95% of adults have Aadhaar

92% of people are satisfied with Aadhaar

90% of people trust that their data are safe in the Aadhaar system

77% of Aadhaar holders have never used features such as mAadhaar, QR code, virtual Aadhaar or masked Aadhaar

90% of people incorrectly believe that providing Aadhaar is mandated by law for bank accounts

67% of people who have been excluded from a service because of Aadhaar are still satisfied with it

80% of recipients feel Aadhaar has made PDS rations, MGNREGS, or social pensions more reliable

33% of people who tried to update their Aadhaar details said the process was difficult

49% of residents used Aadhaar to access one or more services for the very first time

4% of Aadhaar holders have an error on their card

Findings from a pulse survey with 147,868 households across 28 Indian states and union territories, and an in-depth survey with 19,209 households in 16 states, and 1 union territory.
This report was written by Dalberg and funded by Omidyar Network India.

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For more information, comments or questions, please write to us at info@stateofaadhaar.in. We welcome your feedback.

Suggested Citation

Swetha Totapally, Petra Sonderegger, Priti Rao, Jasper Gosselt, Gaurav Gupta

Dalberg is a leading social impact advisory group that brings together - strategy consulting, design thinking, big data analytics, and research to address complex social and environmental challenges. We work collaboratively with communities, institutions, governments, and corporations to develop solutions that create impact at scale.

www.dalberg.com

Omidyar Network India invests in bold entrepreneurs who help create a meaningful life for every Indian, especially the hundreds of millions of Indians in low-income and lower-middle-income populations, ranging from the poorest among us to the existing middle class. To drive empowerment and social impact at scale, we work with entrepreneurs in the private, non-profit and public sectors who are tackling India’s hardest and most chronic problems. We make equity investments in early-stage enterprises and provide grants to non-profits in the areas of Digital Identity, Education, Emerging Tech, Financial Inclusion, Governance & Citizen Engagement, and Property Rights. Omidyar Network India is part of The Omidyar Group, a diverse collection of companies, organizations and initiatives, supported by philanthropists Pam and Pierre Omidyar, founder of eBay.

www.omidyarnetwork.in
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Rahul Matthan
Partner and Head of the TMT practice with Trilgal

Ananth Padmanabhan
Dean Academic Affairs, Sai University; Visiting Fellow, Centre for Policy Research

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In preparation for this study, we consulted more than 30 experts and spoke with over 50 residents in 7 locations. We thank them for sharing their experiences to inform a holistic understanding of Aadhaar, offering views on what would make this report valuable to readers, reviewing initial versions of the questionnaire, helping us think through key analyses and supporting us with access to colleagues, research and field locations.

Residents of Jawhar, Shirshadi and Khured (Maharashtra), and Ranchi, Manika, Lahetar, and Rewat Khurd (Jharkhand)

The making of the State of Aadhaar report 2019

ADVISORY PANEL
Advised on research questions
Advised on framing
Reviewed draft report

TECHNICAL PANEL
Advised on research design & questionnaire
Reviewed draft report

Dalberg
Research Design & Questionnaire
Survey Supervision
Analyses & Report

PULSE SURVEY
147,000 households in 28 States & Union Territories

IN-DEPTH SURVEY
10,000 households in 17 States & Union Territories

HUMAN CENTRED DESIGN RESEARCH
100 in-depth interviews in 4 States
This is the 10th year since the launch of Aadhaar. Conceived as an ambitious project to provide universal identity to more than one billion Indians, Aadhaar is unparalleled in its reach and aspiration. An important objective of the project has been to improve the ability of the Indian state to provide efficient, transparent and targeted delivery of welfare services to a large number of residents who depend on it. In the years following Aadhaar’s launch, its use has expanded to private service provision, including mobile communication and banking services, while raising questions around data privacy, security, and more broadly around what it means for residents of India to have a digital identity.

Debates around Aadhaar have tended to be polarised—yet national household data has been thin on what Aadhaar has done (and not done) for the residents of India. In what ways has Aadhaar empowered or excluded them? To what extent do they trust and use the identification system? In which aspects is it serving them well or poorly—or not at all? Our study set out to answer some of these questions with data.

The primary purpose of this study was to give a broad cross-section of Indian residents a voice in the national discourse on Aadhaar. This study distils insights drawn from two national household surveys on Aadhaar, conducted between May and September 2019, and subsequent human centred design research. Capturing the experiences and perspectives of over 167,000 residents, together the surveys represent the largest primary dataset on the use of Aadhaar and, more broadly, digital ID anywhere in the world. We believe the success of Aadhaar will ultimately depend on how well the program can learn from the experiences and concerns of those who use (or are unable to use) Aadhaar across a wide range of circumstances in their daily lives. Taking residents’ perspectives into account can help better design and implement Aadhaar.

Our aim was also to help identify which aspects of Aadhaar are working and are not working, to what extent and for whom. The research is premised on the principle that the daily users of Aadhaar are best positioned to provide valuable feedback about their lived experience—and therefore practical adjustments needed to improve Aadhaar’s functioning. We do not attempt to adjudicate the ultimate merits of Aadhaar as a project; the question of whether Aadhaar is good or bad for the people of India hinges on factors, analyses and value judgments beyond the scope of this study. We hope these findings can augment efforts to move towards a more effective digital identity for all residents of India who desire it.

Our ambition, too, was for this report to anchor data-driven discourse on Aadhaar. We hope our efforts build a shared understanding of the facts. This report highlights the most significant findings and themes across the study as well as an overview of the methodology and its limitations. Following the publication of this report at the end of 2019, we intend to publish a three-part series to dig deeper into different aspects of people’s experience, such as enrolments and updates, service-level experience, or people’s sentiment and awareness. In the spirit of sparking greater discourse as well as further research on the topic, all primary data from the study is readily available on the State of Aadhaar website.

Our ultimate aspiration is that policymakers, researchers, service providers, and others use the data and findings from the study to inform decisions about the future of Aadhaar and, more broadly, digital identity. We hope that researchers find this extensive collection of data useful in their own research efforts, that policymakers and implementers will walk away with a sense of what is working and where they can make further improvements to Aadhaar, and that leaders elsewhere in the world who are embarking on or are considering similar digital ID initiatives will learn from India’s experience.

It has been a privilege to conduct this study. It would not have been possible without the help of the more than 40 individuals who served as our advisory panel, technical panel, expert advisors, and research partners. We are deeply grateful to these individuals for their subject expertise, guidance on methodology and validation of our surveys, analyses and findings. Most of all, we are grateful to the participants of our study for their time and perspectives. We have done our best to ensure that the content of this report is complete and accurate; any errors or shortcomings are our own.

Thank you for reading State of Aadhaar 2019. We look forward to hearing your reflections in the coming weeks and months.

Warmly on behalf of the State of Aadhaar team,

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Dalberg Design

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Gaurav Gupta
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Dalberg Asia
1. Aadhaar is becoming ubiquitous in India

- 95% of adults have Aadhaar, and on average use it once a month
- 75% of children have Aadhaar

2. A notable minority still does not have Aadhaar

- 90% of residents in Assam and 61% of residents in Meghalaya do not have Aadhaar
- 90% of residents in Assam and 61% of residents in Meghalaya do not have Aadhaar
- 8% of people who do not have Aadhaar – or an estimated 102 million people, 75 million of whom are children

3. Updating is the hardest part of the Aadhaar process

- 33% of people who tried to update their Aadhaar details found the process difficult; one in five did not succeed
- 4% of people currently have errors in the information on their Aadhaar card
- 15% of people have an error in their linked mobile phone number; an additional 39% have not linked a number at all

4. Aadhaar has supported inclusion

- 49% of people used Aadhaar to access one or more services for the very first time (e.g., rations, MGNNREGS, social pensions, SIM cards, and/or bank accounts)
- For 8% of people, Aadhaar was their first ID ever

5. For many residents Aadhaar has improved service delivery

- 80% of recipients feel Aadhaar has made PDS rations, MGNNREGS, or social pensions more reliable
- Using Aadhaar, residents were 40% more likely to obtain a new SIM card within one day, compared to using other forms of ID.

