

# Estimating the Impact of Mandatory Aadhaar in the National Social Assistance Programme

Ashwini Chhatre, Aditya Murlidharan, Shradhey Parijat Prasad and Nishka Sharma

## Key Facts

1.2 Crore of more than 95% of the Indian population possess an Aadhaar number.

In NSAP, 35% or 1.1 crore people do not possess an Aadhaar number.

In the event of mandatory Aadhaar for benefits, 2.6 crore people are at-risk of being excluded.

Better governed states have a higher penetration of Aadhaar for NSAP beneficiaries.

In terms of Aadhaar seeded bank accounts, less efficiently governed states have a substantially higher number of beneficiaries.

## Study Methods and Data Sources

Data for the National Social Assistance Programme was used for this analysis. We used data both at the state level as well as the district level. The data for both the State and District level is available at <http://nsap.nic.in/>. The data used for the analysis for was downloaded in December 2018.

The Visible Infrared Imaging Radiometer Suite (VIIRS) nightlights data provides us with the radiance values at the district level for the year 2018. The data is generated by the Earth Observation Group, NOAA National Centres for Environmental Information.

## Summary

The National Social Assistance Programme (NSAP), launched on 15th August 1995, is a social pension scheme by the Government of India. NSAP has around 3.1 crore beneficiaries across India.

Beneficiaries of NSAP are the most vulnerable section of the society. They include old age people, widows and disabled individuals whose livelihoods are below poverty line. Mandating Aadhaar will require these vulnerable people to have an Aadhaar number as well as a linked bank accounts to be able to receive pensions.

In the event of compulsory Aadhaar, all beneficiaries who do not possess an Aadhaar number or have not linked them to a bank account will be at risk of being excluded from NSAP.

In such an event, up to 2.6 crore beneficiaries are at risk of being excluded from NSAP.

While 70% beneficiaries have an Aadhaar number, only 16 % have linked it to their bank accounts. This means that 1.7 crore or 56% beneficiaries cannot avail Aadhaar linked benefits even though they have Aadhaar cards

Better governance should directly translate to better social welfare implementation. We use VIIRS nightlights data as a measure of governance.

In line with our hypothesis of better governance leads to better social welfare implementation, we find efficiently governed states like Karnataka, Andhra Pradesh and others have a much higher level of Aadhaar penetration as compared to less efficiently governed states.

Contrastingly, the less efficiently governed states have a substantially higher number of Aadhaar seeded bank accounts. Most of the at-risk population resides in the better governed states.

The 2.6 crore individuals at risk of being excluded from NSAP translates to roughly 2% of the Indian population.

**Keywords:** NSAP, Aadhaar, Exclusions, VIIRS

## Introduction

The National Social Assistance Programme (NSAP), launched on 15<sup>th</sup> August 1995, is a social pension scheme by the Government of India. NSAP has around 3.1 crore beneficiaries across India.

Beneficiaries of NSAP are the most vulnerable section of the society. The beneficiaries include old age people, widows and disabled individuals from the below poverty line (BPL) livelihoods. Mandating Aadhaar will require these vulnerable people to have an Aadhaar number as well as linked bank accounts to be able to receive pensions directly into their bank accounts.

The matter for the scope and validity of Aadhaar has been debated in front of the Supreme Court of India. The resulting verdict by the SC allowed the government to make Aadhaar mandatory in social welfare schemes. The implication is that the government now has the legal authority to make Aadhaar mandatory in all social welfare schemes including NSAP. As NSAP deals with the most vulnerable section of the society, it is important to understand the magnitude of impact in the event of Aadhaar being mandatory.

Since NSAP came under Direct Benefits Transfer (DBT), the government has been pushing to make the use of Aadhaar in social sector schemes to further curb leakages and duplication. In the event of compulsory Aadhaar, all beneficiaries who do not possess an Aadhaar number or have not linked them to a bank account will be at risk of being excluded from NSAP. Currently, up to 2.6 crore beneficiaries are at risk of being excluded from NSAP.

We also do a district level analysis of the distribution of NSAP beneficiaries with governance. We utilize the VIIRS night-lights data as a proxy for governance. Night lights is a considered a measure of economic activity. A healthy level of economic activity, especially at night, can be considered a good measure of governance in the area. Our results show an inverse relation between governance and Aadhaar usage in NSAP.

