

A 'Cost-Benefit' Analysis of UID

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A cost-benefit analysis by the National Institute of Public Finance and Policy of the benefits from Aadhaar integration with seven schemes throws up huge benefits that are based almost entirely on unrealistic assumptions. Further, the report does not take into account alternative technologies that could achieve the same or similar savings, possibly at lower cost.

A recent study released by the National Institute of Public Finance and Policy (NIPFP) presents an innovative “cost-benefit analysis” of the Unique Identification (UID) or Aadhaar project. This is, in principle, a welcome step towards more informed discussion and greater transparency of this project. On close examination, however, the widely-publicised conclusions of this study turn out to have a fragile basis.

In a nutshell, the NIPFP report covers the potential use of Aadhaar in seven major welfare schemes and subsidies. These are the public distribution system (PDS), Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA, or simply NREGA), school education (including teacher salaries, mid-day meals, textbooks and uniforms), fertiliser subsidy, liquefied petroleum gas (LPG) subsidy, Indira Awaas Yojana (IAY), and payments in other schemes (pensions, Janani Suraksha Yojana, accredited social health activists and the Integrated Child Development Services). It estimates that linking these programmes to Aadhaar will lead to a “saving” of Rs 1 lakh crore over 10 years (Mathew 2012), and that after accounting for the costs of integration with Aadhaar the internal rate of return of the project will be over 50%.

Benefits from UID-Integration

The main question pertains to the benefits of integration with UID. The NIPFP report recognises that not all leakages in these programmes can be fixed by UID-integration. Only “bogus” beneficiaries,

i.e., ghosts (e.g., a dead person whose name remains on government records) and duplicates (one person getting benefits twice), can be weeded out.¹ Estimates of bogus beneficiaries are available for only two of the seven programmes considered in the NIPFP report (the PDS and NREGA).

For the PDS, the report uses the leakage estimates from a report of the Planning Commission published in 2005, based on the outdated data pertaining to 1997-2001.² That study estimated that 57% of PDS grain is diverted, of which, 17% was attributed to “ghost cards”. The definition of ghost cards includes (a) below the poverty line (BPL) cards that are not in possession of their owners, and (b) the excess of the total number of ration cards over that of total households (ibid: 82). It is worth-mentioning here that PDS entitlements are fixed per household. It is quite possible that in some cases several members of a joint household obtained separate ration cards for their respective nuclear families. Whether this should count as a case of “ghost” cards, as the Planning Commission report assumes, is not entirely clear. In any case, there is no reliable and up-to-date estimate of the share of bogus cards in circulation.

For NREGA the report assumes that UID integration will lead to savings of 12% of total expenditure – 7% from “automation of muster rolls” and another 5% from linking NREGA bank accounts to Aadhaar (without explaining how these would curb corruption, e.g., how automation of muster rolls helps to reduce leakages). If the idea is that some people who do not work manage to have their names on the muster rolls and wages are credited to their accounts (i.e., are “bogus” beneficiaries), then this

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fraudulent practice can continue even if muster rolls are automated.

The real protection from wage corruption in NREGA comes through bank accounts as it separates the payment agency from the implementing agency.³ With bank accounts, wage corruption can still continue in three forms: collusion (where the bank staff and NREGA functionaries collude to inflate work attendance and credit wages into accounts of people who have not worked), extortion (when an official forcibly takes money from NREGA workers after it has been withdrawn from the bank account) and deception (when a worker's account is operated by NREGA functionaries without his or her knowledge). In the first two cases (collusion and extortion), linking accounts to UID will not help to reduce corruption. Only in cases of deception (or "identity fraud") can biometric authentication at the stage of withdrawal of wages help.⁴ Estimates of the breakdown of the different types of corruption are not available.

The NIPFP report also recognises that estimates of duplicates and ghosts are not available for many schemes. What is the correct way to make assumptions on benefits of UID-integration in such cases? There is no easy answer to this, so what the NIPFP report does is either to apply the estimates of leakages due to bogus beneficiaries for one scheme to another (e.g. in the case of fertiliser and LPG subsidies, the estimates applicable to the PDS are used),⁵ or – for the remaining schemes – to apply an arbitrary rate of 7-10%.⁶

Although these assumptions are termed "conservative" (Patnaik 2012), available evidence – patchy as it is – suggests otherwise. For example, an estimate of fraud in six pension schemes has been made by the Society of Social Audit Accountability and Transparency (Department of Rural Development, Government of Andhra Pradesh) for July-October 2012. Six types of corruption are documented: "dead persons", "dual beneficiaries", "partial payments", "ineligible beneficiaries", "not paid but drawn" and "other". These social audit reports suggest that the total discrepancies in disbursement of pensions are around 2%.

