Identity for Inclusion
Moving beyond Aadhaar

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State intervention in India to expand financial inclusion to rural areas has had an interesting history. It has moved away from building state-led institutions to setting policy that pushed financial inclusion through non-state agencies as well. While identity, de-duplication, and authentication were issues that affected the pace of financial inclusion, they were not the most significant problems to be fixed. By allowing the Aadhaar project to set the discourse on financial inclusion, the State has moved away from the Reserve Bank of India's definition of comprehensive and meaningful financial inclusion towards a model that facilitates transactional aspects, with significant costs added at the intermediary levels.

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Institutional intervention by the State in India has always had a pattern. The role of the State was in the arena of "welfare" – dispensation of benefits, subsidies, providing access to credit, etc. In each of these interventions, while the issue of classification (poor versus non-poor, upper versus lower castes, tribal versus non-tribal and so on) was important, the issue of identity or authentication of identity was not as critical to the design of the welfare scheme. Each was largely a stand-alone intervention. The technology afforded by the times did not accord the luxury of what is today known as "convergence".

In this paper, we focus on financial services instituted by the state for the poor. We review the process of planning and institutional intervention, focusing on the initiatives after Independence. We examine the approach of the state in the area of poverty and development. We find that the theme of poverty and development was closely associated with rural areas and agriculture. While poverty and the inclusion agendas had to be beyond these classifications, the data was ordered as per this classification.

The decade of the 1950s only recognised that there was a large scale exclusion of the "poor". The state evolved policies to actively intervene in this area. An examination of the data in Table 1 (p 149) showed that only 7.3% of cultivator borrowings were from the institutional sources. We fall into the same fallacy as the state – when we use poor and cultivators interchangeably. But it was important to recognise that the policy discourse has used this interchangeably. The data was also ordered according to geographical consideration (rural versus urban) and occupational considerations (agriculture, micro, small and medium enterprises (MSME), and other sectors).

The state evolved its first intervention after the report of the All India Rural Credit Survey Committee (set up in 1951, reported in 1954). While questions were raised about methodology and representativeness of the report (Thorner 1960), this was the authoritative data of that era. The policy interventions of the decade were based on the recommendations of the committee. The committee recommended an integrated approach to cooperative credit and emphasised the need for viable credit cooperative societies by expanding their area of operation, encouraging rural savings and diversifying business. The committee recommended for government participation in the share capital of cooperatives (RBI 1954).

In addition to involvement in the cooperatives, the report recommended that the state compulsorily amalgamate the

Imperial Bank of India and major state associated banks into what was to eventually become the State Bank of India (SBI). This was because the committee had correctly identified that cooperatives provided the last mile solution; the backbone for access to financial services had to be through an efficient banking system. This was important for "cheap and efficient remittance of cash" (RBI 2008) (Table 1).

Table 1: Share of Debt in Cultivator Households from Different Sources

Sources of Credit	1951	1961	1971	1981	1991	2002
Institutional	7.3	18.7	31.7	63.2	66.3	61.1
Cooperatives societies/banks, etc	3.3	2.6	22.0	29.8	30.0	30.2
Commercial banks	0.9	0.6	2.4	28.8	35.2	26.3
Non-institutional	92.7	81.3	66.3	36.8	30.6	38.9
Moneylenders	69.7	49.2	36.1	16.1	17.5	26.8
Unspecified	–	–	–	–	3.1	–
Total	100.0	100.0	100.0	100.0	100.0	100.0

Debt refers to outstanding cash dues.
Source: Reserve Bank of India (RBI), *All-India Rural Credit Survey, 1951-52*; RBI, *All-India Rural Debt and Investment Survey, 1961-62* and NSSO, *All-India Debt Investment Surveys, 1971-72, 1981-82, 1991-92* and *2003*.

In the first decade the action was largely in the cooperative sector for outreach. This was backed by the nationalisation of Imperial Bank of India as SBI in 1955 and later nationalisation of the subsidiary banks in 1960. These together represented a third of the Indian banking sector (RBI 2008). This strategy had an impact as transactions moved from the informal sector to the formal as seen in the changed shares in 1961 and 1971.