## Institutional Background

The National Social Assistance Programme (NSAP), launched on 15<sup>th</sup> August 1995, is a social pension scheme by the Government of India. It aims to maintain minimum standards of living by ensuring that the minimum level of benefits provided are uniform across the country. To avail benefits under NSAP, the individuals must belong to a below poverty line household. The base pension amount is decided by the Central government. The state government must contribute an equal amount but may choose to contribute as per their financial situation. NSAP consists of the following pensions schemes:

- Indira Gandhi National Old Age Pension Scheme (IGNOAPS)  
The IGNOAPS is the old age pension scheme under NSAP. The scheme covers all Indians who are below poverty line (BPL) and are above the age of 60. At present, all

individuals above 60 years receive Rs 200 as pension from the central government. Individuals above the age of 79 receive Rs500.

- **Indira Gandhi National Widow Pension Scheme (IGNWPS)**  
The IGNWPS is the widow pension scheme under NSAP. The scheme covers all India windows between the age of 40 and 79 and are below poverty line. The central government assistance is Rs.300.
- **Indira Gandhi National Disability Pension Scheme (IGNDPS)**  
The IGNDPS is the disability pension scheme under NSAP. The scheme covers individuals under the below poverty line and are physically disabled. The central government provide with a pension of Rs.300 for individuals between the age of 18 and 79.
- **National Family Benefit Scheme (NFBS)**  
The NFBS provide a one-time lump sum payment of Rs20,000. The benefits is paid to families where the primary bread winner died between the age of 18-59 and the household qualifies as one below poverty line.
- **Annapurna:**  
Annapurna scheme provides 10 kg food grains per month to senior citizens.

In 2013, NSAP came under the purview of Direct Benefits Transfer (DBT). The objective of DBT was to enable the government to directly transfer benefits into the bank accounts of beneficiaries. DBT aimed to minimize human intervention in disbursement of benefits.

Over the past few years, the government has been pushing for mandating for disbursement of social benefits. The government claims that by linking a beneficiary's bank account with their Aadhaar number makes the disbursement procedure more efficient. Aadhaar linking also removes the scope of duplicate or ghost beneficiaries from the system and reduces the scope of leakages and duplication.

## **Data, Variables and Summary**

The data for the analysis has been downloaded from National Social Assistance Program (NSAP) website. We study only three out of the five mentioned schemes as the data availability is limited to IGNOAPS, IGNWPS and IGNDPS. For each of these schemes, we define two exclusion criteria and one inclusion criteria for all beneficiaries across these schemes. For the purpose of this study, we keep the states where majority of the Indian population resides.

There is still a chunk of population in the country that does not have an Aadhaar number. Given that NSAP consists of the most vulnerable people of the society, there is high possibility that a lot of people

without Aadhaar are a part of NSAP. Even if they do have an Aadhaar number, they have not necessarily linked it with their accounts. Therefore, they run high risk of being excluded if Aadhaar is made mandatory and will be the worst hit.

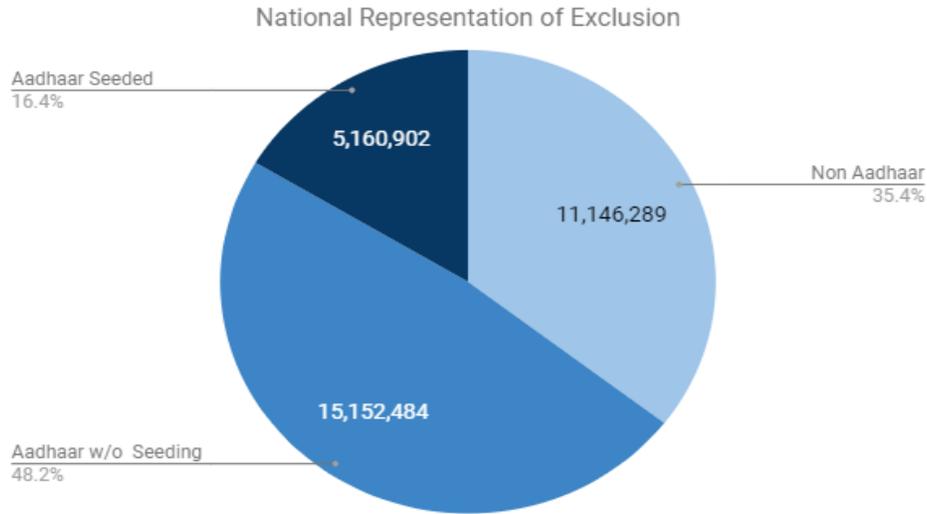
We classify exclusion in two levels: (i) those who do not have Aadhaar and (ii) those who have Aadhaar, but it is not linked with accounts. We call those beneficiaries who have Aadhaar linked accounts as included. The variables which give information about the same are *exclusion 1*, *exclusion 2* and *verified bank account*. Exclusion 1 gives the number of people without any Aadhaar number. Exclusion 2 gives the number of people without account linked Aadhaar number. Verified bank account is the inclusion criteria, it gives the number of Aadhaar linked accounts. We use various proportions of these variables with total beneficiaries across states and across the country.

