

# Unique Identification Initiative: An Evaluative Study on World's Largest Project AADHAAR in India

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**Abstract:** The Unique Identification (UID) or Aadhaar project is the world's largest national identity project, launched by government of India, which seeks to collect biometric and demographic data of residents and store these in a centralized database. Till date, 1176445369 users have enrolled in the system, and the government has spent at least INR 791.24 crore on the project till 31<sup>st</sup> January, 2018 (UIDAI Official data 2018). In this article I have highlighted several aspects of Aadhaar Project including the salient features, functional entities and procedure, benefits, disadvantages, enrollment and saturation ratio in different parts of India, money utilization for the project against budgeted figure and also various areas which require Aadhaar card as mandatory. The UID project of UIDAI acts as an enabler for the under privileged and migrant population which will empower them with a single identity. It will in turn remove fake and duplicate identities from the system and also plug the leakages in the public distribution system (PDS). The primary mode of identification and authentication will be biometric signature of the enrollee which is unique to every individual. The use of biometrics as an authentication tools has its unique problems as a result of which similar biometric based identity solutions have been shelved in developed countries like U.K., U.S.A. The technological framework for such a large database is not available and it is also mitigated with the lack of privacy and data security law in India.

**Keywords:** Aadhaar; Unique Identification; Saturation; biometric; demographic information

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## I. INTRODUCTION

The idea of a Universal Electronic Identity was proposed by the Indian Department of Information Technology in 2006. The Unique Identification Authority of India (UIDAI) was established under the aegis of planning commission headed by Mr. Nandan Nilekani as the chairman in June 2009, with the primary aim of issuing biometric enabled Unique Identity (UID) number to every residents of India. The flagship project of Government of India (GOI) through UIDAI in this regard which is known as "Aadhaar" is the world's largest national identity project, which seeks to collect biometric and demographic data of residents and store these in a centralised electronic repository. It is seemed as an opportunity to create a super identity—one that is more portable, traceable, and has little or no chance of being misused or stolen. Till date, 1176445369 users have enrolled in the system, and the government has spent at least INR 791.24 crore on the project (UIDAI Official data, March 2018). At present, in India there is no single universally accepted national ID system. Prior to the UID project the various ID documents in use were basically derivatives of the services being offered by the agencies e.g. voters ID card issued by the Election Commission. Many Indian residents today have several forms of identity for different purposes, such as a voter ID card, a ration card for accessing the public distribution system, a Permanent Account Number (PAN) card for tax registration, a driver's license, and a passport. Such a silo based approach has resulted in perpetration of fake identities which has resulted revenue loss and corruption. As per UIDAI draft, duplication and the fake identity will be minimized with UID as it will be impossible for an UID enrollee to register for multiple identities as his or her biometric information will be tagged with the UID number. The proposed system of government to create a single biometric identification database would allow a more accurate picture of Indian residents and their access to use of public services.

### Salient Features of UID Project

Some of the salient features of UID project as mentioned in the UIDAI draft (UIDAI, 2009) are briefly mentioned below:

- The UID will be a random generated number, devoid of any coding intelligence which will minimize chance of fraud. However UIDAI will only prove identity and having an UID number will not signify citizenship status.
- The enrolment process for UID number will be a voluntary.
- The UIDAI will only issue a number to the individual who can be printed to any document or cards like PAN card, voters identity card etc. Once the UID number is issued it will remain the same for the enrollee till his or her death.

- The UIDAI will evolve proper Know your resident (KYR) standard for the UID enrolment process which will prevent fraud and ghost entries.
- The UIDAI will form a Central ID data repository (CIDR); it will function as a managed service provider and will also ensure core services required for the UID including storage of UID linked resident records, verification, authentication and amendment of the resident data.
- To ensure speed in the enrolment process the UIDAI plan to partner with existing government and non-government agencies across the country, such agencies will be the 'registrars' for UIDAI and will leverage their infrastructure. The registrar will process UID application, connect to the CIDR database for verification and reduplication and receive the UID numbers.