6. Problems with Aadhaar can lead to denial of welfare services, and at times exclusion

- 0.8% of people experienced exclusion due to Aadhaar-related reasons from a key welfare service (PDS, MGNNREGS, social pensions) which they had earlier received
- 1% of MGNNREGS job card holders did not get work the last time they tried due to Aadhaar-related reasons (compared to 31% due to non-Aadhaar-related reasons)
- 0.5% of social pension beneficiaries did not receive their pension the last time they expected it due to problems with Aadhaar (compared to 5.7% who did not receive it due to non-Aadhaar-related reasons and many more who could not identify a reason)
- 1.5% of PDS users experienced a biometric authentication failure and did not receive rations in their last attempt. However, 3.2% of PDS users received their ration despite biometric authentication failure.

Error rates by type of data

% of primary respondents and their household members over 15 years of age who have Aadhaar

4% report at least one error on their Aadhaar card

% of errors for information visible on the Aadhaar card

- 0.5% report an error in their name
- 2.5% report an error in their date of birth
- 0.3% report an error in an errant in their gender
- 0.5% report an error in their photograph
- 0.6% report an error in their address

% of errors for information not visible on the Aadhaar card

+ 1% report an error in their biometric information

Note: Respondent and their household members present during the interview were asked to respond on behalf of themselves and all absent household members over 15 years of age.
7. Despite the Supreme Court ruling, many people find that Aadhaar is de facto mandatory for bank accounts, SIM cards, and school enrolment

- More than half of all people who produced Aadhaar to get a SIM card or bank account, said their provider accepted only Aadhaar, even after the Supreme Court ruling.
- 3.3% of people were denied bank accounts, and 0.8% of people were denied SIM cards due to Aadhaar-related problems.
- 0.5% of 6 to 14-year-olds were not able to enrol in school due to Aadhaar-related reasons.
- 65% of people mistakenly believe that providing Aadhaar is mandatory by law for bank accounts, SIM cards, and school enrolment.

Reasons why people provide Aadhaar to access private-sector services

<table>
<thead>
<tr>
<th>% of respondents who used Aadhaar to access the service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank account</td>
</tr>
<tr>
<td>SIM card</td>
</tr>
</tbody>
</table>

8. Most people appreciate Aadhaar’s universal acceptance; some have concerns

- 72% of residents appreciate the convenience of Aadhaar as a universal ID, but almost half of these same people worry about the risks of linking it to too many services.
- 92% of people are very satisfied or somewhat satisfied with Aadhaar.
- 67% of people who have been excluded from a service due to problems with Aadhaar still say they are satisfied.

Share of people who see Aadhaar’s universality as both a benefit and a concern

<table>
<thead>
<tr>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of respondents</td>
</tr>
<tr>
<td>Everyone accepts it literally without question</td>
</tr>
<tr>
<td>It gives access to several services</td>
</tr>
<tr>
<td>It is used to pay/track/verify e-governance transactions</td>
</tr>
<tr>
<td>It gives me a personal digital identity</td>
</tr>
<tr>
<td>It makes access to services (tillers, ATM, bus, etc.) easier</td>
</tr>
<tr>
<td>It can be an essential identity card today</td>
</tr>
<tr>
<td>Not sure to answer about benefits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of respondents</td>
</tr>
<tr>
<td>Too many services are linked to it</td>
</tr>
<tr>
<td>It can cause loss of privacy</td>
</tr>
<tr>
<td>It is inconvenient to have a separate Aadhaar number for every service</td>
</tr>
<tr>
<td>I don’t know if it will be beneficial</td>
</tr>
<tr>
<td>I don’t have it even today I don’t want it</td>
</tr>
</tbody>
</table>

People who mentioned both

<table>
<thead>
<tr>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of respondents</td>
</tr>
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<tr>
<td>It can be an essential identity card today</td>
</tr>
<tr>
<td>Not sure to answer about benefits</td>
</tr>
<tr>
<td>None</td>
</tr>
</tbody>
</table>

9. The newer digital features of Aadhaar are yet to be embraced

- 77% of people have never used a newer digital feature of Aadhaar (such as the mAadhaar app, QR code scanning, virtual Aadhaar number, or masked Aadhaar).
- Only 39% have linked a correct mobile phone number to their Aadhaar.

Use of different forms and features of Aadhaar

| % of respondents who have Aadhaar |

10. Most people trust the Aadhaar system

- 90% of people trust that their data are safe in the Aadhaar system.
- 61% of welfare beneficiaries trust that Aadhaar prevents others from accessing their benefits.
- 8% worry about the misuse of their Aadhaar, and 2% have experienced fraud that they believe was related to Aadhaar.

Findings from a pulse survey with 147,868 respondents across 28 Indian states and union territories, and an in-depth survey with 19,209 respondents in 16 states and 1 union territory.
1 Introduction 1
2 People’s Experience with Aadhaar 5
  2.1 Aadhaar in context 7
  2.2 Getting Aadhaar: enrolment and updates 9
  2.3 Using Aadhaar 16
  2.4 Perceptions, satisfaction, and trust 21
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1. Introduction
Why we conducted this study

The residents' view is under-represented in today's discourse around Aadhaar, the world's largest digital ID system. The State of Aadhaar initiative aims to understand what aspects of Aadhaar are working and what aspects are not for those who interact with Aadhaar in their everyday lives. This 2019 edition provides a pan-India view of residents' experience by drawing on the largest dataset on the use of Aadhaar to date. Our ambition is that this study will inform data-driven discourse and decision-making.

What we studied

In this study, we sought to understand people’s journey with Aadhaar (see Figure 1). People begin their journey by enrolling in Aadhaar. They may later need to update demographic, biometric, or contact information. Over time, they may use Aadhaar to access a range of services, provided by both the government and the private sector. These experiences inform their overall sentiment towards and trust of Aadhaar. Along the journey, they may face inclusion or exclusion; they may experience benefits or challenges; and their daily activities may become easier or more difficult.

This study is based on findings from two national surveys on Aadhaar that gathered the experiences and perspectives of over 167,000 residents in India—representing the largest primary dataset on the use of digital ID in the world. We conducted a 10-minute pulse survey with 147,868 respondents across 28 states and union territories and a 45-minute in-depth survey with 19,209 respondents across 16 states and 1 union territory. After the survey analysis, we conducted in-depth interviews using human centred design (HCD) research with 103 people in 4 states (see Figure 2). All data collection took place from May to September 2019. The survey output is a public dataset that allows anyone to conduct their own analyses - to add nuance to the findings reported here or to create their own.

In preparation for the study, we received inputs from more than 30 experts and from over 50 residents in 7 locations across Maharashtra and Jharkhand. Throughout our study, we received guidance on research and survey design as well as analyses from nine technical and subject matter experts on our Technical and Advisory Panels.

Our key research questions covered:

Aadhaar enrolment
- How many are enrolled? Who is not yet enrolled—and why?
Aadhaar updates
- How many updates are needed, i.e., how common are errors?
- Do errors get corrected? What is the update experience?
- And how easy or difficult is the process?

Using Aadhaar to access services
- How widely and how frequently is Aadhaar used?
- What is the experience of using Aadhaar for key services (PDS, MGNREGS, social pensions, SIM cards, and bank accounts)?
- If residents face problems with Aadhaar, how does that affect their access to services?

Across the journey
- What benefits and challenges do they see?
- How satisfied are people with Aadhaar overall?
- Do they trust the system?

Using Aadhaar to access services
- How widely and how frequently is Aadhaar used?
- What is the experience of using Aadhaar for key services (PDS, MGNREGS, social pensions, SIM cards, and bank accounts)?
- If residents face problems with Aadhaar, how does that affect their access to services?

Limitations of the study

Given the limitations of survey methodologies, we focused only on questions that residents were able to answer credibly through a survey format. There are many valuable questions, related to the experience of both people and providers that our study cannot answer—among them, the following:

- To what extent can perceived benefits and challenges be attributed to Aadhaar?
- What are residents’ worries about privacy and surveillance with respect to Aadhaar?
- To what extent has Aadhaar benefitted government?
- To what extent has Aadhaar benefitted private-sector actors?

Surveys are also inherently limited by the framing, sequence, translation, communication, and interpretation of questions. We have tried to minimise biases arising from these limitations through a rigorous review process and extensive enumerator training, but some will inevitably remain.

