government. While the citizen's first port of call may be a village or ward official, local government officers are often seen as technical experts in the area for a particular sector, or have the capacity to negotiate for resources from their chief executive officer. Their ability to provide these services across the population they are intended to serve will partly be a function of how many of their colleagues there are to share the burden of work. It would seem that, at least in terms of manpower, an Ethiopian local bureaucrat has substantially less support from his colleagues.

¹²Existing evidence, such as Lewis-Faupel et al (2016), indicates that improving information technology infrastructure in developing country governments can have positive effects on the quality of service delivery.

What is the sex of a civil servant's colleagues? The first row of Table 4 presents the proportion of women in each of the surveys for which we have individual-level data. In all but one of the countries we study, the civil service is a male dominated environment, with 60% of civil servants male. However, across the countries we study, the experience of the civil service varies substantially in terms of the gender make up of a civil servant's colleagues. In Pakistan, only a fifth of civil servants are female while in the Philippines two-thirds are.¹³ The experience of the service is likely to be significantly different in an environment where two-thirds of staff are women compared with a fifth. The tantalising question arising from this variation is whether a female-dominated civil service is more productive than a male-dominated one.¹⁴

Returning to our organization-level data across tiers of government, the gender balance within the civil service is not at parity at any tier of either Nigeria or Ethiopia. In both countries the state level is closest to parity. With recent increases in the number of women in Parliament in Ethiopia (39% of Parliamentarians in the World Development Indicators), women serve in Ethiopia's government relatively equally across the legislative and executive arms.¹⁵ A similar pattern is seen in Pakistan though at a much lower proportion, with 21% of Parliamentarians female. This is not true for Ghana, Indonesia, Nigeria or the Philippines, where the proportion of Parliamentarians who are female is 11%, 17%, 6% and 27% respectively. In these latter countries therefore, women's participation in government, limited though it may be, is typically in the implementation of policy rather than in its legislation.

Managers

Work in the civil service is traditionally organized in a relatively hierarchical way, with directors delegating a subset of their duties to deputy directors and so on to the professional officers who undertake the ground work of the service. This hierarchical culture is particularly prominent in Nigerian and Ethiopian services, reflecting its prominence in their wider societies. The span of control is a way to measure the degree of hierarchy as it indicates the number of employees that report to a manager. Though the specific means of calculating it varies, the tables simply present the number of non-managerial staff in the entire survey divided by the number of managerial staff.

For the countries we study, the span of control varies considerably. Table 4 presents figures that range from 1.23 subordinates per manager to 6.65. In Nigeria and Ghana, the number of managers in the civil service, from assistant director through director or equivalent, is almost as large as the number of professional staff.

A challenge to comparing the span of control across countries is that the definition of manager is not constant, nor are the duties of an officer with a managerial grade. Some officers denoted manager would still undertake a substantial amount of policy work themselves. To compare within countries, we can return to the Nigeria and Ethiopia data for which we have multiple tiers of government. Interestingly, both Nigeria and Ethiopia have a U-shaped span of control across tiers, with the local level having the least managers per employee, with the second highest number of managers at the federal level, and

¹³The high proportion of women in our survey of civil servants in the Philippines corresponds to gender ratios calculated from administrative data there. The proportion of women in the entire Philippine civil service is 59% (Republic of the Philippines, 2010)

¹⁴To provide a more global perspective, UN (2016) states, "The latest ILO data for 49 developing and transition countries show wide variation in women's share of employment in public administration, ranging from 19% in Guinea to 70% in Slovenia. Overall, the share of women in public sector employment exceeded their share in total employment in 46 out of 64 countries."

¹⁵Interestingly, 92% of the Ethiopian organizations we study stated that they had an active policy that encourages women to apply for jobs in their organization. Again looking to UN (2016) for a global perspective, it states that, "A number of countries, including Colombia, Mongolia, the Philippines and South Sudan, have applied quotas or targets for women's employment in the public sector."

then the most at the state. The state government is therefore the most ‘managed’ of the three tiers of government.

Conditional on definitional issues, a surprising feature of these statistics is that the span of control in Ethiopia and to some extent the Philippines is an order of magnitude higher than in Ghana and Nigeria. For example, Nigeria has a vastly larger number of managers operating within the service (one for every 1.23 non-managers) than Ethiopia (one for every 13 non-managers). Depending on your taste for management, there is a very clear choice between these two types of civil service, and the experience of the civil servant is likely to be distinct in these environments. This would be true for managers, who would manage a smaller team of civil servants, and non-managers, who would likely have a higher number of managers above them.

UNDP (2014) reports that across the developing world, women are under-represented in senior decision-making positions in the public sector. In only 5 out of the 35 developing countries and territories they study do women make up 30% or more of those in decision-making positions. Our focus is on the civil service (and excludes male dominated environments such as the security forces), such that we see a more balanced picture in our data. Table 4 presents the proportion of managers who are female in our surveys, and they are typically only slightly less than the proportion of women in the service as a whole.

Tenure in Organization

How long do these officials stay colleagues? Without access to administrative data over time, to answer this question we can turn to estimates of the staff turnover rate in the organization-level surveys, or the proportion of officials that leave the organization each year. These were calculated based on non-contractor positions that were vacated for any reason, though in the Ethiopia data where the reason was asked, the vast majority of movements were voluntarily instigated by the official. The rates are slightly higher in Ethiopia, and in fact high enough for the Government of Ethiopia to undertake a survey to investigate the phenomenon, allowing us to use it in this paper.

If the rates were applied equally to all civil servants, they would imply a stay of 16 years in an organization for Nigeria and 10 years in Ethiopia. This does not mean that some civil servants do not move much more frequently. In fact, evidence from the Nigerian survey implies that there are some civil servants who move frequently while the main body of staff stay in the same organization for much of their career. Interestingly, this was not due to the formal rotation system in place for some cadres of staff. Many staff within those cadres did not move at all. Rather, it seemed that some civil servants were able to influence their progression through the service, and turnover was fully voluntary. Respondents who listed multiple organizations in their service history were also more likely to state that they had control over their career progression and that they had had ‘influence’ on securing their current posting. The vast majority of others in the Nigeria survey said their posting was random.

Column (1) of Table 3 provides a benchmark figure for each topic based on taking the mean across all tiers in each country where the data is available and then taking the mean of those two figures. For turnover, it is 0.08, implying that the average duration a civil servant in our data stays in her organization is 7 years. Given the evidence from Nigeria about the heterogeneity in transfers among officials, this may be a lower bound for many bureaucrats. Thus, many bureaucrats work together in the same organization for well over a decade.

This approach is supported by asking civil servants about their tenure directly, with the caveat that one cannot interview officials who have left. Table 4 indicates that the officials interviewed had been at their organization for 14 years on average. Since the average number of years in service is 17, three-quarters

of their tenure or more has been in the same organization. These figures are highly consistent with the discussion based on the organization surveys, with a long predicted tenure within service. It is reassuring that the organization-level surveys are compatible with the individual-level surveys, as we would expect if both survey processes were performed effectively.

The Quality of Management

A final area that can be explored in the organization-level surveys is that of management quality. We have already seen above stark differences in how intensively civil servants in Nigeria are managed relative to their Ethiopian counterparts in terms of the number of managers per non-manager. But what is the quality of that management? So far the discussion has focussed on the physical and human capital of the service. A recent literature (Bloom and Van Reenen, 2007, 2010) has argued for the importance of management as an input to the organizational production function. Bloom and Van Reenen's 'World Management Survey' (WMS) is a tool that aims to measure the quality of organizational management that has now been implemented in dozens of countries around the world.¹⁶ The tool conceptualises good management as regular monitoring and communication of organization goals and activities, efficient personnel and policy management, and the judicious use of incentives. Though there is debate as to how to optimally manage public sector organizations, we utilise the WMS as a descriptive tool here.

In Nigeria, the organization questionnaire included a version of the WMS that was consistent with the practices of the Nigerian public sector. Following the practice of the WMS, each question was converted to a z-score defined across all of the Nigerian organizations. These scores were then aggregated into a single index. Table 3 provides the WMS index score for each of Nigeria's tiers of government. It shows significant differences in the WMS management index across the three tiers with the difference between the federal government and the other tiers significant at below the 1% level and the difference between the state and local government tiers significant at the 3% level. Federal organizations turn out to be better managed according to the WMS criteria, with state governments the worse managed. Thus, state-level officials face the most intense management and the worse quality (as judged by the WMS); features which could be linked.

We can also follow the WMS methodology of defining sub-indices of management that relate to operations, monitoring, targets and incentives. The operations index traditionally aims to proxy the degree to which organizations are using frontier production processes. Our operations index differs slightly from that of the standard WMS as it includes indicators of the quality of facilities (which we saw above varied significantly in our context) and the degree to which there is a public service culture at the organization. The other indices follow the standard WMS interpretation and respectively outline the extent to which officials and outputs are monitored, the extent and quality of targets, and the degree to which performance incentives are used to motivate employees. Table 3 indicates that along each of these margins we see the same pattern as displayed by the aggregate index, with the best overall management at the federal tier, with the worst management at the state tier. Thus, if you believe any of the WMS sub-indices are correlated with good management practice in the public sector, they exhibit similar differences across tiers of government.

The standard deviations of these averages are large relative to the levels. We can therefore turn to Figure 1, which plots the individual management scores for each of the 94 organizations in the Nigeria data. The scores are highly diverse within tier. The state governments, marked by the diamonds, have a tail of very poorly managed organizations according to the WMS criteria. However, they also have organizations

¹⁶For details of the questionnaire and methodology of the World Management Survey, see <http://www.worldmanagementsurvey.org> or Lemos and Scur (2016).

at the median and 65th percentiles. Similarly, local governments, represented by the triangles, are spread relatively evenly across the distribution of federal organizations. One local government exhibits management quality above the 90th percentile of management in the entire Nigerian Government. The distribution also exhibits a classic WMS feature, a long tail of poorly managed organization. Bringing up the scores of the tail of poorly managed organizations at the state and local levels would substantially increase the mean level of quality at these tiers, and of management in Nigeria’s public sector more generally.

To highlight this variation in management practices, we can turn to the Kaduna local government data. To investigate the extent of variation within a single state, we measured the quality of management across six local governments there. The WMS scores of these local governments are marked with filled triangles in Figure 1. We can see that even within a single state, with a single coordinating state government, local governments are managed heterogeneously. At the top of the distribution, one local government is in the top decile of all organizations in our sample for its quality of management. Other local governments have management scores below the 20th percentile. For some reason, the Kaduna state government is not harmonising best practices in management across the local governments it supervises. There would seem to be significant potential for inter-governmental transfers of best-practice in management within and across tiers.

These statistics imply that one of the most important elements of the organizational environment for a civil servant, the quality of management she works under, is highly varied across organizations. The experience of being a civil servant at the federal organization at the top of the distribution in Figure 1 is likely to be substantially different to that of a civil servant in the state government at the bottom of the distribution. This variation is exhibited even within the state of Kaduna and across the Federal Government, where there are common sets of public service rules. Thus, these descriptives are evidence that formal rules are not driving a key feature of organizational practice.

We cannot compare our scores directly to those in other WMS studies, as the published z-scores are always defined within sample. However, we can focus on a single quantitative measure of management that can be compared across sectors. In our sample, 68% of the organizations never collect data on key performance indicators. Thus, the median management practice in the public sector is no activity on our index of monitoring. Lemos and Scur (2016) provide WMS assessments for a range of African firms. They note that the median African firm tracks most of their performance indicators formally, and specifically that those in Nigeria have tracking mechanisms of some sort. Thus, on a margin frequently argued to be key to productivity, the public sector falls well behind its private sector counterpart.

4 The Characteristics and Experiences of Civil Servants

We now turn more fully to investigating those surveys that focussed on measuring the experience of the individual civil servant directly. We begin by describing further basic characteristics of the sample in each of the countries we study. Table 4 presents average statistics for each of the samples of civil servants interviewed. Column (1) presents a simple average across the country statistics available. Note again that Ethiopia’s surveys were both at the organization-level and so the country is not represented in this section.

In terms of the age pyramid, Table 4 describes how homogenous civil service averages are across most of the countries we study, with the Philippines acting as a slight outlier. The mean official is in their forties, with a standard deviation of roughly 10. The number of officials below 30 years of age is frequently below 10%, and many senior positions are filled by older members of the service.

Cross-tabulating the age of our officials with their gender, we can approximate the likely future trend of the gender ratio. In Ghana and Pakistan, there is a more equal gender ratio among younger members of the service, implying a gradual equalisation of the gender balance. Since the Ghana survey we utilise here was undertaken in 2000, more recent figures support the predicted trend, as in 2016 roughly 40% of Ghana's civil servants were women. There does not seem to be such a trend in any of our other countries, such that the status quo of a male dominated (or female dominated in the case of the Philippines) service may continue for some time.

Given the importance of education to a civil servant's abilities, Table 4 reports the degree to which civil servants have postgraduate qualifications. There is a high degree of variation across countries.¹⁷ Partly this may be the distinct samples of officials (with a reminder to caveat interpretation of the Pakistan statistics on the lower response rate there) and the timing differences between Ghana and the other surveys. However, the differences are striking. With the long tenures outlined above, the quality of staff and thus their level of education is likely to be an important aspect both of a single civil servants experience of the service as well as the joint production of all civil servants. Understanding the impact of improved education on civil service productivity would seem a first-order issue for research.

Career

In Nigeria and the Philippines, the surveys asked officials what their motivations were for joining the civil service. In Nigeria, 'The chance to serve Nigeria' was the most popular choice (37%), followed by 'I was interested in the type of work' (29%) and 'The stable career path' (20%). In the Philippines, 'Job security' was the main motivator (23%), followed by 'Personal satisfaction' (12%) and 'The benefits' (11%). 'Mission' (8%) was the sixth highest ranked motivator.¹⁸ These responses question whether the assertion in Banuri and Keefer (2013) that more intrinsically motivated citizens select into the public sector is true across countries, or whether reasons for joining the service vary across contexts. This interpretation would be consistent with Dal Bo et al (2013) and Ashraf et al (2015), both of which find the specific recruitment strategies employed for public officials influences the nature of individuals who apply for government posts.

Table 4 summarises officials' beliefs around whether selection into the civil service is based on merit. In Indonesia and Pakistan, the question on this topic was the extent to which respondents believed that 'The selection process identifies the best people for the job', whereas in Ghana respondents are asked whether selection is based on interviews and/or written examinations. The responses indicate that most officials in Ghana and Indonesia believe that recruitment is based on merit, while this is only true for 39% of officials in Pakistan.

However, there is substantial heterogeneity across organizations in these beliefs. Figure 2 charts organizational averages of stated beliefs in meritocratic recruitment for each of the organizations in our data. Each marker on the graph represents the proportion of staff in an organization that believe recruitment

¹⁷While not reported in Table 4, the proportion of civil servants with a postgraduate qualification varies significantly across the layers of government. In Ghana, 37% of officials working in departments under the President have postgraduate qualifications, a figure which drops to below 20% for other ministries and to 16% at the local government tier. Similarly, in Nigeria the rate of postgraduate education drops at each tier below the federal, with only 9% of local government officials having a relevant degree.