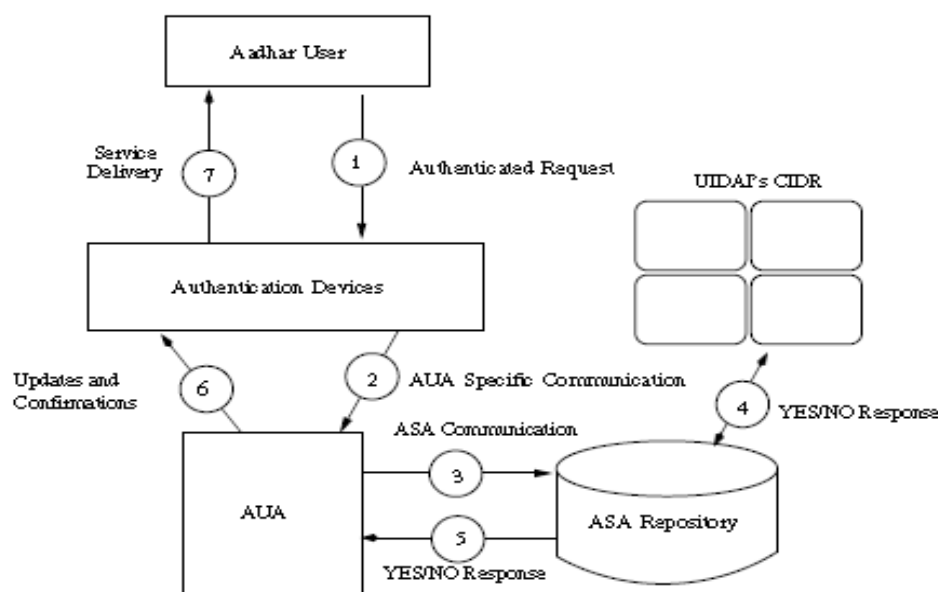
#### Information Required For AADHAAR Registration

<b>Demographic Information</b>	Name, Address (Permanent and Present), Date of Birth/Age, Gender, Mobile Number, Email Address, Relationship Status, UID number of Parents (optional for adult residents) and Information Sharing Consent.
<b>Biometric Information</b>	Iris, Finger Prints and Facial Photograph
Source: <i>Compiled by Author</i>	

#### Structure of UID And Functional Procedure

Structure of Unique Identification Project has been characterized by co-existence of several bodies including UIDAI, AUA, ASA and Enrolment Station and also a Central Identities Data Repository (CIDR) which function in close harmony. With the help of following table, I have shown the responsibilities to be performed by different functional bodies followed by an exhibit showing chronologically the functional procedures.

ENTITIES	FUNCTIONS TO PERFORM
The Unique Identification Authority of India (UIDAI)	Providing the basic Identification and authentication services. Issuing a unique identifier (Aadhaar number) to each resident. Maintaining the biometric and demographic data in a Central Identities Data Repository (CIDR). Managing the said repository (CIDR).
2) An Authentication User Agency (AUA)	Authentication Service to the users. Connecting to the CIDR and using Aadhaar authentication to validate users and enabling its services. Examples: PDS, NREGS, etc.
3) An Authentication Service Agency (ASA)	Transmission of authentication requests to CIDR on behalf of one or more AUAs by the virtue of its formal contract with UIDAI.
4) The Users	To enrol with UIDAI and receiving issued Unique Identification Numbers (Aadhaar numbers).
5) The Point of Sale (POS) or Authentication device	Collection of personal Identity data from Aadhaar holders. Preparing the information for transmission, Transmission for authentication and receiving the authentication results.
6) An Enrolment Station	To enrol people in to the Aadhaar database and capturing their demographic and biometric particulars.
Source: <i>Compiled by Author</i>	



Source: Sharma, S. A. (2017)

#### Areas Where AADHAAR Card is Mandatory

• Income Tax Return	• Aadhaar & PAN Linkage
• SIM Card Connectivity	• Health Organizations
• Education and Scholarship	• DBT and Subsidy scheme
• Provident Fund Account	• Bank Account Openings
• Ration Card digitization	• Online Form fill-up for Exams
• Railway reservation	• Municipal Services
Source: Compiled by Author	

#### Benefits of AADHAAR Card

- Zero Balance Bank Account: Aadhaar Card is used as the major document of proof when opening a bank account under the Pradhan Mantri Jhan Dhan Yojana (PMJDY) in the nation. The bank account comes with great set of benefits like free zero balance saving account, RuPay Card, accident insurance and more.
- Direct Benefit Transfer (DBT): Aadhar Card linked bank account will get their set of LPG Subsidy directly accredited in the bank account. All you need is to link Aadhaar Number to the 17-digit LPG consumer identification under the PAHAL Scheme.
- Monthly Pension and Provident Fund: As per the new changes in rule, a person needs to link their Aadhaar Card to their respective pension account and provident fund. A person who has registered their Aadhaar Card as per the rule will have the amount credited to their bank account.
- Availing New Bank account: Straying away from the old rule that requires submission of multiple documents for the opening of bank account, Aadhaar Card has been a timely intervention. Aadhaar Card is now accepted by the banks as part of the valid id proof for opening a bank account. It also acts as the address proof of the applicant and validates their credentials. No more requirements for the baggage of documents when opening a bank account now.
- Passport and Voter ID: Aadhaar Card will relieve you of the lengthy procedure while obtaining Passport. An applicant who uses Aadhaar Card as part of the procedure can get the Passport in just 10 days. Furthermore, a change in rules and laws have regarded Aadhaar Card as a compulsory document for obtaining Passport.
- Elimination of Multiple voters: Starting from the 9<sup>th</sup> of March, 2015, every Voter ID will be linked to Aadhaar Card in a bid to eliminate the bogus voters. That being said, a legal voter will get absolute right to use his powers granted by the law. It's only for those illegal holders of multiple Voter ID that will be hampered.

