GOVERNANCE NOTES

INNOVATING BUREAUCRACY FOR INCREASING GOVERNMENT PRODUCTIVITY

Prepared by Zahid Hasnain and Daniel Rogger
Governance Global Practice

Improving government productivity is one of the main challenges of economic development. Although consensus exists around the core policies needed for developing countries to achieve equitable growth and reduce extreme poverty, government capability to implement them and achieve the desired outputs for a given set of inputs varies across both countries and policy domains within countries.

Research underlines the importance of the quality of bureaucracy for government productivity. For example, 60 percent of the price variation in standard procurement contracts in Russia is due to the quality of individual bureaucrats and their organizations (Best et al. 2017). If the worst-performing 20 percent of bureaucrats can be as effective as the median bureaucrat, the government would save 10 percent of its procurement costs. In Nigeria, the quality of organizational management across the federal government varies substantially. A one standard deviation increase in the quality of management would lead to a 32 percent increase in project completion rates (Rasul and Rogger 2017).

How can the World Bank help governments innovate bureaucracy for greater productivity? First, government productivity must be robustly measured to effectively explore its determinants. Second, much better information on the human capital of government—the numbers, skills, and characteristics of the individuals populating the bureaucracy—is the most crucial factor in the government production function. Third, moving beyond these inputs, a transition is needed from thinking about government productivity as a "capacity building" problem to an incentives, motivation, and selection problem for managing the workforce. Fourth, understanding motivation and selection requires grappling with the politics of public administration. And finally, digital technologies offer considerable opportunities for innovating bureaucracy, although viewing technology as a silver bullet is a temptation to avoid.

MEASURING PUBLIC SECTOR PRODUCTIVITY

Productivity is defined in economics as the ratio of outputs to inputs, with total factor productivity, or the ratio of output to all factors of production, being a key determinant of long-run economic growth. Measuring government productivity is challenging because of the absence of market prices for many government outputs and the difficulties in identifying quantifiable outputs for many government activities.

But it is not impossible. Productivity indicators for a core set of citizen- and business-facing government activities are now regularly tracked in Organisation for Economic Co-operation and Development countries. Indicators include the number of tax returns processed per cost-weighted inputs, the speed at which drivers' licenses are issued, and the rate at which social welfare beneficiaries are supported back into work (Dunleavy and Carrera 2014). For other activities where it is difficult to quantify outputs, productivity estimates can be derived for common tasks that all government departments are expected to do, such as the efficiency of budget expenditure, the processing of human resource policy, and the proportion of targets achieved. Across each of these indicators, substantial variations are observed across and within government organizations, highlighting that the public sector is fundamentally heterogeneous in its characteristics and its productivity (Rasul, Rogger, and Williams 2017).

UNDERSTANDING THE PUBLIC SECTOR LABOR MARKET

Understanding the determinants of productivity must begin with better data on government personnel, which in turn requires a better understanding of the public sector labor market. What is the distribution of public employees, their demographic characteristics, and their wages and benefits? Information from the World Bank's

Worldwide Bureaucracy Indicators Database is beginning to shed light on this "black box" of bureaucracy. The public sector accounts for 40 percent of formal sector employment globally, employs more women than the private sector, has an older and more educated workforce, and generally pays a wage premium after controlling for observable worker characteristics, according to 2017 data. These aggregate country-level data suggest that, in many developing countries, the public sector has high human capital and consumes significant fiscal resources but does not achieve expected outcomes, underlining the urgent need to improve productivity.

Government micro-level administrative data are also providing a more detailed and nuanced picture of the public sector labor market. Data from Bosnia and Brazil, for example, show the skill distribution of public employees can vary considerably across organizations; public employment is often not aligned to needs, as evidenced by significant variation in student-teacher ratios across local jurisdictions; and considerable pay dispersion across staff cannot be explained by education levels, jobs, or years of service, which implies significant discretion in pay policy. Analyses of these micro-level data can be used to identify efficiency gains through better public employment planning and rationalization of wages as well as to detect potential improvements in productivity through better matching of workers to needs and government functions. Without a practical strategy for allocating staff to required tasks for which they can be most productive, clever mechanisms must be designed to use human capital effectively.

FOCUSING ON INCENTIVES, SELECTION, AND CULTURE

Increasing productivity needs more than just upgrading labor skills through current formal training and capacity-building efforts. The key requirement is improving the motivation and selection system of bureaucrats. In the private sector, financial incentives have frequently been thought of as the main instrument to achieve these ends. Performance pay can also be effective in the public sector, provided that the incentives are simple and based on measurable targets. For example, experimental studies have shown that financial incentives can improve the effort of tax collectors (Khan et al. 2014), school teachers (Muralidharan and Sundararaman 2011), and health facility staff (Basinga et al. 2010; Gertler and Vermeersch 2012). But badly designed performance incentives can also backfire (Dixit 2002), and many public sector jobs lack the measurable performance indicators necessary to condition such incentives.