¹⁸In Nigeria, officials were asked, "What most influenced you to take up a career in the service?" and had to choose a single option from the list: 'I was interested in the type of work', 'The income prospects', 'The prestige associated with such a job', 'The stable career path that a job in the service affords', 'The chance to serve Nigeria', 'It was the only employment I could get', 'Other (please specify)'. In the Philippines, officials were asked, "Please tell us why you chose to (and continue to) work in your job," and could choose multiple options from the list: 'Job security', 'Good salary', 'Benefits', 'Flexible hours', 'Reasonable work load', 'Advancement potential', 'Social status', 'Personal satisfaction', 'Mission', 'Other (please specify)'. Since the Philippines survey allowed multiple answers to this question, the proportions have been rescaled to sum to 1 in line with the Nigeria proportions.

in their organization is meritocratic. The organizations are then ranked on this measure within country to facilitate comparison. Ghanaian officials are generally more positive about the quality of their recruitment process, but there is substantial overlap with organizations in Indonesia, and officials at one organization in Ghana are more pessimistic about recruitment being merit-based than civil servants in Pakistan. The officials in Pakistan all come from the same organization, the Federal Board of Revenue, which may explain the relatively homogenous responses across the four regional offices. The Federal Board of Revenue is likely to use the same personnel practices across its regions. Though Ghana has the highest variation, the proportion of civil servants in Indonesia's offices believing their colleagues are meritocratically recruited goes from 0.6 to almost 1. This could be indicative of substantial differences in the culture and quality of human capital across Indonesia's government.

Once an officer has been selected for the civil service, they must be allocated a job, and potentially a series of jobs as they move through the service. In every country for which we have data on job allocation, a smaller proportion of officials believe that jobs are allocated based on merit compared with service selection. Far fewer officials believe that jobs are allocated through merit once you are in the service than believe entry to the service is merit-based. In Ghana and Indonesia, the differences are substantial. Understanding the dynamics of internal labor markets within the public service would therefore seem as high a priority, if not higher, than understanding service selection. Getting the right people into the right job requires that they are posted there, not just that they are in service.

In almost all cases, officials entered the service when they were in their mid-twenties, worked for a couple of years before joining their current organization and then stayed there for a decade or more.¹⁹ In Indonesia, the average bureaucrat spends 95% of her time in the service at the organization at which they are surveyed. Such long tenures within the service, and within organization, implies that improving the capacity of public officials is as much about making more effective the existing body of staff as recruiting new bureaucrats (as focused on in Dal Bo, Finan and Rossi (2013) for example), if not more. Similarly, the fact that public sector managers are not using rotation across organizations in the services we study, shown to be a potentially effective incentive by Banerjee et al (2016), implies constraints to using this phenomenon broadly.

These findings are consistent with substantial protections to civil servants being fired or moved out of the service. It would be interesting to better understand three features of these dynamics. One, why is there an initial period of 'sorting' in the public sector and does it achieve its aims? Two, why is the average number of years at the current organization such a high proportion of total time in service? Are public officials satisfied with this equilibrium, or would they like to move more? If so, what is stopping them from doing so? Finally, how does the long joint tenure in office impact on the nature of relationships and therefore incentives in the service?

The surveys can shed some initial light on these questions. In Nigeria, only a quarter of officials are satisfied with the number of transfers they have had, and almost half want to be transferred more. So there is demand for greater transfers in Nigeria. As a basic framework for understanding transfers in the civil service, Iyer and Mani (2012) provide evidence that transfers in the Indian civil service arise from political interference in the bureaucracy. They show that politicians construct a network of bureaucrats that they favour and move these to where they can be most useful. They also show that higher skilled individuals are less affected by this interference. We can follow this logic in the Nigeria data

¹⁹As noted in section 3, there seems to be evidence that a small minority of civil servants transfer more frequently. In Nigeria, almost 80% of staff had moved once in the service when interviewed. However, 8% of staff had moved 4 or more times. Surprisingly, in the Philippines sample, the proportion of officials who have worked in 4 or more departments is also 8%. Corresponding data was not available for the other countries we study. Understanding the characteristics and motivations of these high-mobility civil servants would be interesting, particularly if they are strategically important determinants of organizational productivity.

by regressing the number of transfers an official has had within the service on i) her years of schooling as a proxy for ability, and ii) measures of political connections within the service. The second of these are self-reported figures on the number of family members working in the organization or service, the number of a bureaucrat's "community" working in the organization or the service, and a dummy indicator of whether the official knows their boss socially outside of the organization.

The results are consistent with Iyer and Mani's predictions. Years of schooling is negatively correlated with the number of moves within the service, and the coefficient has a p-value of 0.06. The network coefficients are all positive, and those on the number of family and community within the service are significant at the 1% and 5% levels respectively. A Wald test of joint significance of the network variables has a p-value of 0.001. Thus, the descriptives from Nigeria would support the idea that Iyer and Mani's findings from India have some degree of external validity.

Returning to the questions laid out above, the figures presented here would be consistent with a model in which initial sorting of officials by political actors external to or within the service is utilised to learn the 'types' of new civil servants. After types have been learned, only a minority of officials successfully 'graduate' to the inner circle of a political service actor and therefore have the connections required for further transfers. This perspective is supported by direct statements by the civil servants in our sample, 58% of whom state that "special requests" are frequently the source of transfers, with that number rising to 65% at the local level. 50% of civil servants in Pakistan disagree with the statement that "Promotions/bonuses go to those who work hard to achieve the goals of the FBR". 29% of officials in the Philippines stated that their department was one in which "Most promotions went to people who did not meet the formal qualifications for promotion" and 28% agreed that "Promotions are mainly given to those that have friends and family at higher levels in your department". Where we find the least evidence for merit-based advancement, in Pakistan, officials state that 'managerial favouritism' is exactly what is driving career paths. Even in the Philippines, over 50% of staff agree that "Favoritism among managers and employees often makes it difficult for public officials to perform in their jobs."

However, there does seem room for merit-based career trajectories (as Iyer and Mani find). The statistics above on non-merit based promotions and transfers are not explaining 100% of the variation. When civil servants are asked about the importance of different criteria for advancement in the civil service, merit is a frequent response. Apart from Pakistan, Table 4's summary statistics on whether officials agree that promotions are based on merit are high (0.87 in Ghana and 0.89 in Indonesia).²⁰ Similarly, when officials are asked to identify drivers of advancement through the civil service, merit is ranked first. Tenure is frequently highlighted as important in the public service, and though we only have responses from Ghana, it is ranked second there. Bribes play an insignificant role in the countries we study, but direct questioning may not be the most appropriate way to get at this topic and advances in survey methodology may be required to gain more credible estimates of the effects of within-service bribery.

Understanding the different potential paths a civil servant might take through the civil service would be of significant policy relevance. Though reform-minded Heads of the Civil Service might not be able to reform all parts of the civil service, opening up avenues for the most able to rise to the top might be a shortcut to better development outcomes.

²⁰Once again, it is important to caveat differences across countries on differences in question phrasing. In Indonesia, Pakistan and the Philippines, the relevant question on promotion was "Rewards/Promotions go to those who work hard to further the goals of [the department/organization]". In Ghana the relevant question was "In the past three years, have elected officials, their appointees, or political party officials tried to influenced any hiring decisions and or promotions in your organization?". The Ghanaian question was the best available, but includes hiring considerations. They are also phrased positively and negatively respectively, which may change the responses of officials.

Experience of the Civil Service

Civil servants surveys allow us to ask officials about their personal experience of the civil service. We have outlined the scale, characteristics and positions of their colleagues, and sketched the scope, resources and management practices of their organizations, but what constitutes the everyday culture in which officials work? How would civil servants characterise the experience of working in the civil service?

Table 4 provides summary descriptives of questions relating to whether officials believe it is ‘prestigious’ to work for their department/organization and whether they are ‘proud’ to work in the civil service. 71% of Ghanaian civil servants believe that their part of the civil service is a prestigious place to work, but only half of them are proud to work there. In contrast, while Indonesian civil servants are far less likely to state that their organization is a prestigious place of work, they are far more likely to state that they are proud to work there.

The Pakistan survey allows us to understand how the experience of the service varies within the same umbrella organization, but across sub-offices. In Pakistan, across the four locations of the Federal Board of Revenue, there was a relatively homogenous belief in the prestige of the organization. However, we find substantial variation across organizations in the other countries for which we have data, implying a pecking order within the civil service’s organizations. In Indonesia, only a quarter of officials at one organization believed their office to be prestigious, while in another department of government, 93% of their colleagues believed in the prestige of their place of work.

However they feel about their workplace, how do they feel about their colleagues? Given the prevalence of team work in bureaucracies, bureaucrats are often said to value trustworthiness in their colleagues. To what extent do officials believe their colleagues are trustworthy? Table 4 provides details of the extent to which officials agreed with the statement “Most people in your organization can be trusted”. We see that in those surveys where the question was asked, between half and three-quarters of staff agree with the proposition. How stable is this statistic across the service? In Indonesia, where we have both questions on trust and a significant number of organizations, we can look at how the proportion of officials who state that they trust their colleagues varies across organizations. Even the organization with the lowest levels of trust in the Indonesia survey has 40% of officials stating that they trust their colleagues. The rest of the organizations are relatively evenly spread between 40% and 90% of respondents stating that most people in their organization can be trusted. Officials were also asked whether most people in government (so outside of their specific organization) can be trusted, and the proportion of officials that agree falls by about 20 percentage points in each case compared with the trust in their organizational colleagues.

We can compare these levels of stated trust to a similar question in the World Values Survey, a global research exercise to measure people’s values and beliefs.²¹ Though within-firm data would be more appropriate, the World Values Survey has been used to approximate firm-level trust levels given the paucity of other data (Bloom, Sadun and Van Reenen, 2012). In Pakistan, only 22% of respondents in the 2010-2014 wave agreed that “Most people can be trusted” and in the Philippines, it was a mere 3.2% of respondents. The average for all countries available is 24%. This figure is stable even if the question is restricted to ‘your neighbourhood’ or to ‘people you know personally’. Thus, trust within the service, and particularly within organizations, is far higher than among the population as a whole.

Another important part of the service is a common belief that officials are treated fairly; with a single interpretation of the public service rules. Thus, how officials perceive the punishments they receive is key element of public service culture. Table 4 presents average responses to questions relating to whether ‘punishments are applied appropriately’. The surveys differed on how they assessed punishments, which

²¹For more information on the World Values Survey, see www.worldvaluessurvey.org.

may explain the substantial variation we see across countries. However, Indonesian and Pakistani officials were both asked whether, “These punishments are applied to those who do the least to further the goals of the [department/organization]” and we see stark differences in responses. Asking officials directly in Nigeria, “Do you expect to be held accountable for breaking the Public Service Rules?” may have introduced a positive bias to responses there, but a third of officials still responded negatively. Even conditioning on differences in wording and cultural responsiveness, the numbers seem relatively low, with three of our countries reporting proportions of officials believing punishments are fairly applied below 50%.

Who do public officials engage with in their everyday work? We have already seen in section 3 that the collegiate environment of public officials varies substantially dependant on the scale of the office an official works in. Officials working within large federal ministries have thousands of other staff at their daily place of work, while local government officials will be able to have personal relationships with every other member of their organization. In the Philippines, the majority of officials state that they frequently interact with other government employees, but one in six state that they interact with other government employees ‘infrequently’ or ‘very infrequently (less than 5 times per year)’. This isolation is more apparent for female civil servants. In Nigeria, officials state that they are personally engaging with colleagues from (other) federal sectoral ministries on a quarter of the projects or programs they are working on. This figure is constant across tiers, but moving from the federal tier to local government increases personal engagement with communities from just under a quarter to over a third. Interactions with state government officials also increase as you move further down through the tiers of government, potentially reflecting the dominance of that tier in local governance in Nigeria.

The political-bureaucratic divide is at the core of many constitutional arrangements, aiming to formally regulate the nature of pressure on bureaucrats from political actors. However, informal interactions between politicians and civil servants may be a means for politicians to circumvent these protections. Thus, rather than only meeting at committees within the national legislature, politicians and bureaucrats can meet informally to discuss projects, programs and elections. When asked whether they have engaged with a politician on their civil service work over the past three years, only 13% of Ghanaian civil servants state that this has occurred. The average number of interactions with politicians among those bureaucrats who have engaged with politicians is only 4. Philippino officials report slightly higher interactions, but these are in stark contrast to the highly politicised service of Nigeria. There, 77% of civil servants state recent projects they have worked on are exposed to some degree of political interference.²² The intensity of political interference in a bureaucracy is likely to have significant effects on the capacities of the service to deliver public services (Callen et al, 2015; Gulzar and Pasquale, 2016; Rogger, 2014) but also on the experience of being a civil servant there.²³

Job Satisfaction

How satisfied are civil servants with their jobs? Given the work environment and experience that has been described in this paper so far, what is the net perception of civil servants of their working life? Many

²²The specific questions were: “In the past three years, have elected officials, their appointees, or political party officials tried to influenced any hiring decisions and or promotions in your organization? How frequently did it occur?” (Ghana), “To what extent do you agree with the following statement: Politicians often try to influence staff in your department, such as on decisions on the choice of projects or procurement.” (Philippines), “Think about recent projects and/or programmes you worked on for this organization. In what proportion of the projects have the following parties intervened in the implementation of a project? Member(s) of the National Assembly; Member(s) of the state assembly; Governor of the state in which the project is being implemented; State commissioner(s); Local government chairman/men” (Nigeria).

²³Studies have also documented political interference in the experiences of frontline officials such as teachers and health workers. Bêteille (2009) documents how at least 10 percent of teachers in each of the Indian districts she studies report being frequently harassed by politicians and their middlemen for reasons unrelated to teaching.

of the surveys asked questions related to the satisfaction of officials along multiple margins, typically their overall satisfaction with their job, and their specific satisfaction with their wage, and with other benefits. Unfortunately, the precise wording of the questions varied across countries.

In Ghana, officials were asked to what extent they agreed with, “Working in the public sector is generally better than working in the private sector”, “My salary is very satisfactory” and “My other benefits (pension, health, etc.) are very satisfactory”. In Indonesia and Pakistan, they were asked, “How do you compare [your organization] as a place to work with private sector firms that are in a similar area as [your organization]?” and the extent to which they agreed that, “Your pay is fair compared to staff doing similar jobs in other [ministries]”. In Nigeria, officials were asked directly whether they were satisfied with their current job, current income and working conditions. In the Philippines, the question was the extent to which they agreed that, “You are satisfied with the pay you receive for your work”.