#### Disadvantages of AADHAAR Card

- Foreign Handling of the data: As Aadhaar Project is being handled by private companies who won the round of auctions. The project is also set to entertain Foreign Companies in terms of research and development. Such a step might lead to data erosion to the foreign body which in the hindsight will compromise the privacy of the individuals of India.

- Problems Arising due to Centralization: As the Unique Identification Scheme is governed by the supreme authority of the nation, there might arise problems pertaining to the centralization of it. The centralization of power will create different unorthodox issues for government and people as a whole
- Individual Information may be compromised: Aadhaar based identification record the biometrics of a person with uniquely associated 12-digit numerical. It is also linked with the bank accounts and the voter ID credentials as we discussed up above in the advantages squadron. This bit of private individual information may be compromised if handled otherwise. This stands as a big risk going forward with the Aadhaar card.
- Misuse in Banking Transactions: Aadhaar based identification will give way to a new banking transaction where Aadhaar Identification will be used in lieu of ATM, Debit or Credit Cards. This bit will help out to reach the financial transaction to a mass of people but cites in a few disadvantages too. Such identification can be used to forge the transaction and endure loss to many.
- Uneasy nature of Usage – Although Aadhaar based identification will prove to be a hit, in the long run, the current trend says otherwise. In a mass of population where illiteracy and rural lifestyle are still burgeoning around, using Aadhaar card can be a tricky thing to be negotiated. Many still find using Aadhaar Card and its mirage of offerings as one of the bane rather than as a boon for the nation. Only when the population is able to cope with the usage of Aadhaar Card can that be named as successful enough. Until then, we could cite this as a disadvantage.

#### UID Enrollment and Saturation Status

Total Population is not actual figure, rather the population data has been projected in 2017 on the basis of census figure. Number of Aadhaar Cards issued has been divided by the projected population figure in order to get the Saturation Ratio.

$$\text{Saturation Ratio (\%)} = (A / B) * 100$$

Where,

A = Number of Aadhaar Cards issued,

B = Total Population

Source: Compiled by Author

India has not yet been fully saturated so far as issue of Aadhaar Card is concerned. Till February, 2018, 1176445369 Aadhaar cards had been issued resulting India's overall saturation ratio of 89.40%. Saturation Ratio is nothing but a percentage of 'No. of Aadhaar Issued' with respect to the 'Projected Total Population' of the respective state or union territory. So the said percentage is expected to be less than or equal to 100%. But in the table given below, few parts of India like Delhi, Goa, Haryana, Kerala, Punjab, etc. have achieved a saturation ratio of more than 100% while Tamil Nadu, Uttar Pradesh, West Bengal, Tripura attained a saturation ratio of less than 1 or less than 100%. Meghalaya (21.10%) and Assam (7.8%) have very miserable performance in this respect. They stood at the end of the following table with last ranks (35<sup>th</sup> and 36<sup>th</sup> respectively). The following table shows the respective saturation percentage in different parts of India.

STATE/UT WISE AADHAAR SATURATION Till 28th February, 2018				
Sl.No	State Name	Total Population (Projected 2017)	Numbers of Aadhaar assigned	Saturation (%)
1	Delhi	18,110,349	21287867	117.5%
2	Goa	1,521,000	1562246	102.7%
3	Chandigarh	1,110,820	1135404	102.2%
4	Himachal Pradesh	7,246,418	7382050	101.9%
5	Haryana	27,443,256	27908144	101.7%
6	Punjab	29,344,896	29718525	101.3%
7	Kerala	35,043,531	35472595	101.2%
8	Telangana	38,042,884	38401349	100.9%
9	Uttarakhand	10,956,753	10813701	98.7%
10	Lakshadweep	70,214	69175	98.5%
11	Dadra & Nagar Haveli	373,636	362700	97.1%
12	Daman & Diu	216,981	209284	96.5%
13	Gujarat	63,000,000	60084352	95.4%
14	A & N Islands	414,057	393251	95.0%
15	Puducherry	1,356,199	1279477	94.3%
16	Chhattisgarh	28,125,421	26442981	94.0%
17	West Bengal	96,775,592	90845937	93.9%
18	Jharkhand	36,672,687	34265576	93.4%
19	Tamil Nadu	75,844,451	70778424	93.3%
20	Odisha	44,912,901	41844079	93.2%