As per a World Bank report dated Feb 1<sup>st</sup>, 2018, some of the low-income states like Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan and Uttar Pradesh, show slower progress in human development indicators than the rest of the country. These are also the states where share of poor is higher than their share in the total population in the country. The reasons behind the gap in human development of these states with the rest of the country seems to be explained by differences in capacity and efficiency of state level institutions- which basically is governance of the state. Roughly translated, it means that bad governance is the cause of bad human development outcomes. We also use the said world bank report and India Today governance ranking observe if there is some correlation between governance and social security.

We use Visible Infrared Imaging Radiometer Suite (VIIRS) nightlights data to additionally observe any regional patterns that pop out in terms of governance and Aadhaar usage in NSAP. The data is generated by the Earth Observation Group, NOAA National Centres for Environmental Information. VIIRS collects global low light imaging of lights emitting from cities, towns, villages, combustion sources and lit fishing boats. We use the monthly global radiance maps of human settlements with electric lighting at a district level generated from this data.

Nightlights are a strong indicator of economic activity at night. Economic activity at night is possible only if the area has infrastructure facilities. Better infrastructure facilities mean better governance; therefore, we use nightlights as a proxy for governance. For the purpose of the analysis, we classify India into 6 different regions: north, west, central, east, north-east and south. We do this part of the analysis at a district level.

There are total 3.1 crore NSAP beneficiaries in India. Fig 1 shows the distribution of beneficiaries in the above-mentioned categories. Our preliminary observations indicate that almost 35% beneficiaries do not have an Aadhaar number. Out of the remaining beneficiaries, only 16% of all the beneficiaries have an Aadhaar seeded account. This means that the remaining 48% beneficiaries cannot avail Aadhaar linked benefits even though they have Aadhaar cards. In total, there are 2.6 crore individuals at risk of being excluded from NSAP which translates to roughly 2% of the Indian population.



*Fig. 1: Distribution of NSAP beneficiaries into three categories*

## Results

### 1. Magnitude of Exclusion

In the event that Aadhaar is made mandatory for availing benefits in NSAP, almost 2% of the most vulnerable Indian population faces the risk of being excluded. Even amongst these, those who do not have Aadhaar, as measured by exclusion 1 will be the ones who will suffer the most. We find that there are almost 1.1 crore NSAP beneficiaries who do not have Aadhaar. Besides these individuals, there are people who have Aadhaar but have not linked it to their bank accounts which is measured by exclusion 2. There are almost 1.5 crore beneficiaries who risk exclusion because of non Aadhaar seeded account. Apart from these two categories, there are individuals who do not face any risk of inclusion as given by verified bank account.

For the purpose of this test, we define exclusion 1 as proportion of beneficiaries without Aadhaar in each state as compared to total beneficiaries without Aadhaar in India. Similarly, we define exclusion 2 and verified Aadhaar accounts as proportions of variables at the state level with respect to their national total. We plot the charts in figure 2 to observe the distribution of beneficiaries in each category at the state level, The three panels of fig. 2 depict the distribution of exclusion 1, exclusion 2 and verified bank accounts.