With overall job satisfaction, we can compare among the Ghana, Indonesia and Pakistan surveys, as these all ask about the experience of working in the public sector *relative* to the private sector. Looking at the country averages in Table 4, we see relatively substantial differences, with 53% of Ghanaian civil servants neutral or positively satisfied with their jobs relative to the private sector and 85% of Indonesian civil servants. The Nigeria survey, however, asks about their overall satisfaction with their job. Officials may feel that jobs in the private sector are better than those in the public sector, but overall it is better to have a job than not at all. Such a story would be consistent with the fact that Nigeria has the highest overall level of satisfaction (with 89% of civil servants neutral or positively satisfied with their job overall).

Splitting overall satisfaction by gender, we do not see major differences anywhere but in Pakistan. Women in the service there are 7 percentage points more likely to state that they are satisfied with their public sector job relative to the private sector. This may be an artefact of the limited opportunities for women in Pakistan’s private sector (UN, 2016).

We can also look at the distribution of satisfaction within and across government organizations. Figure 3 plots, for each organization in our sample, the proportion of civil servants in that organization that are neutral or positively satisfied with their job. These proportions are plotted against the percentile of average satisfaction at an organization *within country*. Thus, Figure 3 shows us that officials at the median organization in the Ghanaian data are roughly 40% less satisfied with their jobs than those in the Indonesian data. A similar claim could be made about the comparison between Ghana and Nigeria, but this would be conditional on the wording issues outlined above.

Ghana is a relative outlier in the extent of variation its organizations exhibit in average satisfaction. The other surveys fluctuate between 60% and 100% of staff satisfied with their jobs overall.²⁴ Interestingly, though the data from Pakistan all come from a single sector (revenue collection), the four organizations on which we have data exhibit a similar magnitude of variation to all the organizations in Nigeria or Indonesia. Sector does not seem to be a substantive predictor of motivation.

Other margins of stratification also struggle to explain much of the variance. There is almost no difference between the satisfaction levels of professional and support staff in Ghana or between males and females there. In Indonesia, a tenth of a standard deviation separates professional and support staff’s average reports of overall satisfaction, while average satisfaction across Nigeria’s tiers of government fluctuates by a few percentage points only. Understanding what drives differences in motivation levels across government, particularly those of the orders of magnitude displayed in the Ghana data, would be an interesting avenue for research.

²⁴This variation could be partly explained by the lower sample sizes at each organizations. As described in section 2, the researchers behind the Ghanaian survey gained a broader sample of organizations at the cost of a smaller number of interviews at each.

Comparing Ghana with Nigeria on wages (or as they phrased it, ‘salary’ and ‘income’ respectively), seems a relatively uncontroversial comparison in terms of wording and has the advantage of the two countries being neighbors. Ghanaian civil servants are certainly less satisfied with their wage (18% satisfied including neutral responses) than Nigerians (54%). The concern with comparing these to the Philippines “pay you receive for your work” (57%) is that the latter potentially anchors the respondent to their base wage, rather than additional benefits provided by their organization to all staff. Making the leap to the framing used in Indonesia (49%) and Pakistan (82%), which is relative to other ministries seems ambitious. In fact, the difference in wording may explain why Pakistan’s average is so much higher than the other countries. Ministry of Finance staff, the focus of the Pakistan survey, typically have some of the highest wages in government, making their wage relatively satisfactory compared with other ministries. However, this does not imply that a Ministry of Finance official is satisfied with their wage in a more general sense.

Comparing the data across different questions, we can correlate the extent to which satisfaction with the public sector is driven by satisfaction with wages. Within country, the correlation is surprisingly low, at 0.20 in Ghana, 0.18 in Indonesia, 0.24 in Nigeria and 0.05 in Pakistan. These are large enough to be significant (positive) predictors of overall job satisfaction and support experimental evidence such as Dal Bo et al (2013) and Ashraf et al (2015) that suggest high wages are an important part of the motivation to work in the public sector. However, they leave the vast majority of that satisfaction unexplained. While pay may be a component of the motivation of public officials, these correlations imply that other factors are also predictive. For example, whether civil servants believe they are working within a well functioning organization is more predictive of their satisfaction than income across all of our surveys.²⁵ This would support the view of Perry and Hondgeheim (2008) that civil servants are motivated by the non-monetary rewards of working within the service.²⁶

This discussion illustrates a disadvantage of the fragmented survey efforts that this paper relies on. We have been fortunate so far in that the surveys collected some variables in a relatively homogenous way allowing us to make comparisons across civil services. However, for a number of key topics such as satisfaction, the questions are sufficiently different to cast doubt on the usefulness of direct comparison. For core topics in the civil service such as the degree and nature of public official’s motivation, a system of surveys that implemented a common module would be of significant value to our undertaking comparative public administration analysis. For a consensus to be built around what the appropriate set of questions should be for the civil service setting, there is a need for experimentation with the methodology of surveying in the public sector.

Differences Between Sectors

Much of the study of the public service has been fragmented into sectors such as health, education and finance. There are large literatures on doctors and nurses, teachers, central bankers, budget officers,

²⁵In Indonesia, the adjusted R-squared of a regression of job satisfaction on a binary variable that indicates officials ‘Agree’ or ‘Strongly agree’ with the statement, “You are proud to work at your K/L” is 0.07 versus 0.03 for a similar regression on income satisfaction, with corresponding coefficients of 0.29 and 0.12. In Pakistan, the adjusted R-squared of a regression of job satisfaction on a binary variable that indicates officials ‘Agree’ or ‘Strongly agree’ with the statement, “The FBR is functioning very well” is 0.05 versus 0.00 for a similar regression on income satisfaction, with corresponding coefficients of 0.21 and 0.06.

²⁶An interesting caveat to these findings comes from Nigeria, where we have both organization-level turnover rates, as well as average levels of satisfaction across multiple domains. By regressing the latter of these on the former, we can identify the behavioural response from poor satisfaction with ‘Current job’, ‘Current income’, ‘Working conditions’, ‘Opportunities for self-improvement’ and ‘Rewards for good performance’. Which of these makes people more likely to leave an organization? Dissatisfaction with income and with rewards are the only variables that significantly predict (at the normal levels) higher turnover rates. Given the discussion above on the characteristics of individuals who transition across the service, it may be that they are more responsive to financial concerns than their colleagues.

agricultural extension agents, and so on. Much of these literatures focus on ‘street-level bureaucrats’ (Lipsky, 1980), “who interact directly with citizens on behalf of the state”, rather than the professional administrators that we focus on.²⁷ Table 5 therefore provides descriptive statistics for some of the variables presented for all bureaucrats for those officials within particular sectors. An official is allocated to a sector if their organization is determined as predominantly working within a single sector.²⁸

There are differences across sectors, and sector fixed effects are statistically significant predictors of responses at the usual levels. In terms of overall satisfaction, officials in the water and environment sector are the least satisfied bureaucrats of the sectors we study. There is more variation in satisfaction with wage and non-wage benefits, corresponding to the potential for distinct reward schemes across sectors. For example, in Nigeria both education and health have specialised pay systems.²⁹ This may be a driver in the higher satisfaction scores for wages in those sectors. Similarly, across Ghana jobs are believed to be allocated based on merit by a similar proportion of staff, though with education lagging behind the other sectors. In Indonesia, education officials are substantially more pessimistic about the merit-basis of job allocation than their colleagues in administration and finance, which reflect beliefs closer to the proportions in Ghana. Interestingly, in both Ghana and Nigeria education is one of the least vulnerable to political interference, with administration and finance the most vulnerable. Further research on what determines the vulnerability of sectors to politicisation from within or outside the civil service and how it varies across countries would be useful in understanding the phenomenon better, as would other studies that take a comparative perspective on the civil service across sectors.

The magnitude of the differences are not particularly large. Taking the table as a whole, there is a surprising degree of commonality across sectors within a country. Despite the large variations in the conditions of work we see elsewhere in the paper, the sector an official works in explains a relatively small portion of variation in the variables we study here, versus say the distribution across organizations. In Ghana, an official’s overall satisfaction with her job varies between 44% of officials in the water and environment sector and 56% of administration and finance officials. That 12 percentage point spread is the largest we see for the variable, with 8 percentage points in Indonesia and 6% in Nigeria. This is compared to a 30 percentage point difference between the 25th and 75th percentiles of Ghanaian organizations. Officials across sectors, though working on very different projects and programs, seem to be similarly satisfied with their experience of the service. Similarly, the culture of punishment seems relatively standardised across each service, with spreads of 9, 7 and 6 percentage points respectively in Ghana, Indonesia and Nigeria. There may be common aspects of the service experience across sectors that stem from the wider design of the bureaucracy.

5 Productivity in the Civil Service

Fundamentally, we care about the civil service because it is an engine of public service delivery. This may be with regard to projects, programs, regulation, or other outputs of the service, but a core concern

²⁷This widely-used terminology is a little misleading, as we have seen that core public administrators sometimes meet with members of the citizenry, for example when planning or implementing a public project, and some bureaucrats play a dual role, say an agriculture officer in a local government both planning agriculture policy as well as directing, and sometimes participating in extension services.

²⁸An underexplored area of research is the extent to which there is differential selection and experience across sectors within the service. Do those who predominantly deal with finance or healthcare differ on their underlying commitment to public service? Does their experience shape that commitment differentially? The data in the surveys at hand is not rich enough to give concrete answers to these questions, leaving room for future surveys to target these questions.

²⁹The Consolidated University Academic Salary Structure (CONUASS) is a specialised salary structure for academic staff of Federal Universities, while the Consolidated Tertiary Institutions Salary Structure II (CONTISS II) is the salary structure for non-academic staff. The Consolidated Medical Salary Structure (CONMESS) provides a specialist salary structure for medical and dental officers in the Federal Public Service, while the Consolidated Health Salary Structure (CONHESS) is a specialised salary structure for pharmacists, medical laboratory, nurses and other health workers.

must be with its productivity. To date, there is very little in the way of a common consensus as to how to measure civil service productivity, and innovations in that area would be of benefit to our understanding of the service. However, this section will aim to discuss what civil servant surveys can tell us about the drivers of civil service productivity, by using bureaucrat assessments of organizational productivity.

We begin by reporting on the factors that civil servants believe are most significant in determining the productivity of their organizations. In a number of our surveys, officials were asked what the key drivers were in their own, or their organization's, productivity. Of the 66% of officials in Ghana who believe there are objective performance standards to judge their organizations by, the average assessment of performance is that the organization is achieving those standards 75% of the time. Across organizations, the relatively normally-shaped distribution goes from 42% to 95%. They argue that the key requirements for better performance were more budgetary resources, including higher salaries, and better trained staff.

In Nigeria, officials were asked what the main reasons for public projects failing were. Only 4% of officials believed that it was because of the technical characteristics of projects. There was substantial support (31%) for a key problem being ineffective management of the project and its stakeholders. However, corruption was the leading issue, in the public sector (60% of respondents believed it was a 'main reason'), in the local community (27%), and in the private sector (17%).³⁰ While we do not have civil servants' own assessments of organizational productivity, Rasul and Rogger (2016) document independent evaluations of project implementation created by a subset of federal organizations in Nigeria and find that 38% of projects never start while 31% of projects are fully completed. They find that both management practices and civil servant assessments of the extent of corruption in an organization are significant predictors of these evaluations, in line with the claims outlined here.

In Pakistan, officials were asked whether the Federal Board of Revenue claimed that taxpayers were compliant (a key responsibility of the Board) when actually they were not. 57% of officials stated that this best described the FBR. This is in line with the findings of Khan, Khwaja and Olken (2015), who present evidence that taxation in Pakistan is a collusive bargaining game between taxpayers and tax officials. When asked why the Board was making such significant errors in compliance assessments, officials foremost pointed to mismanagement (unclear regulations, managers given unclear instructions) rather than to corruption. Political connections was stated by only 16% of officials to be significant.

A similar set of questions used in Pakistan were asked in the Philippines, with 54% of officials stating that their organization did not declare non-compliant individuals or organizations to be so in the relevant sector-specific regulations. In contrast to the Pakistani respondents however, the two main causes are said to be 'Political connections' and 'Managerial favoritism'. This distinction is in line with Fafchamps and Labonne (2016) that finds private sector outcomes in the Philippines are closely linked to an individual's political connections.

Bureaucratic Inputs

As reported by public officials, the basis of productivity in the civil service seems to be a nexus of politics, corruption and management. In contrast, the principal-agent model of the bureaucracy emphasizes that a key input to the civil service is the efforts made by civil servants. In the next sub-section we will assess the relative explanatory power of these phenomenon. Here we outline what the surveys have to say about bureaucratic effort.

³⁰The percentages add up to more than 100 as the officials were allowed to choose multiple answers. These are proportions of all respondents that chose that factor as a 'main reason'.

Three of the surveys asked officials about whether their colleagues committed an appropriate number of hours to their work. This is the closest to a measure of effort that the surveys provide, and thus we use it with the caveat that it is an imperfect proxy. Importantly, they were not asking about the *respondents* hours of work but their perceptions of *other peoples*, reducing our concern that the responses would be biased. Table 4 provides the average assessments of respondents as to the proportion of their colleagues that left work early or spent “a lot of time on personal matters (more than two hours)”.³¹ We can see that a significant proportion of civil servants do not work the full day, and the proportion is relatively stable across Indonesia, Pakistan and the Philippines. Across civil service settings, around 17% of staff are not working their contracted hours.³²

Civil servants in these three countries were also asked what proportion of civil servants’ working hours *exceeded* their contractual hours.³³ Across the board, the average proportion of staff perceived by survey respondents to be over-working exceeds those under-working by a significant margin. Table 4 indicates that over-workers make up roughly a third of civil servants. In Indonesia, roughly half of officials believed they could not be responsive to new requests because the organization was “already overloaded with work”. The majority of civil servants committed to their work are overloaded while a minority of their colleagues are shirking their basic responsibilities.

To what extent are the additional efforts of the over-workers compensation for the lack of effort of the under-workers? Evidence from Indonesia would suggest that the link is weak. Figure 4 plots the proportion of early leavers in each of the Indonesian organizations for which we have data. We see that there is wide variation in the proportion of staff said to under-work, or ‘early leavers’. We can then plot the proportion of ‘late stayers’ in an organization on the same figure (ranked by the proportion of early leavers as well) to assess whether there is a pattern of compensation. The line of best fit through the markers of late stayers is positive but shallow, with a p-value of 0.15. From this small sample of evidence, there does not seem to be a trend that civil servants are making up for the lack of effort of their colleagues. Rather, some organizations contain both few early leavers and many late stayers, and others the reverse. Better understanding the time use of public officials would allow us to assess the welfare consequences of these results.³⁴

Correlates of Productivity

We now turn to analysis akin to ‘growth accounting’, an exercise that attempts to decompose productivity into its constituent determinants. Famous examples in the macroeconomics literature are Klenow and Rodriguez-Clare (1997) and Hall and Jones (1999), who find that income differences across rich and poor countries can be most keenly explained by human capital and ‘technology’. This last term is a catch-all for management quality, the application of frontier knowledge, and anything else that cannot be explained by included variables. Bloom et al (2016) find that the organizational incentive environment accounts

³¹The exact question was, ‘On any given day, what is your best guess of the approximate percentage of others of your rank in [your organization] who stop work and leave early, or spend a lot of time on personal matters (more than two hours)? (1) 0 -10% (3) 20-30% (5) 50-100% (2) 10 -20% (4) 30-50%’.