21	Maharashtra	119,581,739	111278675	93.1%
22	Karnataka	65,426,566	60721149	92.8%
23	Andhra Pradesh	52,375,124	48445397	92.5%
24	Madhya Pradesh	80,894,777	72844055	90.0%
25	Tripura	4,000,638	3597890	89.9%
26	Sikkim	662,250	583154	88.1%
27	Uttar Pradesh	224,558,257	195265658	87.0%
28	Rajasthan	76,802,294	66345748	86.4%
29	Bihar	117,153,097	98210439	83.8%
30	Mizoram	1,188,971	963263	81.0%
31	Manipur	2,966,130	2389104	80.5%
32	Arunachal Pradesh	1,506,749	1155102	76.7%
33	Jammu Kashmir	13,477,325	9829854	72.9%
34	Nagaland	2,158,431	1221455	56.6%
35	Meghalaya	3,230,132	680327	21.1%
36	Assam	34,068,394	2656980	7.8%
	<b>TOTAL</b>	<b>1,316,632,920</b>	<b>1176445369</b>	<b>89.4%</b>

Source: UIDAI (2018)

#### Budgeted Allotment and Utilization for the Project

Year	Budget Estimates	Revised Estimates	Expenditure (INR In Crore)
2009-10	120.00	26.38	26.21
2010-11	1,900.00	273.80	268.41
2011-12	1,470.00	1,200.00	1,187.50
2012-13	1,758.00	1,350.00	1,338.72
2013-14	2,620.00	1,550.00	1,544.44
2014-15	2,039.64	1,617.73	1,615.34
2015-16	2,000.00	1880.93	1680.44
2016-17	1140.00	1135.27	1132.84
2017-18	900.00	-	791.24*

\*Cumulative Expenditure up to January 2018

Source: UIDAI (2018)

#### Detailed Summary of the Budget till 31<sup>ST</sup> January, 2018

OH	Sanctioned For 2017-18	Released (To UIDAI) For 2017-18	Consolidated Exp. Up To December, 2017	Expenditure in Jan 2018	Consolidated Exp. Up To 31st January, 2018	% of Exp. Wrt Sanctioned Fund for 2017-18
General Grants	714.98	714.98	532.35	86.74	619.09	86.59%
Grants for capital assets	145.02	145.02	131.79	3.33	135.12	93.17%
Grants-in-aid salaries	40.00	40.00	31.52	5.51	37.03	92.58%
<b>Total</b>	<b>900.00</b>	<b>900.00</b>	<b>695.66</b>	<b>95.58</b>	<b>791.24</b>	<b>87.92%</b>

Source: UIDAI (2018)

From the above tables, it can easily be noticed that Government of India has sanctioned increasing amounts over the years since FY 2009-2010. For the FY 2017-18, the sanctioned budgeted amount is INR 900 crore out of which 87.92% (INR 791.24 Crore) has been utilized till 31<sup>st</sup> January, 2018. The expenditures made in order to cover some general expenditure, capital asset creation and salary payment to the staffs.

## II. CONCLUSION

The UIDAI is publicising the Aadhaar project as pro-poor enabler, intended to stop leakages in the welfare system and provide Residential Identity to all. The Government has also strengthened the process by way of linking Aadhaar with PAN, ration card, and so on. But it is evident that the leakages addressed by UIDAI do not justify the high cost of such an implementation. How far the project will serve the predetermined purpose (s) for the welfare of the targeted population is also highly debatable. There is a lack of wide public discussion on the feasibility or desirability of the UID project. The use of biometrics as an authenticating mechanism has numerous pitfalls and limitation for which similar projects were shelved in developed countries like U.K. and U.S.A after such public scrutiny. Such a high cost for a largely untested e-governance project is highly debatable more so as India is a developing country and the actual outcome, security and benefits of the project is also uncertain and questionable.

## III. REFERENCES

- [1] Agrawal, S., Banerjee, S., & Sharma, S. (2017). *Privacy and security of Aadhaar: a computer science perspective*. *Economic & Political Weekly*, 52(37), 93-102.
- [2] Banerjee, S. (2016). *Aadhaar: Digital Inclusion and Public Services in India*. *World Development Report*.
- [3] Das, J. K., Maitra, S., & Bagchi, D. (2011). *Unique Identification Number: The New Identity Paradigm*. *Globsyn Management Journal*, 5(1/2), 11.
- [4] Raju, R. S., Singh, S., & Khatler, K. (2017). *Aadhaar Card: Challenges and Impact on Digital Transformation*. *arXiv preprint arXiv:1708.05117*.
- [5] Saini, S., Sharma, S., Gulati, A., Hussain, S., & von Braun, J. (2017). *Indian food and welfare schemes: Scope for digitization towards cash transfers*.
- [6] Sharma, S. A. S. B. S. *Privacy and Security of Aadhaar: A Computer Science Perspective*.
- [7] UIDAI Official Websites (last Visited on 7<sup>th</sup> March, 2018)