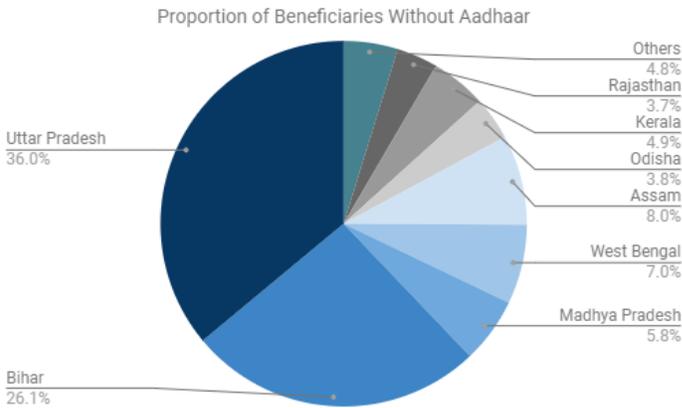


Fig. 2(a): Exclusion 1

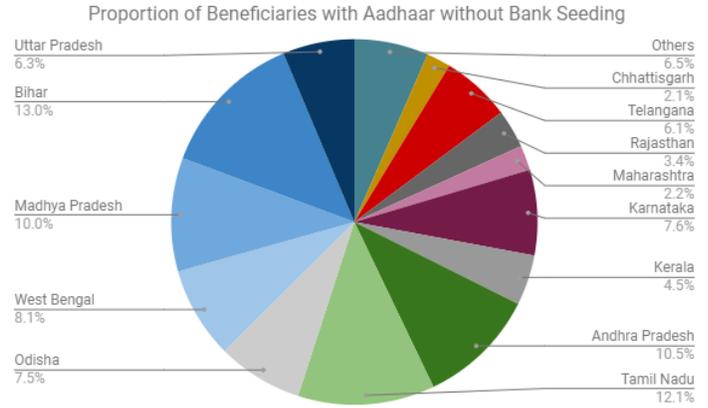


Fig. 2(b): Exclusion 2

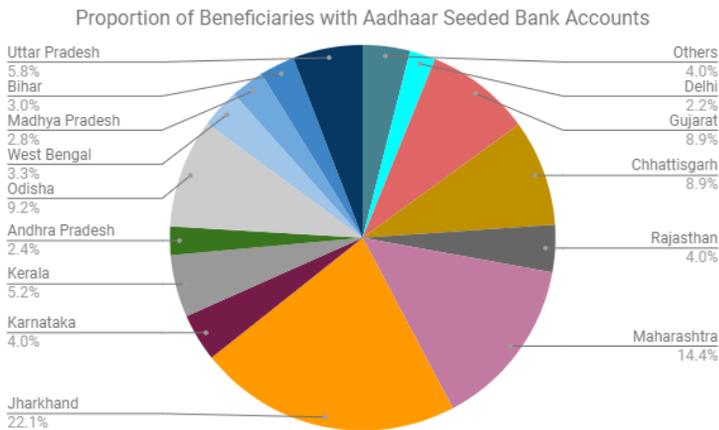


Fig. 2(c): Aadhaar verified accounts

Fig. 2: NSAP beneficiaries in the three categories at the state level. Fig. 2(a) depicts exclusion 1 i.e. proportion of beneficiaries without Aadhaar. Fig. 2(b) depicts exclusion 2 i.e. proportion of beneficiaries without Aadhaar linked accounts. Fig. 2(c) depicts inclusion i.e. proportion of beneficiaries with Aadhaar verified accounts.

## 2. Regional Patterns

As per the recent ranking of Indian states based on governance, published by India Today group, the low-income states are also the ones performing the worst in terms of governance. The states with best governance are four south Indian states, namely: Kerala, Tamil Nadu, and Karnataka, which are also the relatively richer states of India. As the study was conducted on the performance along the lines of essential infrastructure, support to human development, social protection, women and children as well as law and order, it is expected that the better governance states also perform better in terms of social assistance programs.

For the purpose of this test, we define exclusion 1 as proportion of beneficiaries without Aadhaar in each state as compared to total NSAP beneficiaries in the state. Similarly, we define exclusion 2 and verified Aadhaar accounts as proportions of variables at the state level with respect to NSAP beneficiaries in the state.

We observe a surprising pattern here. Upon plotting in graphs it appears that the poor governance are the ones working more actively towards inclusion of the population in social assistance programs. The level of inclusion in these states far ahead of the better governance states. Jharkhand, the state that is pitted as an example of poverty and poor governance has more than 90% NSAP beneficiaries with Aadhaar seeded bank accounts. Only Gujarat and Maharashtra are amongst the richer states with greater than 50% NSAP beneficiaries that have Aadhaar seeded accounts. Remaining states with more than 50% Aadhaar linked NSAP beneficiaries belong to the poor bad governance states. These regional patterns can be observed in Fig. 3.

