State of Aadhaar Survey 2017-18

Technical Appendix: Research Design, Methodology, and Analysis

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Draft (v4)

RESEARCH DESIGN, METHODOLOGY, AND ANALYSIS

This document outlines the research design, methodology, and analysis for the State of Aadhaar Survey 2017-18. Most elements of the design were developed in late 2017 (October and November). Data collection occurred between November 2017 and February 2018. Data cleaning and analysis occurred between February and May 2018.

Please note that this document is a work-in-progress. We will be adding missing elements in the coming weeks. Whenever new material is added or changes are made we will revise the date and version number. See the version tracker for details.

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I. OVERVIEW

The State of Aadhaar survey concept was developed between July – October 2017 as a way to conduct primary research on the Aadhaar lifecycle to supplement the work of IDinsight's inaugural *State of Aadhaar Report 2016-17*.

Motivation

IDinsight's *State of Aadhaar* initiative aims to catalyse data-driven discourse and inform decision-making in the Aadhaar ecosystem. To achieve this objective, we maintain a website with up-to-date data, research, news, and official documentation on Aadhaar. Last year, we also released the *State of Aadhaar Report 2016-17*, which provides a landscape review of Aadhaar and highlights important areas of future research.

Through the *State of Aadhaar (SOA)* survey, we seek to gain an understanding of user experiences with and attitudes towards the Aadhaar ecosystem. The motivation of this survey was to capture a snapshot of how users interact with different aspects of the ecosystem, to understand their experiences, and to learn about how individuals perceive the benefits and problems they encounter. We aim to provide evidence on policy-relevant issues and use our findings to inform policymakers and influencers operating within these issues.

Sample Description

State	**Andhra Pradesh**	**Rajasthan**	**West Bengal**
Individual Respondents*	1142	965	840
Total Household Members	4454	5430	3785
Region	South	West	East
Geographic Description	Rural	Rural	Rural
Sampled Districts	6 (of 13)	8 (of 33)	7 (of 23)
Dates of Survey	Nov – Dec 2017	Dec 2017 – Jan 2018	Jan – Feb 2018
** Sample targets for the three states were: 1080 (AP), 960 (RJ), and 840 (WB).We exceeded our targets for Andhra Pradesh by 62 and for Rajasthan by 5.[1] The survey was directly administered to main respondents only, though some survey questions concern all household members of the main respondents.*			

Theme Selection

The survey contains five main themes: Enrolment, Data Quality & Updation, General Usage, Program-Specific Uses[2] (Bank accounts, SIM cards, and PDS), and User Awareness & Attitudes. These themes were largely sourced through our experience conducting research for the *State of Aadhaar Report 2016-17*.

External inputs

Given our intention to make the study relevant to policymakers within the Aadhaar ecosystem, we reached out to a number experts and influencers on the topic of digital identity to help us refine our themes. The list below contains the external experts we solicited input from for the purposes of this survey:

- Ajay Bhushan Pandey, Unique Identification Authority of India

[1] The reason for exceeding the targets for these two states is that in certain polling stations we surveyed more households in the process of replacing missing households.

[2] We also collected data pertaining to NREGA. We are currently working on differentiating the role that Aadhaar and non-Aadhaar related factors play in service delivery.

- Ajay Shah, National Institute of Public Finance and Policy
- Alan Gelb, Center for Global Development
- Anit Mukherjee, Center for Global Development
- Anurodh Giri, MicroSave
- Avani Kapur, Accountability Initiative
- Emrys Schoemaker, Caribou Digital
- Janaki Srinivasan, Caribou Digital
- Malavika Raghavan, Dvara Trust
- Reetika Khera, IIT Delhi
- Vaishnavi Prathap, Dvara Trust
- Vijay Madan, former Unique Identification Authority of India

II. GEOGRAPHY SELECTION

Given our time and budget constraints, we decided to cover three states.[3] We wanted the states selected to reflect the diversity of the country in terms of geography and linguistic groups. We also wanted states with moderate to high saturation of Aadhaar enrolment as well as the implementation of a range of Aadhaar-linked government programs, so that we have a large and diverse sample for the purpose of capturing user experiences and attitudes.

Below is a table listing the characteristics of all states and union territories in terms of geography, population, Aadhaar enrolment, as well as rates of Aadhaar-linking of various government programs. We used this table to guide our selection of states.

We also took into account logistical feasibility as determined by availability of survey teams and geographic spread of populations. Based on these factors, we selected: (1) Andhra Pradesh, (2) Rajasthan, and (3) West Bengal.

State	**Andhra Pradesh**	**Rajasthan**	**West Bengal**
Region	South	West	East
Overall population (2011)	84,580,777	68,548,437	91,276,115
Rural population (2011)	56,361,702	51,540,236	62,213,676
Main language	Telugu	Hindi	Bengali
Aadhaar enrolment saturation (% population enrolled in Aadhaar)	92%	84%	92%
PMJDY linking (% bank a/c linked to Aadhaar)	86%	73%	58%
State-level adoption of ABBA* for PDS	Yes	Yes	No
MGNREGA linking (% job cards linked to Aadhaar)	99%	92%	84%
* Aadhaar-based biometric authentication			

[3] Given the constraints, it was not feasible to conduct the survey on a sample that is representative of the entire rural population of the nation.

Data sources: UIDAI data on estimated population and enrolment, NREGA portal for beneficiary seeding data, Lok Sabha and Food and Civil Supplies data for PDS, and PMJDY dashboard.

III. SAMPLING DESIGN

The objective of the sampling design for the State of Aadhaar Survey is to balance budget constraints with precision.The goal is to collect data that is representative of rural populations at the state level for three states that reflect the geographical and linguistic diversity of the nation. We use the Election Commission's public, online voter ID database as our sampling frame for a multi-stage cluster sampling design. After incorporating sampling weights, we are able to produce estimates that are representative of the rural population at the state level for each of the three states.[4]

Selection process

Before we dive into the methodology at the different stages, it is essential to understand the functioning of the electoral rolls. The Election Commission of India has been tasked with conducting national and state level elections in the country. For this purpose, districts are divided into Assembly Constituencies, which are further split into polling stations. Each polling station has a voter list (also known as voter/electoral roll). The list contains the names, house numbers, genders, and ages of all the registered voters in that polling station.

The four stages and the methodology of selection at each stage is as follows:

Stage	**Sampling method**
District	Probability proportional to size (stratified by region)
Assembly Constituency (AC) (rural only)	Probability proportional to size
Polling Station (PS)	Probability proportional to size
Household	Simple random sampling
Main respondent	Simple random sampling

We use probability proportional to size (PPS) sampling without replacement at the first three levels to increase the precision of our estimates (where size is defined as the number of voters in each unit according to the voter rolls). We dropped all urban ACs from our sample before beginning the selection process to ensure our sample population was representative of rural populations.

After using PPS to select the Districts, ACs, and PSs, we downloaded the voter rolls for selected polling stations from the official website of the Chief Electoral Officer of each state. Within each polling station, simple random sampling was used to select 20 households, and one respondent

[4] For questions concerning the main respondents, we have estimates representative of all rural voters at the state level. For questions concerning all household members of the main respondents, we have estimates representative of all rural households at the state level, with the caveat that households where no member is included in the voter roll will not be captured by our sampling frame.

from each household was selected to be surveyed.[5] Missing households were replaced with randomly selected households from the same polling station.

Sample size calculations
We selected 6-8 districts within each state using PPS, stratified by region (see table below). Within each district, 3 (rural) ACs were selected using PPS. Within each AC, for Andhra Pradesh we selected 2 polling stations using PPS; for Rajasthan and West Bengal, we selected 3 polling stations from each selected AC using PPS.

The number of units sampled at each level was determined by minimizing the variances of our estimates subject to time and budget constraints. To calculate the intracluster correlation coefficients needed for estimating the variances in outcomes (which we selected to be access to photo ID and participation in NREGA), we used data from the Indian Human Development Survey.

Below are tables describing how district selection was stratified by region in each state, as well as districts that were selected in each region (bolded and underlined).

Andhra Pradesh	
Regions	*Districts (6 of 13 districts selected, all rural)*
Coastal Region	**Ananthapur,** Chittoor, **Kadapa,** Kurnool *(2 of 4 districts selected, all rural)*
Rayalseema Region	East Godavari, Guntur, **Krishna**, **Nellore**, Prakashan, **West Godavari** *(3 of 6 districts selected, all rural)*
Uttara Andhra Region	**Srikakulam**, Vishakapatnam, Vizianagram *(1 of 3 districts selected, all rural)*

Rajasthan	
Regions	*Districts (8 of 33 districts selected, all rural)*
Dhundhar Region	Ajmer, **Alwar**, Bharatpur, Dausa, **Jaipur**, Jhunjhunu, Sikar, **Tonk** *(3 of 8 districts selected, all rural)*
Hadoti Region	Baran, Bundi, Dholpur, Jhalawar, Kota, **Modhopur, Sawai** (*1 of 6 districts selected, all rural*)

[5] In practice, in the process of replacing missing households we sometimes end up with slightly more or less than 20 households in some polling stations.

Marwar Region	Barmer, Jaisalmer, Jalore, **Jodhpur**, Karauli, **Nagaur**, Pali, Sirohi (*2 of 8 districts selected, all rural*)
Mewar Region	Banswara, Bhilwara, Chittorgarh, Dungarpur, Pratapgarh, Rajsamand, **Udaipur** (*1 of 7 districts selected, all rural*)
Sekhawati Region	Bikaner, Churu, **Ganganagar**, Hanumangarh (*1 of 4 districts selected, all rural*)

West Bengal	
Regions	*Districts (7 of 22 rural districts selected; 1 urban district excluded from selection)*
Region 1	**Bankura,** Birbhum, Jhargram, Paschim Bardhaman, Paschim Medinipur, **Purba Bardhaman**, **Purba Medinipur,** Purulia *(3 of 8 districts selected, all rural)*
Region 2	**Hooghly**, Howrah, Nadia, North 24 Parganas, **South 24 Parganas** *(2 of 5 rural districts selected; Kolkata district is urban and hence excluded from selection)*
Region 3	Alipurduar, Coochbehar, Darjeeling, **Jalpaiguri,** Kalimpong *(1 of 5 districts selected, all rural)*
Region 4	Dakshin Dinajpur, Malda, **Murshidabad**, Uttar Dinapur *(1 of 4 districts selected, all rural)*

Data Collection

The State of Aadhaar survey collected both individual-level data and household-level data. We survey one respondent per sampled household, though some questions concern all members of the household. The data was collected electronically through mobile phones using SurveyCTO. All data was encrypted and stored securely to preserve the privacy of our respondents. To ensure high data quality, the team adopted multiple strategies that included: spot checks, back checks, accompaniments, data quality checks through Stata .do files and daily debriefs. Fieldwork was conducted between November 2017 and February 2018 (exact timing varied by state). For each state we spent approximately 10 days on surveyor training and piloting followed by approximately 4 weeks of data collection.

IV. LIMITATIONS

Using voter rolls as our sampling frame has some limitations. For instance, a voter roll may exclude some households completely. Furthermore, because we do not have any survey data on households excluded from voter rolls, we do not know whether these households differ in terms of Aadhaar enrolment and other indicators of interest. However, other researchers who have used voter rolls as a sampling frame have found low exclusion rates, which suggests that such exclusions may not be of major concern.[6]

Using voter rolls offered some clear advantages over other sampling methods, such as right-hand rule and household listing, both of which also suffer from exclusion errors. In order to ensure high quality implementation of right-hand rule sampling or household listing, enumerators must be highly trained and closely supervised. Otherwise, enumerators may skip some households that are located in remote parts of a village or that are difficult to canvas for other reasons, or may select households in other non-random fashions. In this regard, using voter rolls improves the rigor of random selection among households included in the voter rolls. Additionally, using voter rolls as the sampling frame is more cost-effective: accurately mapping villages for these other techniques is very time consuming and we estimated it would have doubled the number of days required to complete our survey.

[6] Dalal, P. M., et al. "Mumbai stroke registry (2005-2006)-surveillance using WHO steps stroke instrument-challenges and opportunities." JAPI 56 (2008): 675-80.
Saha, A., et al. "Ocular morbidity and fuel use: an experience from India." Occupational and environmental medicine 62.1 (2005): 66-69.

TECHNICAL APPENDIX A: SURVEY MATERIALS

Survey protocol details

To ensure consistency across districts within a state, we used the same survey team for an entire state. These teams (composed of 10-12 members) spent 4-6 weeks going through training, piloting, and data collection for their state. To maintain as much consistency as possible across districts as well as across states, we designed and followed a strict survey protocol. Some key guidelines are provided below.

Household replacements

We took several measures to minimize the number of households that needed to be replaced. Enumerators were required to follow a set of steps to locate the households assigned to them. If they were unable to find the households after following all steps in the protocol, then they would request a replacement household from a list of randomly selected replacement households in the same polling station. The replacement household list was held by team leaders who were responsible for ensuring enumerators followed all protocols before receiving a replacement household. Enumerators were required to keep records of why a household needed to be replaced. At the end of each day, replacement data was monitored and discussed with all enumerators during the team debrief.

Respondent replacements

In cases where the selected respondent was not available, another adult member of the household was selected.

Polling Station and Assembly Constituency replacements

In cases where we could not obtain consent from the Sarpanch or other officials, we dropped the polling station from our sample and replaced it with another polling station selected using PPS from previously unselected polling stations. In West Bengal, we were forced to drop one Assembly Constituency due to safety concerns in that area. We selected a different Assembly Constituency using PPS.

Survey modifications

Half-way through our data collection in Andhra Pradesh (before beginning in Rajasthan or West Bengal), we decided to revise the questionnaire to add a few questions about the reasons why people think the current system of PDS delivery is better or worse than the previous system. At the end of the survey, the team conducted phone surveys for the households covered in the first half of the survey (496 households) to collect responses on the newly added questions and got a response from 351 out of 496 households. The responses received via phone surveys were then merged with the original dataset. This change did not affect Rajasthan or West Bengal.

In Rajasthan, after surveying had begun, we found that we were not capturing all respondents who were denied ration in the last three months. We initially only asked about the reason a respondent did not go to the ration shop for those who went to the ration shop at least once but did not go all three times during the last three months; however, we realized that some respondents who did not go to the ration shop at all during the last three months could have been denied ration. We therefore modified the survey questions to also ask for reasons to such

respondents. For those already surveyed earlier (104 households), we conducted phone surveys to ask them this question and got a response from 88 out of the 104 households.

Data cleaning

We addressed the following issues during data cleaning:

Outliers

Each day our survey teams kept detailed notes from events in the field and conversations during the daily team debrief. One intention of these notes was to keep a record of genuine outliers and to identify possible surveyor errors. During the data cleaning process we incorporated changes according to these notes.

User experience questions

A Likert scale that ranges from 1 to 5 was used in Andhra Pradesh for questions on user experience; however, we switch to a simpler 3 point scale (better, neutral or worse) in Rajasthan and West Bengal. We compressed the responses under the 5 point scale to fit the 3 point scale.

Survey questionnaire

Surveys varied slightly by state, most notably by the options presented for questions on state-specific programmes. The survey was also translated from English into the main language of the state: Telugu for Andhra Pradesh, Hindi for Rajasthan, and Bengali for West Bengal. We provide the English version of the Rajasthan survey for reference. Questionnaires in other languages are available upon request.

CLICK HERE FOR THE QUESTIONNAIRE

TECHNICAL APPENDIX B: ANALYSIS

Sample and population characteristics

Below we show comparisons of estimates of demographic characteristics based on our sample with summary statistics on the rural population from the 2011 census. We compare the main respondents against rural adults, and all household members of the main respondents against the rural population. Sampling weights have been applied to the population estimates of our sample in order to arrive at estimates that represent all rural voters (or voter households) of the states. We also show summary statistics directly from our sample (without applying sampling weights), though those should not be directly compared with the census summary statistics.

The first and fourth columns are summary statistics of data from the 2011 Census. The second and fifth columns are estimates using sampling weights based on our sample population (these columns represent what our sample implies about the characteristics of the relevant population after accounting for sampling weights). The third and sixth columns are summary statistics directly on our sample: main respondents along with the members of their households. To understand the representativeness of our sample compared with the underlying population, compare column 1 (Rural Adults: Census) with column 2 (Rural Adults: with Sample Weights), and column 4 (Rural Population: Census) with column 5 (Rural Population: with Sample Weights).

Andhra Pradesh						
	1	2	3	4	5	6
	Rural Adults (Census)	**Rural Adults** (w/ Sampling Weights)	**Main Respondents** (Sample)	**Rural Population** (Census)	**Rural Population** (w/ Sampling Weights)	**All Household Members** (Sample)
Percentage of Females	50.63	56.48	55.78	49.89	49.21	49.12
Percentage of SC individuals	18.79	22.41	23.29	19.24	24.59	25.37
Percentage of ST individuals	8.44	3.57	3.42	9.28	3.32	3.17
Percentage of Hindus	-	84.22	82.66	93.67	83.23	81.63
Percentage of Muslims	-	7.46	7.79	5.04	8.12	8.51
Percentage of Literates	51.25	56.42	57.36	53.85	63.92	64.37

Percentage of individuals b/t 18 – 60	83.98	81.56	81.44[7]	59.08	65.52	65.65
Percentage of individuals above 60	16.02	18.11	18.21[7]	8.57	11.22	11.11
Total Population / Sample size	38.1M	1142	1142	56.3 M	4454	4454

Data sources: 2011 Census and State of Aadhaar Survey 2017-18

Rajasthan						
	1	2	3	4	5	6
	Rural Adults (Census)	**Rural Adults** (w/ Sampling Weights)	**Main Respondents** (Sample)	**Rural Population** (Census)	**Rural Population** (w/ Sampling Weights)	**All Household Members** (Sample)
Percentage of Females	49.12	52.61	51.61	48.27	49.98	49.56
Percentage of SC individuals	17.89	22.24	22.69	18.52	20.81	21.33
Percentage of ST individuals	15.89	16.72	12.75	16.88	19.14	13.98
Percentage of Hindus	-	90.01	89.43	91.97	90.36	89.59
Percentage of Muslims	-	6.17	6.84	6.14	6.41	7.18
Percentage of Literates	50.21	61.16	62.18	51.40	67.26	67.24
Percentage of individuals b/t 18 – 60	86.61	84.82	84.04[7]	50.69	55.36	55.65
Percentage of individuals above 60	13.39	15.18	15.96[7]	06.22	9.80	10.09
Total Population /	29.3 M	965	965	51.5 M	5430	5430

[7] In our sample across all three states, the main respondents only consists of those who are 18 or above except 3 cases in West Bengal where the age is missing due to refused to answer / don't know / survey error.

Sample size						

Data sources: 2011 Census and State of Aadhaar Survey 2017-18

West Bengal						
	1	2	3	4	5	6
	Rural Adults (Census)	**Rural Adults** (w/ Sampling Weights)	**Main Respondents** (Sample)	**Rural Population** (Census)	**Rural Population** (w/ Sampling Weights)	**All Household Members** (Sample)
Percentage of Females	48.85	61.58	59.29	48.79	49.59	49.51
Percentage of SC individuals	27.70	28.18	27.38	27.49	27.46	26.37
Percentage of ST individuals	7.60	8.73	8.45	7.81	8.80	8.56
Percentage of Hindus	-	57.40	65.12	66.47	55.89	63.46
Percentage of Muslims	-	42.60	34.64	30.79	44.11	36.30
Percentage of Literates	65.92	76.96	79.05	63.06	77.85	79.18
Percentage of individuals b/t 18 – 60	87.82	86.86	86.43[7]	58.07	65.11	65.18
Percentage of individuals above 60	12.18	12.75	13.21[7]	6.60	8.88	9.17
Total Population / Sample size	40.2M	840	840	62.1 M	3785	3785

Data sources: 2011 Census and State of Aadhaar Survey 2017-18

Sampling weights

Sampling weights for respondents and households were constructed using a combination of simulations and calculations.

For stages of the sampling process where PPS was used, we conduct simulations where we reproduce the PPS sampling conducted at each stage of the sampling process in order to calculate the inclusion probability of units.

At the polling station and household levels, where households and respondents were selected using simple random sampling, we simply calculate inclusion probability of units. Since we encountered missing households in polling stations (on average 20-30% for each state), we make the assumption that households are missing at random within polling stations, and assign the (conditional) probability of a household being included to be:

$$Probability\ of\ inclusion\ for\ household\ = \\ (Total\ number\ of\ household\ sampled\ in\ PS)\ /\ (Total\ number\ of\ non\ missing\ households\ in\ PS)$$

where the total number of non missing households in the polling station is calculated by multiplying the total number of households in the polling station (according to voter roll) by one minus the fraction of households that were found to be missing (out of the 20 that we initially selected for each polling station).

Analysis approach

We conducted analysis of our survey data through a combination of ***proportion estimations*** and ***hypothesis tests***, focusing on a set of questions selected for their relevance for policy action and contributions to the broader Aadhaar discourse.

We conduct proportion estimations on key indicators of interest. Proportion estimations allow us to highlight descriptive statistics regarding important questions, such as the proportion of people that were excluded from the public distribution system in Andhra Pradesh and Rajasthan and how much Aadhaar-related factors contributed to this exclusion. In all proportion estimations we incorporate sampling weights at the respondent or household level (depending on the level at which the outcome is measured). The confidence intervals are constructed using a logit transform so that their endpoints always lie between 0 and 1. All proportion estimations that we conducted, including those not discussed in the report, are presented in the analysis output tables under the relevant sections.

In addition, we run hypothesis tests on whether certain groups in our sample differ on specific outcomes of interest. The hypotheses tests are conducted by running regressions of the outcome variable on a dummy variable indicating group membership (e.g. whether the respondent or their household belongs to vulnerable groups defined by caste, education, gender and age). With these we answer key questions such as whether or not there are differences in Aadhaar enrolment rates between various vulnerable communities and the rest of the population.

In *SOAR 2017-18* we discuss results from 8 different hypotheses tests. All the hypotheses that we tested are presented in the analysis output tables under the relevant sections.

In order to account for multiple hypothesis testing for the hypotheses that we discussed in the report, we use the Bonferroni multiple hypothesis correction, a relatively conservative method of correcting for multiple hypothesis testing.

Lastly, it is important to note that the purpose of these hypotheses tests is to check for correlations between outcomes and respondent or household characteristics, and do not have any causal interpretation. Thus causal claims should not be made from our data and analysis.

Calculations using estimates

Aadhaar Platform: Calculation of the number of individuals with duplicate Aadhaar
An estimation based on our survey data indicates that 0.1 percent of rural adults in the three states possess a duplicate Aadhaar (defined as cases where someone has two cards with the same demographic information but different Aadhaar numbers). In order to calculate the implied number of duplicates in the total population our sample represents (i.e., rural voters in the three states) we multiply this figure by the number of rural voters in the three states (see Table 1). We use the total number of rural voters instead of the rural population numbers from the census because we used the voter roll as our sampling frame. Hence, our sample of main respondents is only representative of the (rural) voting population of the states.

Table 1: Calculation of the number of individuals with duplicate Aadhaar

Percentage of duplicates	**Total voters (rural) across three states**	**Implied number of voters (rural) who have duplicate Aadhaar**
0.1	71.3 million	71,300

We found 3 duplicate cases out of the 2918 respondents who answered this question; the proportion estimate of 0.1% is obtained after applying sampling weights. The 95 percent confidence interval on our estimate of 0.1% ranges from 0 to 0.3%, and hence the 95 percent confidence interval around the implied number of duplicates ranges from 3 to 213,900, meaning there is a wide variance on our estimate for how many duplicates may exist.[8]

Social Protection: Calculation of the number of individuals excluded in PDS due to Aadhaar
We define exclusion in PDS as cases where eligible beneficiary households are denied their food subsidy. From our data we estimate the average monthly exclusion rate due to Aadhaar, which is the average percentage of households excluded from PDS due to Aadhaar per month (see Output Table 6.8).[9]

[8] We use three as the lower bound as we discovered three cases of duplicates in our sample.
[9] We estimate the average monthly exclusion rate in three steps: 1) for each respondent household that reported having been excluded from PDS in the last three months, we take the number of times they were excluded during this period to be the number of times they could have claimed ration but did not (i.e. three or six minus the number of times they claimed ration; we use six for West Bengal, since ration is collected twice a month); 2) we calculate the average number of times households were excluded from PDS each month by dividing the previous number by three (or six) for those who were ever excluded during this

To calculate the implied average number of rural residents excluded due to Aadhaar every month in each state we multiply the monthly exclusion rate (due to Aadhaar) with the total number of rural beneficiaries of PDS. We calculate the total number of rural PDS beneficiaries by multiplying the total rural population with the proportion of households with at least one ration card (from our survey data; see Table 2 below).[10]

Table 2: Calculation of the number of individuals excluded in PDS due to Aadhaar

State	2017 rural population*	Percentage of HHs who have at least one ration card[11]	Average monthly exclusion rate	Contribution of Aadhaar related factors	Average monthly exclusion rate due to Aadhaar	Persons excluded
Andhra Pradesh	34,835,154	97.4%	1.1%	70.6%	0.8%	265,891
Rajasthan	57,685,077	97.9%	9.9%	22.3%	2.2%	1,246,770
West Bengal	65,910,395	99.4%	6.2%	12.4%	0.8%	503,679

*Calculated using 2017 total population estimates provided by UIDAI and the proportion of rural population provided by the 2011 Census.

Social Protection: Calculation of the exclusion rate in PDS in Jharkhand and contribution of Aadhaar

The paper "Aadhaar and Food Security in Jharkhand: Pain without Gain?" (Drèze et al, 2017) presents results from a field survey conducted on Jharkhand to understand the contribution of Aadhaar to exclusion. In our report, on page 24, footnote 30, we estimate that the exclusion rate due to Aadhaar-related factors in their study is 5%. Presented here is how we arrived at that figure.

Exclusion in PDS is defined as cases where eligible beneficiary households are denied their food subsidy. The paper reports data on PDS exclusion from May 2017 based on a survey in June 2017. The percentage of households that did not transact in May 2017 is 21 percent as per the online PDS portal of Jharkhand (Aadhaar).[12]

period, and assign a value of zero to households who were never excluded during this period; 3) we estimate the mean of the variable constructed in the previous step, applying household-level sampling weights. To arrive at the monthly exclusion rate due to Aadhaar (only), we weigh the monthly exclusion rate estimates by the proportion of excluded households who reported Aadhaar-related reasons. One reason we use monthly figures is to compare with Drèze et al. 2017 which focuses on one month.

[10] We calculate the rural population by multiplying the 2017 projected population (UIDAI 2017) for the state by the proportion of the population that is rural (we calculated this using the 2011 population breakdown (NITI Aayog 2011)).

[11] This estimate is at the household level. We make the assumption that the same percentage of residents have at least one ration card.

[12] The online portal can be found at http://aahar.jharkhand.gov.in/

To calculate the monthly exclusion rate we must not include cases where the individual did not transact in May 2017 for reasons other than being explicitly denied from ration. See Table 3 for a list of these reasons.

Table 3: Percentage of cases where non-transacting households are not excluded

Reason for non-transaction during May other than being denied	**Percentage (%) of non-transacting households**
Not interested in ration	0.5
Collected May ration in June 2017	26
Planned to collect May ration in June 2017	14
Total	40.5

We therefore estimate that the exclusion rate is 12.5% (59.5% of the 21% non-transacting households).

Our next step is to determine the contribution of Aadhaar to the exclusion rate of 12.5%. We do this by classifying the reasons for exclusion based on whether they are Aadhaar or non-Aadhaar related reasons (See Table 4).

Table 4: Calculating the percentage contribution of Aadhaar and non-Aadhaar related reasons to PDS exclusion

Reason for exclusion	**Role of Aadhaar**	**Percentage (%) of excluded households**
No household member was PoSable	Confirmed Aadhaar-related reasons = 42%	13
No PoSable member was available		20
PoS did not work		9
Dealer refused	Factors not related to Aadhaar = 57.5%	30
Other		27
Not interested		0.5

Therefore the percentage of PDS beneficiary households excluded per month due to Aadhaar would be 5.2% (42% of the 12.5% excluded households). This is a conservative estimate since the “other” category and “dealer refused” can include Aadhaar-related factors as well.

Calculations from our survey data indicate that 0.8%, 2.2%, and 0.8% of PDS beneficiary households were excluded per month due to Aadhaar-related reasons in Andhra Pradesh, Rajasthan and West Bengal, respectively (see Table 3). If we include those excluded due to a combination oboth Aadhaar and non-Aadhaar reasons, the figures are 0.8%, 2.9% and 0.9% (see Figure 5.3 of the *State of Aadhaar Report 2017-18*).

Analysis output tables

CLICK HERE FOR ANALYSIS OUTPUT TABLES

STATE OF AADHAAR SURVEY 2017-18 QUESTIONNAIRE: RAJASTHAN

Question	Responses
Do you consent to taking this survey?	1. Yes 0. No (Skip to end of the survey)
Proceed only if respondent has given consent.	
Respondents were given the option to refuse to answer or say they didn't know for each question.	
Questions that require enumerators to read out all options are mentioned in the questionnaire. When options are not read, the enumerator reads out the question and marks an answer based on the respondent's response.	

I.	Household-level Questions	
1	How many people live in this household, i.e. number of people who have been eating from the same stove for more than six months in the last 12 months?	
*The following questions are **repeated for each family member**.*		
2	What is the name of the family member?	
3	What is the gender of the family member?	1. Male 2. Female 3. Third gender
4	What is the age of the family member?	

