

Digital Governance: Is Krishna a Glimpse of the Future?

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Earlier this year we undertook a field study of Krishna district of Andhra Pradesh (AP), together with collaborators from Microsave, to understand the experience and perceptions around digital governance reforms. Krishna, and AP more generally, are considered as among the leading areas to adopt digital technologies, including for ID and payments, and to reform public service delivery over the past decade. Most government services and subsidies are now linked to Aadhaar, India's national biometric ID system. AP has also taken steps to minimize exclusion due to technology and has implemented real-time monitoring to improve service delivery.

Our three surveys—of households, ration shop owners, and bank correspondents—find widespread support for digital governance reforms, including the use of Aadhaar authentication to receive food rations through the public distribution system (PDS) and social pensions through the panchayat, as well as for digital land records. Technology provides an opportunity to make government more efficient and effective, improving the interface between people and the state.

However, we also find some areas for improvement. There is scope to improve authentication experience, especially for the elderly, and to strengthen the network of business correspondents to expand the reach and convenience of banking services, as well as to improve the process of on-boarding claimants for pensions and rations.

KRISHNA DISTRICT IS AN INNOVATION HUB FOR DIGITAL GOVERNANCE

- **Aadhaar is integrated into all services provided by the government**, effectively making it mandatory for receiving public subsidies and transfers.
- **Andhra Pradesh has introduced portability.** PDS beneficiaries and social pension recipients can now collect their benefits from any Fair Price Shop or panchayat. Customers are empowered, and it is much easier for internal migrants to access their benefits.
- **In an effort to solve connectivity issues, government-supplied ePoS devices can accommodate up to four SIM cards**, with two paid for by Krishna district administration.
- A centralized digital governance center in AP allows for **real-time monitoring of public transfers and services** to help resolve problems expeditiously.

- Andhra Pradesh has **established a dedicated mechanism to carry out random beneficiary surveys**, asking users to rate services on a scale of 0 to 10. This provides beneficiaries with an opportunity to provide feedback and helps the government to identify problems and take remedial actions.

FIGURE 1 – Location of survey

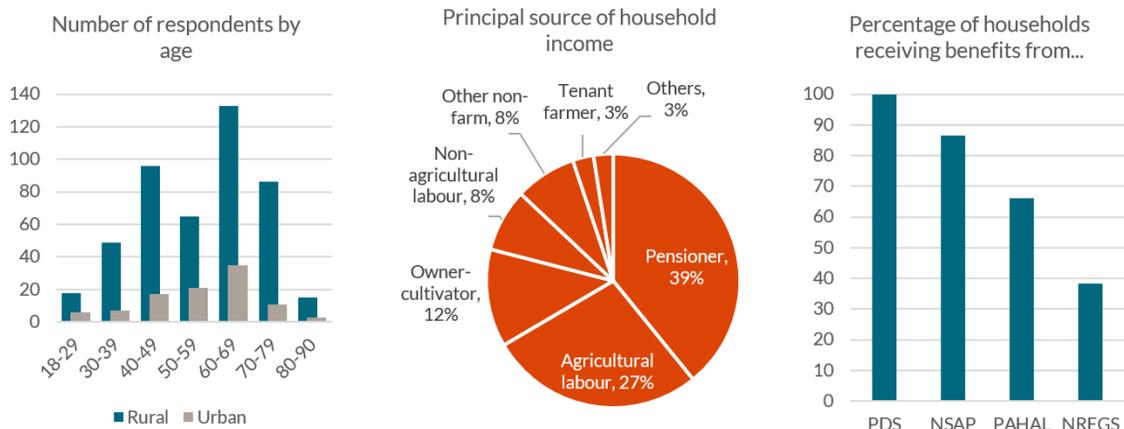


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HOUSEHOLD SURVEY DESIGN

- We covered **562 households** representing all administrative sub-districts and selected using a simple random sampling method at the village level. The median age is 60 years old and median monthly household income is INR 2500.
- Two-thirds of our survey respondents are female**; 79 percent of respondents were located in rural areas and 21 percent in urban areas. Figure 2 illustrates age distributions by location and sources of household income.