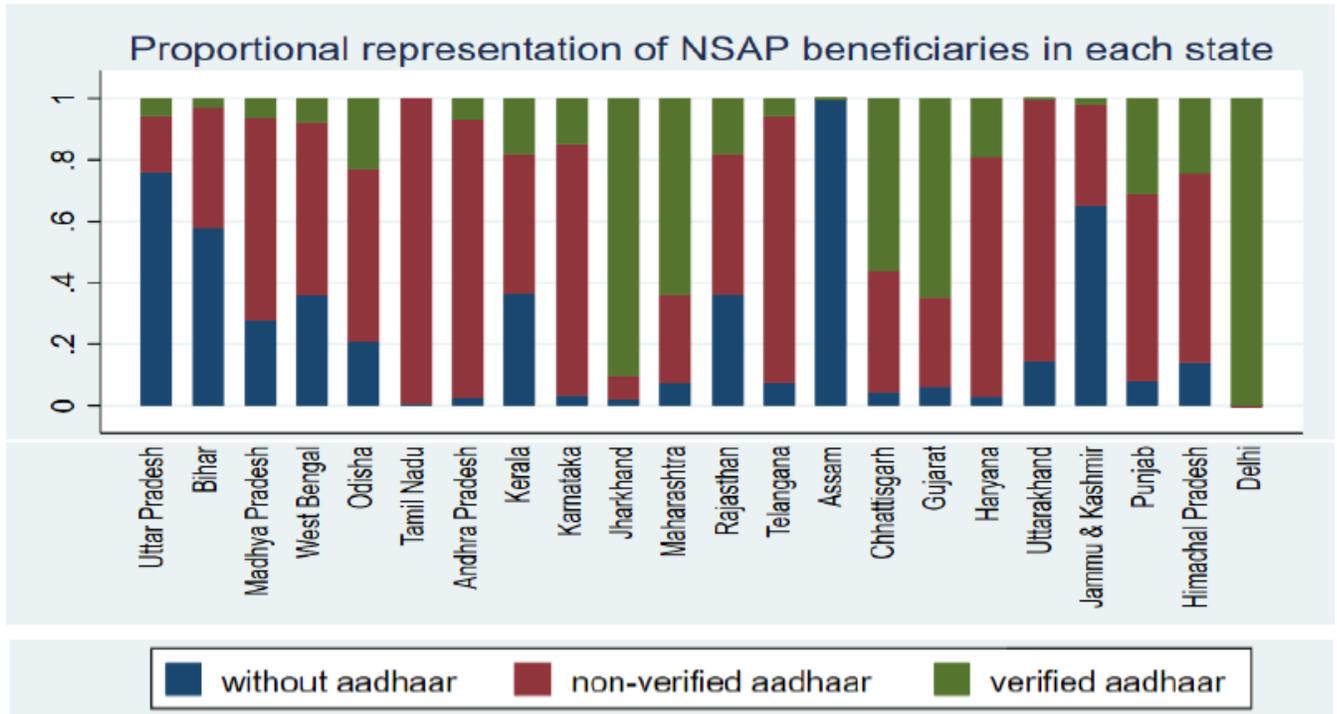


Fig. 3: Regional patterns in distribution of NSAP beneficiaries into three categories

### 3. Nightlights

The VIIRS nightlights data has been used as a proxy for governance to observe if there are any regional patterns with respect to usage of Aadhaar in NSAP. Better governed states are expected to efficiently implement social welfare schemes. As NSAP beneficiaries are some of the most vulnerable people in the society, it is reasonable to assume that areas under good governance will show a higher level of Aadhaar beneficiaries as well as Aadhaar verified bank accounts for smooth transfer of benefits. Our observations show a clear contrast between governance and Aadhaar usage. We do this analysis at a district level.

For the purpose of this test, we define exclusion 1 as proportion of beneficiaries without Aadhaar in each district as compared to total NSAP beneficiaries in the district. Similarly, we define exclusion 2 and verified Aadhaar accounts as proportions of variables at the district level with respect to NSAP beneficiaries in the district.

The analysis is divided into two parts. The first part deals with the spread of luminosity and Aadhaar penetration among beneficiaries. As seen in fig. 4, the good governed states such as Kerala, Tamil Nadu, Karnataka, Telangana and Andhra Pradesh are expectedly clustered near top quartile in Aadhaar penetration along with a variable spread in luminosity. This goes along our hypothesis that better governed states would have a higher Aadhaar penetration.