Table 2: Branch Expansion of Commercial Banks

End-December	Rural	Semi-Urban	Urban/Metropolitan	Total
1	2	3	4	5
1952	540 (13.3)	1,942 (47.8)	1,451 (35.7)	4,061#
1960	831 (16.5)	2,512 (50.0)	1,633 (33.5)	5,026
1965	801 (13.1)	2,836 (46.2)	2,354 (38.4)	6,133*
1967	1,247 (17.9)	3,022 (43.3)	2,716 (38.9)	6,985

#: 128 branches were unclassified.
*: 142 branches were unclassified.
Figures in parentheses are percentage to total.
Source: Statistical Abstract Relating to Banks in India, various issues.

While there was overall progress the gap between the informal and the formal sector was still formidable. The number of branches was increasing, but the commercial banks were not gaining speed in providing assistance to the poor, agriculturalists and rural areas. Even as the bank network kept expanding, the skew in the outlets in favour of urban and metropolitan areas continued (Table 2).

In 1969, the State moved its thrust towards mainstream banks as an additional player in the market by nationalising all the major commercial banks. It is said that the then Prime Minister Indira Gandhi in a broadcast to the nation indicated that the purpose of the bank nationalisation was to expand bank credit to priority areas, particularly adequate credit to agriculture, small industry and exports (Singh undated). Having gained control over the banks and setting up micro targets, the state made another intervention in 1977 by "incentivising" banks with a licence to open a branch in urban/metropolitan area for every four branches opened in unbanked locations (RBI 2008). Simultaneously, the banking system was directed to earmark credit to certain sections. This was first formalised in 1972 and saw multiple revisions. By 1985 not only were the priority sector areas well defined, but also sub-targets for certain sectors, including agriculture were set (RBI 2012).

This intervention was followed by the setting up of regional rural banks (RRB) in the mid-1970s based on a report submitted by a working group headed by M Narasimham. The institutional interventions in the cooperative and the banking sector were followed up with policy interventions. However, the state was seeking more institutional interventions for making banking (particularly credit facilities) accessible to those who were excluded. The RRBs came into being with greater stringency in deployment of credit (Misra 2006). It appeared to have had the desired impact in moving transactions and indebtedness from the informal sources towards formal ones.

These interventions through partnering cooperatives, nationalising banks and setting up RRBs worked because of the larger ecosystem which was able to absorb the increased availability of credit productively. The green revolution and massive irrigation projects of the first few plan periods created such an ecosystem. The focus on poverty translated to a focus on small and marginal farmers in the agricultural sector and also an associated attention towards self-employment credit under the Integrated Rural Development Programme (IRDP). The reversal of this direction of the formal sector, losing to the informal sector, happened in the decade ending 2001-02 (Table 1). While the relative share of banks remained flat, the relative share of indebtedness to cooperatives significantly fell. Even though the State set up the Vaidyanathan Committee for reform and recapitalisation of the cooperatives in 2004, and accepted the recommendations soon after the submission of the report (Chidambaram 2005), the spirit of the recommendations was violated when the State announced a waiver of farm loans (Chidambaram 2005). From the 2000s there was a shift in the approach of the State. It moved away from state led institutional intervention (of creating new and more institutions) to the use of policy instrumentality to further the agenda of inclusion.

There was no significant institutional intervention led by the State after 1982 when the National Bank for Agriculture and Rural Development (NABARD) was set up. The institutional interventions in banking were in opening the banking sector to new private banks (1993). This was followed by opening up of local area banks (LAB) for which guidelines were issued in 1996. Five banks were licensed and started operations between 1999 and 2001 of which four survived. This experiment never assumed the scale it was expected to. All these policy initiatives had minimal bearing on the inclusion agenda.

Era of Policy Interventions

On the inclusion agenda, state intervention through policy instrumentality occurred subtly in three phases. Some of the policy interventions were more in response to the initiatives in the field rather than conscious efforts. The evolution of policymaking showed how the focus shifted from institutions to addressing the individual client groups. We have traced three phases of policymaking.