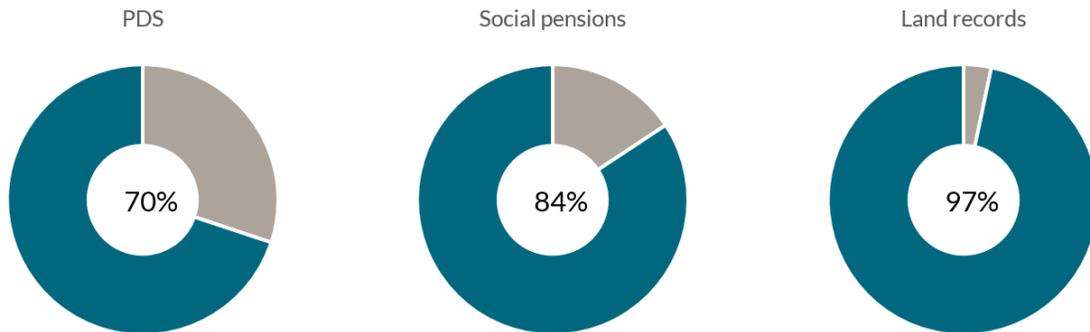
FIGURE 2 – Sample statistics



RESPONDENTS EXPRESS A STRONG PREFERENCE FOR THE NEW DIGITAL SYSTEMS

- When asked about their preferences, **respondents have highly favorable opinions of the government’s digital reforms in PDS, social pensions, and land reforms** (figure 3).
- Land owners nearly universally prefer the digital land management system** and report that it has eased the process of land settlement, sales, information gathering, and loan and insurance applications. Tenant farmers, however, are less enthusiastic about the changes and report that it has done little to improve their experiences with crop loans and insurance.
- Digitization has increased government efficiency** for delivering services, and real-time monitoring has allowed implementers to respond to challenges and solve problems much faster.

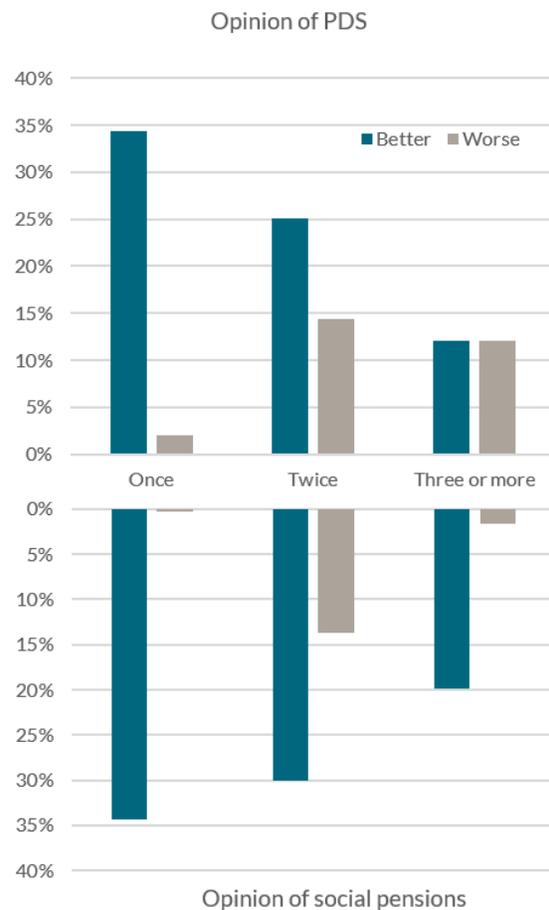
FIGURE 3 – Percentage which think the new system is better for...



- **Government surveys to collect user feedback have allowed the government to address issues faced by beneficiaries**, although the beneficiary-driven complaint mechanism has been underpublicized and thus leaves room for growth.
- **A human backup system has helped to resolve problems of technology failure**; the effect may be inconvenience but apparently not exclusion. In particular, the Village Revenue Officer (VRO) acts as designated backup for authentication.

- **There is a clear relationship between problems faced by beneficiaries to authenticate and their negative perception of the new system.**¹ Figure 4 shows how the balance of negative opinions tends to increase with authentication difficulties. PDS beneficiaries who had to authenticate their fingerprints twice were 31 percent more likely to say the new system is worse than those who need only one attempt, while those who took three or more attempts were 44 percent more likely to say that the new system was worse than the previous one. Likewise, compared to those who could easily authenticate, social pension beneficiaries who needed two attempts on average were 30 percent more likely to say the new system is worse.