³²In the Philippines, 40% of staff believe that “A substantial number of others at your level are not productive during work hours.” Of these staff, 40% believe that “the annual performance appraisal process identifies individuals that do not contribute.” While there is a fair chance that poor performers will be identified, this does not seem sufficient incentive to perform. This may be consistent with the fact that over 60% do not agree with the statement that “Punishments are applied to those who do the least to further the goals of the department.”

³³The exact question was, ‘On any given day, approximately what percentage of others of your rank in [your organization] continue to work past official hours? (1) 0 -10% (3) 20-30% (5) 50-100% (2) 10 -20% (4) 30-50%’.

³⁴Since the questions on effort were asked about ‘others of your rank’, we can create averages of the propensity to stay late at work at the rank-organization level in Indonesia, leaving us with 45 units of observation. To the extent that it is a meaningful exercise, we can then regress these outcomes on averages of the variables described in previous sections. We find that, even conditional on age, the longer the average length of service at an organization, the less likely officials are to stay late. The perceived prestige of the organization also has a positive impact on the proportion of late stayers.

for roughly 30% of cross-country total factor productivity differences. We now turn to the civil servants survey data to investigate the extent to which these findings are true in the public sector. The ‘factors’ we focus on are those emphasized in the growth accounting literature - physical and human capital, ‘technology’ - and those emphasized by civil servants themselves - politics, corruption and management.

To assess the correlates of productivity in the civil service, the best that a civil servant survey can do is regress estimates of civil service productivity by bureaucrats themselves on other characteristics of those bureaucrats. Since officials were asked to assess organizational productivity, we must make the organization the unit of analysis. Only in Ghana do we have both civil servants assessments of productivity (which we average at the organization level) and a sufficiently large number of organizations for quantitative analysis. Even here, we have to drop 8 of the 85 organizations as no official in the organization rated their productivity.

Specifically, the measure of productivity in Ghana is an organizational average of civil servant responses to ‘roughly to what degree are [the written performance standards of your organization] met?’ with potential answers approximating percentages. Only civil servants who knew of written standards of performance for their organization were asked this follow up question.³⁵ In the Ghana regressions I include ‘capital and noise controls’ which are measures of organization budgets and averages of assessments by the enumerators as to the reliability of the interviews at an organization.

A criticism of this approach is that civil servant reports of their organization’s productivity may not be an unbiased measure of the underlying truth. Thus, we complement the Ghana results with the use of independent audits of programs and projects undertaken at 63 of the 94 Nigerian organizations we have studied to this point. As outlined in Rasul and Rogger (2016), quantitative information was collected to measure the actual implementation success of 63 *federal* ministries and agencies. The auditors were independent teams of engineers and members of civil society who provided assessments of completion rates (from 0 to 100% completed) for over 4700 public sector projects implemented by these 63 organizations.³⁶

The unit of observation in Nigeria is therefore a project implemented by one of the 63 organizations for which we have relevant data. Focussing on the project, rather than averaging to the organization-level, allows us greater power in assessing the impact of organizational characteristics on project outcomes. To absorb some of the project-specific variation, I include project type fixed effects (whether it was a dam, building, etc.) in all of the regressions, as well as project-level characteristics that include the log of the project budget, an indicator of whether it is a rehabilitation, and an assessment of its technical complexity. For consistency with the Ghanaian regressions I include capital controls that consist of organization-level measures of the log number of employees, total budget and the capital budget. I follow Rasul and Rogger (2016) by clustering the Nigeria regressions at the project type-organization level. In Column 8 I repeat our most extensive analysis at the organization level without the project-specific controls.

Since the Nigerian productivity data has multiple observations at each organization, we can begin by assessing the extent to which organizational, and other, fixed effects explain the underlying variation in completion rates. A regression of proportion completed on project type, organization, and local

³⁵The exact questions were as follows. If an official answered positively to, “In many countries, public organizations are evaluated based on objective, measurable criteria of success, known as performance standards. An example of a performance standard for the Police might be ‘responding to 80 percent of all emergency telephone calls within 15 minutes’. Are there written standards of performance for your organization?”, they were asked “If yes, roughly to what degree are these performance standards met?” with potential answers ‘Has never (0%)’, ‘Almost no times (1-10%)’, ‘Less than half of the times (11-40%)’, ‘Around half of the times (41-60%)’, ‘More than half of the times (61-90%)’, and ‘Almost all the times (91-100%)’. The middle point of each percentage range was then applied to the respondent, and an average taken across respondents within an organization.

³⁶Further details are provided in the paper. For example, the aggregate budget for these projects is US\$800 million or 8% of all social spending in Nigeria during the study period. They are thus an important component of government activity and representative of an important component of public spending.

government fixed effects explains 49% of the variation in project completion rates. organization fixed effects on their own explain 33% of the variation. However, in an analysis of variance, the partial sum of squares on the organization variable is about half as large as that on the local government variable, which picks up both local political dynamics and constituency characteristics. These both dwarf the explanatory power of project type, bringing these results in line with the claims by Nigerian officials that technical characteristics of projects and programs do not dictate their success, but the organizational and political dynamics around them do.

Turning now to the correlations, Table 6 presents regressions of a subset of the variables we have discussed in this paper on measures of public sector productivity, at the organization level in Ghana and the project level in Nigeria. The explanatory variables chosen are those on which we have data for both Ghana and Nigeria. Columns 1 and 5 restrict analysis to basic demographics. There is little evidence of demography being an important driver of productivity. In Nigeria, the longer the average service tenure among officials, the lower their productivity; a result significant at the 10% level that disappears in all other specifications.

Columns 2 and 6 introduce measures of the experience of the service. In Ghana, the longer officials stay at an organization, the more likely they are to claim that it is productive. Postgraduate education is strongly correlated with reports of organizational productivity in Ghana, and in Nigeria the coefficients are generally positive but insignificant at the usual levels. In neither country does the gender of officials seem to correlate with organizational productivity. With regard to how job satisfaction affects productivity, the results from the two countries are divergent. Job satisfaction correlates strongly with reports of productivity in Ghana, but is potentially negatively related to actual productivity measures in Nigeria.

The contrasting findings from columns 2 and 6 question the value of bureaucrat assessments of productivity. That more tenured, educated and satisfied officials rate their organization as performing more effectively may be because they are more aware of the relevant outputs or because they are happy with their own work. These may be true drivers of productivity, but the fact that the most significant drivers of the self-reported measures of productivity turn out to be highly consistent with a positive response-bias threatens the credibility of such an approach. The challenges to interpreting the Nigeria results are not insignificant despite the productivity assessments being independently measured. Adding the additional complexity of self-assessment makes interpretation demanding.

Columns 3 and 7 extend the analysis to include measures of political interference, corruption and management, the three factors highlighted by public officials themselves as critical to productivity. One concern related to the criticisms of self-reporting is that there may be selection in which respondents provide an assessment. In our context, different proportions of officials across organizations felt there were performance standards they could judge their organization by. This may therefore lead to greater measurement error across organizations. In Column 4, we re-run the specification in Column 3 using weighted least squares, where the weights are the proportion of civil servants who make an assessments of their organization's productivity.

Interestingly, in both specifications we see a significant negative correlation between claims of political interference, and reported productivity. Even if we interpret the Ghana data as suffering from response bias, this may be one area where public officials can see a clear link. If they personally experience the detrimental effects of political interference, they may factor this in to their assessments of organizational productivity.

Given the mixed evidence arising from the analysis of self-assessments of productivity in Ghana, we might fare better by focusing on the independent measurement of civil service outputs in Nigeria. Here, we replicate the first three columns of the Ghana specifications in Columns 5 to 7 respectively. We see

relatively limited correlations between the demographic structure of the civil service or the civil servant experience with productivity. Where we see significant impacts, following the observations made by officials themselves at the start of this section, are in the areas of corruption and management.

The variable ‘frequency of observation of corruption’ is an organization average of the proportion of projects on which public officials see their colleagues “breaking service rules for their own benefit”. This is highly predictive of the proportion of a project or program that is completed at an organization. The coefficient is close to 1, indicating that a 1 percentage point increase in the average observation of corruption leads to a 1 percentage point reduction in organizational output. As has been shown in many other settings, corruption is bad for public sector productivity.

Column 7 also includes the management indices of Rasul and Rogger (2016), which follow the World Management Survey methodology described earlier. The quality of management index follows the public administration literature by splitting management into its autonomy components and its incentive components. The autonomy index captures the extent to which bureaucrats input into policy formulation and implementation processes, and the flexibility with which bureaucrats can be reorganized to respond to best practice and project peculiarities. The incentives/monitoring based management index captures the extent to which an organization collects indicators of project performance, how these indicators are reviewed, and whether bureaucrats are rewarded for achievements reflected in these indicators. Though the Ghana survey did not follow the WMS methodology, I have created proxies for these two indices from the Ghana survey that align as closely to the WMS questions as possible.

We see that in both Ghana and Nigeria, the coefficient on the autonomy index is positive, and the coefficient on the incentives index is negative, with the coefficients in Nigeria being significant at the 1% level. Rasul and Rogger (2016) interpret the negative effects of the incentive index through the lens of public sector incentive theory. They argue that bureaucrats might need to exert multiple effort types, not all of which are measurable, and performance incentives shift their efforts towards the contractable elements of public projects at the cost of the project as a whole. Management matters in the public sector.

Interestingly, the Nigeria results do not echo those of Ghana on political interference, and the coefficients are in fact positive. The idea of ‘political interference’ being positive is theoretically plausible. The legislature is supposed to keep track of, and discipline the executive when it is not performing. It is only when legislatures overstep their responsibilities and intervene in processes that are supposed to be politically neutral, might there be negative consequences (though of course they could still be informally coaching bureaucrats to perform). The question underlying the Ghanaian measure of political interference focuses on personnel decisions, perhaps an area of civil service business that should have no political interference. The question underlying the Nigerian measure is broader, asking “In what proportion of the projects [that you have worked on for this organization] have [relevant politician] intervened in the implementation of a project?” This could be for both positive and negative reasons.

Given the comparatively rich nature of the Nigeria survey, we can tease apart this difference by looking at variables that do not have comparators in the Ghana data. The extent to which political interference is informal, rather than undertaken through formal processes such as legislative committees, might be proxied by the *personal* engagements public officials have with politicians. The Nigeria questionnaire asked officials to “Think about recent projects and/or programmes you worked on for this organization. How often, if at all, do you *personally* engage with members of the following groups in the work that you do?” (emphasis in original). The questionnaire then listed federal, state and local politician as options. Column 9 of Table 6 includes averages of these measures for each organization.

In the specification of Column 9, the results on corruption and management continue to hold, but

we can now reinterpret the variable on the frequency of political interference as ‘formal’ involvement in the project cycle conditional on three measures of informal involvement. The coefficient on formal involvement is strongly positive, echoing the belief that politicians who work through formal channels can be a check and balance on the executive. The variables on politicians informal involvement in the project cycle are all negative, and a test of joint significance has a p-value of 0.02. However, the dominant effect arises from political interference by federal politicians, who are likely to have most control over the federal bureaucrats working in the 63 organizations we study in this sub-section. The coefficient on informal involvement is -1.4, such that a 1 percentage point increase in informal interactions between bureaucrats and politicians implies a greater than 1 percentage point reduction in bureaucratic productivity.

Together, the results mirror the opinions of public officials, that corruption, management and politics are all key aspects of the civil service environment impacting on productivity. We in fact see little evidence that the specific make up of civil servants has large impacts on productivity, but rather it is the broader incentive environment they are immersed that matters.

Overall, these correlations cannot be directly interpreted as causal in a wholesale way. For example, the relationship between staff capacity and productivity is certainly more complex than that reflected in Table 6. As reflected in the recent literature on the public service, experimental or quasi-experimental evidence provides more credible estimates of the linkages between specific aspects of service life. However, the picture painted in this section and the paper more widely present a structure in which to evaluate the significance of any individual result. Similarly, “experimental evidence on mid-level bureaucrats remains scarce” (Finan et al, forthcoming) and so such work will not provide a ‘thick description’ of the civil service in the developing world for many years. Further collection of representative surveys of civil servants will allow us to better understand where the largest gains to intervention might be within the civil service, and act as a reality-check on the consequences of insights gathered from other research methods.

6 Conclusion

This paper presents descriptive statistics from eight surveys of civil servants undertaken across six countries with a combined population of three-quarters of a billion people. They illustrate the nature of bureaucracy in the developing world and present an opportunity to better understand the environment and experience of public officials who are central to serving the world’s poorest people.

Five Stylized Facts

To summarize the discussion presented in the paper, I proffer five ‘stylized facts’ of the civil service in the developing world:

FACT ONE. The civil service is a highly varied place. In each of the surveys we analyse, there is substantial heterogeneity on a number of key margins from physical and human capital to the extent of political interference in the daily work of the service. Operational work that attempts to undertake reforms within a single service must therefore map that variation and understand the heterogeneous ways in which the service will respond to any reform efforts. Similarly, along a number of dimensions, we see stark distinctions between civil services across countries. As such, understanding what drives commonalities and differences between services seems to be a rich research agenda.

FACT TWO. The experience of the civil service is highly localized. Neighbouring local governments or federal organizations can have management practices that are at the 10th and 90th percentile of

management in the country. Neighbouring civil servants can use distinctive means to further their careers. Reform initiatives might therefore be built such that they can be automatically targeted to local conditions. For example, creating an incentive-compatible menu of options into which organizations self-select (like firms offering a menu of options to consumers) provides the best chance of it being appropriate for the organization's particular needs.

FACT THREE. The organization plays a critical role in the experience of the civil servant. Throughout this paper we have seen examples of where organizations seem to play an important part in determining the experience of the official and her productivity. There are limited transitions of civil servants across organizations, making the organization's characteristics a key determinant of the civil servant's working life. Creating mechanisms through which reformers, including civil servants throughout an organization, can influence the design of that organization will facilitate a motivating environment for public officials. Understanding the workings of the internal labor market of the service would seem a first order focus of research.

FACT FOUR. The stock of human capital within the service is highly persistent. Consistent with the employment protections that are afforded civil servants (so as to protect them from political interference), we observe civil servants spending much of their working life in the civil service, working with similar colleagues. Identifying how to optimize the productivity of existing civil servants will be key to the effectiveness of the public sector.