5	What is the relation of the family member to the respondent?	1. Self 2. Father/Father-in-law 3. Mother/Mother-in-law 4. Husband 5. Wife 6. Daughter/Daughter-in-law 7. Son/Son-in-law 8. Brother/Brother-in-law 9. Sister/Sister-in-law 15. Niece 16. Nephew 10. Uncle 11. Aunt 12. Grandchild 13. Grandmother 14. Grandfather 98. Other, please specify
6	What level of education has the family member completed?	1. Not literate 2. Literate 3. Primary (up to class 5) 4. Middle (class 6 - class 8) 5. Secondary (class 9 - class 10) 6. Senior Secondary (class 11 - class 12) 7. Graduate 8. Professional

II.	**Enrolment and Data Quality** *The following questions **are repeated for each family member**.*	
7	Does the family member have a mobile phone?	1. Yes 0. No
8	Does the family member have an Aadhaar card?	1. Yes 0. No (Skip to Q26)
9	Does the Aadhaar card of the family member have an error?	1. Yes 0. No (Skip to Q20)
*The following questions were asked for members of the household who **had an error** in their Aadhaar card:*		

10	What type of error does the Aadhaar card have? *The enumerator read out all options for this question. The respondent could select all options that applied.*	1. Name 2. Address 3. Date of birth 4. Gender 5. Photo 6. Father's name 7. Husband's name 98. Other, please specify
*The following question was asked for members of the household who **reported an error in the name** on their Aadhaar card:*		
11	In what way is your name incorrect?	1. Fully incorrect/completely wrong name 2. Incorrect spelling 98. Other, please specify
*The following question was asked for members of the household who **reported an error in the address** on their Aadhaar card:*		
12	In what way is your address incorrect? *The respondent could select all options that applied.*	1. House/Street name 2. Village/Mandal 3. District 4. Pin code 98. Other, please specify
*The following questions was asked for members of the household who **reported an error in the date of birth** on their Aadhaar card:*		
13	In what way is your date of birth incorrect? *The respondent could select all options that applied.*	1. Wrong day 2. Wrong month 3. Wrong year 4. Missing day 5. Missing month 98. Other, please specify
*The following questions were asked for members of the household who **had an error in their Aadhaar card**:*		
14	Why do you think there is an error in your Aadhaar card?	1. Data entry error at the center/camp 2. Errors in other IDs submitted 98. Other, please specify

15	Did you try to get the error corrected?	1. Yes 0. No (Skip to Q20)
*The following question was asked if the member of the household **tried to get the error corrected**:*		
16	Did the error get corrected?	1. Yes 0. No (Skip to Q20)
*The following question was asked **if the error was corrected**:*		
17	Did you have to pay to fix the error?	1. Yes 0. No (Skip to Q20)
*The following questions were asked if the member of the household **had to pay** to get the error fixed:*		
18	How much did you have to pay?	
19	By the UIDAI guidelines, it should not cost more than 15 rupees to update information such as name, address, etc. Were you aware of this fact?	1. Yes 0. No
*The following question was asked if the member of the household was **over the age of 17**:*		
20	Do you have a voter ID card?	1. Yes 2. Registered to vote but do not have a voter ID card. 0. No (Skip to Q30) 98. Other, please specify
*The following question was for the enumerator if the member of the household **had a voter ID** card:*		
21	Note to enumerator: Verify if the name is on the list	1. Yes 0. No 98. Other, please specify
*The following questions were asked if respondent or family member **had a voter ID**:*		
22	Did you have any errors in your voter ID card?	1. Yes 0. No (Skip to Q30)
*The following questions were asked if the member of the household had an **error in the voter ID** card:*		

23	What type of error did your voter ID card have? *The respondent could select all options that applied.*	1. Name 2. Address 3. Date of birth 4. Gender 5. Photo 6. Father's name 7. Husband's name 98. Other, please specify
24	Did you try to fix the error?	1. Yes 0. No (Skip to Q30)
*The following question was asked if the member of the household **tried to fix the error** in the voter ID card:*		
25	Were you successfully able to fix the error?	1. Yes 0. No
*The following questions were asked if the member of the household **did not have an Aadhaar** card:*		
26	Did you try to get an Aadhaar card?	1. Yes, but was not able to get an Aadhaar card 2. Yes, I have enrolled for it but have not received my Aadhaar card yet (Skip to Q28) 0. No (Skip to Q29) 98. Other, please specify
*The following question was asked if the member of the household **tried to get an Aadhaar** card:*		

27	Why have you not been able to get an Aadhaar card?	1. I could not enrol due to a biometric error 2. I did not know where to enrol 3. There are no enrolment centers nearby 4. Due to my caste / religion 5. Due to my gender 6. Because I was not from the village 7. Due to my disability 8. The staff at the enrolment center asked for a bribe 9. I did not have the necessary documents 98. Other, please specify
*The following question was asked if member of the household was **waiting to receive an Aadhaar** card:*		
28	When did you apply for an Aadhaar card?	1. Within the last month 2. 1-2 months ago 3. 3-6 months ago 4. 7-12 months ago 5. 1-2 years ago 6. More than 2 years ago
*The following question was asked if the member of the household **had not enrolled or tried** to enrol to get an Aadhaar card:*		
29	Why have you not enrolled to get an Aadhaar card?	1. There is no enrolment center around me 2. I do not need one 3. I do not want to get one due to personal reasons, such as religion or caste 4. I do not want to share my biometric information (fingerprints and iris scan, etc.) with UIDAI/the government 5. I do not want to share my demographic information (name, age, address, mobile phone, etc.) with UIDAI/the government 98. Others, please specify

Individual-level Questions		
*The following questions were asked to the **main respondent** only.*		
*The following question was asked if the main respondent **had an error in their Aadhaar** card AND claimed they were **able to fix the error** in their Aadhaar card:*		
30	You mentioned you have fixed the error in your Aadhaar card: Overall, how easy or difficult did you find the process of fixing the error in your Aadhaar card? *The enumerator read out all options for this question.*	2. Easy (Skip to Q31) 3. Neutral 4. Difficult (Skip to Q32)
*The following question was asked if the main respondent found the process of fixing the error in their Aadhaar card **easy**:*		
31	What part of the process made the update easy for you?	1. The enrolment/update center was easily accessible 2. The documents required to fix the error were easy to gather 3. The staff at the enrolment center were very helpful 4. The lines were short; I did not have to wait too long 98. Other, please specify
*The following question was asked if the main respondent found the process of fixing the error in their Aadhaar card **difficult**:*		
32	What part of the process made the update difficult for you?	1. The enrolment/update center was difficult to get to 2. I did not have the necessary documents 3. I did not know what documents I needed 4. The staff at the enrolment center were not helpful 5. The lines were very long; I had to wait a very long time 6. I had to pay a bribe to update my Aadhaar card 98. Other, please specify

*The following question was asked if the main respondent had **not tried** to fix the error in their Aadhaar card:*		
33	You mentioned you have not tried to fix the error in your Aadhaar card: Why did you not try to fix the error?	1. I did not know I could fix the error 2. I did not want to give the card back 3. The error on the Aadhaar card does not affect me in any way 4. I did not want to have to wait for a new card to come 98. Other, please specify
*The following question was asked if the main respondent was **not successful** in fixing the error in their Aadhaar card:*		
34	You mentioned you were not successful in fixing the error in your Aadhaar card: Why were you not successful in fixing the error?	1. I could not find a center to fix it 2. I did not have the necessary documents to fix the error 3. The enrolment center said they cannot fix my error 4. It costs too much money to fix the error 5. I heard from others that it costs too much money 98. Other, please specify
	What is the address of the household?	
35	District *Note: For each state, we pre-populated the districts, ACs, and PSes selected through our methodology to minimize survey errors.*	1. Alwar 2. Sawai Madhopur 3. Tonk 4. Jaipur 5. Nagaur 6. Jodhpur 7. Udaipur 8. Ganganagar
36	Mandal	

37	Assembly Constituency	1. Alwar Rural 2. Kathumar 3. Ramgarh 4. Khandar 5. Sawai Madhopur 6. Bamanwas 7. Deoli - Uniara 8. Niwai 9. Malpura 10. Phulera 11. Shahpura 12. Dudu 13. Parbatsar 14. Khinwsar 15. Merta 16. Bilara 17. Osian 18. Phalodi 19. Mavli 20. Jhadol 21. Kherwara 22. Karanpur 23. Suratgarh 24. Raisingh Nagar 25. Bassi
38	Polling Station	
39	Address *[list house number, street name, nearby landmark, etc.]*	
*The following question was asked if the main respondent **owned a mobile phone**:*		
40	If you are okay with it, could you share your mobile number with us?	
*The following questions were asked if the any of the **other members of the household owned a mobile phone**:*		
41	If you are okay with it, could you share the mobile number of one member?	
42	Could you tell us who the mobile phone belongs to?	
*The following questions were asked to the **main respondent** only.*		

43	What religion do you belong to?	1. Hindu 2. Muslim 3. Christian 4. Sikh 5. Jain 6. Buddhist 98. Other, please specify
44	Which category do you belong to?	1. General 2. SC 3. ST 4. OBC 98. Other, please specify
*The following questions were asked if the main respondent **had an Aadhaar card**:*		
45	When did you enrol for an Aadhaar?	
46	Month	1. January 2. February 3. March 4. April 5. May 6. June 7. July 8. August 9. September 10. October 11. November 12. December
47	Year	1. 2009 2. 2010 3. 2011 4. 2012 5. 2013 6. 2014 7. 2015 8. 2016 9. 2017
48	Did you enrol for your Aadhaar at an Aadhaar camp?	1. Yes 0. No

49	When you applied for an Aadhaar card, did you have this identity document: ___? *The enumerator read out all options for this question and the. The respondent could select all options that applied.*	1. NREGA job card 2. Ration card 3. Voter ID 4. Pension card 5. Driving license 6. PAN Card 7. Photo ATM/credit/bank card 8. Bank statement / passbook 9. Letter from Panchayat certifying identity & address 10. I did not have any form of identification 98. Other, please specify
50	Why did you get an Aadhaar card? *The respondent could select all options that applied.*	1. Because Panchayat / Aadhaar / Government persons told me to get one 2. Because other external agency told me to get one 3. Because I need it to access government service(s) (e.g. rations, LPG subsidy, MGNREGA wage, pensions) 4. Because I needed it to open a bank account / get a SIM card / other service / product 5. Because everyone was getting one 6. Because it is easy to use as an identification document; Aadhaar is accepted everywhere 7. Because I did not have an identification document 8. No particular reason 98. Other, please specify
51	Did you pay anyone in the process of getting an Aadhaar card?	1. Yes 0. No (Skip to Q54)
*The following questions were asked if the main respondent **had to pay** anyone in the process of getting an Aadhaar card:*		

52	Who did you pay?	1. A member of the village panchayat 2. Someone from the local post office 3. Someone from the local school 4. Someone from the bank 5. Someone from the enrolment center 6. A middle man 7. Family member/relatives 8. Friends 98. Other, please specify
53	In total, how much did you have to pay to get your Aadhaar card?	
*The following questions were asked if the main respondent **had an Aadhaar card**:*		
54	By the UIDAI guidelines, it is free for anyone to enrol for an Aadhaar card. Were you aware of this fact?	1. Yes 0. No
55	Overall, how easy or difficult did you find the process of getting your Aadhaar card? *The enumerator read out all options for this question.*	2. Easy 3. Neutral 4. Difficult
56	Overall, has having an Aadhaar card made your life easier or more difficult? *The enumerator read out all options for this question.*	2. Easier (Skip to Q57) 3. Neither easier nor more difficult/ No change 4. More difficult (Skip to Q58)
*The following question was asked if the main respondent **found life easier** with an Aadhaar:*		
57	How has having an Aadhaar card made your life easier? *The respondent could select all options that applied.*	1. It allows me to carry less identification documents - Aadhaar can be used everywhere 2. The fingerprint authentication makes sure that nobody can pretend to be me 3. I am able to get my rations / wages / benefits faster because of Aadhaar 4. I have been able to access other types of services (SIM cards, bank accounts, microloans, farm loans, etc.) because I have an Aadhaar 98. Other, please specify
*The following question was asked if the main respondent **found life more difficult** with an Aadhaar:*		

58	How has having an Aadhaar card made your life more difficult? *The respondent could select all options that applied.*	1. It causes big problems when I do not have my Aadhaar card with me 2. I am made to link my Aadhaar card to many things 3. I have been unable to receive my rations / wages / benefits because of fingerprint authentication errors 98. Other, please specify
59	Is the address that you have on your Aadhaar card still the address where you currently live?	1. Yes (Skip to Q64) 0. No 98. Other, please specify
*The following questions are asked if the address that the main respondent has on the Aadhaar card is **different from the address** where he/she currently lives:*		
60	Have you tried to have your address updated to your current address?	1. Yes (Skip to Q62) 2. I did not know I could do this 0. No
*The following question was asked if the main respondent **did not try to update the address** on the Aadhaar card:*		
61	Why did you not try to update your address?	1. I did not know I could update my address 2. I did not want to give the card back 3. The difference in address on the Aadhaar card does not affect me in any way 4. I did not want to have to wait for a new card to come 98. Other, please specify
*The following question was asked if the main respondent **tried to update the address** on the Aadhaar card:*		
62	Were you successfully able to update the address on your Aadhaar card?	1. Yes (Skip to Q64) 0. No 98. Other, please specify
*The following question was asked if the main respondent was **not successful in updating** the address on the Aadhaar card:*		

63	Why were you not successful in updating your address?	1. I could not find a center to update it 2. I did not have the necessary documents to update it 3. The enrolment center said they cannot update my information 4. It costs too much money to update my information 5. I heard from others that it costs too much money 98. Other, please specify
64	Did you provide a mobile phone number when you enrolled for an Aadhaar card?	1. Yes 0. No (Skip to Q73)
*The following question was asked if the main respondent **provided a mobile phone number** when enrolling for Aadhaar:*		
65	Do you still use the mobile phone number that you provided when you enrolled for an Aadhaar card?	1. Yes (Skip to Q73) 0. No
*The following question was asked if the main respondent used a **different mobile phone number** than the one they provided when enrolling for Aadhaar:*		
66	Have you tried to have your mobile phone number on your Aadhaar card updated to your current mobile phone number?	1. Yes (Skip to Q68) 2. I did not know I could do this 0. No
*The following question was asked if the main respondent **had not tried to update their mobile phone number**:*		
67	Why did you not try to update your mobile phone number?	1. I did not know I could update my mobile phone 2. I did not want to give the card back 3. The difference in mobile phone number on my Aadhaar does not affect me in any way 4. I did not want to have to wait for a new card to come 98. Other, please specify
*The following question was asked if the main respondent **tried to update their mobile phone number** provided at the time of Aadhaar enrolment:*		

68	Were you successfully able to update the mobile phone number associated with you Aadhaar card?	1. Yes (Skip to Q70) 0. No 98. Other, please specify
*The following question was asked if the main respondent was **not successful in updating the mobile phone number** provided at the time of Aadhaar enrolment:*		
69	Why were you not successful in updating your mobile phone number?	1. I could not find a center to update it 2. I did not have the necessary documents to update it 3. The enrolment center said they cannot update my information 4. It costs too much money to update my information 5. I heard from others that it costs too much money 98. Other, please specify
*The following question was asked if the main respondent **had to update mobile and/or address** details on the Aadhaar card:*		
70	Overall, how easy or difficult did you find the process of updating the information (mobile and/or address) of your Aadhaar card? *The enumerator read out all options for this question.*	2. Easy (Skip to Q71) 3. Neutral 4. Difficult (Skip to Q72)
*The following question was asked if the main respondent found the **process of updating information easy**:*		
71	What part of the process made the update easy for you?	1. The enrolment/update center was easily accessible 2. The documents required to fix the error were easy to gather 3. The staff at the enrolment center were very helpful 4. The lines were short; I did not have to wait too long 98. Other, please specify
*The following question was asked if the main respondent found the **process of updating information difficult**:*		

72	What part of the process made the update difficult for you?	1. The enrolment/update center was difficult to get to 2. I did not have the necessary documents 3. I did not know what documents I needed 4. The staff at the enrolment center were not helpful 5. The lines were very long; I had to wait a very long time 6. I had to pay a bribe to update my Aadhaar card 98. Other, please specify
73	How many Aadhaar cards do you have?	1. Just one (Skip to Q75) 2. Two 3. More than two
*The following question is asked if the main respondent **had more than one Aadhaar card**:*		
74	Do they have the same 12-digit Aadhaar number?	1. Yes 0. No
*The following question was asked if respondent said they **had a voter ID** card:*		
75	How many voter ID cards do you have?	1. Just one (Skip to Q77) 2. Two 3. More than two
*The following question was asked if the main respondent had **more than one voter ID** card:*		
76	*Enumerator should request permission from respondent to check voter ID card. The enumerator should then compare the two to see if they are same.* Do they have the same address and details?	1. Yes 0. No

77	Since you have received your Aadhaar card, how have you used it? *The enumerator read out all options for this question. The respondent could select all options that applied.*	1. Provided a copy of my Aadhaar card 2. Showed my Aadhaar card as a form of identification 3. Used my fingerprint on a digital machine with my Aadhaar card 4. Used my iris scan on a digital machine with my Aadhaar card 5. Used a one-time-password sent to the mobile number registered with my Aadhaar card 6. I have not used my Aadhaar card since I have received it 98. Other, please specify
*The following question was asked if the main respondent **had not used fingerprint authentication** available with Aadhaar:*		
78	One of the features of having an Aadhaar is that you can use your fingerprint on a digital machine. Were you aware of this feature?	1. Yes 0. No
*The following question was asked if the main respondent **had not used iris authentication** available with Aadhaar:*		
79	One of the features of having an Aadhaar is that you can use your iris scan (eye scan) on a digital machine. Were you aware of this feature?	1. Yes 0. No
*The following question was asked if the main respondent **had not used OTP authentication** available with Aadhaar:*		
80	One of the features of having an Aadhaar card is that you can receive a code on your registered mobile phone number that you can then use for authentication. Were you aware of this feature?	1. Yes 0. No

III.	**Banking**	
81	Do you have a bank account?	1. Yes 0. No (Skip to Q97)
*The following questions were asked if the main respondent **had a bank account**:*		
82	How many bank accounts do you have?	

83	Do you have a PMJDY (Pradhan Mantri Jan Dhan Yojana) account?	1. Yes 0. No
84	*If the respondent had one bank account:* When did you open your bank account? *If the respondent had more than one bank account:* When did you open your most recently opened bank account?	1. Less than one month ago 2. 1-6 months ago 3. 7-12 months ago 4. 1-3 years ago 5. 4-6 years ago 6. More than 6 years ago
85	*If the respondent had one bank account:* Did you use Aadhaar to open your bank account? *If the respondent had more than one bank account:* Did you use Aadhaar to open your most recently opened bank account?	1. Yes 2. Used Bhamashah card 0. No (Skip to Q87)
*The following question was asked if the main respondent **used Aadhaar** to open the only/most recent bank account:*		
86	How did you use Aadhaar when opening your bank account? *The enumerator read out all options for this question and then were required to select one response.*	1. As an identification document (provided a copy, showed Aadhaar card, etc.) 2. Provided my Aadhaar information AND used my fingerprint on a digital machine, (Aadhaar e-KYC) 98. Other, please specify
87	*If the respondent had one bank account*: How long did it take to open this bank account? *(From the time of application to the time of receiving a bank account number)* *If the respondent had more than one bank account:* How long did it take to open your most recently opened bank account?	1. 1 day 2. 2-3 days 3. 4-6 days 4. 7-10 days 5. 11-15 days 6. More than 15 days
88	*If the respondent had one bank account*: Overall, how easy or difficult was it for you to open your bank account? *If the respondent had more than one bank account:* Overall, how easy or difficult was it for you to open your most recently opened bank account?	2. Easy 3. Neutral 4. Difficult

	The enumerator read out all options for this question.	
*The following question was asked if the main respondent **had one bank account**:*		
89	Is your bank account seeded with your Aadhaar number?	1. Yes 0. No (Skip to Q93)
*The following question was asked if the main respondent **had more than one bank account**:*		
90	How many of your accounts are seeded to Aadhaar?	
*The following question was asked if the main respondent **reported seeding his/her Aadhaar to the bank account**:*		
91	*Note to enumerator: Verify if the respondent's bank account/most recent bank account is seeded using *99*99#*	1. Yes 4. Error in verification / unable to verify 0. No
92	Why did you seed your bank account with your Aadhaar?	1. Because the bank required me to seed it 2. Because seeding was required for me to receive a benefit from the government 3. Because seeding makes it easier for me to use my bank account 98. Other, please specify
93	Have you used your most recently opened bank account in the past 3 months?	1. Yes 0. No
94	Do you receive any direct transfers from government schemes? For example many programmes, such as NREGA wages, student scholarships, pensions and LPG subsidy the government has started to directly transfer money into bank accounts.	1. Yes 0. No 98. Other, please specify
*The following question was asked if the main respondent **received DBTs** from the government and **has more than one bank account**:*		
95	Do you receive them all into one account?	1. Yes 0. No (Skip to Q97)
*The following question was asked if the main respondent **received DBTs into one account**:*		

96	Is this bank account seeded with your Aadhaar number?	1. Yes 0. No

IV.	Mobile	
*The following questions were asked to main respondents who **owned a mobile phone**:*		
97	What is the carrier of your mobile phone?	1. Airtel 2. Reliance Jio 3. Vodafone 4. Idea 5. BSNL 6. Aircel 98. Other, please specify
98	When did you get this SIM card? *Enumerators were instructed to ask about the respondent's most recent SIM card if they possessed more than one SIM card.*	
99	Month	1. January 2. February 3. March 4. April 5. May 6. June 7. July 8. August 9. September 10. October 11. November 12. December

100	Year	1. Before 2009 2. 2009 3. 2010 4. 2011 5. 2012 6. 2013 7. 2014 8. 2015 9. 2016 10. 2017
101	Did you use Aadhaar to get this SIM card?	1. Yes 2. Somebody else bought this SIM card for me (Skip to Q103) 0. No (Skip to Q103)
*The following question was asked if the main respondent **used Aadhaar to get a SIM card**:*		
102	How did you use Aadhaar when getting this SIM card?	1. As an identification document (provided a copy, showed Aadhaar card, etc.) 2. Provided my Aadhaar information AND used my fingerprint on a digital machine (Aadhaar e-KYC) 98. Other, please specify
103	How long did it take to get this SIM card activated?	1. 1 day 2. 2-3 days 3. 4-6 days 4. 7-10 days 5. 11-15 days 6. More than 15 days
104	Is your mobile phone seeded with your Aadhaar number?	1. Yes 0. No
105	Can anyone in your household read and write SMS on a mobile phone?	1. Can neither read nor write SMS 2. Can read SMS but not write 3. Can read and write SMS

V.	PDS	
106	Do you or a member of the household have a ration card?	1. Yes 0. No (Skip to Q133)
107	How many ration cards do you have?	
The following question was asked if the household had more than one ration card:		
108	Are you listed on one of the ration cards? *If "yes," enumerators were instructed to ask the respondent about the card they are listed on* *If "no," enumerators were instructed to ask the respondent about the card they have knowledge of*	1. Yes 0. No
*The following questions are about the ration card that the main respondent **is listed on or has knowledge of**:*		
109	What type of ration card is it?	1. Antyodaya (Yellow) 2. BPL (Red) 3. APL (Blue + White) 4. Annapurna 5. State BPL (Green) 98. Other, please specify
110	How many of the household members are listed on the ration card?	
111	How many of the household members Aadhaar numbers are seeded to the ration card?	
*The following question is asked in case **none** of the household members' Aadhaar numbers are **seeded to the ration card**:*		
112	Why have you not seeded your ration card with your Aadhaar numbers?	1. Did not know I had to 2. Tried to but was unsuccessful 98. Other, please specify
*The following questions are asked in case **at least one** of the household members' Aadhaar numbers is **seeded to the ration card**:*		
113	Can you use your fingerprint/iris on the Aadhaar-linked PoS machine to get ration?	1. Yes 0. No 98. Other, please specify

114	How many members of the household are able to use their fingerprint/iris on the Aadhaar-linked electronic POS machine to get rations?	
115	Currently what type of system does the local PDS shop use to give out rations? *The enumerator read out all options for this question.*	1. Regular register system only 2. Aadhaar-linked electronic POS machine with fingerprint only 3. Aadhaar-linked electronic POS machine with fingerprint & iris scan only 4. Regular register AND Aadhaar-linked electronic POS machine with fingerprint 5. Regular register AND Aadhaar-linked electronic POS machine with fingerprint & iris scan 98. Other, please specify
116	Currently, how do you pay for your ration? *The enumerator read out all options for this question.*	1. Cash payment 2. Deducted from my bank account 3. Both 98. Other, please specify
117	How many times did you go to collect your food grain rations in the last three months?	
*The following question was asked if any of the household members listed on the ration card had **collected food grain rations at least once**:*		
118	Have the household members faced any of these problems in the last 3 months?	1. Dealer says that no family member's Aadhaar is seeded on ration card 2. Bank account is not seeded to Aadhaar / bank account not given to the ration shop 3. No member whose fingerprint works was available to collect ration 4. Internet / server was not working 5. Fingerprint authentication failure (of self and/or family members)

	The enumerator read out all options for this question. The respondent could select all options that applied.	6. Iris authentication failure (of self and/or family members) 7. Fingerprint worked but PoS machine still gave an error 8. Iris worked but PoS machine still gave an error 9. No electricity / power 10. Machine was broken / did not work 11. Don't get ration ever / sometimes 12. More money was deducted from my bank account than I owe 13. More money was charged in cash than I owe 14. I received less ration than my entitlement 15. It takes very long to get my ration 16. I have to go multiple times to go collect my ration 17. No problems 18. Dealer says ration is not available
119	Have you faced any other problems not listed above?	1. Yes 0. No (Skip to Q121)
120	Please specify other:	
121	Have the household members faced any of these benefits in the last 3 months? *The enumerator read out all options for this question. The respondent could select all options that applied.*	1. Nobody else outside my household can take ration in my name 2. Takes less time 3. Don't have to make multiple visits to collect my ration 4. I get my full entitlement of ration 5. I don't have to pay more money than I owe 6. Get ration regularly/always 7. No benefits

122	Have you faced any other benefits not listed above?	1. Yes 0. No (Skip to Q124)
123	Please specify other:	
*The following question was asked if the village had **Aadhaar-based biometric authentication** for PDS and any one of the household members **had collected ration** from the fair price shop:*		
124	In the last 3 months, on average, how many times has it taken you (or) another member of the household for successful fingerprint authentication?	1. Once 2. Twice 3. 3 or 4 times 4. 5 or more times 5. Never works 98. Other, please specify
125	What is the average time taken to collect ration in the last three months? (from the time of leaving from home and coming back)	1. Less than 15 minutes 2. 16-30 minutes 3. 31-45 minutes 4. 45 minutes-1 hour 5. 2-3 hours 6. More than 3 hours
126	In the last 3 months, has the household ever tried to collect ration and not been able to collect your monthly quota of food grain ration?	1. Yes 0. No (Skip to Q130)
*The following question was asked if household had been **unable to collect rations** in the last 3 months:*		
127	How many times has this happened?	

128	What were the reasons why they could not collect their ration? *The respondent could select all options that applied.*	1. Dealer says that no family member's Aadhaar is seeded on ration card 2. Bank account is not seeded to Aadhaar / bank account not given to the ration shop 3. No member whose fingerprint works was available to collect ration 4. Internet / server was not working 5. Fingerprint authentication failure (of self and/or family members) 6. Iris authentication failure (of self and/or family members) 7. Fingerprint worked but PoS machine still gave an error 8. Iris worked but PoS machine still gave an error 9. Dealer says ration is not available 98. Other, please specify
*The following question was asked if household had **gone less than 3 times to collect monthly rations in the last 3 months**:*		

129	Why did you go less than three times to collect your rations? *The respondent could select all options that applied.*	1. I did not want to go collect ration for that / those month 2. I collected the ration for more than one month at the same time 3. Dealer says there is zero Aadhaar seeding on ration card 4. No member whose fingerprint works was available to collect ration 5. Bank account is not seeded to Aadhaar / bank account not given to the ration shop 6. Internet / server was not working 7. Fingerprint authentication failure 8. Iris authentication failure 9. Fingerprint worked but PoS machine still gave an error 10. Iris worked but PoS machine still gave an error 11. I am not eligible to receive rations 13.[13] I do not receive rations after getting a new ration card 98. Other, please specify
130	Comparing the system with which you receive your rations now using Aadhaar vs. the system with how you received it before without Aadhaar, what is your opinion about the new system? *The enumerator read out all options for this question.*	2. Better than before (Skip to Q131) 3. Same as before 4. Can't say as never used the old system 5. Worse than before (Skip to Q132)
*The following question was asked if the main respondent found the **new system better**:*		

[13] The option number 12 is missing here since we adapt the options from the questionnaire for Andhra Pradesh by removing options that do not apply to Rajasthan while preserving the numbering of options. This also applies to later questions where some numbers are skipped.