Structure of the report

As we present our findings in the pages below, readers will follow people’s Aadhaar journey from obtaining Aadhaar (enrolling and updating) to using it in their daily lives. We then share people’s perceptions and levels of satisfaction with a range of aspects of Aadhaar, and discuss cross-cutting themes that affect the entire user journey. Finally, we conclude with questions for further research.
2. People's Experience with Aadhaar
### 2.1 Aadhaar in Context

#### ID
1.2 billion people<sup>2</sup> have Aadhaar

#### Food<sup>3</sup>
39% of people (an estimated 330 million) give their Aadhaar-linked biometrics regularly to receive rations

29% of households (an estimated 80 million) depend on these rations for more than half of their monthly supplies

#### Energy
50% of households have given their Aadhaar at least once for LPG subsidy

11% of households (an estimated 32 million) have given their Aadhaar at least once for kerosene subsidy

#### Livelihood
9 million people older than 65 years verified their Aadhaar to continue drawing social pensions, which for most is their only source of income<sup>4</sup>

90% of farmers (an estimated 96 million) have given their Aadhaar at least once for their fertilizer subsidy<sup>5</sup>

102 million MGNREGS workers have given their Aadhaar at least once in order to receive MGNREGS wages<sup>6</sup>

#### Finance
72% of adults (an estimated 609 million) have linked their bank accounts to Aadhaar; 87% of all bank accounts are linked<sup>7</sup>

29% of household transactions are completed via the Aadhaar-enabled Payment System (AePS)<sup>8</sup>

#### Education
47% of children (an estimated 125 million) enrolled in school using their own or their parent’s Aadhaar

#### Communication
41% of adults (an estimated 345 million) gave their Aadhaar for a SIM connection

---

<sup>2</sup> UIDAI, 2019

<sup>3</sup> Unless otherwise mentioned, statistics in the context section have been reported from the State of Aadhaar 2019 in-depth survey. Estimated population or household numbers are for the 16 states and 1 union territory covered in the survey.

<sup>4</sup> National Social Assistance Program. State level dashboards.


<sup>7</sup> UIDAI. 20th August 2018

<sup>8</sup> The Reserve Bank of India. Statistics: Retail Electronic Payment Systems Data, accessed in October 2019.
2. Getting Aadhaar: Enrolment and Updates

Aadhaar is now India’s most ubiquitous ID with high enrolment levels across most states. More than 90% of residents in India (or an estimated 1.2 billion people) had Aadhaar, including almost all adults (95%) and most children (75%). Enrolment levels were higher for Aadhaar than for voter ID, which was the second-most common ID. Aadhaar was ubiquitous in nearly every state—15 out of 28 states and union territories we studied had enrolment levels greater than 95%, and six states had near-complete enrolment (greater than 99%; see Figure 3). A few Northeastern states—Assam and Meghalaya, with enrolment levels of 10% and 30% respectively—served as exceptions.

Still, a sizable minority does not yet have Aadhaar; most adults who do not have Aadhaar want to enrol. Some people (8% of the population, or an estimated 103 million people), still did not have Aadhaar. The majority of these (73% or an estimated 75 million) were children, of which one-third were under the age of five. However, the number also included 3% of all adults (an estimated 28 million). Around three-quarters of adults without Aadhaar lived in Assam and Meghalaya; the remaining one-quarter lived in other states (see Figure 4).

By and large, lack of Aadhaar did not appear to be a matter of personal preference. Almost all adults (95%) without Aadhaar said that they want the ID. The majority of these people had not tried to apply—mostly because there were no local enrolment centres or the centre was closed (37%), people did not know where to enrol (21%), or they lacked the necessary documents (9%). Many people (one-third of people who wanted Aadhaar) tried but failed to enrol, often despite making multiple trips to enrolment centres. Few people (5% of those without Aadhaar) said that they did not enrol in Aadhaar by choice (see Figure 5).
Lack of Aadhaar is more prevalent among marginalised groups

Where differences between demographic groups existed, enrolment was almost always lower for the group that is commonly perceived as socio-economically less well off: some minority religions (Muslim, Christian) have lower enrolment levels than the national average; scheduled tribes have lower levels than OBC or intermediate castes. There were almost no enrolment differences between men and women, but people who identified as third gender were markedly less likely to be enrolled (see Figure 6). Rural areas had lower enrolment levels than urban areas, but these differences were mostly due to higher enrolment in a few states that have large urban populations.

Figure 6: Share of people who do not have Aadhaar, by demographic group and their household members

<table>
<thead>
<tr>
<th>AGE</th>
<th>GENDER</th>
<th>REGION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>59%</td>
<td></td>
</tr>
<tr>
<td>6-17</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>18-69</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>&gt; 70</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>National average</td>
<td>8%</td>
<td>27%</td>
</tr>
<tr>
<td>Female</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third gender*</td>
<td></td>
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</tr>
</tbody>
</table>

However, the differences between individual demographic groups do not convey the full picture. We analysed some of the most marginalised populations and found that they had lower Aadhaar enrolment levels than others.

Homeless and third-gender people had particularly low enrolment. About one-third (30%) of all homeless and about one-quarter (27%) of third-gender people did not have Aadhaar. The majority of them (84% of homeless and 85% of third-gender people without Aadhaar) wanted the ID but were unable to acquire it, often despite multiple attempts.

The reasons for their low rates of enrolment were often symptomatic of their particular status. For homeless people, a lack of documents was a major obstacle. Two-thirds (67%) of all homeless people without Aadhaar do not have any other ID. Two-thirds (67%) of homeless people without Aadhaar have made multiple attempts to get the ID. Still, Ankita remained hopeful about the value that an Aadhaar card could bring—something to show the police when they arbitrarily threatened to arrest her, or to show train conductors and landlords if they troubled her.

Ankita, Unemployed, Karnataka

Ankita is a 40-year-old trans woman living with a community of Mangalmukhis (third gender) in Bangalore. She consistently failed to secure job opportunities and earned her living by begging. When Ankita, along with a group of others from the Mangalmukhi community, went to the Aadhaar enrolment centre, they were not allowed to enter. “We don’t give it to you people,” they were told. “You have a voter ID, that is enough.” She made four attempts over four years, and even participated in a protest rally, but each time, she was met with refusal.

Ankita remained hopeful about the value that an Aadhaar card could bring—something to show the police when they arbitrarily threatened to arrest her, or to show train conductors and landlords if they troubled her.

Residents have errors on their Aadhaar cards, limiting the effectiveness of the ID

Four percent of people over 15 years of age reported errors in the information printed on their Aadhaar card. Error rates varied by level of education, gender, and the state (see Figure 7). Among children, error rates were similar: 4% for 0-5 year-olds and 3% for 6-17 year-olds. People with a lower level of education and third-gender people had more errors on their cards.

Figure 7: Share of people with Aadhaar who report an error on their Aadhaar card, by state

4% National average

Legend

- < 5%
- 5% to 10%
- 10% to 15%
- > 15%
- Not surveyed

Source: State of Aadhaar pulse survey, 2019* (* 357,024). Source: State of Aadhaar: data summary 2018 (80,000 people who identify as third gender: N= 5,890). Source: SoA in-depth survey 2019. Error rate by level of education: Completed Std I (5.5%), Std III (5.4%), Std X (5.5%), Std XII (4.6%), graduate degree (3.0%). Error rate by gender: Male (4.0%), female (4.5%), other (5.1%). Error rate by state: Delhi (8.4%), Tamil Nadu (8.2%), West Bengal (4.9%), Assam (4.9%), Jharkhand (4.8%). Error rates were similar: 4% for 0-5 year-olds and 3% for 6-17 year-olds. People with a lower level of education and third-gender people had more errors on their cards.
The most common error for information visible on the Aadhaar card was an incorrect date of birth. Error rates were lower than 1% for other fields like name, gender, address, and photographs. (see Figure B).

The error rate for mobile phone numbers (not visible on the Aadhaar card) is the highest, affecting 15% of Aadhaar holders above age 15. Many (39%) Aadhaar holders had not given a number at all, and some (7%) did not know whether they had linked a number. As a result, less than half (59%) of all adult Aadhaar holders had a correct number linked to the ID. While the impact of mobile phone number inaccuracy may currently be low, it will grow in the future: new Aadhaar features are increasingly based on mobile phone access.

The error rate for mobile phone numbers (not visible on the Aadhaar card) is the highest, affecting 15% of Aadhaar holders above age 15. Error rates were lower than 1% for other fields like name, gender, address, and photographs.

Despite efforts to improve the update process (such as online updates and self-service centres), it does not appear to have become easier over time. Meanwhile the number of updates has been increasing: 24% of people who updated last did so in 2019.