FACT FIVE. Non-market forces determine the incentives of civil servants. Though pay and performance-linked bonuses may be a factor in civil servant performance, there appear to be a variety of other forces generating incentives within the bureaucracy. Correlations with productivity measures presented here imply that management structures and political engagements are of particular importance. This claim has been made by many other researchers, and we find evidence for it in our assessments of the nature of civil service work, motivational concerns and political interference.³⁷ How to create institutions that harness these incentives for improved service delivery would seem to be under-studied.

These observations have precedents in existing literature such as Gingerich (2013) that emphasizes the within-country variation in the capacity of state agencies. They also find support in cross-country data sets, on which most of the existing literature has been based. For example, in the Quality of Government Expert Survey 2015, country experts were asked the extent to which they agreed with the statement, 'Once one is recruited as a public sector employee, one remains a public sector employee for the rest of one's career' on a scale from 1 (hardly ever) to 7 (almost always). 77% of countries fall into the middle grouping (4) or above, emphasizing the persistence of human capital in the service and the relevance of fact four. At the same time, the countries in the Quality of Government data span all seven categories, emphasising fact one.

The future of surveying in this field lies partly in identifying where commonalities, such as these facts, apply, and where they do not. As a complement to expert surveys, analysis of administrative data, and experiments, civil servants surveys provide both the breadth and depth of description required for such differentiation. Using civil servants surveys to generate more data on the micro-characteristics of civil servants will build our capacity to identify which aspects of the service are stylized within a country, or across the world, and which aspects are more mutable. Much of this paper has struggled with the distinct approaches to data collection taken by the surveys we have studied. However, their individual strengths have highlighted routes to better surveys.

³⁷Motivational concerns, political interference and the nature of civil service work may make bureaucratic organizations even more 'islands of conscious power' than bureaucracies within the private sector. As Aghion and Holden (2012) quote, "In his famous essay, Coase (1937) quotes the description of D. H. Robertson (1928, p. 85) that firms are 'islands of conscious power in oceans of unconsciousness like lumps of butter coagulating in buttermilk.'"

The Route to Better Surveys

As indicated by the paucity of data on organizations themselves in section 3, the unit of observation in any surveying effort should at least be the organization and the individuals inside it, or a representative sample of them. A more refined surveying effort would also try to understand how the unit fits within the department, and the department within the organization. Beyond these, surveys that better mapped how different organizations related and supported, or constrained, each other would be of substantial benefit to our understanding of the architecture of the service.

There are a host of topics that were not addressed in this paper due to their absence in the underlying surveys. What is the level of teamship or cohesion between officials? Do what extent do people become socially connected as they move through the service? Who do they go to resolve a problem, and to what extent are these vertical or horizontal relationships? Each reader will have their own concerns over what was excluded. Beyond individual topics, surveying should also focus on the interconnectedness or 'system' nature of the civil service. If an official takes an action in one part of the service, its effects can ripple through the bureaucracy. For example, once an official in one part of the public service breaks a *de jure* public service rule and goes unpunished, this changes the *de facto* understanding of a common policy of punishment around that rule. Similarly, how does my behaviour change if the service culture emphasizes the importance of hierarchy and I see that behaviour exemplified in my colleagues' actions?

As a complement to setting-specific modules, a system of coordinated common modules would facilitate inter-survey comparison. The commonalities of the service documented here would imply that there is scope for us to ask some of the same questions to all civil servants, and as argued above the lack of existing data would encourage such comparisons. Common modules would have significantly reduced the need for discussion in this paper over comparability. There is work to be done on what should be in these common modules, and how to ask them, and experimentation should be embedded in new surveys that allow us to better understand how to survey civil servants.

Beyond common modules, a common approach to collecting data on productivity across services would be of immense benefit to our understanding of the comparative quality of government. I have argued that this should not simply be self-reported within the survey. Given the process nature of much of civil service work, the likelihood is that this productivity data would need to take the form of performance audits, such as those undertaken in Ghana in Rasul et al (2017). To facilitate the analysis of these productivity measures, a common framework for collecting data on physical and human capital across settings would allow for commonalities in the control variables used for productivity decomposition. These measures could also be used as a common benchmark for the basics of what a civil service requires to function - electricity most of the time, computers for key staff, and internet connectivity at least some of the time each week, as well as the ability to use computers and an understanding of what the internet offers for supporting service delivery. Such measures could be as basic as whether a unit has a basic filing system.

Beyond any single survey, panel data would allow us to better understand the dynamics of the service. For example, following the cadre of officials who move most frequently across the service would provide us with insights on the productivity impacts of their migrations. This will require long-term relationships with governments eager to understand such dynamics in a representative and rigorous way. Similarly, linking surveys of public administration officials with those of frontline public service staff (such as the World Bank's Service Delivery Indicators), and even with citizen or public service user surveys would provide an integrated framework in which to understand the 'flow' of governance through the individuals who organize, deliver, and consume it.

Some of the surveys reported on in this paper have some of these features, but none had all. There is ample scope to transform our understanding of the civil service in the years to come with a second generation of civil servants surveys. Given the current state of research on the subject, better understanding the civil service is likely to have more significant welfare consequences than almost any other topic.

References

ACEMOGLU, D., S.JOHNSON AND J.A.ROBINSON (2005) "Institutions as a Fundamental Cause of Long-Run Growth" Chapter 6 of AGHION, P. AND S.N.DURLAUF (2005) "Handbook of Economic Growth, Volume IA" Amsterdam: Elsevier

ASHRAF, N., O.BANDIERA AND S.LEE (2015) "Do-Gooders and Go-Getters: Career Incentives, Selection, and Performance in Public Service Delivery," HBS Working Paper. Available at http://www.hbs.edu/faculty/Publication%20Files/doGooders_Mar2015_0eb31759-32ca-47c1-a8ce-be1f790efd50.pdf

BADDOCK, E., P.LANG AND V.SRIVASTAVA (2016) 'Government Wage Bill and Employment', Data set downloaded on 29th November 2016 from <http://www.worldbank.org/en/topic/governance/brief/size-of-the-public-sector-government-wage-bill-and-employment>

BANERJEE, A.V. AND E.DUFLO (2007) "The Economic Lives of the Poor," *Journal of Economic Perspectives* 21(1): 141-167

BANERJEE, A.V., R.CHATTOPADHYAY, E.DUFLO, D.KENISTON AND N.SINGH (2016) "Can Institutions be Reformed from Within? Evidence from a Randomized Experiment with the Rajasthani Police," MIT Working Paper. Available at <http://economics.mit.edu/files/7783>

BANURI, S. AND P.KEEFER (2013) "Intrinsic motivation, effort and the call to public service," *World Bank Policy Research Working Paper*. Available at <http://documents.worldbank.org/curated/en/860121468181781095/pdf/WPS6729.pdf>

BARKAN, J., A.GBOYEGA AND M.STEVENS (2001) "State and Local Governance in Nigeria," *World Bank Report No.24477-UNI*, Washington D.C.: The World Bank. Available at <http://documents.worldbank.org/curated/en/2002/07/1977229/nigeria-state-local-governance-nigeria>

BECK, T., G.CLARKE, A.GROFF, P.KEEFER AND P.WALSH (2001) "New tools in comparative political economy: The Database of Political Institutions," *World Bank Economic Review* 15 (1): 165-176

BEST, M., J.HJORT AND D.SZAKONYI (2017) "Individuals and Organizations as Sources of State Effectiveness, and Consequences for Policy Design," *CEPR Working Paper*. Available at http://cepr.org/active/publications/discussion_papers/dp.php?dpno=11968

BETRAND, M., R.BURGESS, A.CHAWLA AND G.XU (2015) "Determinants and Consequences of Bureaucrat Effectiveness: Evidence from the Indian Administrative Service" Unpublished

BETEILLE, T. (2009) "Absenteeism, transfers and patronage: The political economy of teacher labor markets in India" Ph.D. Thesis submitted to Stanford University

BLOOM, N. AND J.VAN REENEN (2007) "Measuring and Explaining Management Practices Across Firms and Countries," *Quarterly Journal of Economics* 122: 1351-1408

BLOOM, N. AND J.VAN REENEN (2010) "New Approaches to Surveying Organizations," *American Economic Review* 100: 105-9

- BLOOM, N., R.SADUN AND J.VAN REENEN (2012) "The Organization of Firms Across Countries," *The Quarterly Journal of Economics* 127:1663-1705
- BLOOM, N., R.SADUN AND J.VAN REENEN (2016) "Management as a Technology?" NBER Working Paper No. 22327. Available at <http://www.nber.org/papers/w22327>
- BRILLIANTES, A. AND J.SONCU (2010) "Civil Service Reforms in the Philippines: Its Many Faces, Leadership, and Politics" In SUK KIM, P. (ed.) (2010) "Civil Service Systems and Civil Service Reform in ASEAN Member Countries and Korea" Seoul: Daeyoung Publishing
- CALLEN, M., S.GULZAR, A.HASANAIN, Y.KHAN AND A.REZAEI (2014) "Personalities and Public Sector Performance: Evidence from a Health Experiment in Pakistan," UCLA Working Paper. Available at <http://www.nber.org/papers/w21061.pdf>
- CALLEN, M., S.GULZAR, A.HASANAIN AND Y.KHAN (2015) "The Political Economy of Public Employee Absence: Experimental Evidence from Pakistan," Mimeo
- CENTER FOR SYSTEMIC PEACE (2015) "Polity IV Dataset," Data set downloaded on 29th November 2016 from <http://www.systemicpeace.org/inscrdata.html>
- CENTRE FOR THE STUDY OF AFRICAN ECONOMICS (1998) "Comparative firm-level data for the manufacturing sector," Data set downloaded on 31st May 2016 from <http://www.csae.ox.ac.uk/datasets/cfd/cfd-main.html>
- CORPORACION ANDINA DE FOMENTO (2016) "A more effective State Capacities for designing, implementing and evaluating public policies," Bogotá, Colombia: CAF. Available from <http://www.iri.usp.br/documentos/RED/RED2015-english-VF.pdf>
- DAL BO, E., F.FINAN AND M.A.ROSSI (2013) "Strengthening State Capabilities: The Role of Financial Incentives in the Call to Public Service," *Quarterly Journal of Economics* 128:1169-1218
- DANIEL, J., J.DAVIS, M.FOUAD AND C.V.RIJCKEGHEM (2006) "Fiscal Adjustment for Stability and Growth," Washington DC: IMF
- EGHAN, B. (2008) "Enhancing the Performance of the Public Service in a Developmental State: Ghana Case Study", Paper presented at the 30th African Association for Public Administration and Management Annual Roundtable Conference in October 2008 in Accra, Ghana
- EVANS, P. AND J.E.RAUCH (1999) "Bureaucracy and Growth: A Cross-National Analysis of the Effects of 'Weberian' State Structures on Economic Growth," *American Sociological Review* 64: 748-765
- FAFCHAMPS, M. AND J.LABONNE (2016) "Do Politicians' Relatives Get Better Jobs? Evidence from Municipal Elections," Mimeo
- FINAN, F., B. OLKEN AND R. PANDE (forthcoming) "The Personnel Economics of the State" *Handbook of Field Experiments*.
- FINER, S.E. (1999) "The History of Government from the Earliest Times: Ancient Monarchies and Empires; The Intermediate Ages; Empires, Monarchies and the Modern State (3 Volume Set)" Oxford: Oxford University Press
- GILL, D. (2002) "Signposting the Zoo – from Agencification to a More Principled Choice of Government Organizational Forms," *OECD Journal on Budgeting* 2: 27-80
- GINGERICH, D. (2013) "Governance Indicators and the Level of Analysis Problem: Empirical Findings from South America," *British Journal of Political Science* 43(3): 505-540

- GULZAR, S. AND B.PASQUALE (2016) "Politicians, Bureaucrats, and Development: Evidence from India," *American Political Science Review* (forthcoming)
- IMTIAZ, S.A. (2013) "A Study on the Civil Service Structure, Civil Servants Training and an Overview of National Commission of Government Reforms in Pakistan," Peshawar: BMZ
- IYER, L. AND A.MANI (2012) "Traveling Agents: Political Change and Bureaucratic Turnover in India," *Review of Economics and Statistics* 94: 723-739
- KAUFMANN, D., A.KRAAY AND M.MASTRUZZI (2010) 'The Worldwide Governance Indicators: A Summary of Methodology, Data and Analytical Issues,' World Bank Policy Research Working Paper No. 5430. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1682130
- LEMONS, R. AND D.SCUR (2016) "A snapshot of mid-sized firms in Africa, Asia and Latin America," Mimeo
- LEWIS-FAUPEL, S., Y.NEGGERS, B.A.OLKEN AND R.PANDE (2016) "Can Electronic Procurement Improve Infrastructure Provision? Evidence from Public Works in India and Indonesia," *American Economic Journal: Economic Policy* 8(3): 258-83.
- LIENERT, I. (2009) "Where Does the Public Sector End and the Private Sector Begin?" Washington DC: IMF
- MANNING, N., R.MUKHERJEE AND O.GOKCEKUS (2000) "Public Officials and their Institutional Environment: An Analytical Model for Assessing the Impact of Institutional Change on Public Sector Performance," World Bank Policy Research Working Paper No. 2427, Washington D.C.: The World Bank.
- MEYER-SAHLING, J. AND K.SASS MIKKELSEN (2016) "Civil Service Laws, Merit, Politicization, and Corruption: The Perspective of Public Officials from Five East European Countries," *Public Administration* 94(4): 1105-1123
- FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA: MINISTRY OF CIVIL SERVICE (2013) "The Civil Service Reform Program in Ethiopia," Addis Ababa: Federal Democratic Republic of Ethiopia
- NORTH, D.C. (1990) "Institutions, Institutional Change, and Economic Performance," New York: Cambridge University Press, New York
- PERRY, J.L. AND A.HONDEGHEM (2008) "Building Theory and Empirical Evidence about Public Service Motivation," *International Public Management Journal* 11(1):3-12
- PILICHOWSKI, E. AND E.TURKISCH (2008) "Employment in Government in the Perspective of the Production Costs of Goods and Services in the Public Domain," Working Papers on Public Governance, Paris: OECD
- PRASOJO, E. (2010) "A Review of Civil Service System and Civil Service Reform in Indonesia" In SUK KIM, P. (ed.) (2010) "Civil Service System and Civil Service Reform in ASEAN Member Countries and Korea" Seoul: Daeyoung Publishing
- RASUL, I. AND D.ROGGER (2016) "Management of Bureaucrats and Public Service Delivery: Evidence from the Nigerian Civil Service," *The Economic Journal* (forthcoming)
- RECANATINI, F. (2003) "Overview of Governance Assessment Tools," Mimeo. Available from <http://www1.worldbank.org/publicsector/anticorrupt/CoreCourse2005/OverviewGovAssTools.pdf>
- REPUBLIC OF THE PHILIPPINES (2010) "Inventory of Government Personnel," Manila: Republic of the Philippines. Available from <http://www.csc.gov.ph/2014-02-21-08-25-45/2014-02-21-08-26-09/2014-06-30-06-55-58>