131	Why do you find the new system better? *The respondent could select all options that applied.*	1. No one else can take our ration now (shopkeeper etc. cannot keep it) 2. We get our ration now (didn't get it before) 3. We always get ration now (irregular before) (*Note to enumerator: don't select if option 2 is selected*) 4. We get the complete quota of ration (don't select if 'b') 5. We have to do less visits per month to get ration 6. We have to spend less time at the PDS shop to get ration 7. We face less technical issues (machine, electricity, internet, fingerprint failures etc.) 8. We face less non-technical issues 98. Other, please specify
*The following question was asked if the main respondent found the **new system worse**:*		
132	Why do you find the new system worse? *The respondent could select all options that applied.*	1. No one else can take our ration now (cannot send our children / siblings etc. to fetch our ration) 2. We don't get ration any more 3. We don't get ration sometimes (*Note to enumerator: don't select if option 2 is selected*) 4. We get less than the right ration quota (don't select if 'b') 5. We have to do more visits per month to get ration 6. We have to spend more time at the PDS shop to get ration 7. We face more technical issues 8. We face more non-technical issues 9. We pay more than the stipulated amount for ration now

		(or pay more money now) 98. Other, please specify

VI.	NREGA *Note: The responses for this section on NREGA are still under analysis by our team; thus they are not included in the State of Aadhaar Report 2017-18.*	
133	Does the household have a NREGA job card?	1. Yes 0. No (Skip to Q156)
*The following questions were asked if the household **had a NREGA card**:*		
134	How many job cards does the household have?	
135	How many members of the household are listed on the job cards? (total)	
136	Did any of the members try to get work in the last 9 months?	1. Yes 0. No (Skip to Q137)
137	Can we speak to any of the members who tried to get work or can you answer on behalf of one of them?	1. Yes (Skip to Q139) 0. No (Skip to Q156)
138	Can we speak to any of the members listed on the job card or can you answer on behalf of one of them?	1. Yes 0. No (Skip to Q156)
139	Is the NREGA job card seeded with Aadhaar?	1. Yes 0. No
140	In the last nine months, were you interested in getting NREGA work?	1. Yes 0. No (Skip to Q156)
141	In the last nine months, did you work at least once for NREGA work?	1. Yes 0. No (Skip to Q156)
142	In the last nine months, were you always able to get NREGA work when you were interested?	1. Yes (Skip to Q145) 0. No
*The following question was asked if the main respondent or any member of the household was **not able to work despite being interested**:*		

143	Why were you not able to work the times you tried? *The respondent could select all options that applied.*	1. There were no jobs available 2. My name was removed from list because of Aadhaar seeding 3. I was not interested in the type of NREGA work offered 4. Due to bad health 5. My name was not on the list, I don't know why 98. Other, please specify
*The following question was asked if the respondent or any member of the household was **not able to work** because their **name was removed** from the list because of Aadhaar seeding:*		
144	Were you able to get NREGA work before Aadhaar seeding?	1. Yes 0. No
*The following question was asked if the respondent or any member of the household **had worked at least once** under NREGA:*		
145	Do you receive NREGA wages directly into your bank account?	1. Yes 0. No (Skip to Q148)
*The following questions were asked if the main respondent or any member of the household **received NREGA wages directly into their bank account**:*		
146	Is this bank account seeded with your Aadhaar number?	1. Yes 0. No
147	Overall, how easy or difficult do you find the process of receiving your benefits directly in your bank account? *The enumerator read out all options for this question.*	2. Easy 3. Neutral 4. Difficult
*The following questions were asked if the main respondent or any member of the household had **worked at least once under NREGA**:*		
148	Have you ever failed to receive wages for work that you have done?	1. Yes 0. No
149	In the last nine months, were any of the wage payments delayed by more than 15 days?	1. Yes 0. No 98. Other, please specify

150	Have you encountered any of the following problems while working under NREGA in the last nine months? *The enumerator read out all options for this question. The respondent could select all options that applied.*	1. My name was removed from list because of Aadhaar seeding 2. Did not receive payment for work that I had done 3. Payment for my work was delayed 11. No problem
151	Have you faced any other problems not listed in the previous question?	1. Yes 0. No (Skip to Q153)
152	Please specify other:	
153	Have you faced any of the following benefits while working under NREGA? *The enumerator read out all options for this question. The respondent could select all options that applied.*	1. Nobody can get NREGA work in my name 2. I always receive payment for work that I had done 3. Payment for my work was not delayed 7. No Benefits
154	Have you faced any other benefits not listed in the previous question?	1. Yes 0. No (Skip to Q156)
155	Please specify other:	

VII.	**MicroATMs**	
*The following question was asked if the main respondent **had a bank account**:*		
156	In the last 3 months, have you used your fingerprint on a digital machine (i.e. a microATM, or e-mitra) to transact with your bank account (such as withdrawing money/depositing money)?	1. Yes 0. No (Skip to Q162)
*The following question was asked if the main respondent **had used a microATM** in the last 3 months:*		

157	Have you encountered any of the following problems while using a microATM? *The enumerator read out all options for this question. The respondent could select all options that applied.*	1. Internet / server was not working 2. Fingerprint authentication failure 3. Fingerprint worked but PoS machine still gave an error 4. No electricity / power 5. No problems (Skip to Q159) 98. Other, please specify
*The following question was asked if the main respondent **faced Aadhaar-related problems when using microATM**:*		
158	What happened when you were unable to use the microATM?	1 Visited the banking correspondent again next day / some other time 2. Used mobile one-time-password authentication 3. Used a bank branch 4. Went to an ATM 5. Used bank / debit / ATM card 98. Other, please specify
*The following question was asked if the main respondent **had used a microATM**:*		
159	Overall, has using a microATM made it easier or more difficult to withdraw money, deposit money, etc.? *The enumerator read out all options for this question. The respondent could select all options that applied.*	2. Easier (Skip to Q160) 3. Neither easier nor more difficult / No change 4. More difficult (Skip to Q161)
*The following question was asked if the main respondent found **using a micro-ATM easier** to withdraw / deposit money:*		
160	How has it made it easier?	1. It is closer to me so I do not have to travel too much 2. The lines are not too long 3. It is faster to use a microATM to get money than getting money from bank branch / ATM 98. Other, please specify
*The following question was asked if the main respondent found **using a micro-ATM more difficult** to withdraw / deposit money:*		

161	How has it made it more difficult?	1. Need to try multiple times for fingerprint for machine to register fingerprint 2. The place with the microATM is not always open when I go 3. The internet / server does not always work when I go 98. Other, please specify

VIII.	User Attitudes	
162	When you share your personal information (e.g. your name, age, address) with a government agency, how important is it to you to know how they will use it? *The enumerator read out all options for this question.*	2. Important 3. Neutral 4. Not important
163	When you share your personal information (e.g. your name, age, address) with a private company, how important is it to you to know how they will use it? *The enumerator read out all options for this question.*	2. Important 3. Neutral 4. Not important
164	When you share your biometric information (e.g. fingerprint, iris scan) with government agency, how important is it to you to know how they will use it? *The enumerator read out all options for this question.*	2. Important 3. Neutral 4. Not important
165	When you share your biometric information (e.g. fingerprint, iris scan) with a private company, how important is it to you to know how they will use it? *The enumerator read out all options for this question.*	2. Important 3. Neutral 4. Not important
*The following questions were asked if the main respondent **had an Aadhaar card**:*		
166	When you share your Aadhaar number with a government agency, how important is it to you to know how they will use it? *The enumerator read out all options for this question.*	2. Important 3. Neutral 4. Not important

170	When you share your Aadhaar number with a private company, how important is it to you to know how they will use it? *The enumerator read out all options for this question.*	2. Important 3. Neutral 4. Not important
171	It is currently mandatory to have Aadhaar to access many government benefits, e.g. NREGA, PDS, pensions, mid-day meals. Do you approve or disapprove the government's decision to make Aadhaar mandatory to access government benefits? *The enumerator read out all options for this question.*	2. Approve 3. Neutral 4. Disapprove
172	Many companies are notifying their customers to link their Aadhaar card to their services, e.g. mobile phone companies, banks. Do you approve or disapprove the companies requiring you to link your Aadhaar to their services? *The enumerator read out all options for this question.*	2. Approve 3. Neutral 4. Disapprove
173	You are able to lock/unlock your biometric information (e.g. fingerprint and iris scan) so that the fingerprint and iris authentication for Aadhaar is made inaccessible. Were you aware of this fact?	1. Yes 0. No (Skip to Q175)
*The following question was asked if the main respondent **had an Aadhaar** card and **was aware of locking/unlocking** of biometrics with Aadhaar:*		
174	Have you locked/unlocked your biometric information?	1. Yes 0. No
*The following question was asked if the main respondent or any member of the household **owned a mobile phone**:*		
175	Would it be okay for us to call you later if we have any follow-up questions?	1. Yes 0. No
Photo of respondent and GPS coordinates of survey conduction were taken at end of survey with permission of the respondent .		
Surveyors were requested to add any remarks they had the end of the survey. **- END -**		

STATE OF AADHAAR SURVEY 2017-18 ANALYSIS OUTPUT TABLES

Section 1: Enrolment

Section 2: Data quality

Section 3: General usage

Section 4: Banking

Section 5: Mobile

Section 6: PDS

Section 7: User attitudes

Section 8: NREGA

SECTION 1: ENROLMENT

Table 1.1 Percentage of respondents who enrolled at a camp (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	8.7	3.1	18.7	5.3
	5.8-12.8	1.7-5.6	12.6-26.7	3.4-8.2
Yes	91.3	96.9	81.3	94.7
	87.2-94.2	94.4-98.3	73.3-87.4	91.8-96.6
Number of observations	2912	1142	946	824
Number of missing observations (don't know / refused)	8	0	6	2

Notes: 95% confidence intervals are under point estimates.

Table 1.2.1 Percentage of respondents who had other forms of ID at the time of Aadhaar enrolment (among those who have an Aadhaar by ID type) [All three states]

	NREGA job card	Ration card	Voter ID card	Additional ID
No	58.5	3.8	12.2	60.9
	53.3-63.6	3.0-4.8	10.4-14.3	56.7-65.0
Yes	41.5	96.2	87.8	39.1
	36.4-46.7	95.2-97.0	85.7-89.6	35.0-43.3
Number of observations	2919	2919	2919	2919
Number of missing observations (don't know / refused)	1	1	1	1

Notes: 95% confidence intervals are under point estimates.

Table 1.2.2 Percentage of respondents who had other forms of ID at the time of Aadhaar enrolment (among those who have an Aadhaar) [State: Andhra Pradesh]

	NREGA job card	Ration card	Voter ID card	Additional ID
No	69.7	4.3	11.0	68.2
	63.7-75.0	3.2-5.8	8.9-13.5	63.7-72.4

Yes	30.3	95.7	89.0	31.8
	25.0-36.3	94.2-96.8	86.5-91.1	27.6-36.3
Number of observations	1142	1142	1142	1142
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.

Table 1.2.3 Percentage of respondents who had other forms of ID at the time of Aadhaar enrolment (among those who have an Aadhaar) [State: Rajasthan]

	NREGA job card	Ration card	Voter ID card	Additional ID
No	50.6	5.0	13.7	58.2
	43.0-58.1	3.2-7.7	10.7-17.3	49.3-66.7
Yes	49.4	95.0	86.3	41.8
	41.9-57.0	92.3-96.8	82.7-89.3	33.3-50.7
Number of observations	951	951	951	951
Number of missing observations (don't know / refused)	1	1	1	1

Notes: 95% confidence intervals are under point estimates.

Table 1.2.4 Percentage of respondents who had other forms of ID at the time of Aadhaar enrolment (among those who have an Aadhaar) [State: West Bengal]

	NREGA job card	Ration card	Voter ID card	Additional ID
No	55.1	2.4	12.1	56.6
	46.6-63.4	1.6-3.6	7.7-18.6	49.2-63.7
Yes	44.9	97.6	87.9	43.4
	36.6-53.4	96.4-98.4	81.4-92.3	36.3-50.8
Number of observations	826	826	826	826
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.

Table 1.3 Percentage of respondents who had no other form of ID at the time of Aadhaar enrolment (among those who have an Aadhaar by State)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	99.5	99.3	99.2	99.8
	99.0-99.7	98.2-99.7	97.3-99.8	99.5-100.0
Yes	0.5	0.7	0.8	0.2
	0.3-1.0	0.3-1.8	0.2-2.7	0.0-0.5
Number of observations	2919	1142	951	826
Number of missing observations (don't know / refused)	1	0	1	0

Notes: 95% confidence intervals are under point estimates.

Table 1.4.1 Reasons for getting Aadhaar (among those who have an Aadhaar; numbers in percentage) [All three states]

	Government/external impetus	Access impetus	Social network impetus	Identity document impetus	Other/no impetus
No	52.8	76.9	36.3	84.6	99.3
	48.3-57.2	66.0-85.2	31.3-41.7	82.2-86.7	98.6-99.7
Yes	47.2	23.1	63.7	15.4	0.7
	42.8-51.7	14.8-34.0	58.3-68.7	13.3-17.8	0.3-1.4
Number of observations	2919	2919	2919	2919	2919
Number of missing observations (don't know / refused)	1	1	1	1	1

Notes: 95% confidence intervals are under point estimate.
Respondents could state multiple reasons in the corresponding survey question. We categorize the responses in the following way:
Government/external impetus refers to cases where respondents say one of their reasons for getting Aadhaar is that Panchayat/Aadhaar/Government persons or other external agency told them to get one.
Access impetus refers to cases where respondents say one of their reasons for getting Aadhaar is that they need it to access government service(s), or private services like bank accounts and SIM cards.

Social network impetus refers to cases where respondents say one of their reasons for getting Aadhaar is that everyone was getting one or their family member told them to get one.
Identity document impetus refers to cases where respondents say one of their reasons for getting Aadhaar is that they wanted to use it as an identification document, they did not have an identification document, or they needed it to rectify other government/ID documents.

Table 1.4.2 Reasons for getting Aadhaar (among those who have an Aadhaar; numbers in percentage) [State: Andhra Pradesh]

	Government/external impetus	Access impetus	Social network impetus	Identity document impetus	Other/no impetus
No	56.1	90.3	22.4	84.2	99.6
	53.0-59.2	86.9-93.0	18.5-26.9	80.7-87.3	97.3-100.0
Yes	43.9	9.7	77.6	15.8	0.4
	40.8-47.0	7.0-13.1	73.1-81.5	12.7-19.3	0.0-2.7
Number of observations	1142	1142	1142	1142	1142
Number of missing observations (don't know / refused)	0	0	0	0	0

Notes: 95% confidence intervals are under point estimate.
See footnote to Table 1.4.1 for the definition of each impetus.

Table 1.4.3 Reasons for getting Aadhaar (among those who have an Aadhaar; numbers in percentage) [State: Rajasthan]

	Government/external impetus	Access impetus	Social network impetus	Identity document impetus	Other/no impetus
No	61.4	45.5	44.6	85.1	98.3
	55.2-67.2	34.5-57.0	36.9-52.6	78.6-89.9	96.5-99.2
Yes	38.6	54.5	55.4	14.9	1.7
	32.8-44.8	43.0-65.5	47.4-63.1	10.1-21.4	0.8-3.5
Number of observations	951	951	951	951	951

Number of missing observations (don't know / refused)	1	1	1	1	1

Notes: 95% confidence intervals are under point estimate.
See footnote to Table 1.4.1 for the definition of each impetus.

Table 1.4.4 Reasons for getting Aadhaar (among those who have an Aadhaar; numbers in percentage) [State: West Bengal]

	Government/external impetus	Access impetus	Social network impetus	Identity document impetus	Other/no impetus
No	42.4	91.4	42.0	84.4	99.9
	35.7-49.3	88.0-93.9	39.7-44.3	78.8-88.8	98.7-100.0
Yes	57.6	8.6	58.0	15.6	0.1
	50.7-64.3	6.1-12.0	55.7-60.3	11.2-21.2	0.0-1.3
Number of observations	826	826	826	826	826
Number of missing observations (don't know / refused)	0	0	0	0	0

Notes: 95% confidence intervals are under point estimate.
See footnote to Table 1.4.1 for the definition of each impetus.

Table 1.5 Percentage of respondents who paid to enrol for Aadhaar (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	87.7	91.0	76.3	94.3
	83.0-91.2	88.6-92.9	66.4-84.0	92.1-95.9
Yes	12.3	9.0	23.7	5.7
	8.8-17.0	7.1-11.4	16.0-33.6	4.1-7.9
Number of observations	2785	1056	920	809
Number of missing observations (don't know / refused)	135	86	32	17

Notes: 95% confidence intervals are under point estimates.

Table 1.6 Amount paid for Aadhaar enrolment, in Rupees (among respondents who paid to enrol for Aadhaar; numbers in percentage)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Less than 50	25.2	49.7	7.1	58.4
	14.7-39.7	24.5-75.1	3.7-13.1	33.8-79.4
50 to 200	72.7	47.0	91.0	40.0
	58.6-83.3	22.3-73.3	86.0-94.3	20.4-63.4
Above 200	2.2	3.3	1.9	1.6
	0.9-5.0	0.7-14.8	0.4-8.7	0.2-15.3
Number of observations	357	84	227	46
Number of missing observations (don't know / refused)	35	17	17	1

Notes: 95% confidence intervals are under point estimates.

Table 1.7 Percentage of respondents who are aware that Aadhaar enrolment is free (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	58.4	59.8	59.0	56.7
	55.0-61.8	54.4-64.9	50.8-66.7	49.0-64.2
Yes	41.6	40.2	41.0	43.3
	38.2-45.0	35.1-45.6	33.3-49.2	35.8-51.0
Number of observations	2918	1142	950	826
Number of missing observations (don't know / refused)	2	0	2	0

Notes: 95% confidence intervals are under point estimates.

Table 1.8 Perceived ease of the Aadhaar enrolment process (among respondents who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Easy	81.9	84.7	84.4	77.3
	79.0-84.5	80.0-88.5	78.1-89.2	73.6-80.5

Neutral	7.9	6.3	5.7	11.1
	6.1-10.1	4.7-8.4	2.8-11.3	8.2-15.0
Difficult	10.2	9.0	9.8	11.6
	8.8-11.9	5.5-14.4	7.7-12.5	9.5-14.1
Number of observations	2916	1140	950	826
Number of missing observations (don't know / refused)	4	2	2	0

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'Overall, how easy or difficult did you find the process of getting your Aadhaar card?' and were given the options of 'Easy', 'Neutral' and 'Difficult' to choose from.

Table 1.9.1 Hypothesis tests of differences in the likelihood of paying for enrolment among respondents from different vulnerable communities, and whether respondent enrolled at a camp [All three states]

	(1)	(2)	(3)	(4)	(5)	(6)
	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment
SC respondent	0.001					
	(0.95)					
ST respondent	0.024					
	(0.66)					
Muslim respondent		-0.043*				
		(0.07)				
Respondent has not attended school			-0.002			
			(0.90)			

Female respondent				-0.002		
				(0.90)		
Respondent above age 60					-0.022	
					(0.18)	
Did you enrol for your Aadhaar at an Aadhaar camp?						-0.620***
						(0.00)
Constant	0.122***	0.132***	0.124***	0.125***	0.127***	0.688***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2668	2782	2785	2784	2777	2781
R-squared	0.000	0.003	0.000	0.000	0.001	0.287
Mean of dependent variable	0.124	0.124	0.123	0.123	0.124	0.123

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in the likelihood of paying for enrolment between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of paying compared to all other individuals (i.e. all those not in the specified type).

In addition, we also test for whether there is a difference in the likelihood of paying for enrolment between those who enrolled at a camp and those who did not. We find that in the sample combining all three states, enrolling at a camp is associated with a lower likelihood of paying for enrolment. (We discuss this result on p6 of the State of Aadhaar Report 2017-18.)

Table 1.9.2 Hypothesis tests of differences in the likelihood of paying for enrolment among respondents from different vulnerable communities, and whether respondent enrolled at a camp [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)	(6)
	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment
SC respondent	-0.011					
	(0.48)					
ST respondent	0.117*					
	(0.10)					
Muslim respondent		-0.001				
		(0.99)				
Respondent has not attended school			-0.010			
			(0.66)			
Female respondent				-0.026		
				(0.33)		
Respondent above age 60					-0.033*	
					(0.06)	
Did you enrol for your Aadhaar at an Aadhaar camp?						-0.282*
						(0.08)

Constant	0.088***	0.090***	0.095***	0.104***	0.096***	0.363**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.03)
Number of observations	1047	1056	1056	1055	1052	1056
R-squared	0.006	0.000	0.000	0.002	0.002	0.031
Mean of dependent variable	0.090	0.090	0.090	0.090	0.090	0.090

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 1.9.1 for a description of the hypotheses tested here.

Table 1.9.3 Hypothesis tests of differences in the likelihood of paying for enrolment among respondents from different vulnerable communities, and whether respondent enrolled at a camp [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)	(6)
	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment
SC respondent	0.031					
	(0.62)					
ST respondent	-0.063					
	(0.46)					
Muslim respondent		0.081				
		(0.36)				
Respondent has not attended school			-0.015			
			(0.74)			

Female respondent				0.022		
				(0.67)		
Respondent above age 60					-0.031	
					(0.36)	
Did you enrol for your Aadhaar at an Aadhaar camp?						-0.798***
						(0.00)
Constant	0.240***	0.233***	0.243***	0.226***	0.242***	0.885***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	901	919	920	920	920	918
R-squared	0.004	0.002	0.000	0.001	0.001	0.537
Mean of dependent variable	0.236	0.237	0.237	0.237	0.237	0.237

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 1.9.1 for a description of the hypotheses tested here.

Table 1.9.4 Hypothesis tests of differences in the likelihood of paying for enrolment among respondents from different vulnerable communities, and whether respondent enrolled at a camp [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)	(6)
	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment	Having paid for enrolment

SC respondent	0.007					
	(0.78)					
ST respondent	0.020					
	(0.73)					
Muslim respondent		0.012				
		(0.54)				
Respondent has not attended school			0.000			
			(0.98)			
Female respondent				0.016		
				(0.52)		
Respondent above age 60					-0.010	
					(0.62)	
Did you enrol for your Aadhaar at an Aadhaar camp?						-0.237*
						(0.06)
Constant	0.051***	0.052***	0.057***	0.048**	0.059***	0.282**
	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.03)
Number of observations	720	807	809	809	805	807
R-squared	0.001	0.001	0.000	0.001	0.000	0.053

Mean of dependent variable	0.054	0.057	0.057	0.057	0.057	0.057

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 1.9.1 for a description of the hypotheses tested here.

Table 1.10.1 Hypothesis tests of differences in perceived ease of enrolment among respondents from different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)	(5)
	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process
SC respondent	-0.054				
	(0.19)				
ST respondent	-0.039				
	(0.47)				
Muslim respondent		-0.053			
		(0.22)			
Respondent has not attended school			0.036		
			(0.25)		
Female respondent				-0.000	
				(1.00)	
Respondent above age 60					0.026
					(0.45)
Constant	2.736***	2.727***	2.702***	2.717***	2.713***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2797	2913	2916	2915	2907
R-squared	0.001	0.001	0.001	0.000	0.000

Mean of dependent variable	2.719	2.717	2.717	2.717	2.717

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in the perceived ease of enrolment between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has different perceived ease compared to all other individuals (i.e. all those not in the specified type).

Table 1.10.2 Hypothesis tests of differences in perceived ease of enrolment among respondents from different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process
SC respondent	-0.063				
	(0.45)				
ST respondent	0.078				
	(0.39)				
Muslim respondent		0.028			
		(0.65)			
Respondent has not attended school			0.010		
			(0.80)		
Female respondent				0.055	
				(0.25)	
Respondent above age 60					-0.058**
					(0.04)
Constant	2.769***	2.755***	2.753***	2.728***	2.767***

	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1130	1140	1140	1139	1136
R-squared	0.003	0.000	0.000	0.002	0.001
Mean of dependent variable	2.757	2.757	2.757	2.757	2.757

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 1.10.1 for a description of the hypotheses tested here.

Table 1.10.3 Hypothesis tests of differences in perceived ease of enrolment among respondents from different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process
SC respondent	0.015				
	(0.78)				
ST respondent	-0.046				
	(0.53)				
Muslim respondent		-0.090			
		(0.33)			
Respondent has not attended school			0.039		
			(0.35)		
Female respondent				-0.013	
				(0.70)	
Respondent above age 60					-0.001
					(0.99)
Constant	2.751***	2.751***	2.729***	2.753***	2.746***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Number of observations	930	949	950	950	950
R-squared	0.001	0.001	0.001	0.000	0.000
Mean of dependent variable	2.747	2.746	2.746	2.746	2.746

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 1.10.1 for a description of the hypotheses tested here.

Table 1.10.4 Hypothesis tests of differences in perceived ease of enrolment among respondents from different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process	Perceived ease of the enrolment process
SC respondent	-0.080				
	(0.28)				
ST respondent	-0.058				
	(0.62)				
Muslim respondent		-0.000			
		(1.00)			
Respondent has not attended school			0.038		
			(0.62)		
Female respondent				-0.029	
				(0.74)	
Respondent above age 60					0.129*
					(0.08)
Constant	2.684***	2.657***	2.643***	2.673***	2.638***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Number of observations	737	824	826	826	821
R-squared	0.003	0.000	0.001	0.000	0.004
Mean of dependent variable	2.656	2.657	2.656	2.656	2.655

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 1.10.1 for a description of the hypotheses tested here.

Table 1.11 Percentage of residents who have an Aadhaar (among all households surveyed)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	6.8	2.4	12.5	6.8
	5.0-9.3	1.5-3.8	9.9-15.7	5.3-8.7
Yes	93.2	97.6	87.5	93.2
	90.7-95.0	96.2-98.5	84.3-90.1	91.3-94.7
Number of observations	13622	4448	5396	3778
Number of missing observations (don't know / refused)	47	6	34	7

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent.

Table 1.12 Percentage of residents who tried to enrol for Aadhaar (among all residents who do not have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	59.7	61.4	73.8	39.9
	50.7-68.1	45.8-75.0	64.3-81.6	33.8-46.4
Yes, but was not able to get an Aadhaar	15.7	26.7	8.0	22.7
	11.7-20.7	17.6-38.3	4.0-15.3	18.2-27.8

Yes, has enrolled for it but have not received it	24.7	11.9	18.2	37.4
	19.7-30.4	5.4-24.0	14.1-23.2	31.1-44.2
Number of observations	1023	105	663	255
Number of missing observations (don't know / refused)	21	8	3	10

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent.

Table 1.13.1 Hypothesis tests of differences in enrolment status among members of different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)	(5)
	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar
SC household member	-0.007				
	(0.38)				
ST household member	-0.066*				
	(0.08)				
Muslim household member		0.010			
		(0.38)			
Female household member			-0.002		
			(0.56)		
(Adult) household member has not attended school				-0.009**	

				(0.03)	
(Adult) household member above age 60					-0.016**
					(0.02)
Constant	0.941***	0.929***	0.933***	0.989***	0.988***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	13036	13609	13622	9749	9760
R-squared	0.006	0.000	0.000	0.001	0.002
Mean of dependent variable	0.933	0.932	0.932	0.986	0.986

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in Aadhaar enrolment rate between vulnerable residents and other residents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of having an Aadhaar compared to all other individuals (i.e. all those not in the specified type).

This question was asked about all household members of the main respondent. In all columns the sample consists of all household members, except the last two columns of hypothesis tests regarding household members of different schooling or age groups, where we restrict to adult household members. For the last two hypotheses, the results are significant at 5% though insignificant after Bonferroni correction (which is applied to all hypothesis tests included in the report), and the magnitudes of the coefficients (0.9% and 1.6%) are very small relative to a baseline enrolment rate of 98.6% among adults. Hence we conclude that there is no systematic exclusion of Aadhaar against vulnerable groups. (We discuss this result on p5 of the State of Aadhaar Report 2017-18.)

Table 1.13.2 Hypothesis tests of differences in enrolment status among members of different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar

SC household member	-0.004				
	(0.57)				
ST household member	0.002				
	(0.81)				
Muslim household member		-0.003			
		(0.61)			
Female household member			0.003		
			(0.38)		
(Adult) household member has not attended school				-0.004*	
				(0.09)	
(Adult) household member above age 60					-0.008
					(0.18)
Constant	0.977***	0.976***	0.975***	0.999***	0.999***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	4415	4448	4448	3405	3412
R-squared	0.000	0.000	0.000	0.002	0.004
Mean of dependent variable	0.976	0.976	0.976	0.997	0.998

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 1.13.1 for a description of the hypotheses tested here.

Table 1.13.3 Hypothesis tests of differences in enrolment status among members

of different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar
SC household member	-0.006				
	(0.77)				
ST household member	-0.056				
	(0.28)				
Muslim household member		0.002			
		(0.96)			
Female household member			-0.018***		
			(0.01)		
(Adult) household member has not attended school				-0.013	
				(0.10)	
(Adult) household member above age 60					0.004
					(0.43)
Constant	0.889***	0.874***	0.884***	0.986***	0.980***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	5267	5392	5396	3543	3544
R-squared	0.004	0.000	0.001	0.002	0.000
Mean of dependent variable	0.877	0.875	0.875	0.980	0.980

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 1.13.1 for a description of the hypotheses tested here.

Table 1.13.4 Hypothesis tests of differences in enrolment status among members of different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar	Household member has an Aadhaar
SC household member	-0.010				
	(0.49)				
ST household member	-0.031*				
	(0.08)				
Muslim household member		0.015			
		(0.18)			
Female household member			0.006		
			(0.35)		
(Adult) household member has not attended school				-0.014	
				(0.18)	
(Adult) household member above age 60					-0.041**
					(0.02)
Constant	0.938***	0.926***	0.929***	0.983***	0.984***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Number of observations	3354	3769	3778	2801	2804
R-squared	0.001	0.001	0.000	0.002	0.008
Mean of dependent variable	0.933	0.932	0.932	0.978	0.979

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 1.13.1 for a description of the hypotheses tested here.

Table 1.14 Aadhaar enrolment status of residents (numbers in percentage)

	All three states
Did not try to enrol	3.977
	[2.399,5.555]
Tried but was not successful	1.044
	[0.734,1.354]
Enrolled but have not received it yet	1.644
	[1.078,2.210]
Has Aadhaar	93.335
	[91.231,95.438]
Number of observations	13601
Number of missing observations (don't know/refused)	68

Notes: 95% confidence intervals are under point estimate.
This question was asked about all household members of the main respondent.

Table 1.15.1 Reasons for unsuccessful enrolment in Aadhaar (numbers in percentage) [All three states]

	All three states
Biometric errors	30.908
	[20.319,41.497]
I did not know where to enrol	0.682
	[-0.816,2.180]
There are no enrolment centers	14.783
	[1.449,28.117]
I was not from the village	7.035
	[-1.607,15.677]
Due to my disability	5.610
	[0.420,10.799]
I did not have the necessary documents	11.210
	[3.552,18.869]

The enrolment center was closed	3.022
	[-0.255,6.300]
I was denied at the enrolment center	0.978
	[-0.594,2.550]
Due to my age	1.278
	[-1.383,3.938]
Irregular behavior from enrolment	0.645
	[-0.752,2.042]
Told child was too young	21.628
	[5.426,37.831]
Machine was not working	2.221
	[-1.418,5.860]
Number of observations	95
Number of missing observations (don't know/refused)	27

Notes: 95% confidence intervals are under point estimate.

Table 1.15.2 Reasons for unsuccessful enrolment in Aadhaar (numbers in percentage) [State: Andhra Pradesh]

	Andhra Pradesh
Biometric errors	7.386
	[-5.446,20.217]
There are no enrolment centers	4.204
	[-6.399,14.808]
Due to my disability	11.844
	[-1.623,25.312]
Told child was too young	70.615
	[43.341,97.889]
Machine was not working	5.951
	[-9.057,20.958]
Number of observations	26
Number of missing observations (don't know/refused)	1

Notes: 95% confidence intervals are under point estimate.

Table 1.15.3 Reasons for unsuccessful enrolment in Aadhaar (numbers in percentage) [State: Rajasthan]

	Rajasthan
Biometric errors	36.811
	[22.323,51.298]
I did not know where to enrol	1.983
	[-3.642,7.609]
There are no enrolment centers	26.618

	[1.508,51.729]
I was not from the village	1.300
	[-2.291,4.891]
I did not have the necessary documents	8.836
	[-8.040,25.712]
The enrolment center was closed	8.788
	[3.627,13.948]
I was denied at the enrolment center	2.844
	[-3.295,8.983]
Irregular behavior from enrolment	1.875
	[-3.264,7.014]
Told child was too young	9.026
	[3.811,14.241]
Machine was not working	1.919
	[-3.525,7.364]
Number of observations	40
Number of missing observations (don't know/refused)	2

Notes: 95% confidence intervals are under point estimate.