Errors primarily arise from two situations: a mistake made while recording information during enrolment or a change in people’s circumstances that is not updated in their Aadhaar information (e.g., a name change after marriage or a change of address or mobile phone number). Ten per cent of adults report that their Aadhaar was incorrect at the time of issuance. Even if all future cards are issued correctly, updates will continue to be necessary: since enrolling in Aadhaar, 12% of people have experienced life changes that affected their Aadhaar data.

Source: State of Aadhaar pulse survey, 2019 (N = 479,099); Source for biometric errors: State of Aadhaar in-depth survey, 2019 (N = 16,201)

4% report at least one error on their Aadhaar card

© report an error in their name
0.6% report an error in their address
2.5% report an error in their date of birth
0.3% report an error in their gender
0.5% report an error in their photograph
15% report an error in their mobile number
< 1% report an error in their biometric information

Residents are trying to correct errors; many succeed but they find the process difficult

Many (40%) of those who had an error in their Aadhaar information had tried to update it; one in five failed. Residents reported that updating was the most difficult of all Aadhaar-related processes (see Figure 9).

Despite efforts to improve the update process (such as online updates and self-service centres), it does not appear to have become easier over time. Meanwhile the number of updates has been increasing: 24% of people who updated last did so in 2019.

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Source: State of Aadhaar pulse survey, 2019 (N = 479,099); Source for biometric errors: State of Aadhaar in-depth survey, 2019 (N = 16,201)

Note: Respondent and their household members present during the interview were asked to respond on behalf of all absent household members over 15 years of age.

STORIES BEHIND THE DATA

"When I started my job at the factory, they told me I would not get my provident fund because the date of birth on my Aadhaar was wrong. If I go to the update centre in the city, I have to miss work for the day. But I’ve lost out on two months’ worth of provident fund already, so I finally did the update."

Palanethra, Factory Worker, Karnataka

Often people were initially unaware of errors in their Aadhaar information, and only discovered them when they were trying to access a service, such as ration or a scholarship benefit for their children. This resulted in rushed attempts to update Aadhaar cards in order to prevent losing the service.

Source: State of Aadhaar pulse survey, 2019

There may be some recall bias in the comparison between enrolments and updates -- events that lie further in the past (enrolment) may be remembered less vividly than more recent ones (updates). The share of people who found updating to be difficult held steady at 35%-37% from 2016 to 2019. UIDAI introduced a Self Service Update Portal (SSUP) in 2016 - an online facility to update Aadhaar information through the use of a registered mobile phone number. Ten per cent of adults report that their Aadhaar was incorrect at the time of issuance. Even if all future cards are issued correctly, updates will continue to be necessary: since enrolling in Aadhaar, 12% of people have experienced life changes that affected their Aadhaar data.
2.3 Using Aadhaar

Aadhaar is becoming India’s default ID. Those who have Aadhaar use it regularly and across multiple services; this is true whether or not Aadhaar is mandatory for the service, and whether the service is provided by the government or the private sector.

Residents primarily use Aadhaar in analogue form—by providing the card or a photocopy. Very few people use newer digital Aadhaar features; however, people across India have been slow to adopt other digital services as well.

Residents use Aadhaar regularly and across a wide range of welfare and non-welfare services

Across all states, people were using Aadhaar regularly. The majority of people who had Aadhaar (80%) used it at least once in the past three months and the average Aadhaar holder used it around once per month. Residents used Aadhaar for a range of both welfare and non-welfare services. The most common use cases were bank account (94% of Aadhaar holders), LPG subsidy (86%), PDS rations (82%), and SIM card (55%).

For some services, almost all users of the service had provided identification through Aadhaar at least once. These included not only major welfare programmes (LPG subsidy, PDS rations) for which providing Aadhaar was mandatory, but also SIM cards, and financial services, such as bank accounts, for which an Aadhaar mandate was briefly in place, but then removed (see Figure 10).

Not all people with Aadhaar were using it regularly. While 95% of adults in India have Aadhaar, 95% of adults who do not have Aadhaar say they want the ID. SoA pulse survey 2019. Accessing rations typically requires repeated (typically monthly) use of Aadhaar features; however, people across India have been slow to adopt other digital services as well.

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Overall, residents say that using Aadhaar is quite easy and has improved the delivery of some welfare benefits and private sector services. Still, people face challenges and experience exclusion or denial of services as a result of difficulties with Aadhaar. Marginalised groups, such as homeless and third-gender people, are disproportionately represented among those who face Aadhaar-related exclusion from services.

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Residents primarily use Aadhaar by providing the card or a photocopy. Only a minority has ever used newer digital Aadhaar features—as is common for digital services in India. Most people had only used Aadhaar’s analogue form, i.e., the card (84%) or a photocopy (72%), and almost half had used fingerprint authentication (43%, see Figure 11). Comparatively, few people used digital features, such as QR codes or_masked Aadhaar: 77% had never used a newer digital feature.36 Our survey did not reveal why a large majority of people have not yet adopted digital features, but awareness and incorrect or missing phone numbers are likely to be important factors: less than half (29%) of all Aadhaar holders had linked a correct mobile phone number (required for using most new digital features) to their Aadhaar.

Figure 11: Use of different forms and features of Aadhaar

[Image 57x373 to 472x522]

Legend

Low digital features

Traditional features

Source: State of Aadhaar in-depth survey, 2019 (N=11,258)
Note: “Aadhaar in the bank and the card; way to stay in touch due to lockdown.”

Low digital adoption is unsurprising: people across India have not yet adopted digital services in general.37 We hope these data serve as a baseline for understanding how adoption evolves going forward.

Most people find it easy to use Aadhaar to access key services; however, a minority face problems that lead to exclusion or denial of service. The majority of welfare recipients reported that it was easy to link their Aadhaar to key welfare services, such as PDS, MGNREGS, or social pensions.38 On average, they made 1.7 trips to do so. Similarly, using biometric authentication was straightforward, but not frictionless: 27% of people who relied on biometric authentication in their most recent use of Aadhaar were unsuccessful on the first attempt. On average, people needed to make 14 authentication attempts (0.2 attempts for PDS, 1.4 attempts for MGNREGS) to link Aadhaar to services.39 However, some people faced greater difficulties: 10% reported that their fingerprint authentication failed for reasons like PDS rations without Aadhaar than with Aadhaar.40

The overall perception of ease belies the difficulties that some people faced around Aadhaar and access to services. Some people (2.5% of all respondents) experienced exclusion from a key welfare service—they could not access it at all—because of problems with Aadhaar (see Figure 12).41 One-third of them (0.8%) previously had accessed the service. Non-Aadhaar related reasons contributed to exclusion from services for several times as many people (22% experienced exclusion for non-Aadhaar related reasons, 3.5% experienced exclusion for non-Aadhaar related reasons from a service they had earlier received).

Not having Aadhaar was a key driver of exclusion. Among the minority of people who did not have Aadhaar, 15% (an estimated 4 million people) experienced exclusion from at least one service due to Aadhaar-related reasons.42 Adults who belonged to marginalized groups—such as homeless and third-gender people—disproportionately faced Aadhaar-related exclusion from welfare services. This contributed to a situation wherein homeless and third-gender people were nearly one-third as likely to have access to PDS rations without Aadhaar than with Aadhaar.43 Some people, while not excluded, experienced denial of one or more services due to Aadhaar-related reasons. 10% of people missed out on a service while enrolling, and 14% missed out while updating. When residents used Aadhaar to access welfare, they encountered some scheme-specific issues and denial.44

STORIES BEHIND THE DATA

“I know it can be done online, but I don’t know how. I’m not comfortable using the computer, so I prefer to do it in person.”

Prashant, Driver, Karnataka

Even those who were aware of Aadhaar’s digital features often did not use them because they required digital access and literacy. For instance, official SMSes were often in English. Few knew that in some cases one could update Aadhaar online. Others, even when literate, were more comfortable seeking local, in-person solutions over digital ones, as they did not want to navigate the complexity of an online process, and preferred turning to trusted sources like family members, friends and Panchayat heads.

For example, in 2017, only 15% of banking users participated in online banking (BCG and Facebook. 2017). For instance, in 2017, only 15% of banking users participated in online banking. However, some people faced greater difficulties: 10% reported that their fingerprint authentication failed for reasons like PDS rations without Aadhaar than with Aadhaar.40

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Residents believe that Aadhaar has helped to improve the delivery of welfare benefits & private-sector services

Resident felt that Aadhaar is helping to improve service delivery in terms of ease and reliability.