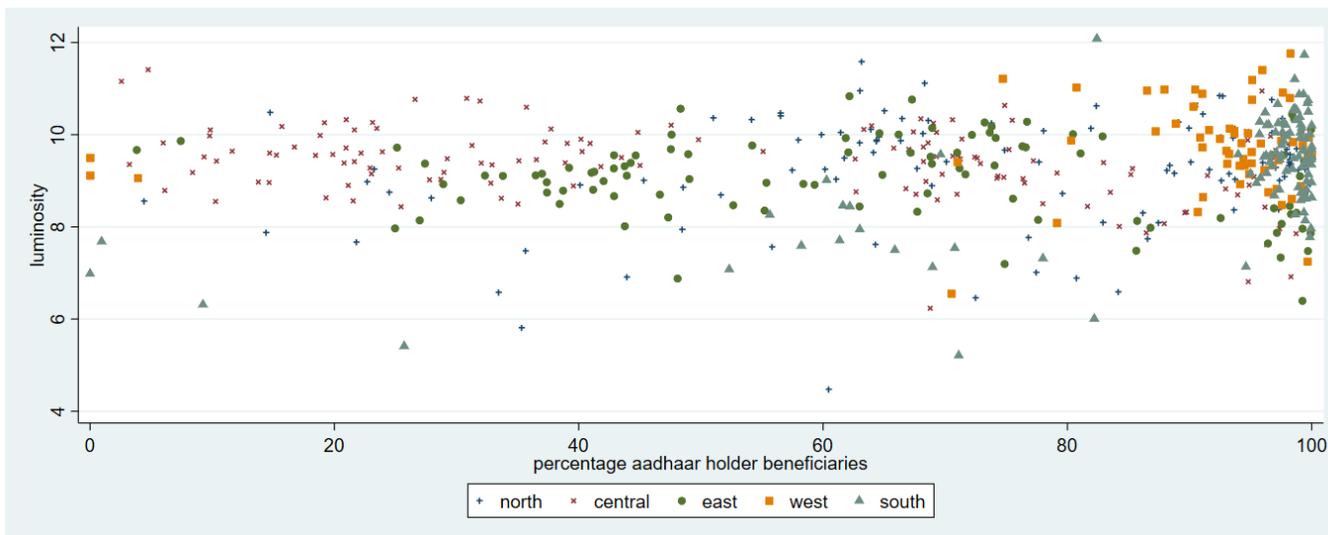


Fig. 4: Distribution of Aadhaar holder NSAP beneficiaries by region

While having an Aadhaar saves beneficiaries from being outright excluded in the event of a mandatory Aadhaar, it will not be enough to receive benefits. To avail benefits directly into their bank accounts, beneficiaries should have an Aadhaar seeded bank account. The correlation of Aadhaar seeded bank accounts and luminosity is shown at fig. 5. The figure is in a complete reversal of the fig. 5. We can observe that the better governed states are now clustered at the lower quartile in Aadhaar seeding. This is surprising results and against our hypothesis.