Table 1.15.4 Reasons for unsuccessful enrolment in Aadhaar (numbers in percentage) [State: West Bengal]

	West Bengal
Biometric errors	41.423
	[24.904,57.942]
There are no enrolment centers	11.492
	[-5.080,28.065]
I was not from the village	16.731
	[-2.951,36.413]
Due to my disability	6.356
	[-4.560,17.272]
I did not have the necessary documents	20.753
	[13.415,28.091]
Due to my age	3.245
	[-4.704,11.193]
Number of observations	29
Number of missing observations (don't know/refused)	24

Notes: 95% confidence intervals are under point estimate.

Table 1.16 Percentage of adult residents who have an Aadhaar (among all

households surveyed)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	1.4	0.2	2.0	2.1
	0.9-2.0	0.1-0.5	1.5-2.6	1.4-3.2
Yes	98.6	99.8	98.0	97.9
	98.0-99.1	99.5-99.9	97.4-98.5	96.8-98.6
Number of observations	9760	3412	3544	2804
Number of missing observations (don't know / refused)	21	3	14	4

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent. We restrict the sample of this analysis to adults.

Table 1.17: Percentage of adult residents who have Voter ID (among all households surveyed)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	10.5	10.5	17.3	6.3
	8.4-13.0	9.1-12.1	13.0-22.6	4.7-8.5
Yes	89.5	89.5	82.7	93.7
	87.0-91.6	87.9-90.9	77.4-87.0	91.5-95.3
Number of observations	9737	3398	3533	2806
Number of missing observations (don't know / refused)	43	16	25	2

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent. We restrict the sample of this analysis to adults.

SECTION 2: DATA QUALITY

Table 2.1 Perceived ease of fixing error in Aadhaar (among respondents who had an error and tried to fix; numbers in percentage)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Easy	56.1	69.1	67.0	47.8
	44.4-67.2	47.8-84.6	31.8-89.8	33.4-62.5
Neutral	12.2	3.2	16.5	15.2
	6.8-20.9	0.7-12.7	4.1-47.9	6.7-30.9
Difficult	31.7	27.7	16.5	37.0
	21.8-43.5	12.3-51.2	2.2-63.9	22.1-54.9
Number of observations	129	43	21	65
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'Overall, how easy or difficult did you find the process of fixing the error in your Aadhaar card?' and were given the following options to choose from: 'Easy', 'Neutral' and 'Difficult'

Table 2.2 Percentage of respondents who tried to update the address on their Aadhaar (among those whose current address is different from the one on their Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	84.3	84.5	92.4	81.6
	74.9-90.6	65.3-94.0	45.4-99.4	59.8-92.9
Yes	13.0	11.9	7.6	15.6
	6.4-24.5	3.1-36.9	0.6-54.6	4.1-44.3
I did not know I could do this	2.7	3.6		2.8
	0.7-9.4	0.4-27.5	-	0.3-21.6
Number of observations	126	71	18	37
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.

Table 2.3 Percentage of respondents who tried to update the mobile number on their Aadhaar (among those who had changed their mobile number since enrolling)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	66.0	56.9	59.0	84.7
	56.5-74.4	43.9-69.1	41.7-74.3	69.7-93.0
Yes	25.5	35.3	20.6	15.3
	19.2-33.0	27.3-44.2	11.4-34.5	7.0-30.3
I did not know I could do this	8.5	7.8	20.4	
	4.7-14.9	3.5-16.2	8.5-41.3	-
Number of observations	219	103	64	52
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.

Table 2.4 Perceived ease of updating information in Aadhaar (among respondents who successfully updated their address or mobile phone number; numbers in percentage)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Easy	83.8	89.7	65.0	83.6
	69.0-92.3	50.6-98.7	33.4-87.3	57.4-95.1
Neutral	9.2		35.0	12.1
	3.3-23.2	-	12.7-66.6	2.2-45.4
Difficult	7.0	10.3		4.3
	1.8-24.1	1.3-49.4	-	0.4-34.1
Number of observations	63	37	13	13
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'Overall, how easy or difficult did you find the process of updating the information (mobile and/or address) of your Aadhaar card?' and were given the following options to choose from: 'Easy', 'Neutral' and 'Difficult'

Table 2.5 Percentage of respondents with duplicate Aadhaar cards (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	99.9	99.8	100.0	100.0
	99.7-100.0	99.2-99.9	.-.	.-.
Yes	0.1	0.2		
	0.0-0.3	0.1-0.8	-	-
Number of observations	2918	1141	952	825
Number of missing observations (don't know / refused)	2	1	0	1

Notes: 95% confidence intervals are under point estimates.
Duplicates are defined as cases where the respondent has two cards with the same demographic information and different Aadhaar numbers. Such responses were verified in two ways: 1) enumerators visually inspected the Aadhaar cards and, 2) we called back each of these respondents as back checks to ensure accuracy.

Table 2.6 Percentage of respondents with duplicate voter IDs (among those who have a voter ID)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	99.6	99.8	99.3	99.6
	99.2-99.8	98.5-100.0	98.1-99.8	98.4-99.9
Yes	0.4	0.2	0.7	0.4
	0.2-0.8	0.0-1.5	0.2-1.9	0.1-1.6
Number of observations	2716	1065	834	817
Number of missing observations (don't know / refused)	3	3	0	0

Notes: 95% confidence intervals are under point estimates.
Duplicates are defined as cases where the respondent has two cards with the same demographic information but different voter ID numbers. Enumerators inspected the voter ID cards to verify such responses.

Table 2.7 Percentage of residents who had an error in their Aadhaar (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	91.2	92.0	95.2	87.8
	89.6-92.6	90.3-93.4	94.4-95.8	86.0-89.5
Yes	8.8	8.0	4.8	12.2
	7.4-10.4	6.6-9.7	4.2-5.6	10.5-14.0
Number of observations	12379	4275	4669	3435
Number of missing observations (don't know / refused)	198	60	60	78

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent.

Table 2.8 Percentage of residents who tried to get the error fixed (among those who had an error)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	47.0	49.0	46.7	45.8
	42.8-51.2	40.8-57.3	34.5-59.4	38.5-53.4
Yes	53.0	51.0	53.3	54.2
	48.8-57.2	42.7-59.2	40.6-65.5	46.6-61.5
Number of observations	973	333	222	418
Number of missing observations (don't know / refused)	7	5	2	0

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent who stated that they have an error in their Aadhaar.

Table 2.9 Percentage of residents who were successful in getting the error fixed (among those who tried to get the error fixed)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	28.6	22.0	37.8	30.2
	24.5-33.0	14.2-32.4	28.5-48.1	24.5-36.6
Yes	71.4	78.0	62.2	69.8
	67.0-75.5	67.6-85.8	51.9-71.5	63.4-75.5

Number of observations	507	167	112	228
Number of missing observations (don't know / refused)	15	2	11	2

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent who tried to get the error in their Aadhaar fixed.

Table 2.10 Percentage of residents who paid to get the error fixed (among those who got the error fixed successfully)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	17.6	16.9	8.0	20.0
	13.4-22.8	8.3-31.2	2.5-23.0	13.7-28.2
Yes	82.4	83.1	92.0	80.0
	77.2-86.6	68.8-91.7	77.0-97.5	71.8-86.3
Number of observations	330	125	56	149
Number of missing observations (don't know / refused)	32	7	13	12

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent who were successful in getting the error fixed.

Table 2.11 Amount paid for fixing errors, in Rupees (among residents who paid to get the error fixed; numbers in percentage)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Less than 50	12.2	4.1	4.0	19.3
	6.9-20.8	1.2-13.4	0.3-37.4	10.4-33.0
50 to 200	85.4	91.6	92.2	80.0
	77.6-90.9	75.8-97.5	58.8-99.0	66.9-88.7
Above 200	2.3	4.3	3.8	0.8
	0.8-6.8	0.7-22.9	0.8-16.6	0.1-10.3
Number of observations	257	97	44	116

Number of missing observations (don't know / refused)	18	7	7	4

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent who paid to get the error fixed.

Table 2.12 Percentage of respondents who are aware that it should cost no more than Rs. 15 for update as per UIDAI regulations (among those who paid to get the error corrected)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	92.7	95.2	88.2	92.0
	89.6-94.9	91.7-97.2	75.1-94.9	85.5-95.7
Yes	7.3	4.8	11.8	8.0
	5.1-10.4	2.8-8.3	5.1-24.9	4.3-14.5
Number of observations	275	104	51	120
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
According to the latest UIDAI guidelines, it costs Rs. 25 to update information in one's Aadhaar. However, at the time of update for these household members the cost would have been Rs. 15.

Table 2.13.1 Types of errors in Aadhaar (among residents whose Aadhaar had errors; numbers in percentage) [All three states]

	Name	Address	Date of birth
No	54.3	85.1	65.7
	48.2-60.2	78.4-89.9	59.9-71.1
Yes	45.7	14.9	34.3
	39.8-51.8	10.1-21.6	28.9-40.1
Number of observations	966	966	966
Number of missing observations (don't know / refused)	14	14	14

Notes: 95% confidence intervals are under point estimates.

This question was asked about all household members of the main respondent who stated that they have an error in their Aadhaar.

Table 2.13.2 Types of errors in Aadhaar (among residents whose Aadhaar had errors; numbers in percentage) [State: Andhra Pradesh]

	Name	Address	Date of birth
No	51.7	84.7	66.2
	36.3-66.7	64.5-94.4	58.9-72.8
Yes	48.3	15.3	33.8
	33.3-63.7	5.6-35.5	27.2-41.1
Number of observations	333	333	333
Number of missing observations (don't know / refused)	5	5	5

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent who stated that they have an error in their Aadhaar.

Table 2.13.3 Types of errors in Aadhaar (among residents whose Aadhaar had errors; numbers in percentage) [State: Rajasthan]

	Name	Address	Date of birth
No	67.8	84.4	49.6
	60.2-74.5	69.9-92.7	38.5-60.7
Yes	32.2	15.6	50.4
	25.5-39.8	7.3-30.1	39.3-61.5
Number of observations	223	223	223
Number of missing observations (don't know / refused)	1	1	1

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent who stated that they have an error in their Aadhaar.

Table 2.13.4 Types of errors in Aadhaar (among residents whose Aadhaar had errors; numbers in percentage) [State: West bengal]

	Name	Address	Date of birth
No	52.3	85.5	69.8
	43.2-61.2	72.9-92.8	58.9-78.8

Yes	47.7	14.5	30.2
	38.8-56.8	7.2-27.1	21.2-41.1
Number of observations	410	410	410
Number of missing observations (don't know / refused)	8	8	8

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent who stated that they have an error in their Aadhaar.

Table 2.14 (Self-reported) reasons for errors in Aadhaar (among those who had an error in their Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Data entry error at the center/camp	88.5	86.8	90.9	88.9
	84.9-91.3	77.6-92.6	82.7-95.4	81.9-93.4
Errors in other IDs submitted	10.3	10.9	9.1	10.3
	7.4-14.3	5.0-22.2	4.6-17.3	5.5-18.3
I made a mistake in giving my details	1.1	1.9		0.9
	0.4-2.7	0.5-7.4	-	0.1-5.0
Child did not have a name	0.1	0.3		
	0.0-0.9	0.0-4.1	-	-
Number of observations	954	326	217	411
Number of missing observations (don't know / refused)	26	12	7	7

Notes: 95% confidence intervals are under point estimates.
This question was asked about all household members of the main respondent who stated that they have an error in their Aadhaar.

Table 2.15 Percentage of residents who had errors in their voter ID (among those

who have voter ID)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	94.3	97.6	97.4	89.6
	91.8-96.0	96.3-98.4	96.5-98.1	88.4-90.7
Yes	5.7	2.4	2.6	10.4
	4.0-8.2	1.6-3.7	1.9-3.5	9.3-11.6
Number of observations	8544	2999	2934	2611
Number of missing observations (don't know / refused)	95	39	28	28

Notes: 95% confidence intervals are under point estimates.

Table 2.16.1 Hypothesis tests of differences in the likelihood of having error in their Aadhaar among members of different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)	(5)
	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar
SC household member	-0.003				
	(0.83)				
ST household member	-0.024**				
	(0.03)				
Muslim household member		0.033***			
		(0.00)			
Female household member			-0.012**		
			(0.04)		
(Adult) household member has not attended school				-0.045***	

				(0.00)	
(Adult) household member above age 60					-0.012
					(0.16)
Constant	0.090***	0.081***	0.094***	0.106***	0.089***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	11856	12366	12379	9440	9454
R-squared	0.001	0.002	0.000	0.006	0.000
Mean of dependent variable	0.087	0.088	0.088	0.088	0.088

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in the likelihood of having error in their Aadhaar between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of having error in their Aadhaar compared to all other individuals (i.e. all those not in the specified type).

Table 2.16.2 Hypothesis tests of differences in the likelihood of having error in their Aadhaar among members of different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar
SC household member	-0.014				
	(0.30)				
ST household member	-0.005				
	(0.76)				

Muslim household member		0.005			
		(0.75)			
Female household member			-0.018*		
			(0.09)		
(Adult) household member has not attended school				-0.051*	
				(0.06)	
(Adult) household member above age 60					-0.001
					(0.94)
Constant	0.085***	0.080***	0.089***	0.096***	0.075***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	4242	4275	4275	3344	3352
R-squared	0.000	0.000	0.001	0.009	0.000
Mean of dependent variable	0.081	0.080	0.080	0.075	0.075

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 2.16.1 for a description of the hypotheses tested here.

Table 2.16.3 Hypothesis tests of differences in the likelihood of having error in their Aadhaar among members of different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar
SC household member	-0.020*				

	(0.09)				
ST household member	-0.019***				
	(0.01)				
Muslim household member		-0.004			
		(0.78)			
Female household member			-0.006		
			(0.13)		
(Adult) household member has not attended school				-0.021*	
				(0.06)	
(Adult) household member above age 60					-0.019
					(0.34)
Constant	0.057***	0.049***	0.051***	0.062***	0.055***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	4563	4665	4669	3425	3427
R-squared	0.002	0.000	0.000	0.002	0.001
Mean of dependent variable	0.049	0.048	0.048	0.053	0.053

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 2.16.1 for a description of the hypotheses tested here.

Table 2.16.4 Hypothesis tests of differences in the likelihood of having error in their Aadhaar among members of different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)

	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar	Has error in Aadhaar
SC household member	0.012				
	(0.73)				
ST household member	-0.015				
	(0.52)				
Muslim household member		0.006			
		(0.72)			
Female household member			-0.012		
			(0.39)		
(Adult) household member has not attended school				-0.045*	
				(0.10)	
(Adult) household member above age 60					-0.010
					(0.60)
Constant	0.121***	0.119***	0.127***	0.137***	0.123***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	3051	3426	3435	2671	2675
R-squared	0.001	0.000	0.000	0.004	0.000
Mean of dependent variable	0.122	0.122	0.122	0.122	0.122

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 2.16.1 for a description of the hypotheses tested here.

SECTION 3: GENERAL USAGE

Table 3.1 Percentage of respondents who have used Aadhaar by providing a photocopy of their Aadhaar card (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	5.4	6.6	3.2	6.1
	4.3-6.7	4.8-9.2	1.7-5.8	4.5-8.3
Yes	94.6	93.4	96.8	93.9
	93.3-95.7	90.8-95.2	94.2-98.3	91.7-95.5
Number of observations	2919	1142	952	825
Number of missing observations (don't know / refused)	1	0	0	1

Notes: 95% confidence intervals are under point estimates.

Table 3.2 Percentage of respondents who have used Aadhaar by showing the card itself (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	50.9	15.3	60.1	75.5
	37.8-63.9	10.7-21.4	50.2-69.2	66.4-82.8
Yes	49.1	84.7	39.9	24.5
	36.1-62.2	78.6-89.3	30.8-49.8	17.2-33.6
Number of observations	2919	1142	952	825
Number of missing observations (don't know / refused)	1	0	0	1

Notes: 95% confidence intervals are under point estimates.

Table 3.3 Percentage of respondents who have used Aadhaar via fingerprint authentication (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	27.3	4.6	23.3	51.2
	17.6-39.6	2.8-7.4	18.1-29.5	36.8-65.4
Yes	72.7	95.4	76.7	48.8
	60.4-82.4	92.6-97.2	70.5-81.9	34.6-63.2

Number of observations	2919	1142	952	825
Number of missing observations (don't know / refused)	1	0	0	1

Notes: 95% confidence intervals are under point estimates.

Table 3.4 Percentage of respondents who have used Aadhaar via iris authentication (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	90.2	73.6	99.0	97.8
	81.5-95.1	59.0-84.5	98.3-99.4	96.4-98.6
Yes	9.8	26.4	1.0	2.2
	4.9-18.5	15.5-41.0	0.6-1.7	1.4-3.6
Number of observations	2919	1142	952	825
Number of missing observations (don't know / refused)	1	0	0	1

Notes: 95% confidence intervals are under point estimates.

Table 3.5 Percentage of respondents who have used Aadhaar via one-time password authentication (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	95.3	98.0	98.0	90.7
	92.8-97.0	95.0-99.2	96.6-98.8	86.9-93.5
Yes	4.7	2.0	2.0	9.3
	3.0-7.2	0.8-5.0	1.2-3.4	6.5-13.1
Number of observations	2919	1142	952	825
Number of missing observations (don't know / refused)	1	0	0	1

Notes: 95% confidence intervals are under point estimates. One-time password (OTP) authentication refers to a temporary code sent to the mobile phone number registered with an individual's Aadhaar.

Table 3.6 Percentage of respondents who have not used their Aadhaar (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	97.5	99.7	98.7	94.5
	95.6-98.6	97.5-100.0	96.2-99.6	91.8-96.3
Yes	2.5	0.3	1.3	5.5
	1.4-4.4	0.0-2.5	0.4-3.8	3.7-8.2
Number of observations	2919	1142	952	825
Number of missing observations (don't know / refused)	1	0	0	1

Notes: 95% confidence intervals are under point estimates.

Table 3.7 Percentage of respondents aware of fingerprint authentication available with Aadhaar (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	14.9	2.2	12.4	28.5
	9.5-22.5	1.2-4.0	9.1-16.8	20.2-38.4
Yes	85.1	97.8	87.6	71.5
	77.5-90.5	96.0-98.8	83.2-90.9	61.6-79.8
Number of observations	2918	1142	951	825
Number of missing observations (don't know / refused)	2	0	1	1

Notes: 95% confidence intervals are under point estimates.
In the survey we asked the question about awareness only to respondents who had not used this feature. In this analysis we combine respondents who said they were aware of the feature in the survey and those who had used it.

Table 3.8 Percentage of respondents aware of iris authentication available with Aadhaar (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	69.0	54.3	84.6	69.2
	61.5-75.7	41.2-66.9	76.4-90.3	61.9-75.6

Yes	31.0	45.7	15.4	30.8
	24.3-38.5	33.1-58.8	9.7-23.6	24.4-38.1
Number of observations	2918	1142	951	825
Number of missing observations (don't know / refused)	2	0	1	1

Notes: 95% confidence intervals are under point estimates.
In the survey we asked the question about awareness only to respondents who had not used this feature. In this analysis we combine respondents who said they were aware of the feature in the survey and those who had used it.

Table 3.9 Percentage of respondents aware of OTP authentication available with Aadhaar (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	89.9	93.9	90.0	86.1
	87.0-92.2	90.7-96.1	86.3-92.8	79.9-90.5
Yes	10.1	6.1	10.0	13.9
	7.8-13.0	3.9-9.3	7.2-13.7	9.5-20.1
Number of observations	2914	1142	949	823
Number of missing observations (don't know / refused)	6	0	3	3

Notes: 95% confidence intervals are under point estimates.
In the survey we asked the question about awareness only to respondents who had not used this feature. In this analysis we combine respondents who said they were aware of the feature in the survey and those who had used it.

Table 3.10 Percentage of respondents aware of all authentication mechanisms available with Aadhaar (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	92.8	94.2	92.8	91.3
	90.9-94.3	90.7-96.5	88.9-95.4	86.8-94.4
Yes	7.2	5.8	7.2	8.7
	5.7-9.1	3.5-9.3	4.6-11.1	5.6-13.2
Number of observations	2911	1142	947	822

Number of missing observations (don't know / refused)	9	0	5	4

Notes: 95% confidence intervals are under point estimates.
In the survey we asked the questions about awareness only to respondents who had not used these features. In this analysis we combine respondents who said they were aware of the features in the survey and those who had used them.

Table 3.11.1 Hypothesis tests of differences in levels of awareness of fingerprint authentication for members of different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)	(5)
	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint
SC respondent	-0.010				
	(0.79)				
ST respondent	-0.040				
	(0.46)				
Muslim respondent		-0.138**			
		(0.04)			
Female respondent			-0.090***		
			(0.00)		
Respondent has not attended school				-0.071**	
				(0.04)	
Respondent above age 60					0.003
					(0.87)
Constant	0.861***	0.878***	0.900***	0.880***	0.851***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2799	2915	2917	2918	2909
R-squared	0.001	0.023	0.016	0.010	0.000

Mean of dependent variable	0.855	0.851	0.851	0.851	0.851

p-values in parentheses

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in the likelihood of being aware of this authentication mechanism between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of being aware of this authentication mechanism compared to all other individuals (i.e. all those not in the specified type).

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 3.11.2 Hypothesis tests of differences in levels of awareness of fingerprint authentication for members of different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint
SC respondent	0.018				
	(0.13)				
ST respondent	0.026**				
	(0.02)				
Muslim respondent		0.003			
		(0.88)			
Female respondent			0.010		
			(0.44)		
Respondent has not attended school				0.024*	
				(0.07)	
Respondent above age 60					-0.028*
					(0.09)

Constant	0.974***	0.978***	0.973***	0.968***	0.983***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1132	1142	1141	1142	1138
R-squared	0.003	0.000	0.001	0.007	0.005
Mean of dependent variable	0.979	0.978	0.978	0.978	0.978

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 3.11.1 for a description of the hypotheses tested here.

Table 3.11.3 Hypothesis tests of differences in levels of awareness of fingerprint authentication for members of different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint
SC respondent	0.017				
	(0.41)				
ST respondent	-0.049				
	(0.49)				
Muslim respondent		-0.081			
		(0.26)			
Female respondent			-0.115***		
			(0.01)		
Respondent has not attended school				-0.088**	
				(0.01)	
Respondent above age 60					0.002
					(0.95)
Constant	0.879***	0.880***	0.934***	0.914***	0.875***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Number of observations	931	950	951	951	951
R-squared	0.004	0.003	0.030	0.018	0.000
Mean of dependent variable	0.875	0.876	0.876	0.876	0.876

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 3.11.1 for a description of the hypotheses tested here.

Table 3.11.4 Hypothesis tests of differences in levels of awareness of fingerprint authentication for members of different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint	Aware of fingerprint
SC respondent	-0.013				
	(0.86)				
ST respondent	0.025				
	(0.76)				
Muslim respondent		-0.042			
		(0.50)			
Female respondent			-0.142***		
			(0.01)		
Respondent has not attended school				-0.200***	
				(0.01)	
Respondent above age 60					-0.009
					(0.84)
Constant	0.712***	0.732***	0.796***	0.787***	0.716***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	736	823	825	825	820

R-squared	0.000	0.002	0.024	0.045	0.000
Mean of dependent variable	0.711	0.715	0.715	0.715	0.715

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 3.11.1 for a description of the hypotheses tested here.

Table 3.12.1 Hypothesis tests of differences in levels of awareness of iris authentication for members of different vulnerable communities [State:]

	(1)	(2)	(3)	(4)	(5)
	Aware of iris	Aware of iris	Aware of iris	Aware of iris	Aware of iris
SC respondent	-0.023				
	(0.39)				
ST respondent	-0.170***				
	(0.00)				
Muslim respondent		0.014			
		(0.71)			
Female respondent			-0.044**		
			(0.04)		
Respondent has not attended school				-0.144***	
				(0.00)	
Respondent above age 60					-0.053
					(0.16)
Constant	0.330***	0.307***	0.334***	0.369***	0.318***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2799	2915	2917	2918	2909
R-squared	0.011	0.000	0.002	0.024	0.002
Mean of dependent variable	0.309	0.310	0.310	0.310	0.310

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
We test the null hypotheses that there are no differences in the likelihood of being aware of this authentication mechanism between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of being aware of this authentication mechanism compared to all other individuals (i.e. all those not in the specified type).

Table 3.12.2 Hypothesis tests of differences in levels of awareness of iris authentication for members of different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Aware of iris	Aware of iris	Aware of iris	Aware of iris	Aware of iris
SC respondent	-0.004				
	(0.94)				
ST respondent	-0.098				
	(0.19)				
Muslim respondent		0.003			
		(0.96)			
Female respondent			-0.057		
			(0.11)		
Respondent has not attended school				-0.146***	
				(0.00)	
Respondent above age 60					-0.089
					(0.12)
Constant	0.461***	0.457***	0.488***	0.522***	0.471***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1132	1142	1141	1142	1138

R-squared	0.001	0.000	0.003	0.021	0.004
Mean of dependent variable	0.457	0.457	0.457	0.457	0.456

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 3.12.1 for a description of the hypotheses tested here.

Table 3.12.3 Hypothesis tests of differences in levels of awareness of iris authentication for members of different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Aware of iris	Aware of iris	Aware of iris	Aware of iris	Aware of iris
SC respondent	-0.029				
	(0.52)				
ST respondent	-0.077**				
	(0.03)				
Muslim respondent		-0.015			
		(0.82)			
Female respondent			-0.082**		
			(0.04)		
Respondent has not attended school				-0.178***	
				(0.00)	
Respondent above age 60					-0.103**
					(0.03)
Constant	0.175***	0.155***	0.196***	0.231***	0.170***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	931	950	951	951	951
R-squared	0.006	0.000	0.013	0.059	0.011

Mean of dependent variable	0.157	0.154	0.154	0.154	0.154

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 3.12.1 for a description of the hypotheses tested here.

Table 3.12.4 Hypothesis tests of differences in levels of awareness of iris authentication for members of different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Aware of iris	Aware of iris	Aware of iris	Aware of iris	Aware of iris
SC respondent	-0.028				
	(0.47)				
ST respondent	-0.133***				
	(0.01)				
Muslim respondent		0.015			
		(0.65)			
Female respondent			-0.013		
			(0.75)		
Respondent has not attended school				-0.122*	
				(0.07)	
Respondent above age 60					0.019
					(0.81)
Constant	0.322***	0.302***	0.315***	0.352***	0.307***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	736	823	825	825	820
R-squared	0.007	0.000	0.000	0.016	0.000
Mean of dependent variable	0.302	0.308	0.308	0.308	0.309

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 3.12.1 for a description of the hypotheses tested here.

Table 3.13.1 Hypothesis tests of differences in levels of awareness of OTP authentication for members of different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)	(5)
	Aware of OTP	Aware of OTP	Aware of OTP	Aware of OTP	Aware of OTP
SC respondent	-0.030				
	(0.12)				
ST respondent	-0.084***				
	(0.00)				
Muslim respondent		0.040			
		(0.21)			
Female respondent			-0.081***		
			(0.00)		
Respondent has not attended school				-0.132***	
				(0.00)	
Respondent above age 60					-0.043**
					(0.02)
Constant	0.116***	0.094***	0.145***	0.155***	0.108***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2795	2911	2913	2914	2905
R-squared	0.007	0.003	0.018	0.046	0.003
Mean of dependent variable	0.102	0.101	0.101	0.101	0.102

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
We test the null hypotheses that there are no differences in the likelihood of

being aware of this authentication mechanism between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of being aware of this authentication mechanism compared to all other individuals (i.e. all those not in the specified type).

Table 3.13.2 Hypothesis tests of differences in levels of awareness of OTP authentication for members of different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Aware of OTP	Aware of OTP	Aware of OTP	Aware of OTP	Aware of OTP
SC respondent	0.008				
	(0.77)				
ST respondent	-0.062***				
	(0.00)				
Muslim respondent		0.054*			
		(0.09)			
Female respondent			-0.075**		
			(0.04)		
Respondent has not attended school				-0.089***	
				(0.01)	
Respondent above age 60					-0.017*
					(0.08)
Constant	0.062***	0.057***	0.101***	0.101***	0.064***
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Number of observations	1132	1142	1141	1142	1138
R-squared	0.002	0.004	0.024	0.034	0.001
Mean of dependent variable	0.061	0.061	0.061	0.061	0.061

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 3.13.1 for a description of the hypotheses tested here.

Table 3.13.3 Hypothesis tests of differences in levels of awareness of OTP authentication for members of different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Aware of OTP	Aware of OTP	Aware of OTP	Aware of OTP	Aware of OTP
SC respondent	-0.062				
	(0.12)				
ST respondent	-0.097**				
	(0.02)				
Muslim respondent		-0.011			
		(0.84)			
Female respondent			-0.107***		
			(0.00)		
Respondent has not attended school				-0.161***	
				(0.00)	
Respondent above age 60					-0.069**
					(0.05)
Constant	0.130***	0.100***	0.154***	0.169***	0.110***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	929	948	949	949	949
R-squared	0.016	0.000	0.032	0.071	0.007
Mean of dependent variable	0.102	0.100	0.100	0.100	0.100

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

See footnote to Table 3.13.1 for a description of the hypotheses tested here.

Table 3.13.4 Hypothesis tests of differences in levels of awareness of OTP authentication for members of different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Aware of OTP	Aware of OTP	Aware of OTP	Aware of OTP	Aware of OTP
SC respondent	-0.053				
	(0.22)				
ST respondent	-0.123***				
	(0.00)				
Muslim respondent		0.005			
		(0.89)			
Female respondent			-0.071**		
			(0.04)		
Respondent has not attended school				-0.135***	
				(0.00)	
Respondent above age 60					-0.034
					(0.41)
Constant	0.168***	0.137***	0.180***	0.187***	0.144***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	734	821	823	823	818
R-squared	0.012	0.000	0.010	0.035	0.001
Mean of dependent variable	0.142	0.140	0.139	0.139	0.140

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 3.13.1 for a description of the hypotheses tested here.