In late 1980, some non-governmental organisations (NGOs) started working on the concept of women's self-help groups

(SHG). This was significant because for the first time an intervention on financial inclusion was taken up outside of the State. This initiative addressed multiple agendas of the state as well. The NGOs worked in collaboration with the State and this resulted in the SHG-bank linkage programme. This programme also addressed the important issue of identity differently and therefore was important in the context of the present paper.

The SHG-bank linkage programme rightly (but subconsciously) identified the constraints in inclusion of the poor in the formal banking sector. The formal sector was fundamentally different from the informal sector in identifying the client. While the informal sector used personal relationships, kinships and social linkages to identify a client, the formal sector had to finally commit the identity of the client to paper. This information had to be codified so that the retrieval need not be person (employee) specific, but driven by the system. This translated into a need to have photographs, signatures and inter se agreements. SHGs helped in leveraging the local knowledge for deciding on intra-group transactions. They provided a collective identity and economies of aggregation to the banking system. Starting with savings within the group, they ensured a documented trail of transactions that helped the bank to link them. This intervention was appropriated by the State through NABARD for scaling up through policy measures.

The second phase of using the policy instrumentality started in the late 1990s when some NGOs moved to another model of microfinance. This movement to the alternative model was sparked by the frustration that the SHG-bank linkage model was not scaling fast enough (the number of people not covered were large). The *grameen* model of Bangladesh demonstrated an alternative as a standardised and scalable model. The grameen groups were different from SHGs. They started with a loan; the loan amounts and instalments were standardised and there was zero tolerance for default. This programme rode on a concept of coercive trust (Sriram 2005). Here default was not tolerated, and assessment effectively was irrelevant. The model proved to be easily scalable, extremely profitable and attracted the attention of a large number of market players (Sriram 2010). The activity that was not seen as profitable by the private sector had turned around and attracted significant investments based on profitability. The response of the state was again through policy push. While the state did not acknowledge the significance of microfinance institutions (MFI) by providing them a separate legislative frame, it made pronouncements that helped these institutions grow.

For MFIs, the issue of identity was not germane. The group mechanism and the use of social collaterals made the establishment of identity incidental and not primary to the transaction. When MFIs had an unbridled growth (encouraged by the State) and started harming some members in the form of overindebtedness and pressures on payment, the state intervened. The discourse of the state was of approval and encouragement of this private sector initiative in formalising informal transactions.

The third phase overlapped with the second phase, but was driven more aggressively after the Andhra Pradesh Microfinance Crisis on 2010. The AP Microfinance Crisis was in brief an overreach of the MFIs that led to multiple lending and repayment pressures with the state government passing an ordinance (later converted into a law) restraining MFIs from undertaking operations without the explicit permission of the government (Sriram 2012). For the first time the policy discourse towards MFIs became tentative. The Reserve Bank of India (RBI) set up a committee (Malegam Committee) to look into the regulation of MFIs. It accepted the recommendations and made modifications in the regulatory framework for MFIs that were registered as non-banking financial companies (NBFC) with RBI (2011).

While the MFIs went through policy and regulatory churn, the state and the RBI championed the agenda of inclusion through formal banks. The policy discourse had a shift from encouraging and nudging private and third sector initiatives to actively promoting the mainstream banks to occupy the inclusion space.

In the first phase of agriculture-focused inclusion, driven by the cooperatives and banks, the ecosystem was provided by the green revolution. In the phase of client-based inclusion, it was driven by technology. Multiple milestones were achieved making financial inclusion technically possible with policy pushes rather than with institutional intervention. The following points were important:

- Aggressive targets on computerisation both for public sector banks and RRBs ensured that all banks were on an interoperable core banking platform. Any banking outlet was in a position to link with any other banking outlet – opening up possibilities in remittances;
- A significant part of the transactional banking and reconciliations of small ticket transactions were possible with the introduction of technology;
- Introduction of automated teller machines (ATM), internet and mobile banking would potentially take a large part of the banking on technology route.
- With centralised databases and real time updates it was possible to outsource small ticket transactions through agents, without much loss of control on the data.

Aadhaar, the identity scheme being rolled out by the Unique Identification Authority of India (UIDAI), was one manifestation of the multiple technical fixes that the state had offered in the inclusion agenda.