- The majority of recipients felt that they received welfare benefits more easily with Aadhaar. For example, a majority (85%) of people who had Aadhaar and used PDS rations said that using the service has become easier since the introduction of Aadhaar. Over a quarter of PDS users who had Aadhaar (28%) had taken advantage of PDS portability, i.e., accessed more than one PDS shop. Ease of DBT-bank account linking was greater with Aadhaar than without: 87% of people who had Aadhaar found it easy to link their bank account with DBT, compared to 61% of people without Aadhaar. A majority (80%) of social pension recipients, PDS recipients, and MGNREGS job card holders also said that they received benefits more reliably with Aadhaar.

- For private sector services, residents saw Aadhaar as increasing first-time access: 40% of all Aadhaar holders who did not previously have SIM cards or bank accounts used Aadhaar to access these services. Ease of access was somewhat greater with Aadhaar: more people who used Aadhaar to access these services found the process easy than did people who used other IDs. Speed of access was greater for those who used Aadhaar to purchase a SIM card: using Aadhaar, residents were 1.4 times more likely to obtain a new SIM card within one day, compared to using other forms of ID.

However, even as most residents saw improved service delivery, a minority (7%) said that Aadhaar has made it more difficult for them to access welfare and non-welfare services.

45. SoA pulse survey, 2019. By comparison, 4% report more difficult access. Only 1% reporting to have problems with card-based services related to code entry. Many other changes were made to the PDS system concurrently with Aadhaar.
46. Biometric Aadhaar authentication enables PDS portability: people can get rations from a PDS shop of their choice even if the paper records that prove their eligibility are held by a different shop. This reduces the number of transactions required to prove eligibility and improves the chances of beneficiaries receiving their benefits on time. A user survey cannot capture all of these effects; more research is needed to understand how PDS portability and the role of Aadhaar play out in practice.
47. Eighty-three per cent of social pension recipients, 80% of PDS recipients and 74% of MGNREGS job card holders receive their benefits (and wages in case of MGNREGS) more reliably with Aadhaar.
48. Twenty-two per cent of Aadhaar holders used Aadhaar to get their first SIM card; 31% used it to open their first bank account.
49. Eighty-seven per cent of people who used Aadhaar to get a SIM card found the process easy compared to 74% of people who used another ID. Eighty-five per cent of people who used Aadhaar to open a bank account found the process easy compared to 79% of people who used another ID.
50. Seventy-six per cent of people who used Aadhaar to get a SIM card received it within one day compared to 53% of people who used another ID. Applying for bank accounts took a similar amount of time, whether or not Aadhaar was used: 27% of people who used Aadhaar to get a bank account could open it in one day compared to 30% of people who used another ID.
2.4 Perceptions, Satisfaction, and Trust

Most people have experienced clear benefits from Aadhaar. For the majority, the main benefit is the convenience of having a single, universally accepted ID.

Most people said they were benefiting directly from Aadhaar: 75% of people felt it had improved their lives. People especially appreciated that Aadhaar is universally accepted as proof of identity and/or address—a single ID that covers everything (72% of people considered this one of Aadhaar’s top benefits; see Figure 13).

Benefits

- People mentioned both

<table>
<thead>
<tr>
<th>Benefits</th>
<th>People who mentioned both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everyone accepts it’s identity proof</td>
<td>72%</td>
</tr>
<tr>
<td>It goes everywhere</td>
<td>61%</td>
</tr>
<tr>
<td>It is easily carried and gives security</td>
<td>31%</td>
</tr>
<tr>
<td>It gives me a permanent identification of address</td>
<td>26%</td>
</tr>
<tr>
<td>It makes travel, transactions (like banks, telecom, insurance) easier</td>
<td>12%</td>
</tr>
<tr>
<td>It can’t be tampered/cannot get lost</td>
<td>8%</td>
</tr>
<tr>
<td>I can’t be denied service due to it</td>
<td>7%</td>
</tr>
<tr>
<td>None</td>
<td>4%</td>
</tr>
</tbody>
</table>

Challenges

- People mentioned both

<table>
<thead>
<tr>
<th>Challenges</th>
<th>People who mentioned both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too many services tied to the same</td>
<td>34%</td>
</tr>
<tr>
<td>It can cause loss of access to services</td>
<td>30%</td>
</tr>
<tr>
<td>It is required to have one Aadhaar for many identity verifications</td>
<td>24%</td>
</tr>
<tr>
<td>It reduces it more difficult to access services (i.e. longer queues, delays)</td>
<td>9%</td>
</tr>
<tr>
<td>It can’t be tampered/cannot get lost</td>
<td>8%</td>
</tr>
<tr>
<td>I don’t need it, I ensure they have to do the same</td>
<td>5%</td>
</tr>
<tr>
<td>None</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: SoA Human Centred Design Research 2019

However, many people recognise the ways in which Aadhaar’s universality is both a benefit and a risk—and some people find Aadhaar inconvenient.

Residents’ views were nuanced. One-fourth (28%) of residents considered Aadhaar’s ubiquity to be both a benefit and a concern. One-third (33%) worried about tying many services to one ID—and the potential of losing access to all at once—even as they appreciated that Aadhaar provides access to services (see Figure 13).

Not everyone saw Aadhaar as convenient: some (24%) saw Aadhaar as one more document to provide—another bureaucratic hurdle in addition to the other documentation required to access services.

For a minority, Aadhaar has provided first-time access to identification and services

Broad acceptance of Aadhaar is all the more important for people who got Aadhaar as their first form of ID, especially third-gender residents (Aadhaar is the first ID for 14%), homeless people (15%), and women (9%). Many of them went on to access services such as bank accounts, SIM cards or PDS rations for the first time (see Figure 14).

For the people we spoke to who were marginalised in terms of religion, gender identity (e.g. third gender), or socio-economic status, having an Aadhaar card provided a psychological sense of security and comfort. This perception held true both for individuals who had an Aadhaar card, like Shahid, but also for those who had not been able to get one. For those who experienced failed attempts to enrol, the status of Aadhaar as a safeguard motivated them to continue attempts at enrolment and to secure their future benefits, like rations and subsidies.

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Figure 14: Share of people who used Aadhaar to gain access to a service for the first time

% of respondents for whom Aadhaar is the first ID

<table>
<thead>
<tr>
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<tbody>
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</tr>
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<td>Social welfare</td>
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Source: SoA Human Centred Design Research 2019

STORIES BEHIND THE DATA

I carry my Aadhaar card everywhere, so that I can show it if someone stops me at night.

Shahid, Plumber, Maharashtra

“Aadhaar is like a heart. It should keep working for as long as we are alive. With it we can access all services and without it none.”

Chandrakala, Tailor, Karnataka

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<td>2%</td>
</tr>
</tbody>
</table>

Source: SoA Human Centred Design Research 2019

STORIES BEHIND THE DATA

“I carry my Aadhaar card everywhere, so that I can show it if someone stops me at night.”

Shahid, Plumber, Maharashtra

“Aadhaar is like a heart. It should keep working for as long as we are alive. With it we can access all services and without it none.”

Chandrakala, Tailor, Karnataka

For the people we spoke to who were marginalised in terms of religion, gender identity (e.g. third gender), or socio-economic status, having an Aadhaar card provided a psychological sense of security and comfort. This perception held true both for individuals who had an Aadhaar card, like Shahid, but also for those who had not been able to get one. For those who experienced failed attempts to enrol, the status of Aadhaar as a safeguard motivated them to continue attempts at enrolment and to secure their future benefits, like rations and subsidies.
Most people trust that the Aadhaar system protects their data and their welfare benefits, although some continue to worry about misuse of the ID.

Almost everyone (92%) felt that their data were well protected in the Aadhaar system.15 And most welfare recipients (87%) also saw Aadhaar as protecting access to their benefits: they believed that Aadhaar prevents other people from accessing PDS rations, MGNREGS jobs, and social pensions in their name.

Not everyone had equally high levels of trust. People who did not have Aadhaar were more ambivalent. Many (24%) of them said they did not know whether or not data were well protected and some (9%) did not believe that data were well protected in the Aadhaar system.16

Almost equal numbers of people considered that Aadhaar offers as one of its greatest benefits (8%), and the risk of Aadhaar being misused to be one of their most important concerns with Aadhaar (8%). Some people (2%) had experienced fraud, which they believed was related to Aadhaar; they were less likely to believe that their personal information was well protected in the Aadhaar system.17

Overall, the vast majority of residents are satisfied with Aadhaar, including many who face Aadhaar-related difficulties.