Table 3.14.1 Hypothesis tests of differences in levels of awareness for all

authentication mechanisms for members of different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)	(5)
	Aware of all	Aware of all	Awareness of all	Aware of all	Aware of all
SC respondent	-0.017				
	(0.25)				
ST respondent	-0.066***				
	(0.00)				
Muslim respondent		0.022			
		(0.25)			
Female respondent			-0.061***		
			(0.00)		
Respondent has not attended school				-0.106***	
				(0.00)	
Respondent above age 60					-0.041***
					(0.00)
Constant	0.083***	0.068***	0.106***	0.116***	0.079***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2792	2908	2910	2911	2902
R-squared	0.005	0.001	0.014	0.040	0.003
Mean of dependent variable	0.073	0.073	0.072	0.072	0.073

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in the likelihood of being aware of all authentication mechanisms between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different

likelihood of being aware of all authentication mechanisms compared to all other individuals (i.e. all those not in the specified type).

Table 3.14.2 Hypothesis tests of differences in levels of awareness for all authentication mechanisms for members of different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Aware of all	Aware of all	Awareness of all	Aware of all	Aware of all
SC respondent	0.013				
	(0.59)				
ST respondent	-0.057***				
	(0.00)				
Muslim respondent		0.040			
		(0.22)			
Female respondent			-0.075**		
			(0.04)		
Respondent has not attended school				-0.084**	
				(0.01)	
Respondent above age 60					-0.013
					(0.11)
Constant	0.057***	0.054***	0.097***	0.095***	0.060***
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Number of observations	1132	1142	1141	1142	1138
R-squared	0.003	0.002	0.026	0.032	0.000
Mean of dependent variable	0.058	0.058	0.058	0.058	0.058

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 3.14.1 for a description of the hypotheses tested here.

Table 3.14.3 Hypothesis tests of differences in levels of awareness for all authentication mechanisms for members of different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Aware of all	Aware of all	Awareness of all	Aware of all	Aware of all
SC respondent	-0.045*				
	(0.07)				
ST respondent	-0.070***				
	(0.00)				
Muslim respondent		0.018			
		(0.76)			
Female respondent			-0.056**		
			(0.04)		
Respondent has not attended school				-0.123***	
				(0.00)	
Respondent above age 60					-0.045*
					(0.09)
Constant	0.094***	0.071***	0.100***	0.125***	0.079***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	927	946	947	947	947
R-squared	0.011	0.000	0.012	0.056	0.004
Mean of dependent variable	0.074	0.072	0.072	0.072	0.072

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 3.14.1 for a description of the hypotheses tested here.

Table 3.14.4 Hypothesis tests of differences in levels of awareness for all authentication mechanisms for members of different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Aware of all	Aware of all	Awareness of all	Aware of all	Aware of all
SC respondent	-0.030				
	(0.38)				
ST respondent	-0.090***				
	(0.00)				
Muslim respondent		0.005			
		(0.85)			
Female respondent			-0.056*		
			(0.10)		
Respondent has not attended school				-0.107***	
				(0.00)	
Respondent above age 60					-0.064***
					(0.00)
Constant	0.103***	0.084***	0.119***	0.125***	0.095***
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Number of observations	733	820	822	822	817
R-squared	0.009	0.000	0.010	0.033	0.006
Mean of dependent variable	0.087	0.087	0.087	0.087	0.087

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 3.14.1 for a description of the hypotheses tested here.

SECTION 4: BANKING

Table 4.1 Percentage of respondents with a bank account

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	12.5	7.2	8.1	21.0
	9.2-16.8	4.4-11.7	5.7-11.5	17.0-25.6
Yes	87.5	92.8	91.9	79.0
	83.2-90.8	88.3-95.6	88.5-94.3	74.4-83.0
Number of observations	2944	1141	963	840
Number of missing observations (don't know / refused)	2	0	2	0

Notes: 95% confidence intervals are under point estimates.

Table 4.2 Number of bank accounts owned by respondents (among those who have a bank account; numbers in percentage)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Only one account	78.5	74.5	86.0	75.4
	74.5-82.1	68.7-79.7	80.5-90.2	66.5-82.6
Two accounts	17.2	19.8	12.1	19.6
	14.6-20.2	16.7-23.3	8.9-16.1	13.8-27.0
More than two accounts	4.2	5.7	1.9	5.0
	3.1-5.8	3.4-9.3	0.9-4.1	3.0-8.2
Number of observations	2590	1053	876	661
Number of missing observations (don't know / refused)	7	1	3	3

Notes: 95% confidence intervals are under point estimates.

Table 4.3 Percentage of respondents with a PMJDY bank account (among those who have a bank account)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Do not know	5.0	0.7	13.5	1.2

	2.6-9.3	0.3-1.4	8.9-20.1	0.5-2.7
No	68.3	78.9	63.8	61.6
	63.3-72.9	72.5-84.2	58.4-68.9	53.6-69.1
Yes	26.7	20.5	22.6	37.2
	22.4-31.5	15.4-26.6	18.0-28.0	30.0-44.9
Number of observations	2597	1054	879	664
Number of missing observations (refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.

Table 4.4 Percentage of respondents who used Aadhaar in bank account opening (among those who opened their bank account in/after 2014)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Did not use Aadhaar	15.9	5.3	17.7	24.4
	11.7-21.2	3.6-7.8	14.3-21.8	17.5-32.9
Used Aadhaar as ID	66.9	81.9	70.7	48.9
	58.2-74.7	72.6-88.6	64.3-76.4	36.1-61.7
Used Aadhaar e-KYC	17.2	12.8	11.5	26.7
	12.0-24.0	7.5-21.0	7.1-18.3	14.4-44.3
Number of observations	1260	479	431	350
Number of missing observations (don't know / refused)	50	6	35	9

Notes: 95% confidence intervals are under point estimates.

Table 4.5 Percentage of respondents who used Aadhaar in bank account opening (among those who opened their bank account before 2014)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Did not use Aadhaar	78.9	64.6	88.1	86.4
	71.9-84.5	56.8-71.7	83.4-91.6	77.5-92.1

Used Aadhaar as ID	18.6	33.2	11.2	9.0
	13.0-25.8	25.4-42.0	7.5-16.5	4.7-16.4
Used Aadhaar e-KYC	2.5	2.2	0.7	4.7
	1.6-4.1	1.3-3.9	0.3-1.7	2.0-10.6
Number of observations	1195	527	387	281
Number of missing observations (don't know / refused)	39	20	15	4

Notes: 95% confidence intervals are under point estimates.

Table 4.6.1 Percentage of respondents who had their bank account activated in 1 day, among those who did not use e-KYC (and opened their bank account in/ after 2014)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	61.0	59.8	48.0	76.3
	54.8-66.9	52.6-66.7	39.6-56.5	69.7-81.9
Yes	39.0	40.2	52.0	23.7
	33.1-45.2	33.3-47.4	43.5-60.4	18.1-30.3
Number of observations	990	409	341	240
Number of missing observations (don't know / refused)	58	14	34	10

Notes: 95% confidence intervals are under point estimates.

Table 4.6.2 Percentage of respondents who had their bank account activated in 1 day, among those who used e-KYC (and opened their bank account in/after 2014)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	62.5	50.1	41.8	76.9
	51.3-72.5	34.3-65.9	21.4-65.4	64.0-86.2
Yes	37.5	49.9	58.2	23.1
	27.5-48.7	34.1-65.7	34.6-78.6	13.8-36.0

Number of observations	203	55	53	95
Number of missing observations (don't know / refused)	9	1	3	5

Notes: 95% confidence intervals are under point estimates.

Table 4.7 Percentage of respondents who had an acceptable proof of identity at the time of obtaining an Aadhaar, among those who used Aadhaar as ID for bank account opening (and opened their bank account in/after 2014)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	10.7	11.9	8.2	12.1
	8.7-13.1	8.2-16.9	4.9-13.4	8.1-17.5
Yes	89.3	88.1	91.8	87.9
	86.9-91.3	83.1-91.8	86.6-95.1	82.5-91.9
Number of observations	864	400	293	171
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
We define proof-of-identity document as one of the following: NREGA job card, voter ID, driving license, PAN card, letter from an official government authority/ panchayat, and passport.

Table 4.8 Percentage of respondents who had an acceptable proof of address at the time of obtaining an Aadhaar, among those who used Aadhaar as ID for bank account opening (and opened their bank account in/after 2014)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	3.8	2.8	6.8	1.5
	2.3-6.3	0.9-8.3	3.8-11.9	0.5-4.0
Yes	96.2	97.2	93.2	98.5
	93.7-97.7	91.7-99.1	88.1-96.2	96.0-99.5
Number of observations	864	400	293	171

Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
We define proofs-of-address document as one of the following: ration card, an existing bank statement, and letter from official government authority/panchayat.

Table 4.9 Percentage of respondents who have seeded their bank accounts to Aadhaar (among those who have a bank account)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Do not know	12.0	9.7	22.8	3.8
	8.7-16.5	7.3-12.9	19.3-26.8	2.2-6.6
No	11.8	11.1	10.3	14.0
	9.6-14.3	6.7-17.6	6.9-15.1	9.6-20.1
Yes	76.2	79.2	66.9	82.2
	71.8-80.1	72.0-84.9	61.5-71.9	75.4-87.4
Number of observations	2589	1053	876	660
Number of missing observations (refused)	1	0	0	1

Notes: 95% confidence intervals in brackets.
In the survey we asked whether the respondent's most recently opened bank account had been seeded with Aadhaar. In this analysis we combine responses from those with one account and those with multiple accounts.

Table 4.10.1 Reasons for seeding bank accounts with Aadhaar, in percentage (among respondents who seeded their bank accounts with Aadhaar; numbers in percentage): Because the bank required me to seed it

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	7.8	7.3	5.0	10.5
	5.8-10.3	4.1-12.6	1.7-14.0	7.5-14.4
Yes	92.2	92.7	95.0	89.5
	89.7-94.2	87.4-95.9	86.0-98.3	85.6-92.5
Number of observations	1962	829	590	543

Number of missing observations (don't know / refused)	7	1	6	0

Notes: 95% confidence intervals are under point estimates.

Table 4.10.2 Reasons for seeding bank accounts with Aadhaar, in percentage (among respondents who seeded their bank accounts with Aadhaar; numbers in percentage): Because seeding was required for me to receive a benefit from the government

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	64.4	44.6	73.7	77.3
	55.2-72.7	34.0-55.8	65.5-80.6	66.2-85.5
Yes	35.6	55.4	26.3	22.7
	27.3-44.8	44.2-66.0	19.4-34.5	14.5-33.8
Number of observations	1962	829	590	543
Number of missing observations (don't know / refused)	7	1	6	0

Notes: 95% confidence intervals are under point estimates.

Table 4.10.3 Reasons for seeding bank accounts with Aadhaar, in percentage (among respondents who seeded their bank accounts with Aadhaar; numbers in percentage): Because seeding makes it easier for me to use my bank account

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	76.3	65.7	89.9	76.2
	70.9-80.9	61.3-69.7	81.4-94.8	72.8-79.3
Yes	23.7	34.3	10.1	23.8
	19.1-29.1	30.3-38.7	5.2-18.6	20.7-27.2
Number of observations	1962	829	590	543
Number of missing observations (don't know / refused)	7	1	6	0

Notes: 95% confidence intervals are under point estimates.

Table 4.11 Percentage of respondents who have used their bank account in the

last 3 months (among those who have a bank account)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	43.2	33.4	55.1	41.9
	38.1-48.5	28.3-38.9	47.7-62.2	36.8-47.2
Yes	56.8	66.6	44.9	58.1
	51.5-61.9	61.1-71.7	37.8-52.3	52.8-63.2
Number of observations	2579	1044	875	660
Number of missing observations (don't know / refused)	18	10	4	4

Notes: 95% confidence intervals are under point estimates.

Table 4.12.1 Percentage of respondents who have used their bank account in the last 3 months, among those who do not receive DBTs (and have a bank account)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	62.9	54.6	69.7	57.0
	55.9-69.4	34.8-73.1	56.9-80.1	51.8-62.2
Yes	37.1	45.4	30.3	43.0
	30.6-44.1	26.9-65.2	19.9-43.1	37.8-48.2
Number of observations	614	74	319	221
Number of missing observations (don't know / refused)	5	1	2	2

Notes: 95% confidence intervals are under point estimates.

Table 4.12.2 Percentage of respondents who have used their bank account in the last 3 months, among those who receive DBTs (and have a bank account)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	36.1	31.8	45.8	33.7
	32.4-40.0	26.6-37.4	39.5-52.2	28.3-39.6
Yes	63.9	68.2	54.2	66.3
	60.0-67.6	62.6-73.4	47.8-60.5	60.4-71.7
Number of observations	1944	964	547	433

Number of missing observations (don't know / refused)	11	8	2	1

Notes: 95% confidence intervals are under point estimates.

Table 4.13 Percentage of respondents who receive DBTs (among those who have a bank account)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	25.6	6.1	37.9	34.1
	18.7-34.1	4.1-8.9	34.1-41.9	25.3-44.3
Yes	74.4	93.9	62.1	65.9
	65.9-81.3	91.1-95.9	58.1-65.9	55.7-74.7
Number of observations	2574	1047	870	657
Number of missing observations (don't know / refused)	23	7	9	7

Notes: 95% confidence intervals are under point estimates.

Table 4.14 Percentage of respondents who receive DBTs into an Aadhaar seeded bank account (among those who receive DBTs)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Do not receive into Aadhaar-seeded bank account	9.8	10.0	7.6	11.5
	7.8-12.2	5.8-16.7	4.9-11.5	7.8-16.5
Receive into Aadhaar-seeded bank account	76.4	75.4	72.8	81.1
	72.9-79.5	67.8-81.7	67.8-77.3	74.9-86.1

Unable to determine whether DBT is received in an Aadhaar-seeded account or not	13.9	14.6	19.6	7.4
	11.5-16.6	11.5-18.3	16.4-23.4	5.2-10.4
Number of observations	1955	972	549	434
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
In this analysis we combine responses from those with one account and those with multiple accounts. For those who receive DBTs and only have one account, we asked whether that account is seeded with Aadhaar. For those who have multiple accounts, we asked whether they receive the DBTs into any account and whether that account is seeded with Aadhaar.

Table 4.15 Percentage of respondents who have used a micro-ATM in the last 3 months (in the last 6 months for those who used a micro-ATM for NREGA wages in Andhra Pradesh; among respondents with a bank account)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	82.8	66.6	94.9	85.3
	74.4-88.9	43.6-83.8	90.6-97.3	80.7-89.0
Yes	17.2	33.4	5.1	14.7
	11.1-25.6	16.2-56.4	2.7-9.4	11.0-19.3
Number of observations	2345	865	848	632
Number of missing observations (don't know / refused)	35	2	31	2

Notes: 95% confidence intervals are under point estimates.
In this analysis we combine the responses of those who have used a micro-ATM to receive NREGA wages (only in Andhra Pradesh), and those who have not used it for NREGA, but have used it for other purposes.
In Andhra Pradesh, due to an initial error in survey skip codes, many respondents were not asked the microATM question. We conducted a follow-up

phone call to reach these respondents, however, we were not able to reach all. In Andhra Pradesh and West Bengal, there were errors due to inconsistent responses from the respondents. The instances in which respondents stated they have used a micro-ATM in the last 3 months but had previously responded they have not transacted with their bank account in the last 3 months were marked as errors, hence missing.

Table 4.16.1 Problems encountered when using a micro-ATM (among respondents who have used a micro-ATM): Internet/server was not working

	Andhra Pradesh	Rajasthan	West Bengal
No	79.4	89.8	55.7
	63.9-89.3	71.4-96.9	38.3-71.8
Yes	20.6	10.2	44.3
	10.7-36.1	3.1-28.6	28.2-61.7
Number of observations	128	49	101
Number of missing observations (don't know / refused)	3	0	0

Notes: 95% confidence intervals are under point estimates.
For Andhra Pradesh and West Bengal, we have removed some inconsistent responses for this question. Where a respondent* stated they had used a microATM in the last 3 months but had previously responded they had not transacted with their bank account in the last 3 months, we marked these responses as errors, hence missing. Additionally, in Andhra Pradesh, due to an initial survey skip pattern error, we made follow-up phone calls to respondents who were not initially asked relevant questions. We were unable to reach some respondents which resulted in missing observations.
In Andhra Pradesh, this questions was only asked to respondents who indicated they have used a micro-ATM outside of the context of receiving wages for NREGA.

Table 4.16.2 Problems encountered when using a micro-ATM (among respondents who have used a micro-ATM): Fingerprint authentication failure

	Andhra Pradesh	Rajasthan	West Bengal
No	79.3	84.3	68.0
	66.3-88.2	67.9-93.1	44.1-85.1
Yes	20.7	15.7	32.0
	11.8-33.7	6.9-32.1	14.9-55.9
Number of observations	128	49	101

Number of missing observations (don't know / refused)	3	0	0

Notes: 95% confidence intervals are under point estimates.
For Andhra Pradesh and West Bengal, we have removed some inconsistent responses for this question. Where a respondent* stated they had used a microATM in the last 3 months but had previously responded they had not transacted with their bank account in the last 3 months, we marked these responses as errors, hence missing. Additionally, in Andhra Pradesh, due to an initial survey skip pattern error, we made follow-up phone calls to respondents who were not initially asked relevant questions. We were unable to reach some respondents which resulted in missing observations.
In Andhra Pradesh, this questions was only asked to respondents who indicated they have used a micro-ATM outside of the context of receiving wages for NREGA.

Table 4.16.3 Problems encountered when using a micro-ATM (among respondents who have used a micro-ATM): Fingerprint worked but PoS machine still gave an error

	Andhra Pradesh	Rajasthan	West Bengal
No	94.9	95.4	83.8
	89.5-97.6	73.5-99.4	66.9-93.0
Yes	5.1	4.6	16.2
	2.4-10.5	0.6-26.5	7.0-33.1
Number of observations	128	49	101
Number of missing observations (don't know / refused)	3	0	0

Notes: 95% confidence intervals are under point estimates.
For Andhra Pradesh and West Bengal, we have removed some inconsistent responses for this question. Where a respondent* stated they had used a microATM in the last 3 months but had previously responded they had not transacted with their bank account in the last 3 months, we marked these responses as errors, hence missing. Additionally, in Andhra Pradesh, due to an initial survey skip pattern error, we made follow-up phone calls to respondents who were not initially asked relevant questions. We were unable to reach some respondents which resulted in missing observations.
In Andhra Pradesh, this questions was only asked to respondents who indicated they have used a micro-ATM outside of the context of receiving wages for NREGA.

Table 4.16.4 Problems encountered when using a micro-ATM (among respondents who have used a micro-ATM): The machine was not turning on

	Andhra Pradesh	Rajasthan	West Bengal
No	98.1	100.0	85.9
	95.9-99.1	.-.	61.9-95.8
Yes	1.9		14.1
	0.9-4.1	-	4.2-38.1
Number of observations	128	49	101
Number of missing observations (don't know / refused)	3	0	0

Notes: 95% confidence intervals are under point estimates.
For Andhra Pradesh and West Bengal, we have removed some inconsistent responses for this question. Where a respondent* stated they had used a microATM in the last 3 months but had previously responded they had not transacted with their bank account in the last 3 months, we marked these responses as errors, hence missing. Additionally, in Andhra Pradesh, due to an initial survey skip pattern error, we made follow-up phone calls to respondents who were not initially asked relevant questions. We were unable to reach some respondents which resulted in missing observations.
In Andhra Pradesh, this questions was only asked to respondents who indicated they have used a micro-ATM outside of the context of receiving wages for NREGA.

Table 4.16.5 Problems encountered when using a micro-ATM (among respondents who have used a micro-ATM): No problems

	Andhra Pradesh	Rajasthan	West Bengal
No	34.7	20.7	55.3
	23.1-48.3	9.1-40.5	37.0-72.3
Yes	65.3	79.3	44.7
	51.7-76.9	59.5-90.9	27.7-63.0
Number of observations	128	49	101
Number of missing observations (don't know / refused)	3	0	0

Notes: 95% confidence intervals are under point estimates.
For Andhra Pradesh and West Bengal, we have removed some inconsistent responses for this question. Where a respondent* stated they had used a

microATM in the last 3 months but had previously responded they had not transacted with their bank account in the last 3 months, we marked these responses as errors, hence missing. Additionally, in Andhra Pradesh, due to an initial survey skip pattern error, we made follow-up phone calls to respondents who were not initially asked relevant questions. We were unable to reach some respondents which resulted in missing observations.
In Andhra Pradesh, this questions was only asked to respondents who indicated they have used a micro-ATM outside of the context of receiving wages for NREGA.

Table 4.17.1 How respondents reacted when they encountered problems using a micro-ATM (among those who encountered problems using a micro-ATM; numbers in percentage) [State: Andhra Pradesh]

	Andhra Pradesh
Visited the banking correspondent again next day / some other time	34.5
	21.3-50.6
Went to a bank branch	50.4
	36.0-64.8
Went to an ATM	11.1
	5.2-22.1
Used bank/debit/ATM card on micro-ATM	4.0
	1.1-13.9
Number of observations	91
Number of missing observations (don't know / refused)	21

Notes: 95% confidence intervals are under point estimates.
In Andhra Pradesh, this questions is only relevant to respondents who indicated they have used a micro-ATM outside of the context of receiving wages for NREGA.

Table 4.17.2 How respondents reacted when they encountered problems using a micro-ATM (among those who encountered problems using a micro-ATM; numbers in percentage) [State: Rajasthan]

	Rajasthan
Visited the banking correspondent again next day / some other time	32.7
	3.7-85.9
Used mobile one-time-password authentication	17.3
	0.2-95.5
Went to a bank branch	38.8
	6.7-84.8

Washed my fingers to try fingerprint authentication again	11.3
	1.8-46.4
Number of observations	9
Number of missing observations (don't know / refused)	1

Notes: 95% confidence intervals are under point estimates.

Table 4.17.3 How respondents reacted when they encountered problems using a micro-ATM (among those who encountered problems using a micro-ATM; numbers in percentage) [State: West Bengal]

	West Bengal
Visited the banking correspondent again next day / some other time	87.9
	68.9-95.9
Used a bank branch	8.1
	1.5-34.0
Used bank/debit/ATM card	1.4
	0.1-14.6
I borrowed money from money lender/ friend/relative	2.7
	0.4-15.0
Number of observations	53
Number of missing observations (don't know / refused)	0

Notes: 95% confidence intervals are under point estimates.

Table 4.18 Perceived relative ease of transaction using micro-ATMs compared to transacting at banks (among those who have used a micro-ATM; numbers in percentage)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Easier	82.1	78.4	92.9	81.6
	77.0-86.2	60.9-89.4	81.6-97.5	78.5-84.3
Neither easier nor more difficult	7.8	9.6	3.9	7.5
	5.5-10.9	5.8-15.4	1.3-11.6	3.4-15.7
More difficult	10.1	12.0	3.2	10.9
	6.1-16.4	3.4-34.5	0.3-29.2	5.7-19.7
Number of observations	267	117	49	101

Number of missing observations (don't know / refused)	16	16	0	0

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'Overall, has using a microATM made it easier or more difficult to withdraw money, deposit money, etc.?' and were given the options of 'Easier', 'Neither easier nor more difficult', and 'More difficult' to choose from. This question was only asked to respondents who used both micro-ATMs and banks in the past 3 months. In Andhra Pradesh, this questions was only asked to respondents who indicated they have used a micro-ATM outside of the context of receiving wages for NREGA.

Table 4.19.1 Problems encountered when using a micro-ATM (among respondents who have used a micro-ATM): It is closer to me so I do not have to travel too much

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	37.6	28.7	48.9	40.7
	28.7-47.6	19.9-39.4	26.1-72.2	23.1-60.9
Yes	62.4	71.3	51.1	59.3
	52.4-71.3	60.6-80.1	27.8-73.9	39.1-76.9
Number of observations	211	86	46	79
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
In Andhra Pradesh, this questions was only asked to respondents who indicated they have used a micro-ATM outside of the context of receiving wages for NREGA.

Table 4.19.2 Problems encountered when using a micro-ATM (among respondents who have used a micro-ATM): The lines are not too long

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	33.1	43.2	36.7	23.2
	25.4-41.7	33.0-53.9	17.1-61.8	13.1-37.8
Yes	66.9	56.8	63.3	76.8
	58.3-74.6	46.1-67.0	38.2-82.9	62.2-86.9
Number of observations	211	86	46	79

Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
In Andhra Pradesh, this questions was only asked to respondents who indicated they have used a micro-ATM outside of the context of receiving wages for NREGA.

Table 4.19.3 Problems encountered when using a micro-ATM (among respondents who have used a micro-ATM): It is faster to use a micro-ATM to get money than getting money from bank branch

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	40.4	28.1	50.9	46.5
	28.6-53.5	18.9-39.7	31.6-70.0	20.5-74.6
Yes	59.6	71.9	49.1	53.5
	46.5-71.4	60.3-81.1	30.0-68.4	25.4-79.5
Number of observations	211	86	46	79
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
In Andhra Pradesh, this questions was only asked to respondents who indicated they have used a micro-ATM outside of the context of receiving wages for NREGA.

Table 4.20 Percentage of respondents who are 'JAM candidates'

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	49.3	41.3	48.1	57.4
	45.2-53.4	36.6-46.2	41.2-55.2	52.4-62.2
Yes	50.7	58.7	51.9	42.6
	46.6-54.8	53.8-63.4	44.8-58.8	37.8-47.6
Number of observations	2943	1141	962	840
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
A 'JAM candidate' is someone who possesses a PMDJY bank account, an Aadhaar and a mobile phone.

Table 4.21.1 Hypothesis tests of differences in bank account ownership among respondents from different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)	(5)
	Owns bank account	Owns bank account	Owns bank account	Owns bank account	Owns bank account
SC respondent	-0.028				
	(0.29)				
ST respondent	-0.008				
	(0.75)				
Muslim respondent		-0.111***			
		(0.00)			
Female respondent			-0.043**		
			(0.03)		
Respondent has not attended school				-0.013	
				(0.36)	
Respondent above age 60					0.019
					(0.46)
Constant	0.891***	0.896***	0.898***	0.880***	0.872***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2821	2941	2943	2944	2935
R-squared	0.001	0.017	0.004	0.000	0.000
Mean of dependent variable	0.883	0.875	0.875	0.875	0.875

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
We test the null hypotheses that there are no differences in the likelihood of owning a bank account for enrolment between vulnerable respondents and other

respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of owning a bank account compared to all other individuals (i.e. all those not in the specified type).

Table 4.21.2 Hypothesis tests of differences in bank account ownership among respondents from different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Owns bank account	Owns bank account	Owns bank account	Owns bank account	Owns bank account
SC respondent	-0.019				
	(0.28)				
ST respondent	-0.122*				
	(0.08)				
Muslim respondent		-0.009			
		(0.82)			
Female respondent			-0.019		
			(0.60)		
Respondent has not attended school				0.000	
				(0.99)	
Respondent above age 60					0.038
					(0.26)
Constant	0.937***	0.929***	0.938***	0.928***	0.921***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1131	1141	1140	1141	1137
R-squared	0.007	0.000	0.001	0.000	0.003
Mean of dependent variable	0.929	0.928	0.928	0.928	0.928

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results

in the table.
See footnote to Table 4.21.1 for a description of the hypotheses tested here.

Table 4.21.3 Hypothesis tests of differences in bank account ownership among respondents from different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Owns bank account	Owns bank account	Owns bank account	Owns bank account	Owns bank account
SC respondent	-0.051				
	(0.19)				
ST respondent	0.001				
	(0.97)				
Muslim respondent		-0.039			
		(0.32)			
Female respondent			-0.000		
			(0.99)		
Respondent has not attended school				-0.007	
				(0.82)	
Respondent above age 60					0.066**
					(0.01)
Constant	0.930***	0.921***	0.919***	0.922***	0.909***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	942	962	963	963	963
R-squared	0.006	0.001	0.000	0.000	0.008
Mean of dependent variable	0.919	0.919	0.919	0.919	0.919

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.21.1 for a description of the hypotheses tested here.

Table 4.21.4 Hypothesis tests of differences in bank account ownership among

respondents from different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Owns bank account	Owns bank account	Owns bank account	Owns bank account	Owns bank account
SC respondent	0.003				
	(0.96)				
ST respondent	0.024				
	(0.46)				
Muslim respondent		-0.065**			
		(0.05)			
Female respondent			-0.087***		
			(0.00)		
Respondent has not attended school				-0.061***	
				(0.00)	
Respondent above age 60					-0.069
					(0.40)
Constant	0.801***	0.816***	0.840***	0.812***	0.800***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	748	838	840	840	835
R-squared	0.000	0.006	0.011	0.005	0.003
Mean of dependent variable	0.804	0.790	0.790	0.790	0.791

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.21.1 for a description of the hypotheses tested here.

Table 4.22.1 Hypothesis tests of differences in usage of Aadhaar as ID in bank account openings among respondents from different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)	(5)

	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID
SC respondent	-0.034				
	(0.46)				
ST respondent	-0.127				
	(0.33)				
Muslim respondent		-0.061			
		(0.30)			
Female respondent			0.076**		
			(0.03)		
Respondent has not attended school				0.005	
				(0.86)	
Respondent above age 60					0.045
					(0.28)
Constant	0.692***	0.680***	0.626***	0.667***	0.665***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1226	1260	1259	1260	1254
R-squared	0.006	0.002	0.006	0.000	0.001
Mean of dependent variable	0.672	0.669	0.669	0.669	0.670

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in the likelihood of using Aadhaar in opening of bank accounts between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of using Aadhaar in opening of bank accounts compared to all other individuals (i.e. all those not in the specified type).

Table 4.22.2 Hypothesis tests of differences in usage of Aadhaar as ID in bank account openings among respondents from different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID
SC respondent	0.070**				
	(0.01)				
ST respondent	-0.210				
	(0.24)				
Muslim respondent		-0.058			
		(0.53)			
Female respondent			0.070		
			(0.27)		
Respondent has not attended school				-0.042	
				(0.47)	
Respondent above age 60					-0.095
					(0.13)
Constant	0.808***	0.822***	0.782***	0.837***	0.833***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	478	479	478	479	476
R-squared	0.016	0.001	0.008	0.003	0.007
Mean of dependent variable	0.819	0.819	0.819	0.819	0.820

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.22.1 for a description of the hypotheses tested here.