FIGURE 4 – Opinions of the new systems by average number of authentication attempts



- **Authentication experience is also consistently reflected in beneficiaries' perceptions about ease of use.** Table 1 shows how the ratio of respondents who find the new system worse increases as they find it occasionally difficult or difficult.

¹ The probabilities reported here are calculated using an ordered logit model and are statistically significant within a 95 percent confidence.

TABLE 1 – Ease of use and opinions

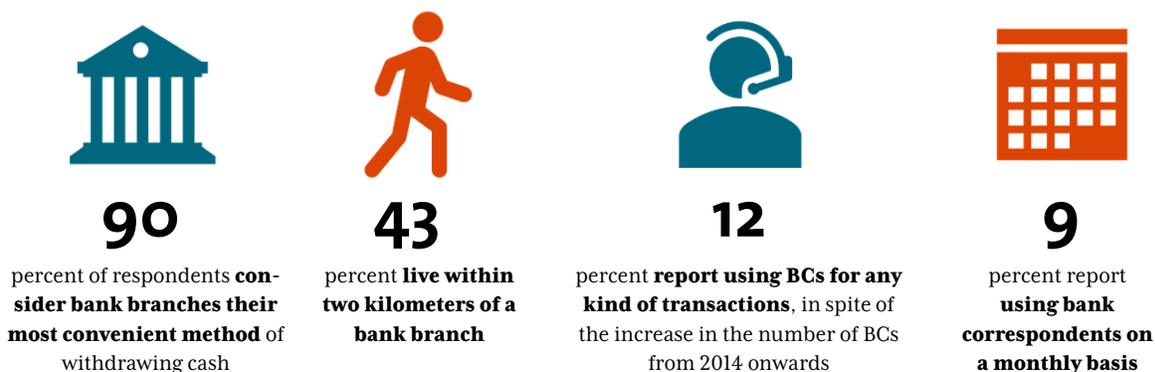
		Opinion of the new system		
		Better	Worse	Total
Is the new PDS system easy to use?	Easy	56.5	2.4	58.9
	Occasionally difficult	13.9	20.4	34.3
	Difficult	1.1	5.7	6.8
	Total	71.6	28.4	100.0

(Pearson's $\chi^2 = 237.3, p = 0.000, n = 545$)

- Qualitative data indicates that **the digitization of government transfers has increased usage of formal banking services** even among those households which already had accounts prior to the reforms.
- The digital reforms are expanding opportunities for women to take active roles in delivery systems.** In the two other surveys, 73 percent of surveyed business correspondents (BCs) were female as well as 36 percent of surveyed Fair Price Shop owners. Interestingly, a vast majority of women BCs listed respect from the community as a major motivation to work in this capacity, reflecting the unmet need for a trusted financial intermediary especially for the rural poor.

BUT THERE ARE STILL CHALLENGES THAT NEED TO BE ADDRESSED

- Beneficiary perceptions reflect impatience over authentication. PDS beneficiaries who require more than one fingerprint attempt on average to authenticate their identity are fully 45 percent more likely to find the new system occasionally difficult or difficult.** As with any new technology, there will be an adjustment period, but qualitative evidence suggests that the full suite of exception management tools is not being utilized effectively by ePoS operators.
- Direct benefit transfers may not always be the preferred solution** by beneficiaries obtain their benefits. AP has experimented with many methods of pension delivery, including through the post office and through bank accounts. The current method of direct distribution through local panchayat offices is strongly preferred by beneficiaries over either of the two previous options. In both cases, the top reasons cited for the preference were better regularity and receiving the correct amount, and the VRO is at hand to resolve authentication problems. This example suggests the value of adapting service delivery mechanisms to the preferences of beneficiaries.
- The underutilization of bank correspondent services suggests that there is much room for growth in their coverage**, as the numbers below reveal:



- **Publicizing grievance redressal mechanisms would further empower beneficiaries and provide another useful source of feedback for improving digital reforms.** While Krishna District already has several mechanisms in place to collect feedback, there is low awareness of the user-driven tools such as the toll-free number for registering complaints.
- **While land record digitization is extremely popular among land owners, tenant farmers remain largely marginalized.** It is difficult for them to prove their tenancy and obtain the Certificate of Cultivation that is required for various government incentives for agriculture. Government should focus efforts on educating landlords and bank officials to ensure that tenant farmers can also access the benefits of land record digitization.



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