Incentive limitations underline the importance of selecting the "right" workers with high public service motivation, particularly since firing underperformers in the public sector can be difficult, and bureaucrats can remain in public service for decades. Higher wages can attract more candidates and higher quality applicants (Dal Bo, Finan, and Rossi 2013), although at the risk of having more extrinsically motivated candidates if wages are set too high (Banuri and Keefer 2015). Relatively high public sector wage premiums, and the large share of formal employment held by the public sector, suggest that a large proportion of workers joined for extrinsic and career reasons. Going beyond wage levels, pay progression and the mix of pecuniary and non-pecuniary incentives are important determinants of selection. More evidence is needed on the optimal mix of incentives for the public sector. The public sector is more likely to offer pensions and health insurance than private sector employers as well as greater job security, which also influences the types of individuals that join. The distinctive nature of the public-sector labor market calls for human resource strategies that focus on selecting individuals with high public service and pro-social motivation, and sustaining this motivation through development of esprit de corps and an organizational identity. Simply advertising public sector positions in different ways can lead to significantly distinct cohorts of applicants (Bandiera, Nava, and Lee 2016).

Equally important is creating norms and values based on professionalization, which are the hallmarks of a Weberian bureaucracy (Perry and Wise 1990; Grant 2008). Management practices can have powerful influence on these norms and on productivity. The World Management Survey (WMS), a rigorous method to quantify managerial and organizational practices, reveals that the quality of management is the main driver of innovation and productivity in firms around the world (Bloom and Van Reenen 2007; Cirera and Maloney 2017). When applied to government bureaucracies in Ghana and Nigeria, the WMS uncovers considerable diversity in the quality of management, specifically in goal setting, monitoring, targeting, and worker autonomy across government ministries and agencies (Rasul and Rogger 2017; Rasul, Rogger and Williams 2017).

THE POLITICS OF PUBLIC ADMINISTRATION REFORM

The politician-bureaucrat nexus is central to the functioning of the public-sector labor market and to the motivation and selection of public employees. Politics can be both an enabler of and an obstacle to bureaucratic capability. China highlights the strong political underpinnings of bureaucratic reforms that were central to achieving the country's economic growth, and the different mix of career and financial incentives for senior and street-level bureaucrats required to achieve these objectives (Ang 2016).

Politicians are also capable of distorting public sector incentives for their own gain (Iyer and Mani 2011). An incumbent leader's fear of losing power is a critical factor behind institutional change (World Bank 2016a), making bureaucratic reform closely interlinked with the incentives of political elites. The 2017 World Development Report argues "reshaping the policy arena where actors bargain" can provide those incentives (World Bank 2017). Partly this relates to shifting the preferences of public officials and their public service identity, and partly it is a product of increased transparency.

INNOVATION IN BUREAUCRACIES

One way to strengthen transparency is through the increased use of digital technologies, which are a major driver of productivity improvements in the private sector. Governments have also invested heavily in digital technologies over the past two decades to improve revenue mobilization, budget preparation, and budget execution, and to deliver a variety of services to citizens. The empirical evidence of the impact of e-government on productivity is generally positive, though limited, and shows that digital technologies can lower the cost of tax compliance (Kochanova, Hasnain, and Larson 2016; Ali et al. 2015), improve the competitiveness of public procurement (Lewis-Faupel et al. 2016), and reduce corruption and inefficiencies in government social welfare programs (Muralidharan, Niehaus, and Sukhtankar 2016).

To have impact, digital technologies are best accompanied by complementary organizational changes (Brynjolfsson and Hitt 2000; Garicano and Heaton 2010). The absence of institutional changes in developing countries may explain the poor returns on many investments in information and communication technology, particularly for large and complex systems (World Bank 2016b). Cross-agency collaboration continues to be a challenge. The opportunities offered by digital technologies bump into bureaucratic structures and budget and legislative processes that reinforce vertical stovepipes (Fountain 2001).

The degree of complementary organizational changes necessary for digital technologies to improve government productivity varies with the nature of the service and activity, and indicates entry points for technology-enabled innovation (World Bank 2016b). For services and activities based on more routine tasks that are easy to monitor, such as cash transfers, tax filing, and licensing, digital technologies can improve productivity rapidly and significantly, even in weak governance contexts. But for services that require more discretion from workers and are hard to monitor, the complementary institutional reforms are much more important.

CONCLUSION

Ending extreme poverty by 2030 and building shared prosperity will require a public sector workforce that is dedicated to serving citizens and creating more innovative public goods at massive scale. It must be made up of frontline service providers—from doctors and teachers to agricultural extension workers. But it must also be made up of those who manage, support, and regulate these providers, who channel information, aggregate the budget, and coordinate relief efforts. Too often, the administrators critical to achieving global development work in bureaucratic and uninspiring structures that do not create the incentives for staff to fulfill their potential, nor innovate for the public good. Many of the world's public officials are not given the chance to truly change the world.

That is where the World Bank has a chance to make a transformational impact on global poverty. Every marginal improvement in how the public sector functions ripples through society. With no substitute for state capacity, attention must turn toward transforming bureaucracies. The World Bank's approach must be grounded in the fundamental diversity of government and in the insights this diversity provides within and across countries. Using frontier data and empirical analysis will reveal the heterogeneity of a specific public sector and allow targeted reforms within the local context. The current expertise and problem-driven approach toward existing issues in bureaucracies can be enriched by a richer picture than has ever been available. Now is the time to innovate bureaucracy, and change the world.

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