Overall, the vast majority (92%) said they were very satisfied or somewhat satisfied with Aadhaar (see Figure 15).18 Across the country, more people reported satisfaction with Aadhaar than dissatisfaction in all but one state covered in our survey. Aadhaar received a net positive satisfaction score (see Figure 15).19 While there were variations in the exact levels of satisfaction between states, there were few differences among demographic groups.20

Eighty one per cent of Aadhaar holders said they would provide Aadhaar when given a choice of which ID to use.

A majority of people who experienced difficulties with Aadhaar were still satisfied with the ID. There was no significant difference in satisfaction between people who had or had not experienced a recent denial of service; most people (81%) who had errors in their Aadhaar information were satisfied, and a majority (67%) of people said they were satisfied if they were excluded from a service due to Aadhaar-related problems.

North-eastern states with low enrolment levels reported lower satisfaction levels.21 In general, people without Aadhaar were far less likely to be satisfied with it, marginalized groups (homeless and third gender people) also reported lower satisfaction.22

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2.5 The Aadhaar Experience for Different Population Groups

PEOPLE WITH LITTLE OR NO EDUCATION

People with little or no education** encountered Aadhaar-related problems more often than others did: more of them had errors or faced difficulties accessing services. Someone who only passed 1st standard had a 20% higher likelihood of having an error on their card as someone who passed 10th standard; the difference was more stark for errors in mobile phone numbers. Similarly, in terms of accessing services with Aadhaar, 3.6% of people with a 1st standard education who had Aadhaar (compared to 1.9% of people with a 10th standard education), said they could not access PDS rations, MGNREGS, or social pension due to Aadhaar-related reasons.

Overall, welfare recipients reported that accessing PDS rations, MGNREGS, and social pension became easier with Aadhaar. However, recipients who had not completed any formal education were nearly half as likely to experience this increase in ease.

ELDERLY PEOPLE

Elderly people** were almost as likely to have Aadhaar as everyone else. Aadhaar is mandatory for social pensions in some states—and elderly residents mostly saw their access positively affected by Aadhaar. Sixteen percent of elderly people used Aadhaar to obtain first-time access to social pensions. Of those who received a social pension, many felt that they received it more reliably (74%) and that providing proof of life was easier (79%) with Aadhaar.

HOMELESS PEOPLE

Homeless populations had low enrolment (30% did not have Aadhaar) and were twice as likely as others to find the process difficult—in particular, they found it difficult to provide the necessary documents. Their use of Aadhaar’s newer digital features was lower than for other groups (6% had ever used one). Some (14%) homeless people were excluded from a service due to Aadhaar-related reasons (although more faced exclusion because of other reasons). Less than half (42%) of homeless people were satisfied with Aadhaar.

However, getting Aadhaar did improve access to ID and services for some homeless people. For 15%, Aadhaar was their first ID, and homeless people who had Aadhaar used it for as wide a range of welfare services (e.g., PDS and Ayushman Bharat) and non-welfare services (e.g., SIM card and bank account) as did the rest of the population—although less frequently.

THIRD GENDER

People of third gender had a similar experience with Aadhaar to that of homeless people. They also had low enrolment: 27% did not have Aadhaar. They were twice as likely to find the enrolment process more difficult than others, partly due to problems with documentation. Aadhaar recognises third gender as a category, but people who identified as third gender still had errors in their gender data four times as often as others did. People of third gender were more than twice as likely as others to experience exclusion for Aadhaar-related reasons. Only half (49%) said they were satisfied with Aadhaar.

Aadhaar was the first form of ID for 14% of people of third gender. They used Aadhaar less often and across fewer services than did the population as a whole, and were three times more likely to be excluded from a service due to Aadhaar-related reasons.

** Notes:
- **Note:** They are “neither satisfied nor dissatisfied” than in other states.
- **Note:** SoA pulse survey 2019. 40% of people without Aadhaar were satisfied with it. 42% of homeless and 49% of third-gender people were satisfied with Aadhaar.
- **Note:** We found similar results for illiterate people as for those with no or only one year of formal schooling.
- **Note:** SoA pulse survey 2019. Aadhaar-related reasons in the pulse survey refer to biometric authentication failure and failure to link Aadhaar to the service.
- **Note:** SoA pulse survey 2019. Overall, welfare recipients found it easier to access rations (66%), MGNREGS (64%), and social pension (62%).
3. Focus Themes
3.1 Awareness

Many people believe they understand Aadhaar-related processes well—until they encounter problems. But, without deeper awareness, people do not know—and therefore cannot exercise—their rights and/or use features or services that could help alleviate some of the challenges they face.

Just over half of all people report that they understand Aadhaar-related processes and find them easy to use.

Over half of all respondents who tried to enrol believed that they fully or mostly understood the processes around Aadhaar enrolment (53%); and among people who tried to update, a slightly larger share felt they understood the relevant processes (65%). However, people who were elderly, homeless or third-gender felt less confident in their understanding.

Irrespective of religion, caste and whether they were male or female, the majority of people (65%) found all processes (from enrolment to updates to linking) easy. A small group (2%) found all processes difficult. However, ease varied greatly by state: people in Assam found it most difficult to enrol in Aadhaar; people in West Bengal found it easiest.

Digging deeper, gaps emerge: foremost, the majority of people do not know when Aadhaar is legally mandated and when it is not.

Most people could not differentiate between circumstances in which providing Aadhaar is mandated by law and those in which it is not. For example, according to the Supreme Court ruling in 2018, Aadhaar cannot be made mandatory for private-sector services. The Supreme Court also ruled that Aadhaar should not infringe on the right to education (RTE). Yet most people incorrectly believed that providing Aadhaar is mandatory for private-sector services, such as SIM cards (83%) and bank accounts (90%), as well as for school enrolment (71%; see Figure 17). Only 6% of Aadhaar holders had ever refused to provide the ID when asked.

Awareness of exception handling and grievance redressal mechanisms is low.

Even if people were aware of their rights, they did not have a clear understanding of how to enforce them. Awareness of redressal mechanisms was low, or else people do not feel empowered to use them.

UIDAI has implemented an Aadhaar helpline and a formal complaints process. However, among people who faced problems with enrolling in or updating Aadhaar, only a small share (13%) knew about central or regional Aadhaar helplines, and even fewer (1%) used them.

Formal complaints were similarly rare: only 4% of people who faced problems while applying or updating filed a formal complaint.

STORIES BEHIND THE DATA

"Helpline is of little help. We put ‘server down’ on our WhatsApp group to inform people about the ration store."

Ration Store Provider, Maharashtra

The ration store providers we spoke to found it hard to get technical support and officials’ explanations when they faced issues. When the server was down, they were unable to use the biometric machine, and could not distribute rations to customers. They relayed an informal channel to spread word about the delays.

Avoidance of exception handling and grievance redressal mechanisms is low.

Many people find that Aadhaar is de facto mandatory for bank accounts and SIM cards:

Despite the Supreme Court ruling, some banks and telecom providers continue to make Aadhaar de facto mandatory ID for savings accounts and SIM cards. Most people did not have a true choice of which ID to provide when signing up: a majority of those who provided Aadhaar believed and/or were told that they must provide Aadhaar in order to access the service (see Figure 18).}

Figure 18: Reasons why people provide Aadhaar to access private-sector services

% of respondents who used Aadhaar to access the service

Legend

Bank account

Ration card

School enrolment

Senior pension

Telco’s job card

Source: SoA Human Centred Design Research 2019

Helpline is of little help. We put ‘server down’ on our WhatsApp group to inform people about the ration store. 

Source: SoA Human Centred Design Research 2019

[1] 2019: real-world service tests before the helpline. People provide without friction in services where error messages inform them “NO ID, TRY AGAIN” to individual providers (SIM cards)
[2] 2019: helplines are made available to users in call centres, and service to consumers is through the helpline
[3] 2019: people were asked if they had ever refused to provide their Aadhaar when asked.
[4] 2019: people were told that a majority of people when asked, they did not have a clear understanding of how to enforce them. Awareness of redressal mechanisms was low, or else people do not feel empowered to use them.
[5] 2019: people were asked if they had ever refused to provide their Aadhaar when asked.

[1] The helpline is of little help. We put ‘server down’ on our WhatsApp group to inform people about the ration store.