The Importance of Identity

Unlike the informal systems, formal systems depended on a codified knowledge of the customer. A village moneylender could carry on with minimal documentation as s/he was a part of the local milieu and knew the ecosystem. Reddy (2007), for instance, found that the relationship and consequent transactions with the moneylender was based on kinship relations, which gave the lender a special edge beyond the formal systems. This relationship was unequal, the transactions opaque and the scope for rent seeking high. The formal systems operated on the basis of codified knowledge – the relationship was transaction oriented, and the systems able to narrate the history of the relationship between the provider and the user

of services. Even here the relationship could be unequal because of procedures and the use of technology which may have led to rent seeking. The idea of codification came largely from the way the provider of financial services was organised. The provider would be represented by staff that need not necessarily know the customer in person, and had to depend on the transactions and knowledge available on the records.

While the functional use of identity was to be able to have an ongoing transactional relationship with the formal institution, it manifested itself into an issue much beyond just the transactional requirement between the provider and the provided. Before we discuss those issues of identity, it is to be acknowledged that the moment a customer dealt with a formal institution, it was imperative that the identity markers had to be established. These markers could be a photograph, a specimen signature and an address – a mechanism through which recourse was available.

However, when the state offered several of its schemes based on "inclusion" of certain categories of people (poor, underprivileged, women, households belonging to certain castes, etc) the imperative was not only to establish the identity, but also classification into an eligible category. Here identity assumed larger significance because a misclassification would deny or confer benefits on someone to whom it was not intended. Therefore, the need for identification was closely associated with dispensation of state patronage.

Apart from dispensing benefits, another need for establishing identity emanated out of revenue and security concerns. The traceability of financial transactions routed through the formal financial systems were largely focused on the amounts, but it increasingly felt that the identity of the persons/institutions involved were also to be traced. This was to ensure that there were no money laundering activities or activities that eventually posed a threat to the security of the country or transactions that resulted in a leakage of revenue to the exchequer through evasion of taxes. This need was based more on surveillance than on business considerations.

Over a period of time, the need to obtain the identity of a customer for transactional purposes (which the banking sector has been doing for decades) moved to mandatory recording of identity – through a list of acceptable documents. This codification of what entails an acceptable identity marker for the purposes of security and detection of frauds are of recent vintage. The discourse on know your customer (KYC) norms was located in the context of suspicious transactions, terrorism and money laundering and not in the context of making the formal institutions accessible to the excluded.

The circulars of the RBI have drawn a distinction based on the concept of materiality and required a lower level of KYC norms for small accounts. Small (or no frills accounts) were defined as accounts having transactions and balances lower than a certain threshold. These accounts could have the concept of an introducer who helped in establishing the identity of the excluded. The requirement of KYC had two elements to it.

The first was a simpler element of obtaining the identity of the customer. The Aadhaar project claimed to provide verification of biometrics at every instance of the transaction. The question that could be legitimately raised was whether this conceptually weighed the risks (of alternate means of verification) with the costs. With the current practice, the banks established identity of the customers at the time of opening the account (and periodically in cases of certain types of customers), but did not use it for transactions. For transactions, surrogates of identity that were used: signatures in case of cheques and paper-based transactions, personal identification numbers (PIN) in case of ATM and debit card transactions, passwords in case of internet transactions. In some cases the banks also resorted to using biometrics, but without recourse to de-duplication. All these were accepted surrogates of identity for small and large transactions. In some of these transactions where the physical presence of the person was not verifiable, the concept of a two factor authentication was resorted to, by requiring the user to register one more independent device (such as a mobile number) to which a short message and a one-time password was pushed. This was to be used as a second factor of authentication. If the technical aspect worked, then the value addition of Aadhaar was in ensuring de-duplication at the instance of verification. The discourse of KYC guidelines indicated that the Aadhaar type of verification and traceability should have been necessary for large and suspicious transactions where there was a heightened requirement of identity, not for the small transactions, where the identity requirement was in any case relaxed on the basis of the materiality.