Table 4.22.3 Hypothesis tests of differences in usage of Aadhaar as ID in bank

account openings among respondents from different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID
SC respondent	-0.055				
	(0.54)				
ST respondent	0.078				
	(0.15)				
Muslim respondent		-0.007			
		(0.95)			
Female respondent			0.011		
			(0.82)		
Respondent has not attended school				-0.027	
				(0.52)	
Respondent above age 60					0.035
					(0.49)
Constant	0.702***	0.708***	0.701***	0.719***	0.703***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	423	431	431	431	431
R-squared	0.007	0.000	0.000	0.001	0.001
Mean of dependent variable	0.702	0.707	0.707	0.707	0.707

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.22.1 for a description of the hypotheses tested here.

Table 4.22.4 Hypothesis tests of differences in usage of Aadhaar as ID in bank account openings among respondents from different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID
SC respondent	-0.058				
	(0.64)				
ST respondent	-0.231				
	(0.18)				
Muslim respondent		0.161			
		(0.16)			
Female respondent			0.196**		
			(0.01)		
Respondent has not attended school				0.031	
				(0.50)	
Respondent above age 60					0.144*
					(0.07)
Constant	0.537***	0.427***	0.370***	0.477***	0.477***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	325	350	350	350	347
R-squared	0.021	0.024	0.036	0.001	0.006
Mean of dependent variable	0.493	0.489	0.489	0.489	0.488

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.22.1 for a description of the hypotheses tested here.

Table 4.23.1 Hypothesis tests of differences in usage of Aadhaar e-KYC in bank account openings among respondents from different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)	(5)

	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC
SC respondent	-0.034				
	(0.22)				
ST respondent	0.085				
	(0.42)				
Muslim respondent		0.054			
		(0.35)			
Female respondent			-0.019		
			(0.46)		
Respondent has not attended school				-0.010	
				(0.75)	
Respondent above age 60					-0.016
					(0.57)
Constant	0.171***	0.163***	0.183***	0.176***	0.173***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1226	1260	1259	1260	1254
R-squared	0.007	0.003	0.001	0.000	0.000
Mean of dependent variable	0.171	0.172	0.172	0.172	0.171

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in the likelihood of using Aadhaar e-KYC in opening of bank accounts between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of using Aadhaar e-KYC in opening of bank accounts compared to all other individuals (i.e. all those not in the specified type).

Table 4.23.2 Hypothesis tests of differences in usage of Aadhaar e-KYC in bank account openings among respondents from different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC
SC respondent	-0.043				
	(0.15)				
ST respondent	0.177**				
	(0.03)				
Muslim respondent		-0.024			
		(0.83)			
Female respondent			-0.029		
			(0.62)		
Respondent has not attended school				0.063	
				(0.25)	
Respondent above age 60					0.043
					(0.18)
Constant	0.133***	0.129***	0.143**	0.101**	0.121***
	(0.00)	(0.01)	(0.01)	(0.02)	(0.01)
Number of observations	478	479	478	479	476
R-squared	0.012	0.000	0.002	0.009	0.002
Mean of dependent variable	0.128	0.128	0.128	0.128	0.127

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.23.1 for a description of the hypotheses tested here.

Table 4.23.3 Hypothesis tests of differences in usage of Aadhaar e-KYC in bank

account openings among respondents from different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC
SC respondent	-0.004				
	(0.92)				
ST respondent	-0.079**				
	(0.02)				
Muslim respondent		0.141			
		(0.22)			
Female respondent			-0.028		
			(0.48)		
Respondent has not attended school				-0.014	
				(0.69)	
Respondent above age 60					-0.026
					(0.61)
Constant	0.129***	0.107***	0.131***	0.122***	0.118***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	423	431	431	431	431
R-squared	0.007	0.011	0.002	0.000	0.001
Mean of dependent variable	0.118	0.115	0.115	0.115	0.115

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.23.1 for a description of the hypotheses tested here.

Table 4.23.4 Hypothesis tests of differences in usage of Aadhaar e-KYC in bank account openings among respondents from different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC
SC respondent	-0.079				
	(0.32)				
ST respondent	0.218				
	(0.15)				
Muslim respondent		-0.067			
		(0.42)			
Female respondent			-0.025		
			(0.68)		
Respondent has not attended school				-0.051	
				(0.40)	
Respondent above age 60					-0.037
					(0.54)
Constant	0.265***	0.293***	0.282**	0.286***	0.269***
	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
Number of observations	325	350	350	350	347
R-squared	0.037	0.005	0.001	0.003	0.000
Mean of dependent variable	0.266	0.267	0.267	0.267	0.267

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.23.1 for a description of the hypotheses tested here.

Table 4.24 Hypothesis tests of differences in usage of Aadhaar as ID in bank account openings by PMJDY account ownership (among those who have only one bank account and opened their bank account in/after 2014)

	(1)	(2)	(3)	(4)

	Andhra Pradesh	Rajasthan	West Bengal	est4
Have PMJDY	-0.152***	-0.031	-0.145	-0.138*
	(0.00)	(0.54)	(0.15)	(0.05)
Constant	0.705***	0.818***	0.744***	0.522***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	903	308	353	242
R-squared	0.024	0.001	0.023	0.019
Mean of dependent variable	0.646	0.809	0.691	0.456

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypothesis that there is no difference in the likelihood of using Aadhaar as ID in opening of bank accounts between PMJDY account holders and other respondents. Aadhaar usage for bank account opening was allowed in late 2013; therefore we look at the usage of Aadhaar in bank account openings starting 2014. In addition, we limit this analysis to those with only one account to be sure that the analysis is relevant for the PMJDY accounts only.

Table 4.25 Hypothesis tests of differences in usage of Aadhaar e-KYC in bank account openings by PMJDY account ownership (among those who have only one bank account and opened their bank account in/after 2014)

	(1)	(2)	(3)	(4)
	All three states	Andhra Pradesh	Rajasthan	West Bengal
Have PMJDY	0.149***	0.089	0.181**	0.107*
	(0.00)	(0.15)	(0.04)	(0.07)
Constant	0.120***	0.098**	0.048**	0.241***
	(0.00)	(0.05)	(0.01)	(0.01)
Number of observations	903	308	353	242
R-squared	0.036	0.015	0.075	0.014
Mean of dependent variable	0.178	0.125	0.114	0.292

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypothesis that there is no difference in the likelihood of using Aadhaar e-KYC in opening of bank accounts between PMJDY account holders

and other respondents. Aadhaar usage for bank account opening was allowed in late 2013; therefore we look at the usage of Aadhaar in bank account openings starting 2014. In addition, we limit this analysis to those with only one account to be sure that the analysis is relevant for the PMJDY accounts only.

Table 4.26 Hypothesis tests of differences in likelihood of having bank account activated in 1 day by usage of Aadhaar as ID (among those who have a bank account and those who opened their bank account in/after 2014)

	(1)	(2)	(3)	(4)
	All three states	Andhra Pradesh	Rajasthan	West Bengal
Used Aadhaar as ID	0.014	-0.130*	0.087	-0.099
	(0.79)	(0.10)	(0.24)	(0.31)
Constant	0.378***	0.521***	0.466***	0.283***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1193	464	394	335
R-squared	0.000	0.010	0.006	0.014
Mean of dependent variable	0.387	0.414	0.528	0.235

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
We test the null hypothesis that there is no difference in the likelihood of having their bank account activated in 1 day between respondents who used Aadhaar as ID for bank account opening and other respondents.

Table 4.27 Hypothesis tests of differences in likelihood of having bank account activated in 1 day by usage of Aadhaar e-KYC (among those who have a bank account and those who opened their bank account in/after 2014)

	(1)	(2)	(3)	(4)
	All three states	Andhra Pradesh	Rajasthan	West Bengal
Used Aadhaar e-KYC	-0.015	0.097	0.062	-0.006
	(0.73)	(0.18)	(0.56)	(0.92)
Constant	0.390***	0.402***	0.520***	0.237***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1193	464	394	335

R-squared	0.000	0.004	0.002	0.000
Mean of dependent variable	0.387	0.414	0.528	0.235

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypothesis that there is no difference in the likelihood of having their bank account activated in 1 day between respondents who used Aadhaar e-KYC bank account opening and other respondents. (We discuss this result on p19 of the State of Aadhaar Report 2017-18.)

Table 4.28.1 Hypothesis tests of differences in Aadhaar seeding of bank account among respondents from different vulnerable communities (among those who have a bank account) [All three states]

	(1)	(2)	(3)	(4)	(5)
	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar
SC respondent	-0.012				
	(0.66)				
ST respondent	-0.072				
	(0.34)				
Muslim respondent		0.033			
		(0.19)			
Female respondent			-0.082***		
			(0.00)		
Respondent has not attended school				-0.123***	
				(0.00)	
Respondent above age 60					-0.042*
					(0.06)
Constant	0.772***	0.756***	0.805***	0.812***	0.769***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Number of observations	2501	2588	2588	2589	2581
R-squared	0.002	0.001	0.009	0.020	0.001
Mean of dependent variable	0.763	0.762	0.762	0.762	0.762

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in the likelihood of seeding their bank accounts with Aadhaar between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of seeding their bank accounts with Aadhaar compared to all other individuals (i.e. all those not in the specified type).

Table 4.28.2 Hypothesis tests of differences in Aadhaar seeding of bank account among respondents from different vulnerable communities (among those who have a bank account) [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar
SC respondent	0.000				
	(1.00)				
ST respondent	-0.066				
	(0.60)				
Muslim respondent		-0.025			
		(0.48)			
Female respondent			-0.050*		
			(0.09)		
Respondent has not attended school				-0.087***	
				(0.00)	

Respondent above age 60					-0.097**
					(0.02)
Constant	0.795***	0.794***	0.819***	0.831***	0.809***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1045	1053	1052	1053	1049
R-squared	0.001	0.000	0.004	0.011	0.008
Mean of dependent variable	0.793	0.792	0.792	0.792	0.792

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.28.1 for a description of the hypotheses tested here.

Table 4.28.3 Hypothesis tests of differences in Aadhaar seeding of bank account among respondents from different vulnerable communities (among those who have a bank account) [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar
SC respondent	-0.048				
	(0.44)				
ST respondent	-0.094				
	(0.21)				
Muslim respondent		-0.058			
		(0.50)			
Female respondent			-0.198***		
			(0.00)		
Respondent has not attended school				-0.205***	
				(0.01)	

Respondent above age 60					0.024
					(0.45)
Constant	0.694***	0.672***	0.770***	0.758***	0.665***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	858	876	876	876	876
R-squared	0.006	0.001	0.044	0.047	0.000
Mean of dependent variable	0.670	0.669	0.669	0.669	0.669

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.28.1 for a description of the hypotheses tested here.

Table 4.28.4 Hypothesis tests of differences in Aadhaar seeding of bank account among respondents from different vulnerable communities (among those who have a bank account) [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar	Seeding bank account to Aadhaar
SC respondent	-0.012				
	(0.80)				
ST respondent	0.047				
	(0.60)				
Muslim respondent		-0.008			
		(0.85)			
Female respondent			-0.012		
			(0.77)		
Respondent has not attended school				-0.060	
				(0.26)	

Respondent above age 60					-0.026
					(0.66)
Constant	0.825***	0.825***	0.828***	0.843***	0.825***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	598	659	660	660	656
R-squared	0.002	0.000	0.000	0.006	0.000
Mean of dependent variable	0.826	0.822	0.822	0.822	0.822

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.28.1 for a description of the hypotheses tested here.

Table 4.29.1 Hypothesis tests of differences in active usage of bank account among respondents from different vulnerable communities (among those who have a bank account) [All three states]

	(1)	(2)	(3)	(4)	(5)
	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months
SC respondent	-0.084**				
	(0.01)				
ST respondent	-0.186***				
	(0.00)				
Muslim respondent		0.010			
		(0.80)			
Female respondent			-0.085***		
			(0.00)		
Respondent has not attended school				-0.086***	
				(0.00)	

Respondent above age 60					0.098**
					(0.02)
Constant	0.612***	0.566***	0.612***	0.602***	0.553***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2490	2578	2578	2579	2572
R-squared	0.014	0.000	0.007	0.007	0.005
Mean of dependent variable	0.576	0.568	0.568	0.568	0.568

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in the likelihood of using their bank account in the last 3 months between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of using their bank account in the last 3 months compared to all other individuals (i.e. all those not in the specified type).

Table 4.29.2 Hypothesis tests of differences in active usage of bank account among respondents from different vulnerable communities (among those who have a bank account) [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months
SC respondent	-0.071				
	(0.19)				
ST respondent	-0.166				
	(0.28)				
Muslim respondent		-0.026			
		(0.76)			
Female respondent			-0.032		

			(0.15)		
Respondent has not attended school				-0.045	
				(0.17)	
Respondent above age 60					-0.042
					(0.26)
Constant	0.687***	0.668***	0.683***	0.686***	0.673***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1036	1044	1043	1044	1040
R-squared	0.007	0.000	0.001	0.002	0.001
Mean of dependent variable	0.666	0.666	0.666	0.666	0.665

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.29.1 for a description of the hypotheses tested here.

Table 4.29.3 Hypothesis tests of differences in active usage of bank account among respondents from different vulnerable communities (among those who have a bank account) [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months
SC respondent	-0.085				
	(0.10)				
ST respondent	-0.122**				
	(0.02)				
Muslim respondent		0.012			
		(0.84)			
Female respondent			-0.139**		
			(0.05)		

Respondent has not attended school				-0.090*	
				(0.08)	
Respondent above age 60					0.219***
					(0.00)
Constant	0.490***	0.449***	0.521***	0.488***	0.414***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	857	875	875	875	875
R-squared	0.010	0.000	0.020	0.008	0.026
Mean of dependent variable	0.453	0.449	0.449	0.449	0.449

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.29.1 for a description of the hypotheses tested here.

Table 4.29.4 Hypothesis tests of differences in active usage of bank account among respondents from different vulnerable communities (among those who have a bank account) [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months	Used bank account in the past 3 months
SC respondent	-0.106**				
	(0.03)				
ST respondent	-0.142*				
	(0.07)				
Muslim respondent		-0.007			
		(0.88)			
Female respondent			-0.094***		
			(0.01)		

Respondent has not attended school				-0.129***	
				(0.00)	
Respondent above age 60					0.140
					(0.18)
Constant	0.643***	0.584***	0.632***	0.625***	0.565***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	597	659	660	660	657
R-squared	0.013	0.000	0.009	0.015	0.009
Mean of dependent variable	0.601	0.582	0.581	0.581	0.582

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.29.1 for a description of the hypotheses tested here.

Table 4.30 Hypothesis tests of differences in active usage of bank account by recipient status of direct benefit transfers (DBTs) (among those who have a bank account)

	(1)	(2)	(3)	(4)
	All three states	Andhra Pradesh	Rajasthan	West Bengal
Do you receive any direct transfers from government schemes?	0.268***	0.229**	0.239***	0.233***
	(0.00)	(0.03)	(0.00)	(0.00)
Constant	0.371***	0.454***	0.303***	0.430***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2558	1038	866	654
R-squared	0.056	0.013	0.054	0.050

Mean of dependent variable	0.570	0.669	0.452	0.583

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
We test the null hypothesis that there is no difference in the likelihood of using their bank account in the last 3 months between respondents who receive DBTs and other respondents. (We discuss this result on p21 of the State of Aadhaar Report 2017-18.)

Table 4.31 Hypothesis tests of differences in active usage of bank account by usage of Aadhaar as ID in bank account opening (among those who have a bank account and those who opened their bank account in/after 2014)

	(1)	(2)	(3)	(4)
	All three states	Andhra Pradesh	Rajasthan	West Bengal
Used Aadhaar as ID	0.021	-0.030	-0.040	0.099
	(0.62)	(0.69)	(0.38)	(0.26)
Constant	0.522***	0.662***	0.409***	0.533***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1252	477	428	347
R-squared	0.000	0.001	0.001	0.010
Mean of dependent variable	0.536	0.637	0.380	0.581

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
We test the null hypothesis that there is no difference in the likelihood of using their bank account in the last 3 months between respondents who used Aadhaar in bank account opening and other respondents.

Table 4.32 Hypothesis tests of differences in active usage of bank account by usage of Aadhaar e-KYC in bank account opening (among those who have a bank account and those who opened their bank account in/after 2014)

	(1)	(2)	(3)	(4)
	All three states	Andhra Pradesh	Rajasthan	West Bengal

Used Aadhaar e-KYC	0.100**	0.120	0.135*	0.037
	(0.01)	(0.22)	(0.05)	(0.45)
Constant	0.518***	0.622***	0.365***	0.571***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1252	477	428	347
R-squared	0.006	0.007	0.008	0.001
Mean of dependent variable	0.536	0.637	0.380	0.581

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
We test the null hypothesis that there is no difference in the likelihood of using their bank account in the last 3 months between respondents who used Aadhaar e-KYC in bank account opening and other respondents.

Table 4.33.1 Hypothesis tests of differences in DBT recipient status among respondents from different vulnerable communities (among those who have a bank account) [All three states]

	(1)	(2)	(3)	(4)	(5)
	DBT recipients	DBT recipients	DBT recipients	DBT recipients	DBT recipients
SC respondent	0.060*				
	(0.09)				
ST respondent	-0.044				
	(0.34)				
Muslim respondent		-0.140**			
		(0.02)			
Female respondent			-0.033		
			(0.28)		
Respondent has not attended school				0.026	
				(0.29)	

Respondent above age 60					0.114***
					(0.00)
Constant	0.735***	0.767***	0.761***	0.733***	0.727***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2489	2573	2573	2574	2566
R-squared	0.005	0.014	0.001	0.001	0.009
Mean of dependent variable	0.745	0.744	0.744	0.744	0.744

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
We test the null hypotheses that there are no differences in the likelihood of receiving DBTs between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of receiving DBTs compared to all other individuals (i.e. all those not in the specified type).

Table 4.33.2 Hypothesis tests of differences in DBT recipient status among respondents from different vulnerable communities (among those who have a bank account) [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	DBT recipients	DBT recipients	DBT recipients	DBT recipients	DBT recipients
SC respondent	-0.011				
	(0.23)				
ST respondent	-0.163*				
	(0.10)				
Muslim respondent		-0.005			
		(0.80)			
Female respondent			-0.013		
			(0.21)		

Respondent has not attended school				-0.034	
				(0.23)	
Respondent above age 60					0.008
					(0.61)
Constant	0.947***	0.940***	0.946***	0.954***	0.938***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1040	1047	1046	1047	1043
R-squared	0.013	0.000	0.001	0.005	0.000
Mean of dependent variable	0.940	0.939	0.939	0.939	0.940

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.33.1 for a description of the hypotheses tested here.

Table 4.33.3 Hypothesis tests of differences in DBT recipient status among respondents from different vulnerable communities (among those who have a bank account) [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	DBT recipients	DBT recipients	DBT recipients	DBT recipients	DBT recipients
SC respondent	0.045				
	(0.27)				
ST respondent	0.086***				
	(0.01)				
Muslim respondent		-0.130**			
		(0.02)			
Female respondent			-0.096**		
			(0.04)		

Respondent has not attended school				0.108**	
				(0.01)	
Respondent above age 60					0.248***
					(0.00)
Constant	0.597***	0.627***	0.670***	0.574***	0.581***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	853	870	870	870	870
R-squared	0.005	0.003	0.010	0.012	0.035
Mean of dependent variable	0.619	0.621	0.621	0.621	0.621

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.33.1 for a description of the hypotheses tested here.

Table 4.33.4 Hypothesis tests of differences in DBT recipient status among respondents from different vulnerable communities (among those who have a bank account) [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	DBT recipients	DBT recipients	DBT recipients	DBT recipients	DBT recipients
SC respondent	0.176***				
	(0.01)				
ST respondent	0.073				
	(0.17)				
Muslim respondent		-0.129*			
		(0.06)			
Female respondent			0.002		
			(0.97)		

Respondent has not attended school				-0.035	
				(0.45)	
Respondent above age 60					0.041
					(0.55)
Constant	0.597***	0.708***	0.658***	0.671***	0.655***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	596	656	657	657	653
R-squared	0.026	0.017	0.000	0.001	0.001
Mean of dependent variable	0.652	0.658	0.659	0.659	0.660

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.33.1 for a description of the hypotheses tested here.

Table 4.34.1 Hypothesis tests of differences in micro-ATM usage in the last 3 months among respondents from different vulnerable communities (among those who have a bank account) [All three states]

	(1)	(2)	(3)	(4)	(5)
	Used micro-ATM	Used micro-ATM	Used micro-ATM	Used micro-ATM	Used micro-ATM
SC respondent	0.019				
	(0.60)				
ST respondent	-0.053				
	(0.31)				
Muslim respondent		-0.029			
		(0.42)			
Female respondent			-0.002		
			(0.93)		

Respondent has not attended school				0.047*	
				(0.08)	
Respondent above age 60					0.027
					(0.38)
Constant	0.174***	0.177***	0.173***	0.153***	0.168***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2265	2344	2345	2345	2339
R-squared	0.002	0.001	0.000	0.004	0.001
Mean of dependent variable	0.173	0.172	0.172	0.172	0.172

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
We test the null hypotheses that there are no differences in the likelihood of using micro-ATMs (in the last 3 months) between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of using micro-ATMs (in the last 3 months) compared to all other individuals (i.e. all those not in the specified type).

Table 4.34.2 Hypothesis tests of differences in micro-ATM usage in the last 3 months among respondents from different vulnerable communities (among those who have a bank account) [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Used micro-ATM	Used micro-ATM	Used micro-ATM	Used micro-ATM	Used micro-ATM
SC respondent	0.072				
	(0.26)				
ST respondent	-0.067				
	(0.74)				
Muslim respondent		0.018			

		(0.90)			
Female respondent			0.023		
			(0.66)		
Respondent has not attended school				0.123***	
				(0.01)	
Respondent above age 60					0.053
					(0.46)
Constant	0.319***	0.332**	0.322**	0.280**	0.325**
	(0.01)	(0.01)	(0.01)	(0.03)	(0.01)
Number of observations	861	865	865	865	863
R-squared	0.005	0.000	0.001	0.017	0.002
Mean of dependent variable	0.334	0.334	0.334	0.334	0.334

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.34.1 for a description of the hypotheses tested here.

Table 4.34.3 Hypothesis tests of differences in micro-ATM usage in the last 3 months among respondents from different vulnerable communities (among those who have a bank account) [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Used micro-ATM	Used micro-ATM	Used micro-ATM	Used micro-ATM	Used micro-ATM
SC respondent	0.001				
	(0.98)				
ST respondent	-0.004				
	(0.89)				
Muslim respondent		0.012			
		(0.65)			
Female respondent			-0.021		

			(0.32)		
Respondent has not attended school				-0.002	
				(0.92)	
Respondent above age 60					0.046
					(0.12)
Constant	0.051*	0.050***	0.062***	0.052***	0.043***
	(0.05)	(0.01)	(0.01)	(0.00)	(0.00)
Number of observations	830	848	848	848	848
R-squared	0.000	0.000	0.002	0.000	0.006
Mean of dependent variable	0.051	0.051	0.051	0.051	0.051

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.34.1 for a description of the hypotheses tested here.

Table 4.34.4 Hypothesis tests of differences in micro-ATM usage in the last 3 months among respondents from different vulnerable communities (among those who have a bank account) [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Used micro-ATM	Used micro-ATM	Used micro-ATM	Used micro-ATM	Used micro-ATM
SC respondent	0.005				
	(0.92)				
ST respondent	0.099**				
	(0.01)				
Muslim respondent		-0.038			
		(0.23)			
Female respondent			-0.015		
			(0.73)		

Respondent has not attended school				0.011	
				(0.65)	
Respondent above age 60					-0.037
					(0.51)
Constant	0.136***	0.161***	0.155***	0.143***	0.151***
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Number of observations	574	631	632	632	628
R-squared	0.006	0.003	0.000	0.000	0.001
Mean of dependent variable	0.147	0.147	0.147	0.147	0.147

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 4.34.1 for a description of the hypotheses tested here.

Table 4.35 Hypothesis tests of differences in perceived ease of bank account opening by usage of Aadhaar as e-KYC in bank account opening (among those who have a bank account and those who opened their bank account in/after 2014)

	(1)	(2)	(3)	(4)
	All three states	Andhra Pradesh	Rajasthan	West Bengal
Used Aadhaar e-KYC	0.043	0.049	-0.004	0.122*
	(0.19)	(0.22)	(0.94)	(0.08)
Constant	0.797***	0.820***	0.862***	0.697***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1259	479	431	349
R-squared	0.002	0.002	0.000	0.015
Mean of dependent variable	0.804	0.827	0.861	0.730

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and

10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypothesis that there is no difference in the perceived ease of the process of opening their bank account between respondents who used Aadhaar e-KYC in bank account opening and other respondents.

SECTION 5: MOBILE

Table 5.1.1 Percentage of respondents who own a mobile phone

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	43.8	37.8	44.2	48.9
	40.2-47.6	33.2-42.7	36.2-52.6	42.6-55.2
Yes	56.2	62.2	55.8	51.1
	52.4-59.8	57.3-66.8	47.4-63.8	44.8-57.4
Number of observations	2947	1142	965	840
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.

Table 5.1.2 Percentage of respondents who got their SIM card before/after Sep 2016 among those who have a mobile phone

	All three states	Andhra Pradesh	Rajasthan	West Bengal
In/after Sep 2016	29.4	19.3	31.4	38.2
	25.0-34.2	16.1-22.9	25.2-38.2	34.5-42.0
Before Sep 2016	70.6	80.7	68.6	61.8
	65.8-75.0	77.1-83.9	61.8-74.8	58.0-65.5
Number of observations	1541	647	503	391
Number of missing observations (don't know / refused)	123	58	41	24

Notes: 95% confidence intervals are under point estimates.
DoT and TRAI allowed the usage of e-KYC for mobile SIM cards in mid-August 2016. Here we have broken down our respondents into those who obtained a SIM card in/after September 2016 and those who obtained a SIM card before September 2016.

Table 5.2 How respondents used Aadhaar for mobile SIM card purchases (among those who got their SIM card in/after Sep 2016; numbers in percentage)

	All three states	Andhra Pradesh	Rajasthan	West Bengal

Did not use Aadhaar	16.3	5.6	16.6	21.7
	11.7-22.3	1.2-22.0	8.5-29.9	15.5-29.6
Used Aadhaar as an identification document	32.8	44.3	35.2	25.1
	24.1-42.9	27.3-62.7	28.1-43.1	9.0-53.0
Used Aadhaar e-KYC	50.9	50.1	48.2	53.2
	41.5-60.2	34.7-65.5	34.8-61.9	31.3-73.9
Number of observations	409	115	149	145
Number of missing observations (don't know / refused)	27	8	11	8

Notes: 95% confidence intervals are under point estimates.
DoT and TRAI allowed the usage of e-KYC for mobile SIM cards in mid-August 2016, therefore we conduct this analysis for those who received their SIM cards in/after Sep 2016.

Table 5.3.1 Percentage of respondents who had their SIM card activated in 1 day, among those who did not use e-KYC (and have a mobile phone, and got their SIM card in/after Sep 2016)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	30.7	31.6	28.7	31.7
	24.5-37.5	17.1-50.7	15.6-46.6	22.0-43.3
Yes	69.3	68.4	71.3	68.3
	62.5-75.5	49.3-82.9	53.4-84.4	56.7-78.0
Number of observations	188	57	68	63
Number of missing observations (don't know / refused)	18	6	8	4

Notes: 95% confidence intervals are under point estimates.

Table 5.3.2 Percentage of respondents who had their SIM card activated in 1 day, among those who used e-KYC (and have a mobile phone, and got their SIM

card in/after Sep 2016)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	17.4	17.5	14.3	19.3
	11.2-26.0	4.1-51.1	8.9-22.3	8.3-38.7
Yes	82.6	82.5	85.7	80.7
	74.0-88.8	48.9-95.9	77.7-91.1	61.3-91.7
Number of observations	200	51	72	77
Number of missing observations (don't know / refused)	3	1	1	1

Notes: 95% confidence intervals are under point estimates.

Table 5.4 Percentage of respondents who have seeded their mobile SIM card to Aadhaar (among those who have a mobile phone)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Do not know	10.7	12.7	15.7	4.1
	8.2-13.9	8.7-18.1	12.3-19.7	2.1-8.0
No	24.2	24.8	21.8	25.7
	21.0-27.6	18.9-31.8	17.0-27.5	18.0-35.2
Yes	65.1	62.5	62.6	70.2
	61.1-68.9	53.3-71.0	57.9-67.0	62.0-77.3
Number of observations	1661	705	541	415
Number of missing observations (refused)	3	0	3	0

Notes: 95% confidence intervals are under point estimates.

Table 5.5.1 Mobile SIM carriers (among those who used e-KYC to get their SIM card and those who got their SIM card in/after Sep 2016; numbers in percentage) [All three states]

	All three states
Airtel	29.7
	21.7-39.2
Reliance Jio	20.7
	14.3-28.9
Vodafone	22.7
	14.2-34.2

Idea	24.0
	14.9-36.3
BSNL	2.0
	0.6-7.0
Aircel	0.9
	0.2-3.8
Number of observations	200
Number of missing observations (don't know / refused)	3

Notes: 95% confidence intervals are under point estimates.

Table 5.5.2 Mobile SIM carriers (among those who used e-KYC to get their SIM card and those who got their SIM card in/after Sep 2016; numbers in percentage) [State: Rajasthan]

	Andhra Pradesh
Airtel	40.9
	26.4-57.1
Reliance Jio	21.4
	13.8-31.7
Vodafone	3.1
	0.6-14.6
Idea	30.0
	12.2-57.0
BSNL	4.6
	0.4-37.3
Number of observations	51
Number of missing observations (don't know / refused)	1

Notes: 95% confidence intervals are under point estimates.

Table 5.5.3 Mobile SIM carriers (among those who used e-KYC to get their SIM card and those who got their SIM card in/after Sep 2016; numbers in percentage) [State: West Bengal]

	Rajasthan
Airtel	32.5
	18.4-50.8
Reliance Jio	30.7
	17.4-48.1
Vodafone	20.3
	8.9-39.8
Idea	14.1
	3.7-41.6
BSNL	0.6

	0.1-6.5
Aircel	1.7
	0.1-17.5
Number of observations	71
Number of missing observations (don't know / refused)	2

Notes: 95% confidence intervals are under point estimates.