RASUL, I., D.ROGGER AND M.WILLIAMS (2017) "Management and the Effective Functioning of Bureaucracies: A Scientific Replication," Mimeo

ROGGER, D. (2014) "The Causes and Consequences of Political Interference in Bureaucratic Decision Making: Evidence from Nigeria" Mimeo

TEORELL, J., S.DAHLBERG, S.HOLMBERG, B.ROTHSTEIN, A.KHOMENKO AND R.SVENSSON (2016) 'The Quality of Government Standard Dataset, version Jan16,' University of Gothenburg: The Quality of Government Institute. Data set downloaded on 29th November 2016 from <http://www.qog.pol.gu.se> doi:10.18157/QoGStdJan16

UNITED NATIONS, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS, POPULATION COMMISSION (2015) "World Population Prospects: The 2015 Revision," Data set downloaded on May 24th 2016 from <http://esa.un.org/unpd/wpp/DataQuery/>

UNITED NATIONS, WOMEN (2014) "Progress of the World's Women 2015-2016," New York: UN. Available at http://progress.unwomen.org/en/2015/pdf/UNW_progressreport.pdf

UNITED NATIONS DEVELOPMENT PROGRAMME (2014) "Education for All Global Monitoring Report: Teaching and Learning– Achieving Quality for All," Paris: UNESCO

UNITED STATES OFFICE OF PERSONNEL MANAGEMENT (2015) "Federal Employee Viewpoint Survey Results Technical Report," Washington, DC: US Federal Government. Available at https://www.fedview.opm.gov/2015FILES/2015_OPM_Technical_Report.pdf

WORLD BANK/INDEPENDENT EVALUATION GROUP (2008) "Public Sector Reform: What Works and Why? An IEG Evaluation of World Bank Support," Washington: World Bank

WORLD BANK (2016) 'World Development Indicators', Data set downloaded on 31st May 2016 from <http://data.worldbank.org/data-catalog/world-development-indicators>

WORLD BANK (2016) "World Development Report 2016: Digital Dividends" Washington: World Bank

WORLD BANK (2017) "World Development Report 2017: Governance and the Law" Washington: World Bank

Table 1: Surveys of Civil Servants

Country	Survey	Authors	Year	Units of observation	Sample	Sample size	Response rate
Ethiopia	Woreda and City Benchmarking Survey V	World Bank Group	2012/3	Organisation	Local governments excluding Somali Region	248	100%
Ethiopia	Staff Turnover Study	World Bank Group	2013	Organisation	Federal organisations (10) and regional (48) and local (368) governments	426	96%
Nigeria	Nigerian Survey of Civil Service Organisations	Daniel Rogger	2010	Organisation	Federal social sector organisations (65) and state (11) and local (18) governments	94	100%
Ghana	Governance and Anti-Corruption Survey	World Bank Group	2000	Civil servant	Public officials of technical grades in central ministries, departments and agencies (631), public service institutions (329) and quasi-government organizations (94)	1,054	n.a.
Indonesia	Public Employee Survey of Bureaucracy Reform	Philip Keefer and Sheheryar Banuri	2012	Civil servant	Civil servants at grades IVa, IIIa and IIIc from 14 ministries	3,800	95%
Nigeria	Nigerian Survey of Civil Servants	Daniel Rogger	2010	Civil servant	Civil servants above grade 7 in federal social sector organisations (4,339) and state (434) and local (857) governments	5,630	99%
Pakistan	Federal Board of Revenue Staff Survey	Philip Keefer	2014	Civil servant	Public officials between grades 17 and 21 in the regional tax offices of the Federal Bureau of Revenue in Karachi, Lahore, Faisalabad and Islamabad	539	37%
Philippines	Philippines Public Sector Survey	Sheheryar Banuri and Zahid Hasnain	2013/4	Civil servant	Civil servants above grade 11 in bureaus of: Internal Revenue; Treasury; and, departments of: Budget and Management; Finance; Trade and Industry; Labor and Employment; Environment and Natural Resources	2,573	100%

Notes: n.a. indicates that data was not available. Year indicates the year in which fieldwork for the corresponding survey was undertaken. Sample indicates the target organisations and grades within the public sector. The definition of the civil service varies across countries but across the surveys described here the focus is on the body of professional public administrators. Response rate indicates the realised sample as a percentage of those requested to respond. The sampling strategy in all studies was akin to stratified random sampling, typically by organisation type (central, intermediate and local). In the Ethiopia studies, local governments sampled in Somaliland were not representative of the wider region due to security concerns and so this region has been dropped from the analysis.

Table 2: Country Characteristics

	(1) Ethiopia	(2) Ghana	(3) Indonesia	(4) Nigeria	(5) Pakistan	(6) Philippines
The Nation						
Political regime	Parliamentary	Presidential	Presidential	Presidential	Assembly-Elected President	Presidential
Polity IV score	-3	8	9	7	7	8
Federal or unitary	Federal	Unitary	Unitary	Federal	Federal	Unitary
Land area covered (sq. km)	1,100.0	227.5	1,811.6	924.0	770.9	298.2
Population (m)	99.4	27.4	257.6	182.2	188.9	100.7
GNI per capita, Atlas method (current US\$)	590	1,480	3,440	2,820	1,440	3,540
The Bureaucracy						
Public Sector Size as a Percent of Total Employment	0.22	0.05	0.09	0.14	0.07	0.08
Wage bill as a proportion of government expenditure	0.31	0.36	0.32	0.29	0.04	0.26
Compression ratio	-	-	1.4	-	2.3	3.7
Rauch and Evans (1999) Score	-	-	-	3	11	6
WGI Government Effectiveness Score	29	45	46	17	27	58
Transparency International Corruption Perception: Public Officials/Civil Servants	35	59	79	69	81	64

Notes: Population, income per capita and land area are from the World Bank's World Development Indicators 2016 and reflect data from 2015. Political regime is an indicator of the executive system from the Database of Political Institutions 2012, from which is also drawn the indicator of whether the country is a federal or unitary state. This latter indicator is not provided for all years and so the most recent data is used. The polity score is taken from the Polity IV data set and is a composite of positive democratic indicators and negative autocratic indicators that ranges from +10 (strongly democratic) to -10 (strongly autocratic). Size of government, wage bill and compression ratio figures are drawn from the World Bank's 'Worldwide Bureaucracy Indicators' data set and associated (unpublished) analysis. The compression ratio is the ratio of the average total compensation of a senior government figure (a judge) and the average total compensation of a secretary. Figures are averages of available years, which vary across countries. Rauch and Evans (1999) published a "Weberianness" Scale based on expert surveys ranging from 1 (least Weberian) to 13.5 (most Weberian). The Government Effectiveness Score is taken from the Worldwide Governance Indicators, 2016 Update and reflect data from 2015. The number shown is the country's percentile rank among all countries (ranges from 0 (lowest) to 100 (highest)) on an index that "Reflects perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies." Transparency International's corruption perception indicator is the percentage of people surveyed in a country that believe public officials/civil servants are 'corrupt or extremely corrupt'. Figures rounded to two significant figures where relevant.

Table 3: The Bureaucratic Environment

Means and standard deviations

	(1) All	(2) Nigeria - Federal	(3) Nigeria - State	(4) Nigeria - Local	(5) Ethiopia - Federal	(6) Ethiopia - Region	(7) Ethiopia - Local
Land area covered (sq. km, thousands)	456.71	924	31.5	1.87	1100	88.6	-
		[-]	[21.7]	[1.64]	[-]	[93.1]	[-]
Population being served (millions)	43.03	159	3.15	0.18	87.6	8.16	0.1
		[-]	[2.17]	[0.1]	[-]	[10.1]	[0.06]
Organisation budget (USD, millions)	167.92	51.4	625	9.83	-	194	20.2
		[122]	[251]	[4.09]	[-]	[167]	[12.5]
Number of civil servants in organisation	863	1,250	-	646	1,995	195	141
		[2582]	[-]	[-]	[2443]	[301]	[245]
Proportion of staff female	0.40	0.35	0.46	0.33	0.43	0.44	0.39
		[0.14]	[0.19]	[0.23]	[0.1]	[0.55]	[0.56]
Span of control	7.12	1.46	0.9	2.69	12.4	9.68	15.6
		[1.00]	[1.05]	[1.60]	[13.5]	[14.3]	[29.6]
Staff turnover rate	0.08	0.07	0.07	0.04	0.09	0.09	0.11
		[0.05]	[0.04]	[0.05]	[0.1]	[0.17]	[0.23]
Proportion of staff with access to computer	0.17	0.38	0.32	0.06	-	-	0.08
		[0.30]	[0.33]	[0.15]			[0.12]
Proportion of days on which internet functions	0.28	0.57	0.42	0.03	-	-	0.21
		[0.35]	[0.43]	[0.12]			[0.27]
World Management Survey score	-	0.11	-0.42	-0.19	-	-	-
		[0.28]	[0.47]	[0.28]			
<i>WMS operations score</i>	-	0.12	-0.38	-0.28	-	-	-
		[0.29]	[0.44]	[0.29]			
<i>WMS monitoring score</i>	-	0.09	-0.4	-0.09	-	-	-
		[0.44]	[0.72]	[0.33]			
<i>WMS targets score</i>	-	0.1	-0.39	-0.06	-	-	-
		[0.49]	[0.62]	[0.47]			
<i>WMS incentives score</i>	-	0.13	-0.62	-0.09	-	-	-
		[0.58]	[0.59]	[0.61]			
Number of organisations	520	65	11	18	10	48	368

Notes: Standard deviations are in parentheses. The column 'All' provides an average of the average of the columns within each country cluster. All Ethiopia statistics exclude the Somali region. For Nigeria, staff numbers and budgets are drawn from administrative data accessed whilst preparing the surveys and for Ethiopia budget numbers are taken directly from administrative data. All statistics using administrative data use the most recently collected before the survey. For example, population data is from the most recent Census (2006 in Nigeria; 2007 in Ethiopia). Number of civil servants in organisation is a count of the total number of staff (including professional and support) in an organisation but excluding externally-based staff whose contracts may be administered there, such as teachers. One of the Nigerian federal organisations, the National Youth Service Corps, includes youth interns in its staffing numbers, and therefore is excluded when computing the federal statistic. The local budget figures are for all available governments, for Ethiopia do not include Addis Ababa given the distinct financing arrangements of the capital administration area, and do not include intergovernmental transfers flowing directly to service providers. Staff turnover figures do not include contract staff. Proportion of staff with access to a computer is assessed in Nigeria by the question, "Out of every ten [10] officers above SGL 7, how many have access to a computer (desktop or laptop)?" and in Ethiopia by the question, "How many staff members have a computer to perform their tasks?", which is then divided by the total number of staff. Proportion of days on which internet functions is assessed in Nigeria by the question, "Out of the five [5] working days, how many hours is their internet access good enough to check e-mail?" and in Ethiopia by the proportion of time managers report having access to Woreda Net or School Net, the government information networks. This measure includes a set of organisations for which there is no internet access and for whom this variable takes the value 0. The 'World Management Survey' scores are means of z-scores formed from sets of questions relating to operations, monitoring, targets and incentives, or all of these in the case of the aggregate score. Figures rounded to two significant figures where relevant.

Table 4: The Characteristics of Civil Servants

Means and standard deviations

	(1) All	(2) Ghana	(3) Indonesia	(4) Nigeria	(5) Pakistan	(6) Philippines
Basic Descriptives						
Sex [female=1]	0.39	0.27	0.42	0.37	0.21	0.67
<i>Managers sex [female=1]</i>	0.34	0.2	0.39	0.32	0.2	0.59
Span of control	3.16	1.59	-	1.23	-	6.65
Age (years)	43.60	43.5	41.5	-	41.5	47.9
Years in service	16.9	[9.12]	[9.97]	[-]	[9.07]	[9.79]
Years at current organisation	14.3	15.5	15.6	16.8	14.8	21.8
		[9.91]	[9.97]	[8.96]	[9.45]	[9.93]
		12.1	14.8	12.7	13.4	18.6
		[8.94]	[9.89]	[9.05]	[9.52]	[10.4]
Highest qualification [postgraduate=1]	0.42	0.20	0.35	0.27	0.76	0.53
Career Progression						
Selection is based on merit [agree=1]	0.66	0.84	0.75	-	0.39	-
Jobs are allocated based on merit [agree==1]	0.46	0.6	0.45	0.42	0.37	-
Promotions are based on merit [agree=1]	0.68	0.87	0.89	-	0.22	0.75
Criteria for advancement (prop. rating important)						
<i>Merit</i>	0.76	0.75	0.9	-	0.61	0.76
<i>Tenure</i>	0.67	0.67	-	-	-	-
<i>Connections</i>	0.29	0.25	0.39	-	0.17	0.35
<i>Bribes</i>	0.06	0.12	0.1	-	0.01	0.02
Experience of the Service						
It is prestigious to work for my department [agree=1]	0.61	0.71	0.53	-	0.46	0.72
Proud to work in civil service [agree=1]	0.68	0.49	0.89	-	0.66	-
Most people can be trusted [agree=1]	0.65	-	0.66	-	0.56	0.72
Punishments are applied appropriately [agree=1]	0.51	0.45	0.75	0.72	0.23	0.39
Frequency of political interference	0.38	0.13	-	0.77	-	0.25
Job Satisfaction						
Satisfied with job [satisfied=1]	0.75	0.53	0.85	0.89	0.71	-
<i>Women</i>	0.76	0.52	0.86	0.87	0.78	-
<i>Men</i>	0.75	0.53	0.85	0.9	0.7	-
Satisfied with wage [satisfied=1]	0.52	0.18	0.49	0.54	0.82	0.57
Satisfied with other (non-wage) benefits [satisfied=1]	0.38	0.22	-	0.54	-	-
Bureaucratic Effort						
Proportion of staff not working full day	0.17	-	0.15	-	0.22	0.14
Proportion of staff exceeding full day's work	0.32	-	0.35	-	0.29	0.31
Number of officials (organisations)	13,591 (204)	1,049 (85)	3,800 (14)	5630 (94)	539 (4)	2,573 (7)