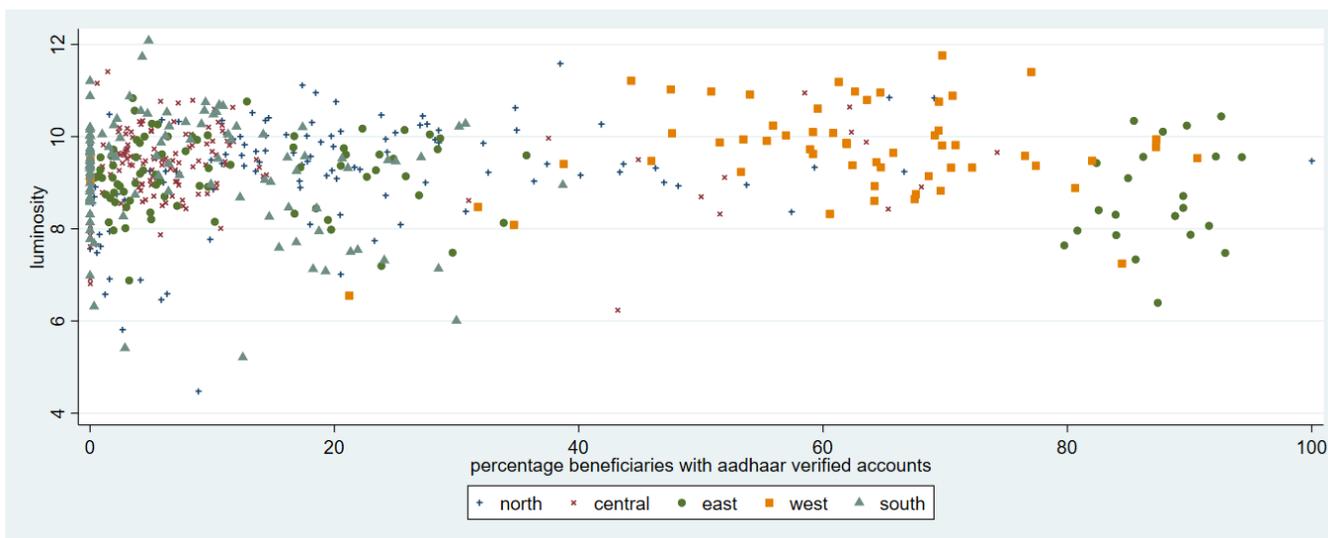


Fig. 5: Distribution of Aadhaar verified account NSAP beneficiaries by region

## Conclusion

The results of our analysis provide unexpected insights into the how Aadhaar is being utilised in NSAP and the risks associated with mandating Aadhaar in NSAP. NSAP provides valuable benefits to people who live below poverty line and are either old, disabled or widowed. In India, around 120 crore Aadhaar numbers have been generated which is more than 95% of the population. Therefore, it is surprising that around 35% or 1.1 crore of beneficiaries in NSAP do not possess an Aadhaar number. If Aadhaar is made mandatory, roughly 2.6 crore are at the risk of losing benefits because they do not possess an Aadhaar number or have not yet linked it to a bank account. This amounts to roughly 2% of the most at-risk population who will lose out on invaluable benefits.

One of the factors associated with the results would be the quality of governance at the state level. Our hypothesis is that the better governed states will be able to provide better implementation of social benefits to the needy. As a proxy for governance, we utilise the nightlights data. Nightlights are a good measure of economic activity in an area. Having a higher economic activity, especially at night provides a good measure of the governance in the area. We equate nightlights and NSAP data at the district level to find interesting correlations.

The states normally associated with better governance such as Kerala, Tamil Nadu and Karnataka, show a higher Aadhaar penetration in NSAP as compared to less efficient governed states like Jharkhand, Odisha and Chhattisgarh. This is in line with our hypothesis that better governance leads to better implementation of social welfare services. The surprising aspect of our analysis is the complete reversal when it comes to Aadhaar seeded bank accounts. In the event of mandatory Aadhaar, benefits would be transferred to the Aadhaar linked bank account of the beneficiary. Our analysis shows that states which are associated with less efficient governance such as Jharkhand, Odisha and Chhattisgarh have a substantially higher number of Aadhaar seeded beneficiaries. Contrastingly, the better governed states of south India have a very low number of beneficiaries with an Aadhaar seeded bank account.

Our aim is to bring awareness about the situation of the most vulnerable section of the society in the event of mandating Aadhaar. The at-risk population of 2.6 crore is not a small number of people in any metric. The people at risk have livelihoods below poverty line with an additional constraint (old age, disabled or widow). We also highlight the unexpected regional patterns in NSAP. Therefore, it is important to consider the situation of the most impacted sections of the society such as NSAP beneficiaries, in any discussion related to the validity, scope or impact of Aadhaar.

### **About DIRI**

This data brief was prepared by the Digital Identity Research Initiative (DIRI), which was launched in July 2017 with funding from Omidyar Network. DIRI is aimed at producing high-quality and timely research on digital identity, engaging relevant stakeholders, and building a global research ecosystem for digital identity. In addition to such briefs, DIRI's activities include [Research Fellowships](#), [Summer Fellowships](#), and the International Conference on Digital Identity (11-13 July 2018). For more information, visit <http://www.isb.edu/digital-identity-research-initiative>

### **Digital Identity Research Initiative (DIRI)**

Indian School of Business, Gachibowli,  
Hyderabad – 500111; Phone: 040-23187264  
E-mail: [diri@isb.edu](mailto:diri@isb.edu)