Table 5.5.4 Mobile SIM carriers (among those who used e-KYC to get their SIM card and those who got their SIM card in/after Sep 2016; numbers in percentage) [State:]

	West Bengal
Airtel	22.5
	10.6-41.8
Reliance Jio	14.2
	6.6-28.0
Vodafone	33.7
	18.9-52.5
Idea	27.2
	10.7-53.7
BSNL	1.7
	0.2-14.3
Aircel	0.8
	0.1-9.3
Number of observations	78
Number of missing observations (don't know / refused)	0

Notes: 95% confidence intervals are under point estimates.

Table 5.6.1 Hypothesis tests of differences in mobile phone ownership among respondents from different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)	(5)
	Owns mobile phone	Owns mobile phone	Owns mobile phone	Owns mobile phone	Owns mobile phone
SC respondent	-0.088**				
	(0.04)				
ST respondent	-0.140***				
	(0.00)				
Muslim respondent		-0.028			
		(0.36)			

Female respondent			-0.364***		
			(0.00)		
Respondent has not attended school				-0.340***	
				(0.00)	
Respondent above age 60					-0.200***
					(0.00)
Constant	0.608***	0.567***	0.759***	0.701***	0.592***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2824	2944	2946	2947	2938
R-squared	0.010	0.000	0.134	0.114	0.021
Mean of dependent variable	0.574	0.562	0.562	0.562	0.562

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in mobile phone ownership between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of owning a mobile phone compared to all other individuals (i.e. all those not in the specified type).

Table 5.6.2 Hypothesis tests of differences in mobile phone ownership among respondents from different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Owns mobile phone	Owns mobile phone	Owns mobile phone	Owns mobile phone	Owns mobile phone
SC respondent	-0.008				
	(0.87)				
ST respondent	-0.143				

	(0.14)				
Muslim respondent		0.021			
		(0.84)			
Female respondent			-0.361***		
			(0.00)		
Respondent has not attended school				-0.272***	
				(0.00)	
Respondent above age 60					-0.139**
					(0.03)
Constant	0.630***	0.620***	0.815***	0.742***	0.645***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1132	1142	1141	1142	1138
R-squared	0.003	0.000	0.138	0.077	0.012
Mean of dependent variable	0.623	0.622	0.622	0.622	0.622

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.6.1 for a description of the hypotheses tested here.

Table 5.6.3 Hypothesis tests of differences in mobile phone ownership among respondents from different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Owns mobile phone	Owns mobile phone	Owns mobile phone	Owns mobile phone	Owns mobile phone
SC respondent	-0.066				
	(0.32)				
ST respondent	-0.161***				
	(0.00)				
Muslim respondent		0.033			

		(0.74)			
Female respondent			-0.409***		
			(0.00)		
Respondent has not attended school				-0.431***	
				(0.00)	
Respondent above age 60					-0.272***
					(0.00)
Constant	0.603***	0.556***	0.768***	0.746***	0.600***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	944	964	965	965	965
R-squared	0.014	0.000	0.169	0.185	0.039
Mean of dependent variable	0.564	0.558	0.558	0.558	0.558

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.6.1 for a description of the hypotheses tested here.

Table 5.6.4 Hypothesis tests of differences in mobile phone ownership among respondents from different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Owns mobile phone	Owns mobile phone	Owns mobile phone	Owns mobile phone	Owns mobile phone
SC respondent	-0.166*				
	(0.05)				
ST respondent	-0.083				
	(0.13)				
Muslim respondent		0.008			
		(0.82)			
Female respondent			-0.324***		

			(0.00)		
Respondent has not attended school				-0.347***	
				(0.00)	
Respondent above age 60					-0.217**
					(0.04)
Constant	0.588***	0.508***	0.696***	0.637***	0.541***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	748	838	840	840	835
R-squared	0.022	0.000	0.103	0.111	0.021
Mean of dependent variable	0.534	0.511	0.511	0.511	0.513

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.6.1 for a description of the hypotheses tested here.

Table 5.7.1 Hypothesis tests of differences in Aadhaar seeding of mobile phone among respondents from different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)	(5)
	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar
SC respondent	0.024				
	(0.59)				
ST respondent	-0.045				
	(0.51)				
Muslim respondent		-0.015			
		(0.73)			
Female respondent			-0.162***		
			(0.00)		

Respondent has not attended school				-0.147***	
				(0.00)	
Respondent above age 60					-0.043
					(0.25)
Constant	0.654***	0.654***	0.713***	0.690***	0.656***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1623	1660	1661	1661	1658
R-squared	0.001	0.000	0.027	0.018	0.001
Mean of dependent variable	0.656	0.651	0.651	0.651	0.651

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in the likelihood of seeding mobile phone with Aadhaar between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of seeding mobile phone with Aadhaar compared to all other individuals (i.e. all those not in the specified type).

Table 5.7.2 Hypothesis tests of differences in Aadhaar seeding of mobile phone among respondents from different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar
SC respondent	0.012				
	(0.87)				
ST respondent	-0.156***				
	(0.00)				

Muslim respondent		-0.133			
		(0.26)			
Female respondent			-0.152**		
			(0.04)		
Respondent has not attended school				-0.104	
				(0.10)	
Respondent above age 60					-0.008
					(0.89)
Constant	0.628***	0.636***	0.685***	0.660***	0.628***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	701	705	705	705	703
R-squared	0.003	0.005	0.023	0.010	0.000
Mean of dependent variable	0.627	0.625	0.625	0.625	0.627

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.7.1 for a description of the hypotheses tested here.

Table 5.7.3 Hypothesis tests of differences in Aadhaar seeding of mobile phone among respondents from different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar
SC respondent	0.051				
	(0.35)				
ST respondent	-0.143**				
	(0.01)				
Muslim respondent		-0.222*			

		(0.06)			
Female respondent			-0.293***		
			(0.01)		
Respondent has not attended school				-0.211***	
				(0.01)	
Respondent above age 60					-0.071
					(0.21)
Constant	0.633***	0.638***	0.723***	0.678***	0.632***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	536	541	541	541	541
R-squared	0.013	0.011	0.082	0.035	0.002
Mean of dependent variable	0.626	0.626	0.626	0.626	0.626

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.7.1 for a description of the hypotheses tested here.

Table 5.7.4 Hypothesis tests of differences in Aadhaar seeding of mobile phone among respondents from different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar	Seeding mobile phone to Aadhaar
SC respondent	0.012				
	(0.90)				
ST respondent	0.125				
	(0.11)				
Muslim respondent		-0.010			
		(0.88)			

Female respondent			-0.077		
			(0.11)		
Respondent has not attended school				-0.122**	
				(0.05)	
Respondent above age 60					-0.054
					(0.60)
Constant	0.706***	0.705***	0.734***	0.727***	0.706***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	386	414	415	415	414
R-squared	0.006	0.000	0.007	0.012	0.001
Mean of dependent variable	0.719	0.702	0.702	0.702	0.701

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.7.1 for a description of the hypotheses tested here.

Table 5.8.1 Hypothesis tests of differences in usage of Aadhaar as ID for mobile SIM purchases among respondents from different vulnerable communities (among those who have a mobile phone) [All three states]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID
SC respondent	0.019				
	(0.62)				
ST respondent	-0.055				
	(0.37)				
Muslim respondent		-0.055			
		(0.29)			
Female respondent			0.126***		

			(0.00)		
Respondent has not attended school				0.075**	
				(0.03)	
Respondent above age 60					0.005
					(0.85)
Constant	0.264***	0.273***	0.218***	0.244***	0.263***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1420	1449	1450	1450	1448
R-squared	0.002	0.002	0.019	0.005	0.000
Mean of dependent variable	0.264	0.263	0.263	0.263	0.263

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypotheses that there are no differences in usage of Aadhaar as ID for mobile SIM purchases between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of using Aadhaar as ID in mobile SIM purchases compared to all other individuals (i.e. all those not in the specified type).

Table 5.8.2 Hypothesis tests of differences in usage of Aadhaar as ID for mobile SIM purchases among respondents from different vulnerable communities (among those who have a mobile phone) [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID
SC respondent	-0.043				
	(0.44)				
ST respondent	-0.133				
	(0.27)				

Muslim respondent		-0.177*			
		(0.07)			
Female respondent			0.132**		
			(0.02)		
Respondent has not attended school				0.014	
				(0.81)	
Respondent above age 60					0.026
					(0.24)
Constant	0.469***	0.471***	0.409***	0.452***	0.453***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	582	584	584	584	583
R-squared	0.003	0.010	0.016	0.000	0.000
Mean of dependent variable	0.455	0.456	0.456	0.456	0.456

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.8.1 for a description of the hypotheses tested here.

Table 5.8.3 Hypothesis tests of differences in usage of Aadhaar as ID for mobile SIM purchases among respondents from different vulnerable communities (among those who have a mobile phone) [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID
SC respondent	0.102*				
	(0.05)				
ST respondent	0.102				
	(0.19)				
Muslim respondent		0.094			

		(0.52)			
Female respondent			0.093***		
			(0.01)		
Respondent has not attended school				0.059	
				(0.38)	
Respondent above age 60					0.003
					(0.92)
Constant	0.150***	0.176***	0.153***	0.167***	0.180***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	479	483	483	483	483
R-squared	0.015	0.003	0.012	0.004	0.000
Mean of dependent variable	0.183	0.181	0.181	0.181	0.181

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.8.1 for a description of the hypotheses tested here.

Table 5.8.4 Hypothesis tests of differences in usage of Aadhaar as ID for mobile SIM purchases among respondents from different vulnerable communities (among those who have a mobile phone) [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID	Used Aadhaar as ID
SC respondent	0.013				
	(0.85)				
ST respondent	-0.031				
	(0.69)				
Muslim respondent		0.084			
		(0.18)			

Female respondent			0.149*		
			(0.06)		
Respondent has not attended school				0.075*	
				(0.05)	
Respondent above age 60					-0.096
					(0.19)
Constant	0.142**	0.113**	0.089***	0.132**	0.156***
	(0.03)	(0.01)	(0.01)	(0.02)	(0.01)
Number of observations	359	382	383	383	382
R-squared	0.001	0.014	0.042	0.007	0.006
Mean of dependent variable	0.143	0.148	0.147	0.147	0.148

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.8.1 for a description of the hypotheses tested here.

Table 5.9.1 Hypothesis tests of differences in usage of Aadhaar e-KYC in SIM card purchases among respondents from different vulnerable communities (among those who have a mobile phone and those who got their SIM card) [All three states]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC
SC respondent	-0.059				
	(0.53)				
ST respondent	0.035				
	(0.80)				
Muslim respondent		-0.074			
		(0.43)			

Female respondent			-0.331***		
			(0.00)		
Respondent has not attended school				-0.200**	
				(0.01)	
Respondent above age 60					-0.107
					(0.27)
Constant	0.524***	0.529***	0.645***	0.567***	0.514***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	400	409	409	409	408
R-squared	0.003	0.004	0.106	0.033	0.003
Mean of dependent variable	0.515	0.509	0.509	0.509	0.507

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
We test the null hypotheses that there are no differences in usage of Aadhaar e-KYC for mobile SIM purchases between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each individual type above has a different likelihood of using Aadhaar e-KYC in mobile SIM purchases compared to all other individuals (i.e. all those not in the specified type).

Table 5.9.2 Hypothesis tests of differences in usage of Aadhaar e-KYC in SIM card purchases among respondents from different vulnerable communities (among those who have a mobile phone and those who got their SIM card) [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC
SC respondent	0.092				
	(0.66)				

ST respondent	0.274				
	(0.45)				
Muslim respondent		0.145			
		(0.24)			
Female respondent			-0.257**		
			(0.04)		
Respondent has not attended school				-0.066	
				(0.55)	
Respondent above age 60					-0.025
					(0.87)
Constant	0.467***	0.492***	0.604***	0.529***	0.504***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	115	115	115	115	115
R-squared	0.013	0.005	0.063	0.004	0.000
Mean of dependent variable	0.501	0.501	0.501	0.501	0.501

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.9.1 for a description of the hypotheses tested here.

Table 5.9.3 Hypothesis tests of differences in usage of Aadhaar e-KYC in SIM card purchases among respondents from different vulnerable communities (among those who have a mobile phone and those who got their SIM card) [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC
SC respondent	-0.103				
	(0.46)				

ST respondent	-0.297**				
	(0.03)				
Muslim respondent		-0.062			
		(0.75)			
Female respondent			-0.387***		
			(0.01)		
Respondent has not attended school				-0.279	
				(0.11)	
Respondent above age 60					-0.104
					(0.46)
Constant	0.542***	0.486***	0.617***	0.558***	0.488***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	149	149	149	149	149
R-squared	0.039	0.001	0.136	0.062	0.002
Mean of dependent variable	0.482	0.482	0.482	0.482	0.482

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.9.1 for a description of the hypotheses tested here.

Table 5.9.4 Hypothesis tests of differences in usage of Aadhaar e-KYC in SIM card purchases among respondents from different vulnerable communities (among those who have a mobile phone and those who got their SIM card) [State: West Bengal]

	(1)	(2)	(3)	(4)	(5)
	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC	Used Aadhaar e-KYC
SC respondent	-0.156				
	(0.23)				

ST respondent	0.266*				
	(0.05)				
Muslim respondent		-0.174			
		(0.14)			
Female respondent			-0.349***		
			(0.00)		
Respondent has not attended school				-0.239*	
				(0.06)	
Respondent above age 60					-0.227
					(0.32)
Constant	0.541***	0.619***	0.693***	0.588***	0.538***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	136	145	145	145	144
R-squared	0.043	0.030	0.122	0.041	0.008
Mean of dependent variable	0.547	0.532	0.532	0.532	0.528

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 5.9.1 for a description of the hypotheses tested here.

Table 5.10 Hypothesis tests of differences in likelihood of having mobile SIM activated in 1 day by usage of Aadhaar e-KYC (among those who have a mobile phone and those who got their SIM card)

	(1)	(2)	(3)	(4)
	All three states	Andhra Pradesh	Rajasthan	West Bengal
Used Aadhaar e-KYC	0.133***	0.141	0.143	0.124*
	(0.01)	(0.34)	(0.12)	(0.06)
Constant	0.693***	0.684***	0.713***	0.683***

	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	388	108	140	140
R-squared	0.024	0.027	0.030	0.020
Mean of dependent variable	0.763	0.757	0.786	0.751

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

We test the null hypothesis that there is no difference in the likelihood of having mobile SIM activated in 1 day between respondents who used Aadhaar e-KYC in mobile SIM purchases and other respondents. (We discuss this result on p30 of the State of Aadhaar Report 2017-18.)

SECTION 6: PDS

Table 6.1 Percentage of households with least one ration card

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	1.8	2.8	2.0	0.6
	1.0-3.0	1.3-5.7	0.6-5.9	0.1-2.6
Yes	98.2	97.2	98.0	99.4
	97.0-99.0	94.3-98.7	94.1-99.4	97.4-99.9
Number of observations	2947	1142	965	840
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
In West Bengal, ration cards are administered at an individual level. However, in Andhra Pradesh and Rajasthan ration cards are administered at the household level. For this analysis we aggregate responses at the household level for all states.

Table 6.2.1 Types of ration cards held by households (among households with at least one ration card; numbers in percentage) [State: Andhra Pradesh]

	Andhra Pradesh
Antyodaya (Yellow)	4.3
	2.8-6.3
BPL (Red)	93.3
	91.0-95.0
APL (Blue + White)	1.9
	1.0-3.7
Annapurna	0.6
	0.1-3.3
Number of observations	1110
Number of missing observations (don't know / refused)	1

Notes: 95% confidence intervals are under point estimates.

Table 6.2.2 Types of ration cards held by households (among households with at least one ration card; numbers in percentage) [State: Rajasthan]

	Rajasthan
Antyodaya (Yellow)	4.5
	2.7-7.5
BPL (Red)	18.1

	10.8-28.8
APL (Blue + White)	72.9
	58.6-83.6
Annapurna	0.1
	0.0-1.2
State BPL (Green)	4.4
	2.0-9.4
Number of observations	936
Number of missing observations (don't know / refused)	14

Notes: 95% confidence intervals are under point estimates.

Table 6.2.3 Types of ration cards held by households (among households with at least one ration card; numbers in percentage) [State: West Bengal]

	West Bengal
Antyodaya	4.0
	1.9-8.5
Annapurna	0.2
	0.0-2.4
Special Priority Household (S.P.H.H)	35.9
	31.1-41.1
Priority Household (P.H.H)	33.7
	26.2-42.0
Rajyo Khadyo Suraksha Yojona - I (R.K.S.Y - I)	11.0
	6.4-18.5
Rajyo Khadyo Suraksha Yojona - II (R.K.S.Y - II)	6.8
	3.6-12.4
Old Card (Not Digitised)	8.4
	5.7-12.0
Number of observations	780
Number of missing observations (don't know / refused)	53

Notes: 95% confidence intervals are under point estimates.

Table 6.3 Number of times respondent households tried to collect ration in the last three months (among households with at least one ration card; numbers in percentage)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
0	11.7	1.6	34.9	8.5
	7.0-19.1	0.8-3.5	22.6-49.7	5.5-12.8

1	1.5	0.4	5.2	0.5
	0.7-3.2	0.1-0.9	2.2-11.8	0.2-1.6
2	1.8	1.2	4.8	0.7
	1.1-3.0	0.7-2.3	2.5-9.1	0.4-1.3
3	34.8	56.4	46.2	6.6
	23.4-48.4	43.6-68.4	34.3-58.5	2.1-18.7
4	6.7	12.0	3.6	3.2
	4.6-9.6	9.0-15.9	1.9-6.6	1.4-7.1
>4	43.4	28.3	5.4	80.5
	29.5-58.4	18.9-40.2	2.5-11.1	68.8-88.5
Number of observations	2787	1043	940	804
Number of missing observations (don't know / refused)	107	68	10	29

Notes: 95% confidence intervals are under point estimates.

Table 6.4 Percentage of households that transact at a fair price shop that uses Aadhaar-based biometric authentication (among households with at least one ration card)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	39.2	0.3		100.0
	18.2-65.1	0.0-3.6	-	.-.
Yes	60.8	99.7	100.0	
	34.9-81.8	96.4-100.0	.-.	-
Number of observations	2673	1101	780	792
Number of missing observations (don't know / refused)	181	8	145	28

Notes: 95% confidence intervals are under point estimates.
West Bengal has not adopted the Aadhaar-based system. In the two other states, households use either Aadhaar-based biometric authentication or the Register system. The former uses e-PoS devices for iris and/or fingerprint authentication for service delivery.

Table 6.5 Average time taken to collect ration in the last three months (among households that tried to collect ration; numbers in percentage)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Less than 15 minutes	7.7	14.1	3.9	2.4
	4.8-12.2	9.8-19.8	1.8-8.3	1.2-4.8
16-30 minutes	21.9	28.8	20.5	15.1
	16.6-28.3	24.2-33.8	14.7-27.8	6.5-31.2
31-45 minutes	15.3	16.7	12.7	14.9
	13.4-17.4	13.9-19.8	9.4-16.8	10.7-20.2
45 minutes - 1 hour	24.4	27.2	34.0	17.6
	20.9-28.4	21.2-34.3	27.3-41.4	13.4-22.6
1-3 hours	26.2	12.0	18.0	44.8
	17.6-37.1	8.6-16.5	13.7-23.3	32.1-58.3
More than 3 hours	4.4	1.3	11.0	5.3
	2.7-7.1	0.5-3.2	7.5-15.9	2.6-10.4
Number of observations	2321	1022	572	727
Number of missing observations (don't know / refused)	38	4	26	8

Notes: 95% confidence intervals are under point estimates.
Respondents were asked 'What is the average time taken to collect ration in the last three months? (from the time of leaving from home and coming back)' and were given the options presented above to choose from. The smaller number of observations for Rajasthan is due to a high percentage of households not transacting even once in the last three months. We did not want to collect the data beyond a recall period of three months. Additionally, the questionnaire had an error that was corrected only after one week of surveying in Andhra Pradesh. The category '45 minutes-2 hours' was incorrectly labelled '45 minutes - 1 hour.'

Table 6.6 Average number of attempts required for successful authentication using Aadhaar-based biometric authentication (among households that tried to collect ration and transact at a fair price shop that uses Aadhaar-based biometric authentication; numbers in percentage)

	Both states	Andhra Pradesh	Rajasthan
One	47.1	41.7	62.4
	37.8-56.6	29.4-55.0	56.1-68.4
Two	40.3	44.2	29.3

	34.8-46.0	37.4-51.2	25.7-33.2
Three	10.4	12.3	5.2
	6.4-16.6	6.3-22.5	2.7-9.8
More than three	2.2	1.9	3.0
	1.1-4.3	0.5-6.6	1.6-5.5
Number of observations	1556	1012	544
Number of missing observations (don't know / refused)	52	9	42

Notes: 95% confidence intervals are under point estimates.
West Bengal is not included as they have not adopted the Aadhaar-based system. In the two other states, respondents were asked 'In the last three months, on average, how many times has it taken you (or another member of the household) for successful fingerprint authentication?' and were given the options presented above from which to choose. The smaller number of observations for Rajasthan is due to a high percentage of households not transacting even once in the last three months. We did not want to collect the data beyond a recall period of three months.

Table 6.7 Percentage of households excluded from PDS at least once in the last three months (among households with at least one ration card)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	89.3	97.7	82.2	84.6
	82.6-93.6	95.6-98.8	69.4-90.4	71.5-92.3
Yes	10.7	2.3	17.8	15.4
	6.4-17.4	1.2-4.4	9.6-30.6	7.7-28.5
Number of observations	2648	1026	854	768
Number of missing observations (don't know / refused)	38	0	2	36

Notes: 95% confidence intervals are under point estimates.
We define exclusion in PDS as cases where eligible beneficiary households are denied their food subsidy. In our survey, we asked respondents if they were ever unable to collect ration in the last three months and the reasons behind not collecting ration. We do not count exclusion in cases where the stated reason is not a case of , for instance the household members not being in the village for that particular month and collecting ration in the following month. Additionally, to ensure we capture all cases of exclusion, we count cases where individuals

transacted less than three times in the last three months as denial (for West Bengal we used less than six times since rations are collected twice a month). The questionnaire was designed to capture exclusion for households that tried to transact at least once in the last three months. However, in Rajasthan we saw that a large number of respondents did not transact at all. Therefore we decided to adjust the questionnaire part way through the survey and to conduct follow up phone call surveys to check if these households had been excluded. The smaller number of observations for Rajasthan reflects cases where we were unable to reach the respondent via phone or if there was an error in data collection which equals to eighty four households.

Table 6.8 Average monthly exclusion rate in PDS for the last three months (among households with at least one ration card)

	All three states	Andhra Pradesh (Aug - Dec'17)	Rajasthan (Sep - Dec'17)	West Bengal (Oct - Jan'18)
Monthly exclusion rate	0.049	0.011	0.099	0.062
	[0.026,0.073]	[0.004,0.018]	[0.038,0.160]	[0.023,0.100]
Number of observations	2643	1026	854	763
Number of missing observations (don't know / refused)	43	0	2	41

Notes: 95% confidence intervals are under point estimates.
We estimate the average monthly exclusion rate in three steps: 1) for each respondent household that reported having been excluded from PDS in the last three months, we take the number of times they were excluded during this period to be the number of times they could have claimed ration but did not (i.e. three or six minus the number of times they successfully claimed ration); 2) we calculate the average number of times households were excluded from PDS each month by dividing the previous number by three (or six) for those who were ever excluded during this period, and assign a value of zero to households who were never excluded during this period; 3) we estimate the mean of the variable constructed in the previous step, applying household-level sampling weights. See footnote to Table 6.7 for a description of why there are fewer observations in Rajasthan.

Table 6.9.1 Contribution of Aadhaar and Non Aadhaar-related factors to exclusion in PDS in the last three months (among households with at least one ration card; numbers in percentage) [All three states]

	All three states
Do not know	3.7

	1.4-9.6
Aadhaar related factors	20.3
	13.8-28.8
Non Aadhaar related factors	72.7
	62.8-80.8
Both	3.3
	1.4-7.5
Number of observations	270
Number of missing observations (refused)	0

Notes: 95% confidence intervals are under point estimates.
The observations in the table above are about the three month period leading up to the survey Aadhaar-related reasons include: Aadhaar seeding, Aadhaar authentication failures, non-availability of PoS-able member, and e-PoS connectivity/electricity issues. Non Aadhaar-related reasons include: Non-availability of ration and other reasons such as dealer not being present. Since this is the calculated average for three months, it is possible that a household was excluded in one month due to an Aadhaar-related reason and in another due to a Non Aadhaar-related reason. Such cases are classified as 'Both.' See footnote to Table 6.7 for a description of why there are fewer observations in Rajasthan.

Table 6.9.2 Contribution of Aadhaar and Non Aadhaar-related factors to exclusion in PDS in the last three months (among households with at least one ration card; numbers in percentage) [State: Andhra Pradesh]

	Andhra Pradesh
Do not know	3.7
	0.2-37.9
Aadhaar related factors	70.6
	23.2-95.0
Non Aadhaar related factors	25.7
	4.5-71.5
Number of observations	20
Number of missing observations (refused)	0

Notes: 95% confidence intervals are under point estimates.
See footnote to Table 6.9.1 for definitions of various types of errors.

Table 6.9.3 Contribution of Aadhaar and Non Aadhaar-related factors to exclusion in PDS in the last three months (among households with at least one ration card; numbers in percentage) [State: Rajasthan]

	Rajasthan
Do not know	5.6
	1.8-15.9

Aadhaar related factors	22.3
	13.5-34.7
Non Aadhaar related factors	65.5
	51.3-77.3
Both	6.6
	3.6-12.0
Number of observations	147
Number of missing observations (refused)	0

Notes: 95% confidence intervals are under point estimates.
See footnote to Table 6.9.1 for definitions of various types of errors. See footnote to Table 6.7 for a description of why there are fewer observations in Rajasthan.

Table 6.9.4 Contribution of Aadhaar and Non Aadhaar-related factors to exclusion in PDS in the last three months (among households with at least one ration card; numbers in percentage) [State: West Bengal]

	West Bengal
Do not know	2.5
	0.3-18.6
Aadhaar related factors	12.4
	4.1-31.8
Non Aadhaar related factors	83.6
	71.8-91.1
Both	1.6
	0.2-10.3
Number of observations	103
Number of missing observations (refused)	0

Notes: 95% confidence intervals are under point estimates.
See footnote to Table 6.9.1 for definitions of various types of errors.

Table 6.10.1 Reasons for exclusion from PDS in the last three months (among households that have been excluded; numbers in percentage) [All three states]

	No ration available	Aadhaar seeding	Aadhaar authentication failures	Connectivity/ electricity issues	No PoS-able member available	Other	Don't know
No	36.3	88.5	92.4	95.8	97.2	89.6	96.5
	25.9-48.2	80.1-93.6	84.2-96.6	88.9-98.5	91.8-99.1	82.2-94.1	90.9-98.7
Yes	63.7	11.5	7.6	4.2	2.8	10.4	3.5

	51.8-74.1	6.4-19.9	3.4-15.8	1.5-11.1	0.9-8.2	5.9-17.8	1.3-9.1
Number of observations	284	284	284	284	284	284	284
Number of missing observations (don't know / refused)	0	0	0	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
The observations in the table above are about the three month period leading up to the survey.

Table 6.10.2 Reasons for exclusion from PDS in the last three months (among households that have been excluded; numbers in percentage) [State: Andhra Pradesh]

	No ration available	Aadhaar seeding	Aadhaar authentication failures	Connectivity/ electricity issues	No PoS-able member available	Other	Don't know
No	94.2	88.0	66.4	89.0	86.4	85.0	97.0
	47.9-99.7	45.8-98.4	37.0-87.0	61.6-97.6	70.6-94.4	48.6-97.1	65.0-99.8
Yes	5.8	12.0	33.6	11.0	13.6	15.0	3.0
	0.3-52.1	1.6-54.2	13.0-63.0	2.4-38.4	5.6-29.4	2.9-51.4	0.2-35.0
Number of observations	25	25	25	25	25	25	25

Number of missing observations (don't know / refused)	0	0	0	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
The observations in the table above are about the three month period leading up to the survey.

Table 6.10.3 Reasons for exclusion from PDS in the last three months (among households that have been excluded; numbers in percentage) [State: Rajasthan]

	No ration available	Aadhaar seeding	Aadhaar authentication failures	Connectivity/ electricity issues	No PoS-able member available	Other	Don't know
No	34.1	90.3	88.2	90.9	95.5	94.1	94.5
	20.1-51.6	80.6-95.4	81.7-92.6	80.1-96.1	82.0-99.0	82.4-98.2	84.5-98.2
Yes	65.9	9.7	11.8	9.1	4.5	5.9	5.5
	48.4-79.9	4.6-19.4	7.4-18.3	3.9-19.9	1.0-18.0	1.8-17.6	1.8-15.5
Number of observations	151	151	151	151	151	151	151
Number of missing observations (don't know / refused)	0	0	0	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
The observations in the table above are about the three month period leading up to the survey.

Table 6.10.4 Reasons for exclusion from PDS in the last three months (among households that have been excluded; numbers in percentage) [State: West Bengal]

	No ration available	Aadhaar seeding	Aadhaar authentication failures	Connectivity/ electricity issues	No PoS-able member available	Other	Don't know
No	28.7	87.4	99.2	100.0	100.0	87.4	97.6
	16.3-45.5	69.2-95.5	90.7-99.9	.-.	.-.	70.6-95.3	82.4-99.7
Yes	71.3	12.6	0.8			12.6	2.4
	54.5-83.7	4.5-30.8	0.1-9.3	-	-	4.7-29.4	0.3-17.6
Number of observations	108	108	108	108	108	108	108
Number of missing observations (don't know / refused)	0	0	0	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
The observations in the table above are about the three month period leading up to the survey.

Table 6.11 Whether respondent thinks the Aadhaar-enabled PDS system is better or worse than the previous system (among those who have used the Aadhaar-based system; numbers in percentage)

	Both states	Andhra Pradesh	Rajasthan
Better	58.5	55.3	67.4
	53.8-63.2	49.4-61.1	60.1-73.9
Same as before	8.8	8.2	10.4
	6.9-11.1	5.6-11.9	7.5-14.2
Worse	32.7	36.5	22.2
	27.7-38.1	30.3-43.2	17.5-27.8

Number of observations	1691	1082	609
Number of missing observations (don't know / refused)	46	16	30

Notes: 95% confidence intervals are under point estimates.
West Bengal has not adopted the Aadhaar-based system. The smaller number of observations for Rajasthan reflects cases where individuals said that their fair price shop uses the Aadhaar-based system but they had not transacted at the shop.
Respondents were asked 'Comparing the system with which you receive your rations now using Aadhaar vs. the system with how you received it before without Aadhaar, what is your opinion about the new system?' and were given the following options to choose from: 'Better', 'Same' and 'Worse' to choose from.