The second aspect of KYC was about the residential address. In this, Aadhaar offered no superior solution than what existed. A recent report of the Committee on Comprehensive Financial Services for Small Business and Low Income Households (Nachiket Mor Committee) had suggested that the banks should insist on one national address and not worry about verifying the current address of the customer (RBI 2014).

The Discourse of Inclusion

As we review the intervention of the state in the broad agenda of inclusion, we find a significant change in thrust. As we saw earlier in this paper, till the mid-1980s the approach of the state was more to look at institutional and policy interventions that directly addressed the flow of credit and other financial services to the rural areas, agriculture and the poor. However, with the advent of microfinance, the State has largely confined itself to policy interventions. The UIDAI was set up to achieve multiple objectives, but being in the sidelines, the project has significantly tried to alter the discourse of inclusion.

Examining the issue of identity, we could summarise the initiatives in the following brief points:

(a) Identity was a requirement for transacting with formal institutions. They needed codified, traceable and verifiable identity of customers. Recording of identity was usually done at the time of enrolment as a one-time event.

(b) The transactions were carried out with identity surrogates like signature, PIN and passwords. Even when biometrics like fingerprints were used mostly in the absence of signature verification possibility, they were usually referred through a local database.

(c) The concerns about establishing identity came largely from the angle of security, suspicious transactions and money laundering. The requirements for "small" accounts were designed so as to ensure that the stringent security requirements did not end in excluding a large part of the poor who deserved to come into the banking system.

Unlike in the past, the RBI had a clear definition of financial inclusion. This has been repeatedly articulated by Chakrabarty (2011):

> Financial Inclusion is the process of ensuring access to appropriate financial products and services needed by all sections of the society in general, and vulnerable groups such as weaker sections and low income groups in particular, at an affordable cost in a fair and transparent manner by regulated mainstream institutional players.

Chakrabarty (2011a) further elaborated the concept of inclusion by articulating the products that should be made available in order to achieve inclusion. These are availability of banking services means availability of a minimum of four products:

- A basic no-frills banking account, with overdraft facility.
- A remittance product for electronic benefit transfer and other remittances.
- A pure savings product, ideally a recurring or a variable recurring deposit.
- Entrepreneurial credit such as general credit card, "Kisan" credit card, etc.

The above definition made it clear that the RBI was looking at a comprehensive coverage of financial services to the poor. In several instances the RBI has said that these services have to be provided by mainstream banks and in a manner that made business sense. To this effect, RBI took several initiatives in providing autonomy to banks on their internal operations, while holding them accountable to the overall parameters of inclusion. The banks were asked to submit a board approved financial inclusion plan for three years, with a strategy detailing the mechanisms to cover unbanked villages with population of more than 2,000 people. The pricing of banks products have been left to the individual boards after the new base rate system kicked in. While RBI stipulated that a quarter of the new branches had to be opened in unbanked locations, the branch licensing policy was eased.

The banking system collected information about the customer as per the KYC norms laid by RBI. This was a one-time exercise, unless there was a revision of the KYC norms that needed an updation in the database. Every time there was a change in the data, it needed to be authenticated. While the customer had portability of a given account across the branches of the bank, any change in address was to be authenticated afresh. Once this was done, the banks usually used their records for authentication of transactions.

While the same protocol was usually observed for all customers, a large chunk of the new customers of the Indian banking system who were enrolled under the financial inclusion plans operated their accounts through the business correspondent (BC) or if it were a corporate BC, through its agent. The banking through a BC did not have standard protocols. Many banks had their own models. However we identify some of the links and examine the alternate mechanisms of transactions.

Typically the customer enrolled through a BC is called an FI customer. Most banks capture the fingerprints of such customers, and store it on their database. There is no process of de-duplication of biometrics at the time of enrolment. Every time a transaction occurred, the fingerprint is used as a mechanism for customer authentication, much the way the signature/PIN/password was used. Biometrics is seen as a convenient method to authenticate off-site transactions, and are a surrogate for the signature method. Usually, the authentication database is either with the corporate BC or with the bank. Even transactions carried out on a day to day basis had two models. One hit the bank server where debits and credits were instantaneously posted. Another model was where the transaction hit the BC's database and a consolidated batch was processed with the bank server at the end of the day. In most cases the customers are given smart cards. In almost all the cases the customers are required to compulsorily deal with the BC and their cards were not interoperable with the bank.