Notes: Standard deviations are in parentheses. The column 'All' provides an average of the average of the columns within each country cluster. Statistics are unweighted, such that each of the officials described in the table are counted equally. Ethiopia is not included in this table due to the surveys undertaken there being organisation-level rather than individual-level surveys. Span of control is the number of non-managers in the data set divided by the number of managers. The surveys differed on how they assessed whether selection, job allocations, promotions and punishments were based on merit, though in all cases binaries were constructed with 'Agree' or 'Strongly Agree' coded as 1. On selection, Indonesian and Pakistani officials were asked to assess, "The selection process identifies the best people for the job". On jobs, they responded to, "In nearly all cases, jobs in the [civil service] are assigned based only on the results of that selection process". On punishments, "These punishments are applied to those who do the least to further the goals of the [department/organisation]". In Indonesia, Pakistan and the Philippines, the relevant question on promotion was "Rewards/Promotions go to those who work hard to further the goals of [the department/organisation]". In Ghana the relevant questions were "Did interviews and written examinations determine the selection for your position?", "Personnel management decisions are completely fair", "In the past three years, have elected officials, their appointees, or political party officials tried to influence any hiring decisions and or promotions in your organization?" and "Disciplinary actions have been impartially applied to necessary cases". In Nigeria, jobs were assessed by an assessment of the frequency of jobs being determined by 'special requests' and punishments by, "Do you expect to be held accountable for breaking the Public Service Rules?". The criteria for advancement are summaries of questions that asked officials to choose the most important criteria for advancement. The frequency of political interference is an indicator of the extent to which officials believe that politicians interfere in the working of the civil service (such as in procurement or project design issues) though the time periods varied from "the last three years" in Ghana, through "recent projects you have worked on" in Nigeria, to contemporary experience in the case of the Philippines. The measures of satisfaction in Ghana are binary variables that takes the value 1 if the respondent states they are 'Neutral', 'Agree' or 'Completely Agree' with the statements "Working in the public sector is generally better than working in the private sector", "My salary is very satisfactory" and "My other benefits (pension, health, etc.) are very satisfactory". In Indonesia and Pakistan, the indicator 'Satisfied with job' takes the value 1 if the official responds 'Neither Better Nor Worse', 'Better' or 'Much Better' to "How do you compare [your organisation] as a place to work with private sector firms that are in a similar area as [your organisation]?". The variable 'Satisfied with wage' takes the value 1 if the official responds 'Neutral', 'Agree' or 'Strongly Agree' to "Your pay is fair compared to staff doing similar jobs in other [ministries]". In Nigeria, the variables take the value 1 if the respondent states they are 'Relatively satisfied' or 'Very satisfied' with their current job, current income and working conditions respectively. In the Philippines, the variable 'Satisfied with wage' takes the value 1 if the official responds 'Neither agree nor disagree', 'Agree' or 'Strongly agree' with the statement "You are satisfied with the pay you receive for your work". To measure staff effort, in Indonesia and Pakistan officials were asked, "On any given day, what is your best guess of the approximate percentage of others of your rank in [your organisation] who stop work and leave early, or spend a lot of time on personal matters (more than two hours)?" and "On any given day, approximately what percentage of others of your rank in [your organisation] continues to work past official hours?". In the Philippines, officials were asked, "On any given day, approximately what percentage of others at your level in your department leave work early (i.e. work less than 8 hours)?" and "On any given day, approximately what percentage of others at your level in your department work late (i.e. work more than 8 hours)?" Figures rounded to two significant figures where relevant.

Table 5: Heterogeneity Across Sectors

	Ghana				Indonesia				Nigeria			
	Administration and Finance	Education	Health	Water and Environment	Administration and Finance	Education	Health	Water and Environment	Administration and Finance	Education	Health	Water and Environment
Selection is based on merit [agree=1]	0.87	0.82	0.86	0.85	0.86	0.61	-	0.74	-	-	-	-
Jobs are allocated based on merit [agree==1]	0.6	0.58	0.67	0.66	0.53	0.31	-	0.43	0.65	0.55	0.55	0.53
Promotions are based on merit [agree=1]	0.87	0.95	0.88	0.93	0.89	0.84	-	0.9	-	-	-	-
Proud to work in civil service [agree=1]	0.49	0.37	0.53	0.45	0.92	0.88	-	0.89	-	-	-	-
Most people can be trusted [agree=1]	-	-	-	-	0.8	0.52	-	0.65	-	-	-	-
Punishments are applied appropriately [agree=1]	0.44	0.52	0.55	0.45	0.78	0.71	-	0.75	0.69	0.72	0.75	0.75
Frequency of political interference	0.13	0.05	0.12	0.07	-	-	-	-	0.89	0.69	0.66	0.81
Satisfied with job [satisfied=1]	0.56	0.48	0.5	0.44	0.91	0.84	-	0.83	0.87	0.93	0.91	0.88
Satisfied with wage [satisfied=1]	0.21	0.13	0.1	0.15	0.66	0.47	-	0.42	0.38	0.69	0.72	0.46
Satisfied with other (non-wage) benefits [satisfied=1]	0.24	0.1	0.1	0.24	-	-	-	-	0.47	0.62	0.56	0.53
Number of officials (organisations)	464 (43)	98 (12)	51 (3)	123 (9)	1262 (6)	238 (1)	-	962 (3)	1408 (31)	1339 (20)	1135 (21)	1050 (15)

Notes: Standard deviations are in parentheses. The sectors outlined here do not include all of the organisations in the data, but are restricted to the highlighted sectors. Statistics are unweighted, such that each of the officials described in Table 1 are counted equally. Ethiopia is not included in this table due to the surveys undertaken there being organisation-level rather than individual-level surveys. The surveys differed on how they assessed whether selection, job allocations, promotions and punishments were based on merit, though in all cases binaries were constructed with 'Agree' or 'Strongly Agree' coded as 1. On selection, Indonesian and Pakistani officials were asked to assess, "The selection process identifies the best people for the job". On jobs, they responded to, "In nearly all cases, jobs in the [civil service] are assigned based only on the results of that selection process". On punishments, "These punishments are applied to those who do the least to further the goals of the [department/organisation]". In Indonesia, Pakistan and the Philippines, the relevant question on promotion was "Rewards/Promotions go to those who work hard to further the goals of [the department/organisation]". In Ghana the relevant questions were "Did interviews and written examinations determine the selection for your position?", "Personnel management decisions are completely fair", "In the past three years, have elected officials, their appointees, or political party officials tried to influenced any hiring decisions and or promotions in your organization?" and "Disciplinary actions have been impartially applied to necessary cases". In Nigeria, jobs were assessed by an assessment of the frequency of jobs being determined by 'special requests' and punishments by, "Do you expect to be held accountable for breaking the Public Service Rules?". The frequency of political interference is an indicator of the extent to which officials believe that politicians interfere in the working of the civil service (such as in procurement or project design issues) though the time periods varied from "the last three years" in Ghana, through "recent projects you have worked on" in Nigeria, to contemporary experience in the case of the Philippines. The measures of satisfaction in Ghana are binary variables that takes the value 1 if the respondent states they are 'Neutral', 'Agree' or 'Completely Agree' with the statements "Working in the public sector is generally better than working in the private sector", "My salary is very satisfactory" and "My other benefits (pension, health, etc.) are very satisfactory". In Indonesia and Pakistan, the indicator 'Satisfied with job' takes the value 1 if the official responds 'Neither Better Nor Worse', 'Better' or 'Much Better' to "How do you compare [your organisation] as a place to work with private sector firms that are in a similar area as [your organisation]?". The variable 'Satisfied with wage' takes the value 1 if the official responds 'Neutral', 'Agree' or 'Strongly Agree' to "Your pay is fair compared to staff doing similar jobs in other [ministries]". In Nigeria, the variables that the value 1 if the respondent states they are 'Relatively satisfied' or 'Very satisfied' with their current job, current income and working conditions respectively. In the Philippines, the variable 'Satisfied with wage' takes the value 1 if the official responds 'Neither agree nor disagree', 'Agree' or 'Strongly agree' with the statement "You are satisfied with the pay you receive for your work". Figures rounded to two significant figures where relevant.

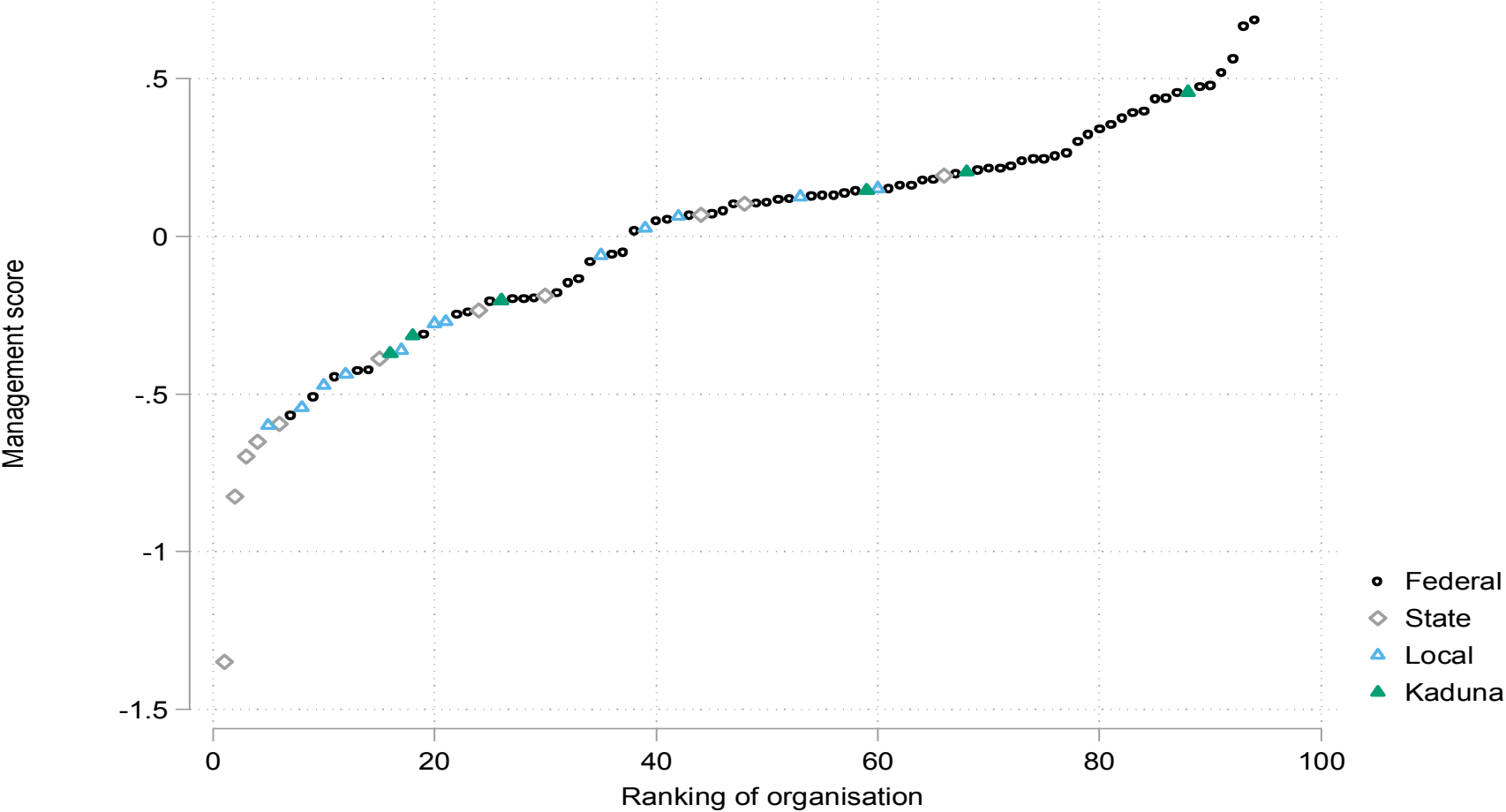
Table 6: Productivity in the Civil Service

Dependant Variable: Organisational Average of Perception That Performance Standards Are Met in Columns 1 to 4; Project Completion Rate in Columns 5 to 9
 Standard Errors: Robust in Columns 1 to 4; Clustered by Project Type Within Organization in Columns 5 to 9
 OLS Estimates

	Ghana				Nigeria				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Average years in service	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.03* (0.02)	0.01 (0.02)	0.01 (0.02)	-0.04 (0.03)	-0.01 (0.03)
Average years at current organisation	0.00 (0.00)	0.01** (0.003)	0.01** (0.004)	0.01*** (0.003)	0.01 (0.01)	-0.02 (0.01)	-0.02 (0.02)	0.01 (0.02)	-0.01 (0.02)
Proportion with postgraduate degree	0.09 (0.07)	0.17** (0.07)	0.17** (0.08)	0.19*** (0.07)	-0.17 (0.21)	0.02 (0.21)	0.02 (0.18)	0.28 (0.44)	0.13 (0.23)
Proportion of staff female	0.00 (0.07)	0.00 (0.06)	-0.03 (0.05)	-0.03 (0.05)	-0.23 (0.23)	0.13 (0.23)	-0.28 (0.19)	-0.42 (0.38)	-0.43 (0.27)
Jobs are allocated based on merit [proportion agree]		0.01 (0.06)	-0.06 (0.05)	-0.06 (0.05)		0.42 (0.46)	0.44 (0.40)	0.49 (0.71)	0.51 (0.38)
Punishments are applied appropriately [proportion agree]		-0.09* (0.05)	-0.10* (0.05)	-0.06 (0.05)		1.47*** (0.51)	0.19 (0.38)	-0.69 (0.78)	-0.23 (0.49)
Satisfied with job [proportion satisfied]		0.16*** (0.06)	0.14*** (0.05)	0.14*** (0.05)		-0.94 (0.63)	0.25 (0.52)	-0.32 (1.09)	-0.17 (0.56)
Satisfied with wage [proportion satisfied]		0.10 (0.08)	0.10 (0.08)	0.08 (0.06)		0.43 (0.28)	0.53** (0.24)	0.19 (0.45)	0.44 (0.29)
Satisfied with other (non-wage) benefits [proportion satisfied]		-0.15 (0.08)	-0.16** (0.08)	-0.15** (0.07)		0.44 (0.30)	-0.34 (0.31)	-0.09 (0.50)	-0.18 (0.35)
Frequency of political interference			-0.19** (0.08)	-0.14* (0.08)			0.37 (0.43)	0.31 (0.66)	1.63*** (0.58)
Frequency of observation of corruption			-0.03 (0.05)	-0.03 (0.04)			-0.86*** (0.25)	-0.35 (0.83)	-0.67** (0.28)
Quality of management (autonomy)			0.03 (0.03)	0.05 (0.03)			0.16*** (0.03)	0.09 (0.06)	0.19*** (0.03)
Quality of management (incentives)			-0.02 (0.02)	-0.02 (0.02)			-0.18*** (0.04)	-0.15* (0.06)	-0.17*** (0.05)
Proportion of officials personally engaging with federal politician									-1.40** (0.71)
Proportion of officials personally engaging with state politician									-0.94 (0.97)
Proportion of officials personally engaging with local politician									-0.53 (0.73)
Capital and Noise Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Project Controls	No	No	No	No	Yes	Yes	Yes	No	Yes
Fixed Effects	No	No	No	No	Project Type	Project Type	Project Type	No	Project Type
Adjusted R-squared	0.08	0.18	0.28	0.33	0.17	0.17	0.18	0.22	0.18
Observations (clusters)	77	77	77	77	4721 (201)	4721 (201)	4721 (201)	63	4721 (201)