Table 6.12.1 Reasons for thinking the Aadhaar enabled PDS system is better (among respondents who think it is better; numbers in percentage) [States: Andhra Pradesh and Rajasthan]

	No one else can take our ration now (shop keeper etc. cannot keep it)	We get our ration now (didn't get it before)	We always get ration now (irregular before)	We get the complete quota of ration	We have to do less visits per month to get ration	We have to spend less time at the PDS shop to get ration	We face less technical issues (machine, electricity, internet, finger print failures etc.)	We face less non-technical issues	We pay the stipulated amount for ration now
No	2.3	87.5	82.3	75.4	81.0	84.1	90.1	95.4	86.6
	1.2-4.2	82.7-91.1	77.5-86.3	67.0-82.3	72.0-87.6	78.9-88.2	82.1-94.7	92.7-97.2	79.0-91.7
Yes	97.7	12.5	17.7	24.6	19.0	15.9	9.9	4.6	13.4
	95.8-98.8	8.9-17.3	13.7-22.5	17.7-33.0	12.4-28.0	11.8-21.1	5.3-17.9	2.8-7.3	8.3-21.0

Number of observations	889	889	889	889	889	889	889	889	889
Number of missing observations (don't know / refused)	0	0	0	0	0	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
West Bengal has not adopted the Aadhaar-based system. The smaller number of observations for Rajasthan reflects cases where individuals said that their fair price shop uses the Aadhaar-based system but had not transacted at the shop.

Table 6.12.2 Reasons for thinking the Aadhaar enabled PDS system is better (among respondents who think it is better; numbers in percentage) [State: Andhra Pradesh]

	No one else can take our ration now (shop keeper etc. cannot keep it)	We get our ration now (didn't get it before)	We always get ration now (irregular before)	We get the complete quota of ration	We have to do less visits per month to get ration	We have to spend less time at the PDS shop to get ration	We face less technical issues (machine, electricity, internet, finger print failures etc.)	We face less non-technical issues	We pay the stipulated amount for ration now
No	2.1	83.7	78.1	66.2	73.3	80.6	86.3	93.0	78.9

	1.1-4.1	77.8-88.2	72.9-82.5	60.7-71.4	62.3-82.1	71.8-87.1	71.6-94.0	90.8-94.7	77.2-80.5
Yes	97.9	16.3	21.9	33.8	26.7	19.4	13.7	7.0	21.1
	95.9-98.9	11.8-22.2	17.5-27.1	28.6-39.3	17.9-37.7	12.9-28.2	6.0-28.4	5.3-9.2	19.5-22.8
Number of observations	483	483	483	483	483	483	483	483	483
Number of missing observations (don't know / refused)	0	0	0	0	0	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
This question was not part of our original survey in Andhra Pradesh and was only added after we had completed half of our survey. We conducted a phone survey on this question to the first half of respondents in Andhra Pradesh. The smaller number of observations reflects cases where we were unable to reach the respondent via phone whcih equals to one hundred and eighteen households.

Table 6.12.3 Reasons for thinking the Aadhaar enabled PDS system is better (among respondents who think it is better; numbers in percentage) [State: Rajasthan]

	No one else can take our ration now (shop keeper etc. cannot keep it)	We get our ration now (didn't get it before)	We always get ration now (irregular before)	We get the complete quota of ration	We have to do less visits per month to get ration	We have to spend less time at the PDS shop to get ration	We face less technical issues (machine, electricity, internet, finger print failures etc.)	We face less non-technical issues	est9
No	2.6	94.2	89.7	91.6	94.5	90.3	96.6	99.7	100.0
	0.6-10.5	86.8-97.6	85.0-93.1	87.5-94.4	91.4-96.5	88.0-92.2	92.1-98.6	98.0-99.9	.-.
Yes	97.4	5.8	10.3	8.4	5.5	9.7	3.4	0.3	
	89.5-99.4	2.4-13.2	6.9-15.0	5.6-12.5	3.5-8.6	7.8-12.0	1.4-7.9	0.1-2.0	-
Number of observations	406	406	406	406	406	406	406	406	406
Number of missing observations (don't know / refused)	0	0	0	0	0	0	0	0	0

Note: 95% confidence intervals are under point estimates.

Table 6.13.1 Reasons for thinking the Aadhaar enabled PDS system is worse (among respondents who think it is worse; numbers in percentage) [State:

Andhra Pradesh and Rajasthan]

	No one else can take our ration now (shopkeeper etc. cannot keep it)	We get our ration now (didn't get it before)	We always get ration now (irregular before)	We get the complete quota of ration	We have to do less visits per month to get ration	We have to spend less time at the PDS shop to get ration	We face less technical issues (machine, electricity, internet, fingerprint failures etc.)	We face less non-technical issues	We pay the stipulated amount for ration now
No	23.5	96.9	91.0	97.4	71.0	56.9	29.7	90.9	99.5
	15.2-34.5	92.9-98.6	87.4-93.6	94.2-98.8	57.3-81.7	44.7-68.3	21.0-40.2	87.5-93.4	98.4-99.8
Yes	76.5	3.1	9.0	2.6	29.0	43.1	70.3	9.1	0.5
	65.5-84.8	1.4-7.1	6.4-12.6	1.2-5.8	18.3-42.7	31.7-55.3	59.8-79.0	6.6-12.5	0.2-1.6
Number of observations	459	459	459	459	459	459	459	459	459
Number of missing observations (don't know / refused)	0	0	0	0	0	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
West Bengal has not adopted the Aadhaar-based system. The smaller number of observations for Rajasthan reflects cases where individuals said that their fair

price shop uses the Aadhaar-based system but had not transacted at the shop.

Table 6.13.2 Reasons for thinking the Aadhaar enabled PDS system is worse (among respondents who think it is worse; numbers in percentage) [State: Andhra Pradesh]

	No one else can take our ration now (cannot send our children/ siblings etc. to fetch our ration)	We don't get ration any more	We don't get ration some times	We get less than the right ration quota	We have to do more visits per month to get ration	We have to spend more time at the PDS shop to get ration	We face more technical issues	We face more non-technical issues	We pay more than the stipulated amount for ration now (or pay more money now)
No	22.6	98.4	92.0	97.3	69.8	49.6	25.5	92.2	99.3
	11.5-39.6	96.6-99.3	87.3-95.0	92.3-99.1	47.5-85.5	34.3-65.1	13.7-42.6	87.8-95.1	97.5-99.8
Yes	77.4	1.6	8.0	2.7	30.2	50.4	74.5	7.8	0.7
	60.4-88.5	0.7-3.4	5.0-12.7	0.9-7.7	14.5-52.5	34.9-65.7	57.4-86.3	4.9-12.2	0.2-2.5
Number of observations	325	325	325	325	325	325	325	325	325

Number of missing observations (don't know / refused)	0	0	0	0	0	0	0	0	0

Notes: 95% confidence intervals are under point estimates.
This question was not part of our original survey in Andhra Pradesh and was only added after we had completed half of our survey. We conducted a phone survey on this question to the first half of respondents in Andhra Pradesh. The smaller number of observations reflects cases where we were unable to reach the respondent via phone which equals to 68 households.

Table 6.13.3 Reasons for thinking the Aadhaar enabled PDS system is worse (among respondents who think it is worse; numbers in percentage) [State: Rajasthan]

	No one else can take our ration now (cannot send our children/ siblings etc. to fetch our ration)	We don't get ration any more	We don't get ration some times	We get less than the right ration quota	We have to do more visits per month to get ration	We have to spend more time at the PDS shop to get ration	We face more technical issues	We face more non-technical issues	We pay more than the stipulated amount for ration now (or pay more money now)
No	27.0	91.1	87.4	97.7	75.3	83.5	45.1	86.0	100.0

	13.2-47.3	76.1-97.0	73.2-94.6	78.7-99.8	61.4-85.4	78.1-87.7	33.6-57.0	76.3-92.2	.-.
Yes	73.0	8.9	12.6	2.3	24.7	16.5	54.9	14.0	
	52.7-86.8	3.0-23.9	5.4-26.8	0.2-21.3	14.6-38.6	12.3-21.9	43.0-66.4	7.8-23.7	-
Number of observations	134	134	134	134	134	134	134	134	134
Number of missing observations (don't know / refused)	0	0	0	0	0	0	0	0	0

Note: 95% confidence intervals are under point estimates.

Table 6.14.1 Hypothesis tests of differences in number of attempts required for successful authentication among households from different vulnerable communities [States: Andhra Pradesh and Rajasthan])

	(1)	(2)	(3)	(4)
	Number of authentication attempts	Number of authentication attempts	Number of authentication attempts	Number of authentication attempts
SC household	0.012			
	(0.82)			
ST household	-0.040			
	(0.73)			
Muslim household		-0.108		
		(0.26)		
Households with majority female adults			0.052	
			(0.17)	

No household member has gone to school				0.217*
				(0.05)
Constant	1.683***	1.686***	1.639***	1.646***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1534	1556	1555	1556
R-squared	0.000	0.001	0.001	0.011
Mean of dependent variable	1.683	1.678	1.679	1.678

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
West Bengal has not adopted the Aadhaar-based system. We test the null hypotheses that there are no differences in the number of times needed to successfully authenticate between vulnerable households and other households, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each household type above has a different average number of attempts needed compared to all other households (i.e. all those not in the specified type).

Table 6.14.2 Hypothesis tests of differences in number of attempts required for successful authentication among households from different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)
	Number of authentication attempts	Number of authentication attempts	Number of authentication attempts	Number of authentication attempts
SC household	0.023			
	(0.71)			
ST household	0.171**			
	(0.01)			
Muslim household		-0.091		
		(0.53)		
Households with majority female adults			0.020	

			(0.68)	
No household member has gone to school				0.145
				(0.24)
Constant	1.733***	1.750***	1.728***	1.719***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1003	1012	1012	1012
R-squared	0.002	0.001	0.000	0.005
Mean of dependent variable	1.745	1.744	1.744	1.744

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 6.14.1 for a description of the hypotheses tested here.

Table 6.14.3 Hypothesis tests of differences in number of attempts required for successful authentication among households from different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)
	Number of authentication attempts	Number of authentication attempts	Number of authentication attempts	Number of authentication attempts
SC household	0.024			
	(0.80)			
ST household	-0.034			
	(0.69)			
Muslim household		-0.243**		
		(0.01)		
Households with majority female adults			0.100**	
			(0.04)	
No household member has gone to school				0.402*
				(0.05)

Constant	1.503***	1.508***	1.422***	1.457***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	531	544	543	544
R-squared	0.001	0.005	0.003	0.024
Mean of dependent variable	1.503	1.495	1.496	1.495

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 6.14.1 for a description of the hypotheses tested here.

Table 6.15.1 Hypothesis tests of differences in monthly exclusion rate among households from different vulnerable communities [All three states]

	(1)	(2)	(3)	(4)
	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS
SC household	-0.004			
	(0.58)			
ST household	0.034			
	(0.26)			
Muslim household		0.036**		
		(0.02)		
Households with majority female adults			0.007	
			(0.28)	
No household member has gone to school				0.017
				(0.31)
Constant	0.045***	0.042***	0.044***	0.048***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	2534	2641	2642	2643
R-squared	0.004	0.008	0.000	0.001

Mean of dependent variable	0.047	0.049	0.049	0.049

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
We test the null hypotheses that there are no differences in the monthly exclusion rates between vulnerable households and other households, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we separately examine whether each household type above has a different monthly exclusion rate compared to all other households (i.e. all those not in the specified type).

Table 6.15.2 Hypothesis tests of differences in monthly exclusion rate among households from different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)
	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS
SC household	-0.002			
	(0.73)			
ST household	-0.012**			
	(0.01)			
Muslim household		-0.001		
		(0.80)		
Households with majority female adults			-0.001	
			(0.71)	
No household member has gone to school				0.002
				(0.78)
Constant	0.012**	0.011***	0.012*	0.011**
	(0.01)	(0.01)	(0.06)	(0.02)
Number of observations	1017	1026	1026	1026
R-squared	0.001	0.000	0.000	0.000

Mean of dependent variable	0.011	0.011	0.011	0.011

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 6.15.1 for a description of the hypotheses tested here.

Table 6.15.3 Hypothesis tests of differences in monthly exclusion rate among households from different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)
	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS
SC household	0.013			
	(0.68)			
ST household	0.070			
	(0.19)			
Muslim household		0.042		
		(0.18)		
Households with majority female adults			0.007	
			(0.66)	
No household member has gone to school				0.110
				(0.11)
Constant	0.082***	0.096***	0.094***	0.090***
	(0.01)	(0.01)	(0.01)	(0.01)
Number of observations	834	854	853	854
R-squared	0.011	0.002	0.000	0.016
Mean of dependent variable	0.096	0.099	0.099	0.099

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 6.15.1 for a description of the hypotheses tested here.

Table 6.15.4 Hypothesis tests of differences in monthly exclusion rate among households from different vulnerable communities [State: West Bengal]

	(1)	(2)	(3)	(4)
	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS	Monthly exclusion rate in PDS
SC household	-0.025**			
	(0.02)			
ST household	-0.028			
	(0.31)			
Muslim household		0.043**		
		(0.01)		
Households with majority female adults			0.020	
			(0.13)	
No household member has gone to school				0.042
				(0.11)
Constant	0.068***	0.043***	0.046***	0.058***
	(0.01)	(0.01)	(0.01)	(0.01)
Number of observations	683	761	763	763
R-squared	0.005	0.015	0.003	0.004
Mean of dependent variable	0.058	0.061	0.062	0.062

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 6.15.1 for a description of the hypotheses tested here.

Table 6.16.1 Hypothesis tests of differences in respondents' view on the Aadhaar enabled PDS system relative to the previous system among respondents from different vulnerable communities [States: Andhra Pradesh and Rajasthan]

	(1)	(2)	(3)	(4)	(5)

	View of new system compared to old	View of new system compared to old	View of new system compared to old	View of new system compared to old	View of new system compared to old
SC respondent	-0.007				
	(0.90)				
ST respondent	0.019				
	(0.77)				
Muslim respondent		0.124			
		(0.17)			
Female respondent			-0.040		
			(0.55)		
Respondent has not attended school				-0.188***	
				(0.01)	
Respondent above age 60					-0.119
					(0.12)
Constant	2.305***	2.301***	2.330***	2.396***	2.328***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1667	1691	1690	1691	1687
R-squared	0.000	0.001	0.000	0.011	0.002
Mean of dependent variable	2.306	2.309	2.309	2.309	2.309

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and 10%. No correction for multiple hypothesis testing has been applied to the results in the table.

West Bengal has not adopted the Aadhaar-based system. We test the null hypotheses that there are no differences in the view on the new system compared to the old system between vulnerable respondents and other respondents, with vulnerability being proxied by each of the categories above. Each column presents coefficients from a regression of the outcome variable on a dummy variable for the corresponding category and a constant. Hence we

separately examine whether each respondent type above has a different view on the new system compared to the old system compared to all other households (i.e. all those not in the specified type).

Table 6.16.2 Hypothesis tests of differences in respondents' view on the Aadhaar enabled PDS system relative to the old one among respondents from different vulnerable communities [State: Andhra Pradesh]

	(1)	(2)	(3)	(4)	(5)
	View of new system compared to old	View of new system compared to old	View of new system compared to old	View of new system compared to old	View of new system compared to old
SC respondent	-0.058				
	(0.47)				
ST respondent	0.057				
	(0.57)				
Muslim respondent		0.217*			
		(0.10)			
Female respondent			-0.011		
			(0.91)		
Respondent has not attended school				-0.177	
				(0.11)	
Respondent above age 60					-0.080
					(0.44)
Constant	2.219***	2.192***	2.214***	2.288***	2.221***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	1073	1082	1081	1082	1078
R-squared	0.001	0.004	0.000	0.009	0.001
Mean of dependent variable	2.207	2.208	2.208	2.208	2.208

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and

10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 6.16.1 for a description of the hypotheses tested here.

Table 6.16.3 Hypothesis tests of differences in respondents' view on the Aadhaar enabled PDS system relative to the old one among respondents from different vulnerable communities [State: Rajasthan]

	(1)	(2)	(3)	(4)	(5)
	View of new system compared to old	View of new system compared to old	View of new system compared to old	View of new system compared to old	View of new system compared to old
SC respondent	0.072				
	(0.40)				
ST respondent	-0.133*				
	(0.08)				
Muslim respondent		-0.008			
		(0.96)			
Female respondent			-0.066		
			(0.44)		
Respondent has not attended school				-0.225***	
				(0.00)	
Respondent above age 60					-0.163
					(0.20)
Constant	2.473***	2.469***	2.502***	2.577***	2.494***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	594	609	609	609	609
R-squared	0.006	0.000	0.002	0.019	0.005
Mean of dependent variable	2.465	2.469	2.469	2.469	2.469

Notes: p-values in parentheses, with ***, **, * indicating significance at 1, 5 and

10%. No correction for multiple hypothesis testing has been applied to the results in the table.
See footnote to Table 6.16.1 for a description of the hypotheses tested here.

SECTION 7: USER ATTITUDES

Table 7.1 Percentage of respondents who believe it is important to know how a government agency would use personal information (e.g., name, age, address) shared by the respondent

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Important	96.5	98.6	96.0	95.1
	95.1-97.5	97.3-99.3	91.8-98.0	92.5-96.8
Neutral	2.2	1.1	3.0	2.4
	1.5-3.1	0.5-2.3	1.7-5.3	1.1-5.2
Not Important	1.3	0.3	1.0	2.5
	0.8-2.2	0.0-1.6	0.2-4.9	1.7-3.6
Number of observations	2910	1135	939	836
Number of missing observations (don't know / refused)	37	7	26	4

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'When you share your personal information (e.g., your name, age, address) with a government agency, how important is it to you to know how they will use it?' and were given the following options to choose from:'Important', 'Neutral' and 'Not Important'.

Table 7.2 Percentage of respondents who believe it is important to know how a private company would use personal information (e.g. name, age, address) shared by the respondent

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Important	95.7	98.1	97.3	92.4
	93.9-97.0	95.1-99.3	95.6-98.4	89.8-94.3
Neutral	2.4	1.7	2.2	3.2
	1.7-3.4	0.6-5.0	1.3-3.7	1.9-5.5
Not Important	1.8	0.1	0.5	4.4
	1.0-3.3	0.0-0.4	0.2-1.8	2.9-6.6
Number of observations	2906	1134	938	834
Number of missing observations (don't know / refused)	41	8	27	6

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'When you share your personal information (e.g., your name, age, address) with a private company, how important is it to you to know how they will use it?' and were given the following options to choose from:'Important', 'Neutral' and 'Not Important'.

Table 7.3 Percentage of respondents who believe it is important to know how a government agency would use biometric information shared by the respondent

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Important	96.5	96.7	98.3	94.9
	95.3-97.4	93.7-98.3	95.6-99.4	93.2-96.1
Neutral	2.2	2.3	1.1	2.9
	1.5-3.1	1.1-4.9	0.5-2.3	1.6-5.4
Not Important	1.3	1.0	0.6	2.2
	0.8-2.1	0.3-3.3	0.1-2.7	1.3-3.7
Number of observations	2898	1137	932	829
Number of missing observations (don't know / refused)	49	5	33	11

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'When you share your biometric information with a government agency, how important is it to you to know how they will use it?' and were given the following options to choose from:'Important', 'Neutral' and 'Not Important'.

Table 7.4 Percentage of respondents who believe it is important to know how a private company would use biometric information shared by the respondent

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Important	95.9	97.4	98.9	92.1
	94.0-97.2	95.3-98.5	98.0-99.4	89.2-94.2
Neutral	1.8	1.6	1.0	2.8
	1.3-2.6	0.9-3.0	0.5-1.9	1.5-5.1
Not Important	2.3	1.0	0.1	5.2
	1.2-4.2	0.4-2.7	0.0-0.9	2.9-9.1
Number of observations	2894	1135	931	828

Number of missing observations (don't know / refused)	53	7	34	12

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'When you share your biometric information with a private company, how important is it to you to know how they will use it?' and were given the following options to choose from:'Important', 'Neutral' and 'Not Important'.

Table 7.5 Percentage of respondents who believe it is important to know how a government agency would use their Aadhaar number (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Important	97.0	96.9	98.1	96.1
	95.8-97.8	91.7-98.9	96.5-98.9	94.2-97.4
Neutral	2.0	2.5	1.3	2.1
	1.3-3.0	0.8-7.4	0.8-2.2	1.3-3.4
Not Important	1.0	0.6	0.6	1.7
	0.6-1.6	0.2-1.5	0.2-2.2	1.0-3.1
Number of observations	2873	1129	924	820
Number of missing observations (don't know / refused)	47	13	28	6

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'When you share your Aadhaar number with a government agency, how important is it to you to know how they will use it?' and were given the following options to choose from:'Important', 'Neutral' and 'Not Important'.

Table 7.6 Percentage of respondents who believe it is important to know how a private company would use their Aadhaar number (among those who have an Aadhaar)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Important	96.2	97.3	99.2	92.7
	94.5-97.4	96.2-98.1	98.7-99.5	90.0-94.7
Neutral	2.1	2.4	0.7	3.0
	1.5-3.0	1.7-3.3	0.4-1.4	1.5-5.9

Not Important	1.7	0.3	0.1	4.3
	0.9-3.2	0.1-0.8	0.0-0.9	2.8-6.5
Number of observations	2874	1130	924	820
Number of missing observations (don't know / refused)	46	12	28	6

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'When you share your Aadhaar number with a private company, how important is it to you to know how they will use it?' and were given the following options to choose from:'Important', 'Neutral' and 'Not Important'.

Table 7.7 Percentage of respondents who approve of making Aadhaar mandatory for accessing government benefits

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Approve	86.5	89.7	88.6	81.8
	83.3-89.2	85.0-93.0	83.7-92.2	74.9-87.1
Neutral	6.5	4.3	3.3	11.1
	4.5-9.3	2.9-6.2	2.4-4.6	6.9-17.4
Disapprove	7.0	6.0	8.0	7.1
	5.6-8.8	3.5-10.2	4.8-13.2	4.7-10.5
Number of observations	2909	1136	945	828
Number of missing observations (don't know / refused)	38	6	20	12

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'It is currently mandatory to have Aadhaar to access many government benefits, e.g. NREGA, PDS, pensions, mid-day meals. Do you approve or disapprove the government's decision to make Aadhaar mandatory to access government benefits?' The following options were read out loud: 'Approve', 'Neutral' and 'Disapprove'.

Table 7.8 Percentage of respondents who approve of making Aadhaar mandatory for accessing services of private companies

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Approve	76.9	77.7	87.3	67.5
	72.0-81.1	72.9-81.9	83.9-90.0	59.7-74.5

Neutral	10.1	10.1	4.9	14.3
	7.5-13.4	7.1-14.2	3.8-6.4	8.6-23.0
Disapprove	13.0	12.2	7.8	18.1
	10.6-15.9	8.7-16.7	5.4-11.1	14.3-22.7
Number of observations	2861	1103	935	823
Number of missing observations (don't know / refused)	86	39	30	17

Notes: 95% confidence intervals are under point estimates.
Respondents were asked: 'Many companies are notifying their customers to link their Aadhaar card to their services, e.g. mobile phone companies, banks. Do you approve or disapprove the companies requiring you to link your Aadhaar to their services?' The following options were read out loud: 'Approve', 'Neutral' and 'Disapprove'.

Table 7.9 Percentage of respondents who are aware of their option to lock or unlock biometric authentication of their Aadhaar

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	96.9	98.0	96.6	96.1
	95.7-97.8	96.1-99.0	94.0-98.1	92.9-97.9
Yes	3.1	2.0	3.4	3.9
	2.2-4.3	1.0-3.9	1.9-6.0	2.1-7.1
Number of observations	2939	1142	961	836
Number of missing observations (don't know / refused)	8	0	4	4

Notes: 95% confidence intervals are under point estimates.

Table 7.10 Percentage of respondents who have locked or unlocked their Aadhaar biometric authentication (among those who have an Aadhaar and are aware of this option)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	84.2	80.5	90.4	81.4
	63.9-94.1	56.0-93.1	56.3-98.6	28.6-98.0
Yes	15.8	19.5	9.6	18.6
	5.9-36.1	6.9-44.0	1.4-43.7	2.0-71.4

Number of observations	70	19	27	24
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.

SECTION 8: NREGA

Table 8.1 Number of NREGA job cards held by household (among all households surveyed)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
0	32.3	37.7	27.3	31.7
	27.0-38.2	24.4-53.1	19.7-36.6	21.6-43.9
1	58.5	53.4	60.7	61.1
	53.1-63.6	43.3-63.2	52.0-68.8	47.9-72.9
Greater than 1	9.2	8.9	11.9	7.2
	7.2-11.7	4.9-15.5	8.4-16.7	4.0-12.5
Number of observations	2935	1140	960	835
Number of missing observations (don't know / refused)	12	2	5	5

Notes: 95% confidence intervals are under point estimates.

Table 8.2 Percentage of respondents whose Aadhaar is seeded with their NREGA job card (among those who have a job card)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	27.0	16.5	28.3	35.1
	20.7-34.3	8.4-29.9	23.7-33.5	23.8-48.4
Yes	73.0	83.5	71.7	64.9
	65.7-79.3	70.1-91.6	66.5-76.3	51.6-76.2
Number of observations	1379	524	433	422
Number of missing observations (don't know / refused)	329	80	180	69

Notes: 95% confidence intervals are under point estimates.

Table 8.3 Percentage of respondents who were able to work when they were interested (among those who had a job card and were interested in working)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	54.3	20.3	47.5	82.3

	38.4-69.4	10.0-37.0	29.8-66.0	72.1-89.3
Yes	45.7	79.7	52.5	17.7
	30.6-61.6	63.0-90.0	34.0-70.2	10.7-27.9
Number of observations	1190	413	374	403
Number of missing observations (don't know / refused)	4	0	1	3

Notes: 95% confidence intervals are under point estimates.

Table 8.4 Percentage of respondents who received their wages directly in their bank account (among those who had worked in the last nine months)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	9.8	17.4	2.3	6.7
	6.0-15.6	13.4-22.3	0.8-6.2	2.1-19.4
Yes	90.2	82.6	97.7	93.3
	84.4-94.0	77.7-86.6	93.8-99.2	80.6-97.9
Number of observations	731	335	214	182
Number of missing observations (don't know / refused)	2	1	1	0

Notes: 95% confidence intervals are under point estimates.

Table 8.5 Perceived ease of the process for receiving wages directly in one's bank account (among those who receive wages directly in their bank accounts)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
Easy	84.1	74.5	94.7	85.2
	78.7-88.3	68.1-80.1	91.2-96.9	78.1-90.3
Neutral	8.8	13.3	3.2	8.7
	6.4-12.0	9.2-19.1	1.5-6.6	5.7-13.1
Difficult	7.1	12.1	2.1	6.1
	4.9-10.4	7.7-18.7	0.5-8.5	3.6-10.2
Number of observations	649	275	208	166

Number of missing observations (don't know / refused)	2	0	0	2

Notes: 95% confidence intervals are under point estimates.

Table 8.6 Percentage of respondents who failed to receive wages for their work (among those who had worked in the last nine months)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	81.6	76.1	86.1	84.8
	75.9-86.2	62.8-85.7	77.1-92.0	69.0-93.3
Yes	18.4	23.9	13.9	15.2
	13.8-24.1	14.3-37.2	8.0-22.9	6.7-31.0
Number of observations	729	333	214	182
Number of missing observations (don't know / refused)	4	3	1	0

Notes: 95% confidence intervals are under point estimates.

Table 8.7 Percentage of respondents whose wage was delayed by more than 15 days (among those who had worked in the last nine months)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	25.4	24.2	48.7	8.5
	18.4-34.0	15.9-35.1	36.2-61.3	4.1-16.8
Yes	74.6	75.8	51.3	91.5
	66.0-81.6	64.9-84.1	38.7-63.8	83.2-95.9
Number of observations	717	332	203	182
Number of missing observations (don't know / refused)	16	4	12	0

Notes: 95% confidence intervals are under point estimates.

Table 8.8 Percentage of respondents whose name was removed from the NREGA list due to Aadhaar seeding (among those who had worked at least once in the last nine months)

	All three states	Andhra Pradesh	Rajasthan	West Bengal
No	97.9	97.4	97.9	98.5
	95.9-98.9	93.0-99.1	90.8-99.5	89.0-99.8
Yes	2.1	2.6	2.1	1.5
	1.1-4.1	0.9-7.0	0.5-9.2	0.2-11.0
Number of observations	732	335	215	182
Number of missing observations (don't know / refused)	0	0	0	0

Notes: 95% confidence intervals are under point estimates.

Table 8.9 Percentage of respondents who used a microATM to withdraw their NREGA wages in Andhra Pradesh in the last nine months (among those who had worked at least once in the last nine months)

	Andhra Pradesh
No	49.0
	39.2-58.9
Yes	51.0
	41.1-60.8
Number of observations	336
Number of missing observations (don't know / refused)	0

Notes: 95% confidence intervals are under point estimates.

Table 8.10 Percentage of respondents who were unable to withdraw their NREGA wages in Andhra Pradesh (among those who used a microATM to withdraw their NREGA wages)

	Andhra Pradesh
No	97.5
	96.1-98.4
Yes	2.5
	1.6-3.9
Number of observations	174
Number of missing observations (don't know / refused)	0

Notes: 95% confidence intervals are under point estimates.
This question was asked to respondents in Andhra Pradesh only. In our survey, we asked respondents if they were unable to withdraw their wages in cash from a microATM. If they were unable to do so, we asked a follow up question on the alternative mechanisms that they used. 'Unable to withdraw wages' in this case

includes only those respondents who were unable to withdraw via any medium (microATM or otherwise).

Technical Appendix: Version tracker

Version No.	Date	Changes
v1	24 May 2018	Original draft
v2	06 June 2018	● Added section entitled: *Sample and population characteristics* (previously marked as forthcoming) ● Added section entitled: *Analysis output tables* (previously marked as forthcoming) ● Fixed minor typographic errors
v3	14 September 2018	● Added section 8 entitled *NREGA* in the analysis output tables
v4	25 September 2018	● Additional analysis for *NREGA* included in the output tables