Source: SoA Human Centred Design Research 2019

[2] The helpline is of little help. We put ‘server down’ on our WhatsApp group to inform people about the ration store.
In terms of using Aadhaar to access services, there was a similar pattern: some new exception handling processes have been introduced, but few people were aware of them or successfully used them. Most (84%) PDS users knew about at least one alternative in case fingerprint authentication failed; however, that alternative was predominantly to use the traditional register or to ask a different household member to authenticate. Few people knew about digital alternatives, such as OTP authentication (5% of PDS users). Similarly, most (79%) DBT recipients understood that a bank form they had filled out determined into which account their payments would go, but 9% of beneficiaries still experienced redirected payments.

In general, residents were not yet using newer digital features of Aadhaar, which could improve their experience (see Figure 11). Many newer features and troubleshooting tools use technology beyond biometric scanning, e.g., QR code scanning in case of failure or unavailability of biometric authentication or biometric locking on the mAadhaar app. Such features will become more important and necessary as the government’s digital transformation accelerates. If awareness remains low, Aadhaar holders will miss out on using them.

The Supreme Court (2018) ruled that Aadhaar cannot be mandatory for private-sector services like opening a bank account or obtaining a SIM card.

“The public shouts at us, they ask us why the update is not working, but how do we know? The rules keep changing, they are not advertised properly, and the website has old information.”

Aadhaar enrolment and update centre employee, Karnataka

73% National average

8% National average

3.2 Children’s Access to Education and Welfare

Children’s access to education and welfare is legally protected. Nevertheless, a family member’s Aadhaar is required for most school enrolments, and families report that children miss out on welfare benefits for Aadhaar-related reasons.

Even after the 2018 Supreme Court ruling, many families still need to provide Aadhaar for children’s school enrolment (see Figure 19). Thirteen per cent of school-age children experienced a delay in school enrolment that was related to providing Aadhaar. In addition, 0.5% of school-age children could not enrol in school due to Aadhaar related reasons—an estimated 1 million children, or one-fourth of all unenrolled children whose parents wished to enrol them.

After the ruling, the majority of school-age children (73%), were still required to provide Aadhaar for school enrolment. In five states, providing Aadhaar during enrolment was mandatory for more than 75% of children (see Figure 19). Thirteen per cent of school-age children experienced a delay in school enrolment that was related to providing Aadhaar. In addition, 0.5% of school-age children could not enrol in school due to Aadhaar related reasons—an estimated 1 million children, or one-fourth of all unenrolled children whose parents wished to enrol them.

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According to the Telangana Children’s Commission, 0.5% of children could not be enrolled in school due to Aadhaar-related reasons.

We defined facing problems as the respondent requiring more than one attempt to enrol or update.

This may partly be explained by different state policies and implementation plans. Not all states use all exception handling mechanisms.

We define school-age as 6 to 14 years of age — in line with age group covered by RTE.

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3.3 Variation of User Experience Across States

Location is one of the most significant variables in people’s experience with Aadhaar

Aadhaar usage varied across states by both frequency of use and number of services for which it is used. Enrollment levels, error rates, ease of use, number of denials of service and satisfaction also varied across states. There were no overall “leaders” or “laggards”—states performed better on some metrics and worse on others (see Figure 21). Performance is bound to be influenced by factors that relate to both Aadhaar implementation (e.g., number of enrolment centres) and local infrastructure (e.g., mobile data connectivity). In addition, recent, highly state-specific activities may play a role, e.g., reactions to experiments with Aadhaar-linked DBT models for PDS. More research is needed to understand the drivers and implications of state-level differences.

Note: States are coloured in blue for the highest performance and red for the lowest. Aadhaar enrolment: share of people who have Aadhaar (SoA pulse survey 2019). Aadhaar accuracy: share of people with no error on their Aadhaar card (SoA pulse survey 2019). Aadhaar usage: share of people who used Aadhaar to receive their full allotment of PDS rations (SoA pulse in-depth survey 2019). Net satisfaction with Aadhaar: share of people who were satisfied minus share of people who were dissatisfied with Aadhaar (SoA pulse survey 2019). Aadhaar-related exclusion from services: share of people who have experienced exclusion from PDS, MGNREGS, Social pensions, SIM card or a bank account due to Aadhaar-related reasons (SoA in-depth survey 2019). Aadhaar accuracy: share of people with no error on their Aadhaar card (SoA pulse survey 2019). Aadhaar enrolment: share of people who have Aadhaar (SoA pulse survey 2019). Aadhaar usage: share of people who used Aadhaar to receive their full allotment of PDS rations (SoA pulse in-depth survey 2019). Net satisfaction with Aadhaar: share of people who were satisfied minus share of people who were dissatisfied with Aadhaar (SoA pulse survey 2019). Aadhaar-related exclusion from services: share of people who have experienced exclusion from PDS, MGNREGS, Social pensions, SIM card or a bank account due to Aadhaar-related reasons (SoA in-depth survey 2019). Net satisfaction with Aadhaar: share of people who were satisfied minus share of people who were dissatisfied with Aadhaar (SoA pulse survey 2019).

Key Facts
1. 0.5% of people mistakenly believe that providing Aadhaar is mandatory by law for bank accounts, SIM cards, and school enrolment.
2. More than half of those who used Aadhaar to get a SIM card or bank account said that the service provider accepted only Aadhaar for identification purposes.
3. 0.5% of 6 to 14 year olds were unable to enrol in school due to Aadhaar-related reasons.
4. The Aadhaar user experience varies greatly between states.
4. Conclusion & Further Research

Residents expressed satisfaction with Aadhaar and trust in the system, despite ongoing difficulties, but emerging concerns need to be addressed. With Aadhaar, some residents gained first-time access to ID, and many have seen improvements in the reliability of welfare service and access to private-sector services. People appreciate the convenience of a single card that is universally accepted and trust that the Aadhaar system protects their data as well as access to their benefits. Almost everyone is satisfied with Aadhaar, including a majority of people who face difficulties. Nevertheless, many people who appreciate Aadhaar’s benefits also worry about the challenges and risks of linking too many services with a single ID. To maintain or improve people’s experience and perceptions, it will be important to make sure that everyone who wants and needs Aadhaar can obtain it and correct it when necessary, and that using Aadhaar for services is streamlined.

Individuals who do not have Aadhaar or who face difficulties in using it are often those most in need of government support. Aadhaar is deeply embedded in Indian life and works for most people most of the time. However, when it does not work, it most affects those who are already vulnerable. Marginalised groups, such as people who are homeless or third gender, have lower enrolment rates; people with lower levels of education have more errors. Since Aadhaar is mandatory for many services that are intended to support the most vulnerable members of society, it is all the more critical to ensure that Aadhaar reaches and works for these people.

Making Aadhaar mandatory can lead to exclusion from welfare and other services—and place an additional burden on residents. Such mandates should therefore be carefully considered. Some residents face service exclusion or denial because they don’t have (correct) Aadhaar or because of problems using it. Fingerprint authentication fails for a significant share of transactions. System and technology failures can be exacerbated when providing Aadhaar is mandatory (since there are few alternatives). This can place an additional burden on residents, who are otherwise legitimate beneficiaries of the service. Every decision to make Aadhaar mandatory for service provision should therefore be carefully considered—along with readily available fall-back options when processes or technology fail—so that Aadhaar’s promise to its holders can be upheld.

Improvements in on-the-ground processes related to Aadhaar can significantly enhance the lives of many residents in India. The social safety net could be appreciably strengthened for the nation’s most vulnerable groups—such as people who have low levels of education, are homeless, or identify as third gender—by offering additional support to those who need Aadhaar but cannot acquire it. Streamlining the Aadhaar updating process can prevent some service denials and save time that residents can put to better use. As more services are linked to Aadhaar, easy access as well as seamless updating and authentication will become more critical. While digital troubleshooting options can sometimes help, their effectiveness is limited because a substantial share of the population has low digital awareness, access, and literacy.

Variations in how states implement Aadhaar represent an opportunity to innovate and learn from each other’s successful practices. Although Aadhaar is a centrally administered national ID, the user experience is local: different states implement Aadhaar in very distinct ways. There is merit to this practice, given that the capacity and readiness for digital transformation vary greatly across states—from both an administrative and a resident point of view. Different approaches to implementation present an opportunity to innovate on a smaller scale. There is also potential for Aadhaar to support greater interstate integration and portability of welfare and other services. This journey has already started; for example, PDS portability (enabled by Aadhaar authentication) is being implemented across state boundaries. An innovation and integration progress, states and union territories will have the opportunity to learn and adopt best practices from each other.

