



RESEARCH NEWSLETTER

Taxation and Technology: Case Studies in E-Government | January 2022

FEATURED RESEARCH

[Filling the Gap by Filing Taxes: How Technology Can Aid Governments in Tax Collection](#)

Taxes lie at the crucial intersection between the provision of public goods, income distribution, social safety nets, and government accountability. Efficient and equitable taxation is essential to long-term development, and a lack of tax revenue can force governments to rely on foreign aid and natural resource revenues, which are less reliable than a broad tax base.

Troublingly, lower-income countries tend to [collect less tax](#) as a percentage of GDP per capita than higher-income countries. At the upper end, countries such as France and Denmark collect more than 40 percent of national GDP as tax revenue. In countries such as Myanmar and Somalia, taxation sits at less than 5 percent of national GDP.

At a recent [Policy Research Talk](#), World Bank economist [Oyebola Okunogbe](#) shared findings from her recent research on the topic, including the presentation of results of two studies along with important policy lessons. “The ability to tax is a capacity that countries develop over time,” said Okunogbe. “But the taxes collected by governments in many low-income countries are inadequate for funding public goods and investing in human capital. This has been highlighted more than ever before in the response to the current pandemic.”

[Continue reading the Feature Story](#) | [Presentation](#) | [Video](#) | [Oyebola Okunogbe, Economist, World Bank](#)

RESEARCH HIGHLIGHTS

WORKING PAPERS

✓ [The Promise and Limitations of Information Technology for Tax Mobilization](#)

[Oyebola Okunogbe](#) and [Fabrizio Santoro](#), *World Bank Policy Research Working Paper 9848, November 2021*

How can low- and middle-income countries improve tax collection using recent technological advancements? This paper discusses the potential for technology to transform tax administration by helping to identify the tax base and facilitate and monitor compliance. For policy makers, this paper provides guidance as tax authorities increasingly adopt electronic systems in a post-COVID world where remote interactions are more common. Possible limitations to the use of technology result from inadequate infrastructure, lack of adoption by taxpayers and tax collectors, lack of institutional support, and an unsupportive regulatory environment.

✓ [Becoming Legible to the State: The Role of Detection and Enforcement Capacity in Tax Compliance](#)

Oyebola Okunogbe, World Bank Policy Research Working Paper 9852, November 2021

Two dimensions of low state capacity that hinder tax collection are the inability to ascertain the tax base (detection capacity) and the inability to enforce unpaid liabilities (enforcement capacity). An experiment in Liberia sought to establish a new digital property database, which was then used to alert property owners of their non-compliance with taxes owed. The experiment found that a personalized notice, when delivered with details on penalties, can quadruple the tax payment rate. A second experiment found that notifying homeowners of possible enforcement further increases compliance. These results highlight the importance of both detection and enforcement capacity.

✓ [Political Dividends of Digital Participatory Governance: Evidence from Moscow Pothole Management](#)

Nisan Gorgulu, Gulnaz Sharafutdinova, and Jevgenijs Steinbuks, World Bank Policy Research Working Paper 9445, October 2020

In this article, the linkage between road quality based on citizens' complaints and electoral outcomes is examined. More than 200,000 online pothole complaints were collected and combined with electoral outcomes data from two rounds of Moscow mayoral elections in 2013 and 2018. The analysis indicates that greater use of digital technologies (measured by pothole complaints) results in an increased number of votes and a higher margin of victory for the incumbent. Thus, digital technologies can be used as a tool to create participatory governance mechanisms and convey to the public an image of a transparent, responsive, and capable government.

✓ [Learning to Navigate a New Financial Technology](#)

Emily Breza, Martin Kanz, and Leora Klapper, World Bank Policy Research Working Paper 9495, December 2020

How do inexperienced consumers learn to use a new financial technology? The authors present results from a field experiment that introduced payroll accounts in a population of largely unbanked factory workers in Bangladesh.

Workers in a treatment group received monthly wage payments into a bank or mobile money account while workers in a control group continued to receive wages in cash. Exposure to payroll accounts leads to increased account use, greater savings, improvements in the ability to cope with economic shocks, and consumer learning. Those receiving accounts with automatic wage payments learn to use the account without assistance, begin to use a wider set of account features, and learn to avoid illicit fees, which are common in emerging markets for consumer finance.

Note that a revised version of this working paper is forthcoming.

✓ [Does Better Information Curb Customs Fraud?](#)

Cyril Chalendard, Alice Duhaut, Ana M. Fernandes, Aaditya Mattoo, Gael Raballand, and Bob Rijkers, World Bank Policy Research Working Paper 9254, May 2020

Can information and monitoring of inspector actions affect tax revenue and fraud detection? By providing customs inspectors in Madagascar with third-party information on what the price of each item included in an import shipment should be, researchers found that goods were 10 percentage points more likely to be scanned and their associated declarations 21.7 percentage points more likely to be deemed fraudulent. Better information thus helps curb customs fraud, but its effectiveness appears compromised

by corruption.

JOURNAL ARTICLES

✓ [Technology, Taxation, and Corruption: Evidence from the Introduction of Electronic Tax Filing](#)

[Oyebola Okunogbe](#) and [Victor Pouliquen](#), *American Economic Journal: Economic Policy*, Forthcoming | [Working Paper](#)

This paper examines the impact of e-filing on compliance costs, tax payments, and bribe payments using data from small and medium-sized firms in Tajikistan. For firms that were previously likely to evade taxes, e-filing doubles tax payments, likely by limiting the firm's collusion with tax officials. Among firms less likely to evade, e-filing reduces tax payments, suggesting that officials had previously required them to pay more. This experiment also found that e-filing taxes could help firms save almost 5 hours a month, or 40 percent of the total time spent on filing taxes. The results indicate that e-filing reduces compliance costs and corruption in tax payments.

