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Timeline
2018-2020

Study Status
Results

Study Type
Randomized Evaluation

Sample Size
34,422 Ministry of Education employees across 1,530 schools

Research Implemented by IPA
No

Strengthening Fragile States: Evidence from Mobile Salary Payments in Afghanistan*

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Abstract

Building state capacity is uniquely challenging in fragile states. We report results from a randomized evaluation of a major Afghan government initiative to increase capacity by modernizing its payroll. The reform, which required teachers to biometrically register and receive salary payments via mobile money, did little to reduce payments to non-existent "ghost" workers, but significantly reduced delays. The reform also improved educational outcomes and increased formal financial inclusion. The impacts were not immediate – highlighting the importance of long time-horizons – and were largest in urban areas. The results have implications for state-building and are potentially actionable for policymakers.

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Academic Paper

Government Mobile Salary Payments for Teachers in Afghanistan

In This Image
Biometric identification registration in Afghanistan

Abstract

Governments rely on state employees to implement public services. However, dysfunctional administrative systems can inhibit payments to state employees and reduce state capacity, particularly in fragile settings. In Afghanistan, researchers conducted a randomized evaluation to test the impacts of making salary payments through biometrically authenticated mobile money platforms on leakages, delays, and service delivery. The reform reduced payment delays, particularly in urban areas, and also led to increases in student learning and mobile money usage.

Policy Issue

Governments rely on state employees to implement public services. However, poor administrative infrastructure can pose critical challenges that hinder service delivery. For example, frequent payment delays—whether at the ministry level or at local bank

branches—can prevent workers from earning a stable income, which can lead to dissatisfaction and subsequent declines in service quality. This is particularly the case in fragile settings, where governments often operate with limited capacity.[1]

Research suggests that paying salaries using mobile money can be instrumental in reducing payroll costs and inefficiencies because payments can be made directly and securely to employees.[2] In addition, using mobile salary payments and mobile money platforms more generally can reduce the need for people in areas to visit banks, especially in rural areas where banks are not always readily available. In turn, this could promote greater financial inclusion among the wider population.[3] What is the impact of mobile money salary payments on payroll experience and the overall provision of government services?

Context of the Evaluation

The Ministry of Education is one of Afghanistan's main public employers, accounting for 70 percent of civilian public workers, mostly teachers. However, a rudimentary administrative system has led to inefficient disbursement of payroll to employees. For instance, before 2017, 55 percent of Ministry of Education employees received their payments with significant delays. In addition, the Ministry spent a significant portion of payroll on "ghost workers"---people who do not exist—and people who were not official employees but are still paid.

Between 2017 and 2020, the government of Afghanistan implemented a series of reforms called the Mobile Salary Payment (MSP) to modernize payroll systems across ministries, including the Ministry of Education, by requiring employees to register for a mobile money wallet using biometric identification and transitioning payments to mobile money platforms. Ultimately, the Ministry of Education MSP reforms were designed to eliminate the prevalence of nonexistent employees through biometric registration, reduce leakages between what was disbursed by the government and what employees received, reduce delays in salary payments, increase student learning outcomes, and increase adoption of mobile money.

Details of the Intervention

In partnership with the Ministry of Education, researchers conducted a randomized evaluation to test the impact of the MSP reforms on employees' experience of receiving salary payments and the quality of service delivery. Researchers divided 1,530 schools in Kandahar, Nangarhar, and Parwan provinces, totaling 34,422 Ministry of Education employees, into 401 registration zones. The registration zones were then randomly assigned to one of three groups as part of a phased rollout:

- *Early payment group (137 registration zones)*: Employees in this group registered for mobile money wallets in May 2018 and were scheduled to receive payments around six months later.
- *Delayed payment group (129 registration zones)*: Employees in this group also registered for mobile money wallets in May 2018 but were scheduled to receive payments six months later than employees in the early payment group.

- *Comparison group (135 registration zones)*: Employees in the group both registered and received payments several months later than employees in the early payment and delayed payment groups.

The intervention took place between May 2018 and April 2019. To evaluate the impact of the MSP reforms, researchers conducted surveys between May 2018 and May 2020 measuring employee attendance at schools, payment experience and support for the reforms, the amount of verified employees who were listed on payroll, and an assessment on student learning. In addition, researchers collected school payroll records from the Ministry of Finance and employee mobile money registration and transaction records from mobile network operators.

Results and Policy Lessons

Payment delays fell sharply over two years, especially in urban areas. The reforms also led to significant increases in student learning and mobile money usage.

Payment delays: The reforms decreased payment delays for both early payment group employees and the comparison group. After the intervention, the portion of all employees experiencing delays fell to 30 percent, from a baseline of 40.6 percent in the comparison group and 66.7 percent across the early and delayed payment groups. This reduction in delays was driven primarily by improvements in the Education and Finance Ministries and Afghanistan's central bank. Among pre-April 2020 MSP recipients, the early payment group experienced a 70 percent decrease in delays after the first year (more than twice the magnitude of the comparison group's 33 percent decrease in delays).

The reforms did increase delays at local bank branches and mobile network operators for the early payment group in the first year, as operators lacked staff to pay out employees. However, this effect disappeared in the second year for all employees due to system-wide improvements brought about by the reforms.

Leakages: Salary leakages, as measured by the self-reported payments that employees make to someone to receive their salary, fell by AFN 17.6 (USD$0.15) in the early and delayed payment groups, relative to average leakages of AFN 12.5 (USD$0.11)

Student Learning: The MSP reforms increased student learning outcomes in urban areas. Students who attended a school where at least 50 percent of teachers were paid using MSP by April 2019 experienced 0.82 additional years of math learning and 0.73 additional years of combined math and reading learning. Interviews with employees suggest that improved service delivery of payroll may have increased their teaching efforts.

Variations between urban and rural areas: In the first year of the reforms, delays and travel times were higher in both rural and urban areas. However, by the second year, delays in urban areas decreased by 26.5 percentage points while delays in rural areas remained elevated. The decrease in payment delays in urban areas may have been because delivering salaries was more logistically straightforward when compared to rural areas. Additionally, the

reform’s impacts on reduced salary leakages were the greatest in rural areas.

Mobile Money Usage: The MSP reforms increased peer-to-peer mobile money transfers by 29.3 percentage points after the first year (a 465.1 percent increase relative to the comparison group mean of 6.3 percent). Among early registration employees, mobile money deposits increased by 0.4 percentage points every month the employees were on the platform. Airtime purchases and transfers of airtime to others (a mobile money transfer that can be done to subscribers without a mobile money wallet) also increased by 0.1 percentage points and 0.2 percentage points every month the employees were on the platform.

Removal of fake workers: Biometric registration did not remove all never-registered employees or stand-in recipients from the payroll system.

Overall, results suggest mobile money salary payments can have positive impacts on state capacity-building in Afghanistan and potentially other fragile states with rudimentary administrative systems. However, impacts generally did not materialize until two years later, suggesting that leaving time for governments to properly establish and improve administrative reforms may further support capacity-building efforts.

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