While our surveys gave us great reach across a large number of households in most Indian states, a questionnaire-based interview is limited in the nuance it can achieve. Facts and perceptions can be drawn out, but closed-ended questions are rarely able to uncover underlying assumptions, drivers and motivations; at this scale, one cannot stop an interview to ask “Why?” Thus, many questions remain unanswered—and some new ones have emerged from our data.

We used our human centred design research to investigate where the greatest opportunities for improvement lie and to gather initial inspiration for how those challenges might be alleviated.

The following are some of the questions we explored through this process:

- Why has Aadhaar become the default ID even where it is not mandatory?
- What is the human impact of exclusion?
- What are residents’ worries about privacy and surveillance with respect to Aadhaar?
- How much does low awareness matter for residents?
- Why are almost all people satisfied with Aadhaar even if their experience is not always positive?

The HCD research also brought some new questions to light:

- What does Aadhaar mean for people’s identity? How does it affect the ways in which they view their place in society?
- What does Aadhaar mean for people’s identity? What does it mean to be satisfied with Aadhaar?

Beyond these questions, many others remain open for future research. Among them are:

- What drives state-level and sector-level differences in experience?
- How well do back-end and Aadhaar processes function? What is the experience of those who administer Aadhaar and Aadhaar-linked services?
- How could residents become more empowered to understand and assert their Aadhaar-related rights?
- How much does low awareness and usage of Aadhaar’s newer digital features develop?
- To what extent can perceived benefits and challenges be attributed to Aadhaar?
- What are residents’ worries about privacy and surveillance with respect to Aadhaar?
- To what extent has Aadhaar benefitted private-sector actors?

Our research methodology focused on residents’ perceptions and experiences. Our findings can represent only what people know and feel, whereas much of what affects the functioning of Aadhaar relies on the actors and systems in the background—from the design and security of the biometric database to internet connectivity at a ration shop or a bank branch manager’s understanding of mapping accounts to Aadhaar for DBT payments. In some cases, deliberate misuse of infrastructure and information has been reported, e.g., when a ration shop owner incorrectly claims that biometric authentication failed.20 In other cases, implementers on the ground may be struggling due to lack of information or resources. None of these processes (or systemic shortcomings) are necessarily visible to our respondents, and understanding them requires a different methodology.

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- What, if any, Aadhaar-related challenges are residents experiencing but not able to attribute to Aadhaar?

The HCD research also brought some new questions to light:

- What does Aadhaar mean for people’s identity? How does it affect the ways in which they view their place in society?
- What does Aadhaar mean for people’s identity? What does it mean to be satisfied with Aadhaar?

Beyond these questions, many others remain open for future research. Among them are:

- What drives state-level and sector-level differences in experience?
- How well do back-end and Aadhaar processes function? What is the experience of those who administer Aadhaar and Aadhaar-linked services?
- How could residents become more empowered to understand and assert their Aadhaar-related rights?
- How much does low awareness and usage of Aadhaar’s newer digital features develop?
- To what extent can perceived benefits and challenges be attributed to Aadhaar?
- What are residents’ worries about privacy and surveillance with respect to Aadhaar?
- To what extent has Aadhaar benefitted private-sector actors?
Methodology Note

OBJECTIVES OF THE STUDY

The State of Aadhaar 2019 report is the third entry in the State of Aadhaar series that launched in 2016.

The objective of the 2019 edition is to generate datasets on people’s experiences with Aadhaar across India and promote a data-driven discourse on Aadhaar.

To that end, this edition aims to answer the following key research questions from the point of view of residents:

- **Aadhaar enrolment**
  How many are enrolled? Who is not yet enrolled—and why?

- **Aadhaar updates**
  How many updates are needed, i.e., how common are errors? Do errors get corrected? What is the update experience? And why do people find it easy or difficult?

- **Using Aadhaar to access services:**
  How widely and how frequently is Aadhaar used? What is the experience of using Aadhaar for key services (PDS, MGNREGS, social pensions, SIM cards, and bank accounts)? And if residents face problems with Aadhaar, how does that affect their access to services?

- **Across the journey:**
  We also sought to understand how satisfied people are with Aadhaar overall—what benefits and challenges do they see? Do they trust the system?

A user journey framework guided our enquiry along these research questions.

The study followed people’s journey with Aadhaar from the enrolment stage to updating their information to using Aadhaar for various services. The study also followed those who dropped off at various points along this journey for reasons including but not limited to their information to using Aadhaar for various services. The study also followed those who dropped off at various points along this journey for reasons including but not limited to

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The surveys and report leaned on guidance and inputs from subject matter experts as well as the general public.

The report incorporated inputs from more than 30 experts including government officials and policymakers, legal advisors, technologists, researchers and others. Additionally, nine experts were involved as technical and advisory panelists to provide ongoing guidance as the study evolved. In preparation for the study we also conducted field visits in seven locations across Maharashtra and Jharkhand, where we spoke to residents about their experience with Aadhaar. These exploratory discussions, together with the survey pilots, conducted with 10,253 people in 28 states, helped us formulate questions and refine our survey instruments.

RESEARCH INSTRUMENTS

This report relies on two nationwide surveys conceptualised, designed, managed, and analysed by the Dalberg team with support from specialist organisations. These are:

1. A pulse survey of a panel of 147,868 households in 28 states and union territories
   State of Aadhaar added a 10-minute questionnaire to the triannual CHPS household panel survey conducted by the Centre for Monitoring Indian Economy (CMIE). These questions captured critical metrics on the adoption of Aadhaar and people’s experience around it. For part of this questionnaire (Aadhaar enrolment status, errors and some usage questions), we captured data for all household members, a total of 575,127 people. This survey was conducted between May and August 2019.

2. An in-depth 45-minute survey of 19,209 households across 16 states and 1 union territory
   State of Aadhaar conducted a separate deep-dive survey to uncover the nuances of people’s experience with Aadhaar. It included a wide range of questions on enrolment, updates and use of Aadhaar for services—particularly three welfare services (PDS, MGNREGS and social pensions) and two non-welfare services (telecom and banking). Considering the Supreme Court ruling of 2018, the survey also included some questions on schools to test on-ground implementation of the court’s orders. This survey employed stratified random sampling across the country and oversampled populations who are typically not covered by household surveys.

Dalberg created the research design and questionnaire. Kantar Public conducted the survey between July and September 2019, with close day-to-day oversight from Dalberg. The raw data were exclusively accessed and analysed by Dalberg.

After completing data collection and preliminary analyses for the surveys, we followed up with Human Centred Design (HCD) research. This helped us probe deeper into the survey findings and uncover the why and how behind some of the most interesting trends displayed by the data. We interviewed over 100 people in their homes, communities and workplaces using a range of HCD research methods, such as 1:1 in-depth interviews, intercepts, small-group discussions, activity-led sessions, and observational walk-throughs. This research took place in the states of Maharashtra, Karnataka, Assam and Bihar. These efforts enabled us to better understand the human stories behind the data and uncover further areas for research.

In the interest of encouraging a data-driven discourse, raw datasets from both surveys and a data dashboard are publicly accessible on the State of Aadhaar website. This report distils the key findings from the research, but for more data are available. The State of Aadhaar website www.stateofaadhaar.in hosts both the full, raw dataset and a data dashboard that allows anyone to explore key variables by states and demographics. We encourage policymakers, researchers, and industry actors to engage with the dataset and use it for their own research and decision making.

In our findings, we report numbers from the larger dataset (pulse survey) whenever possible. Most findings, however, are from the in-depth survey since this covered for more questions.

Numbers in graphs may not match those reported in the text or they may not sum to 100% because of rounding, non-responses, or responses of “don’t know.”
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Error rate

Glossary of Terms

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Error rate: The incidence of error in people’s Aadhaar information. We report error rates for data printed on the card (name, date of birth, gender, address, photograph) and for some data that is captured but not printed on the card (mobile phone, biometrics). Error rates are self-reported.

Exclusion: We define exclusion from a service as lack of access to the service because of inability to capture or cancellation of existing enrolment.

Net satisfaction: Share of people who are satisfied minus share of people who are dissatisfied.

Resident: Any person living in India. Our study cannot establish legal residence status.

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