✓ [Property Taxation in India: Issues Impacting Revenue Performance and Suggestions for Reform](#)

[Rajul Awasthi](#), [Mohan Nagarajan](#), and [Klaus W. Deininger](#), *Land Use Policy* 110 (2021) 104539, November 2021

Although urbanization in India is associated with rapidly rising land values, this has not been matched by increases in property tax revenue. Undervaluation of properties, scarcity of data on rental value, and incomplete and outdated rolls limit the number of people in the tax base. Using the experience of select Indian cities, some of which quadrupled their property tax revenues, this paper argues that information and communication technology-based approaches provide an opportunity for cities in developing countries to increase revenue from taxes on land and property.

✓ [Using satellite imagery to create tax maps and enhance local revenue collection](#)

[Daniel Ayalew Ali](#), [Klaus W. Deininger](#), and [Michael Wild](#), *Applied Economics*, 52(4), 2020, January 2020 | [Working Paper Version](#)

A city's competitiveness depends on its ability to address the 'demons of density' by planning ahead and raising the revenue needed to provide services effectively. Recurrent property tax revenue can help resolve the obstacles faced by developing cities. However, developing-world revenue from property taxes is still far below that of developed countries. The example of Kigali shows how building footprints and heights generated from high-resolution satellite imagery, together with sales prices and other data, can improve the design and coverage of property tax systems.

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UPCOMING EVENTS FROM THE DEVELOPMENT RESEARCH GROUP

- **February 8, 2022:** Policy Research Talk: [Out of the Shadows: The Impact of Amnesties on the Lives of Migrants](#)
- **March 2022:** Policy Research Talk: Data from Secondary Markets: Insights and Implications for Development

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Special Feature: 2021 Job Market Posts Continued

The following are a [series of posts](#) by PhD students on the job market featured on the *Development Impact Blog*.

- [Family First, State Last: Bureaucratic Nepotism in a Modern State](#) | Juan Felipe Riaño | November 24
- [Tripping at the finish line: Misperceptions and secondary school completion in Argentina](#) | Carolina Lopez | November 29
- [Are parents' investments in education distorted by inaccurate beliefs](#) | Tianqi Gan | November 30
- [Is it what I think or is it what I think my peers think: Tackling sexual harassment](#) | Karmini Sharma | December 1
- [A Holistic approach to tackling intimate partner violence among marginalized women in urban Liberia](#) | David Sungho Park | December 2
- [A wrap-up of our job market blog post series](#) | December 14

Learning from past research on gender: endowments, agency, and economic opportunities

[Kerina Wang](#) | *Let's Talk Development* | December 8, 2021

This blog entry is part of a series that highlights insights from research for development policies and practices, supported by the [Knowledge for Change Program](#) (KCP).

“We all recognize that gender equality is a moral imperative and a basic human right. But what makes the argument even more persuasive is the fact that gender equality also makes great economic sense. In addition to the importance of exercising agency highlighted above, two additional dimensions are worth noting for a pathway towards greater gender equality: i) the accumulation of endowments, such as education attainment and health, and ii) the utilization of these endowments to pursue economic opportunities, in order to improve labor productivity and earnings. The three interconnected concepts of gender equality outcomes — endowments, agency, and economic opportunities — are the foundation of the conceptual framework for the [2012 World Development Report on Gender Equality and Development](#) published nearly 10 years ago, which the KCP supported, and the insights still resonate immensely today.”

[Read the blog](#)

Competition and firm recovery post-COVID-19 in Europe and Central Asia

[Miriam Bruhn](#), [Asli Demirguc-Kunt](#), and [Dorothe Singer](#) | *Let's Talk Development* | December 7, 2021

“The COVID-19 pandemic resulted in the [deepest global recession since World War II](#). As argued by Schumpeter (1942), crises can result in “creative destruction.” That is, they can play a [cleansing role](#), by speeding up the reallocation of economic activity from less productive to more productive firms, leading to greater productivity and economic growth in the longer run. However, it is not obvious whether a pattern of creative destruction will emerge from the COVID-19 crisis. The broad-based shock may simply result in widespread destruction ([here](#) and [here](#)). Or, instead of shifting economic activity to the most productive firms, [the crisis may reallocate activity to firms with greater market power or political connections, which could be detrimental to productivity growth](#). The question of the impact of COVID-19 on firms and its implications for long-run economic growth is thus an empirical one. How did firms fare so far?”

[Read the blog](#)

What is the profile of leading development economists on the PhD job market?

[David McKenzie](#) | *Development Impact* | December 7, 2021

“I’m part of our recruitment committee this year, which has meant looking at a lot of CVs and job market papers. In doing so, I thought it might be of interest to put together some statistics on what makes for a competitive job market candidate — which can hopefully be useful for those still in grad school, potentially help provide some relief to those currently on the market who worry about whether they have enough papers and whether they need publications or R&Rs, and help correct some misperceptions of what is needed to be successful as an economics grad student these days.”

[Read the blog](#)

Improving healthcare provisioning through decentralized financing: Evidence from Nigeria

[@eeshani_kandpal](#) | *Twitter* | December 6, 2021

“We wrote a [@vox_dev](#) piece about our new [@BMCMedicine](#) paper on [#healthfinancing](#) in [#Nigeria](#). We find comparable impacts of pay-for-performance (P4P) and unconditional facility financing on maternal and child health, even though the P4P arm was **twice** as expensive.”

[Read the thread](#)

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