Discrepancies due to dead beneficiaries and dual pensions – problems that Aadhaar can fix – are a subset of this 2%. The rate assumed by the NIPFP report is 7%.

While the report admits that there are no "robust" estimates of duplicates and ghosts, it provides little justification for the rates assumed in the cost-benefit analysis. Anticipating questions about the assumptions, the anonymous authors of the NIPFP report do upload the spreadsheet with their calculations, inviting readers to "modify the assumptions and explore alternative outcomes"⁷

Alternative Technologies

Biometric technology (of which Aadhaar is one variety) can help when there are bogus beneficiaries – ghosts or duplicates. Other, cheaper technologies (e.g. computerisation) can also help weed out bogus cards and help plug other leakages. Tamil Nadu has a fully computerised PDS database and overall PDS leakages are very small (4% in 2009-10). In states such as Chhattisgarh, overall leakages in the PDS have fallen from 50% (in 2004-05) to 10% (in 2009-10) without any use of Aadhaar, but through computerisation and other measures (Khera 2011b). The question a cost-benefit analysis should really address is whether Aadhaar is more cost-effective than these and other alternatives, including local biometrics (used in Andhra Pradesh). This question is raised in passing, but not answered in the NIPFP report (Patnaik 2012).⁸

Concluding Comments

In short, NIPFP's widely publicised cost-benefit analysis of UID is far from persuasive. It is almost entirely based on assumptions, not estimates, of the benefits of integration with Aadhaar. Where estimates (not assumptions) of bogus beneficiaries are used, they are unreliable or out of date. Further, the report does not take into account alternative technologies that could achieve the same or similar savings, possibly at lower cost.

The report also briefly considers the "costs" of integration of these schemes with Aadhaar. However, it makes no mention of the potential disruption that the integration exercise might cause.

Disruption could be at the stage of integration (e.g. old age pensioners may be unable to complete the required formalities) or during operations (e.g. software, connectivity or biometric failures). By assuming, with touching optimism, that the UID system is reliable and seamless, the report fails to address crucial concerns that have been raised about this adventurous project.

NOTES

- 1 For a detailed discussion on the types of corruption Aadhaar can weed out, see Khera (2011a).
- 2 "The reference period for the study was from 1997 to 2001 – the four-year period of the operation of TPDS. The household level information referred to the period from May to December 2001" (Planning Commission 2005: 13).
- 3 This practice has been in operation since 2008, except in Tamil Nadu. A few remote pockets were allowed to return to cash payments by Minister of Rural Development Jairam Ramesh in late 2011.
- 4 Note also that once those who were using "deception" to defraud the system, may turn to extortion and collusion once identity fraud becomes impossible.
- 5 The report states, "Using the estimates for PDS and MGNREGS as benchmarks, we assume that using Aadhaar-enabled system would result in a benefit of 7% of the total value of subsidies" (p 11) and "in the absence of such robust studies estimating the leakage from the system towards commercial use, we assume that use of Aadhaar would result in a benefit of 10% of the total value of the subsidy (similar to PDS)" (p 12).
- 6 See, for instance, p 10 where the report says, "In the absence of data on the extent of leakages that exist on account of fake and duplicate beneficiaries, we have assumed this figure to be 10% of the total expenditure incurred by the government on books and uniforms for school children".
- 7 Initial attempts (twice, at a three-day interval) to download the spreadsheet revealed that the spreadsheet was password protected. Now one out of seven worksheets can be modified. The practice of posting reports without author names is also observable with the documents on NREGA and PDS on the Unique Identification Authority of India (UIDAI's) website.
- 8 The cost-benefit work has been done by the MacroFinance group at NIPFP, a government-funded institution. The group has a project from UIDAI on financial inclusion which is perhaps why they focus only on UID. At the time of writing, no other paper on UID or financial

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inclusion was available on their website, raising the question whether the cost-benefit analysis itself was effectively sponsored by the UIDAI. Even if that is not the case, funding from the UIDAI to the MacroFinance group does create a possible conflict of interest, which would merit at least a short disclosure in the report.

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