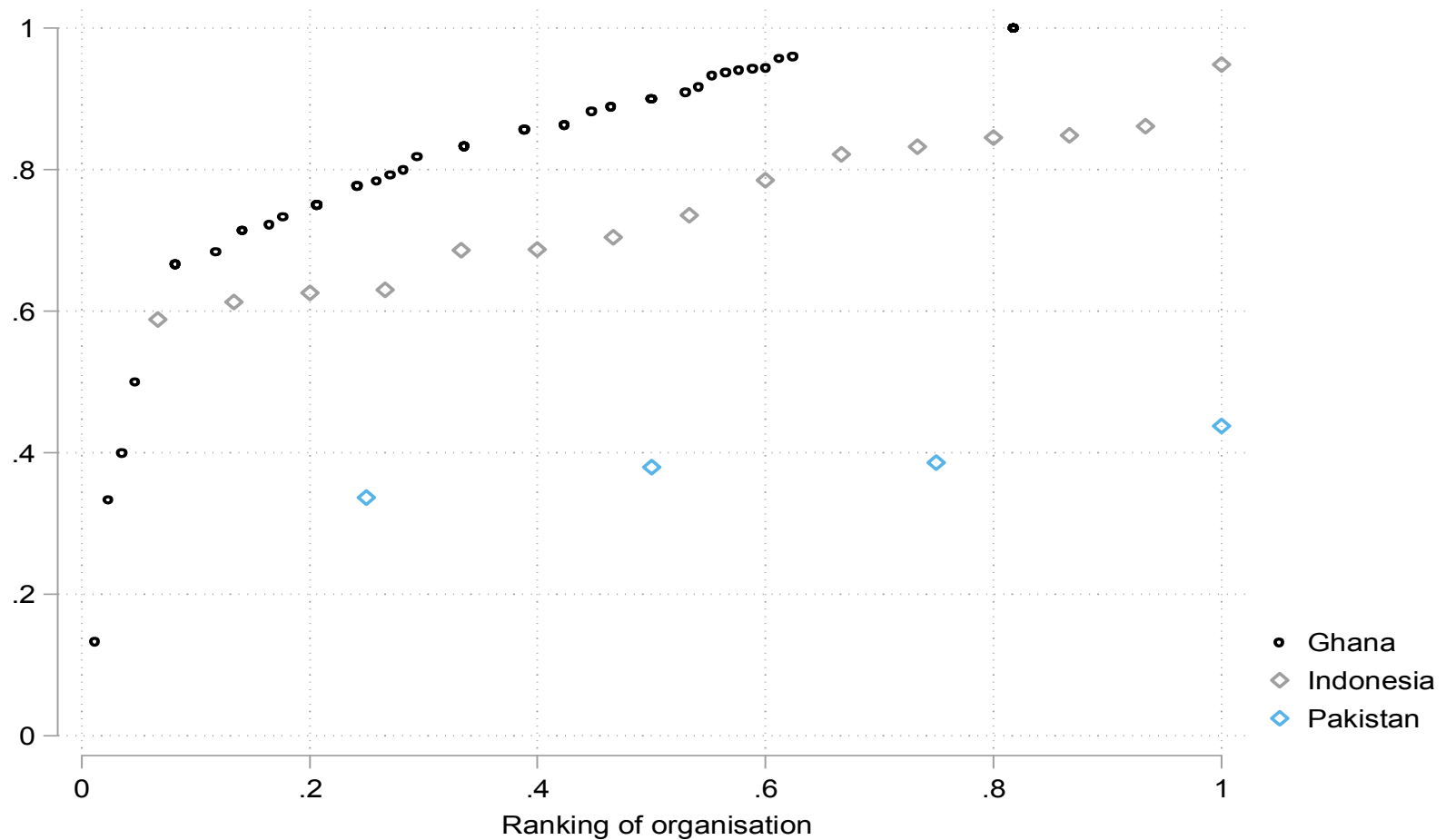
Notes: *** denotes significance at 1%, ** at 5%, and * at 10% level. Standard errors are in parentheses, are robust in columns 1 to 4 and clustered by project type within organisation in columns 5 to 9. All columns report OLS estimates. The dependent variable in columns 1 to 4 is an organisation average of bureaucrat perceptions of the proportion of organisation activities that meet performance standards. The dependant variable in columns 5 to 7 and 9 is the proportion of the project completed (that is a continuous measure between zero and one). The dependent variable in Column 8 is an organisation average of the proportion of project completion. In Ghana, capital controls comprise assessments of the total budget of the organisation. In Nigeria, capital controls comprise organization-level controls for the logs of number of employees, total budget, and capital budget. Total and capital budget figures are an average of organization budget figures for the years 2006-10. In Ghana, noise controls are indicators of the reliability of the survey response as coded by the interviewer. In Nigeria, noise controls are four interviewer dummies, the day of the week the interview was conducted, the time of day the interview was conducted, a dummy variable indicating whether the interview was conducted during Ramadan, the duration of the accompanying management interview, and an indicator of the reliability of the information as coded by the interviewer. Project controls comprise project-level controls for the project budget, whether the project is new or a rehabilitation, and an assessment of its aggregate complexity by Nigerian engineers. Project Type fixed effects relate to whether the primary classification of the project is as a financial, training, advocacy, procurement, research, electrification, borehole, dam, building, canal or road project. Figures are rounded to two decimal places.

Figure 1: Management across Nigeria's public sector



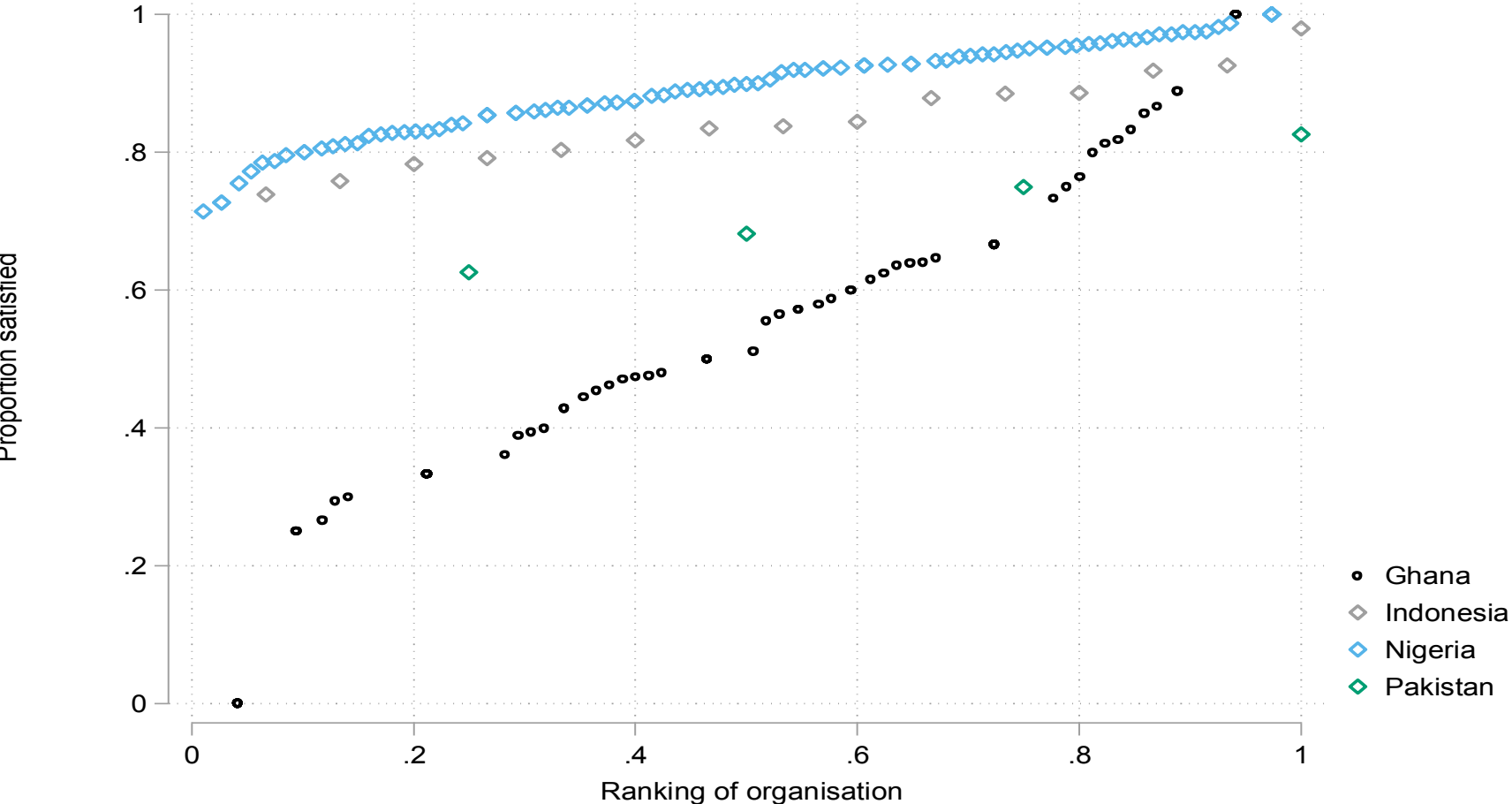
Notes: The scatterplot indicates the distribution of World Management Survey scores of organisations across the Federal Government of Nigeria, ranked in ascending order by the organisations score. The 'World Management Survey' scores are means of z-scores formed from sets of questions relating to operations, monitoring, targets and incentives, or all of these in the case of the aggregate score.

Figure 2: Belief That Entry into the Service is Based on Merit



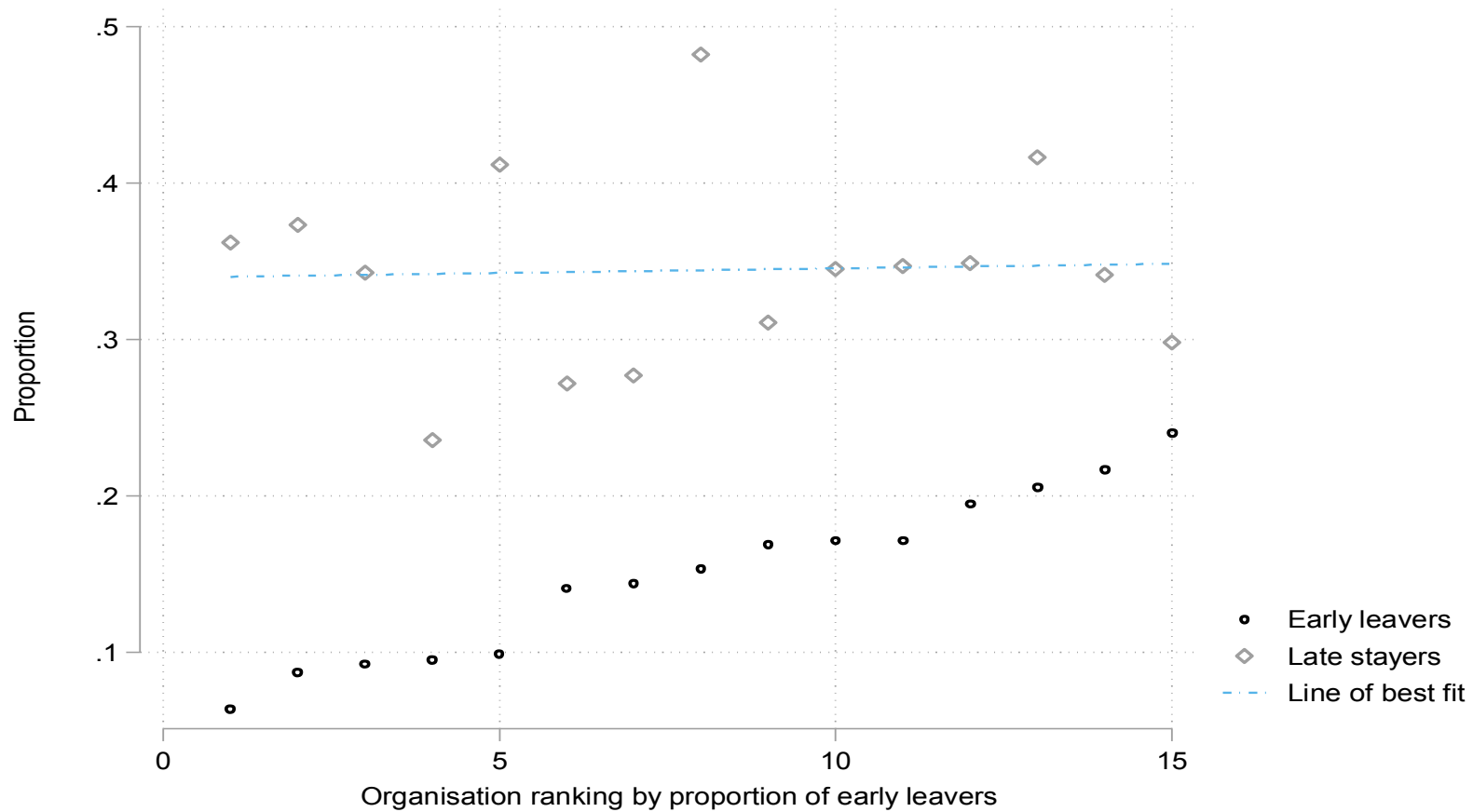
Notes: The scatterplot indicates the proportion of staff within an organisation agreeing that entry into that organisation was merit-based, ranked in ascending order by the proportion of officials at the organisation agreeing selection is based on merit. The surveys differed on how they assessed whether entry into the service is based on merit, though in all cases binaries were constructed with 'Agree' or 'Strongly Agree' coded as 1. Indonesian and Pakistani officials were asked to assess, "The selection process identifies the best people for the job". In Ghana the relevant question was 'Did interviews and written examinations determine the selection for your position?'

Figure 3: Self-reported Satisfaction in the Public Service



Notes: The scatterplot indicates the proportion of staff within an organisation stating they are satisfied, ranked in ascending order within a specific country by the proportion of officials at the organisation stating they are satisfied. The measure of satisfaction in Ghana is a binary variables that takes the value 1 if the respondent states they are 'Neutral', 'Agree' or 'Completely Agree' with the statement "Working in the public sector is generally better than working in the private sector". In Indonesia and Pakistan, the indicator 'Satisfied with job' takes the value 1 if the official responds 'Neither Better Nor Worse', 'Better' or 'Much Better' to "How do you compare [your organisation] as a place to work with private sector firms that are in a similar area as [your organisation]?". In Nigeria, the variable takes the value 1 if the respondent states they are 'Relatively satisfied' or 'Very satisfied' with their current job.

Figure 4: Proportion of Colleagues Who Leave Early/Stay Late in Indonesia



Notes: The scatterplot indicates the average response of staff interviewed in Indonesia within an organisation to the questions, "On any given day, what is your best guess of the approximate percentage of others of your rank in [your organisation] who stop work and leave early, or spend a lot of time on personal matters (more than two hours)?" and "On any given day, approximately what percentage of others of your rank in [your organisation] continues to work past official hours?". The scatterplot is ranked by the average proportion of early leavers, and a line of best fit is provided through the corresponding scatterplot of late stayers.