The system adhered to the standards of identity and residence proof as laid out by the KYC norms. If the customer of a bank is also identified for electronic benefit transfer (EBT) payments or Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) payments, the state makes these payments directly to the accounts of the recipients. The beneficiaries could then withdraw their eligible amounts using fingerprint authentication through the BC.

The Additionality of Aadhaar

While the RBI and others involved in the financial inclusion agenda were looking at Aadhaar as a facilitative tool to help open accounts, UIDAI tried to change the discourse of inclusion by making the Aadhaar project the centrepiece. Based on the documents put up in the UIDAI website and the various presentations made by functionaries of UIDAI there were three themes that emerged predominantly. Apart from verification of identity and de-duplication, UIDAI was

- Negotiating with the banks/RBI on opening accounts using Aadhaar as the KYC requirement. UIDAI had drawn a memorandum of understanding where the banks would in the first instance work as registrars for Aadhaar enrolment, and then would use the Aadhaar platform to carry out transactions. The Aadhaar enrolment forms had the option of linking the Aadhaar number (when issued) to a specific bank account, or if the account was not there, requesting for a bank account based on the Aadhaar number. UIDAI was trying to move beyond identity authentication – to opening accounts.
- UIDAI did not define financial inclusion in the same spirit as the RBI. While RBI identified four essential financial services to be included in the definition of inclusion, UIDAI singled out remittances and payments for its engagement.
- Focusing on the payments led it to engage with the benefit transfer programme. The predominant themes of engagement for UIDAI were payment of wages for the works related to the MGNREGA; cash transfers (pensions and scholarships) and a

futuristic engagement with EBT when the subsidies – particularly to fertiliser and fuel – would be monetised.

To this end UIDAI was engaged with the payment architecture. The following elements were to be considered while discussing the payment architecture:

- All payments originated from the payer (government, in case of EBTs). This was through a source account that the payer maintained with a particular bank.
- From this bank it moved to the bank where the beneficiary had an account. If it was a bank that was different from the payer's, there were inter-bank charges.

Traditionally, this process happened through the clearing house, but through technology and electronic gateways, the amounts moved seamlessly. However it was the next part of the transaction that was more difficult and crucial. This involved physically transferring the amounts from the account to the hands of the beneficiary in the form of cash. This moved in three different routes:

- Withdrawal at the bank counter
- Withdrawals at the ATM. Bank ATMs were fully interoperable, and the withdrawal could happen at any ATM. RBI regulations stipulated that up to five transactions could be done at an ATM not belonging to the host bank of the customer, free of charge. Transactions beyond the five were chargeable on a per transaction basis. While even for the first five transactions there was a cost, this was settled between the banks. The interbank charges were around Rs 20 per transaction, and it was extremely expensive if the transaction ticket sizes were small.
- Withdrawal through the BC or BC agent: the agent that was accessible to the customer had to represent the bank in which the beneficiary had the account. While the UIDAI advocated interoperability of BCs as well, there was resistance because of costs and authentication.

The issue of authentication has become crucial in the third type of transaction where the customer got cash off-site from an agent appointed by the bank. Both the banks and UIDAI were advocating this outreach model as an important tool for inclusion. The customer of a given BC is not even interoperable with the host bank thereby ensuring that the customer is excluded from mainstream banking. It would be in order to assume this is a temporary phenomenon and eventually the customers would have facilities that are fully inter-operable across the banking system over time.

The Complexity of the Last Mile Problem

A business case for inclusive banking could be made only if the risk adjusted returns from this portfolio was to be compelling. If the business case was not taken care of, then the initiatives would not assume levels of scale and would merely remain transactional. The typical customer who needed "inclusion" was not an attractive customer for several reasons. While these reasons emanate out of pure economic arguments, unless we consider these arguments it is difficult to suggest any public policy intervention.

From the perspective of profitable banking system the following are the main points apropos the above:

- Acquiring a customer was expensive. The customer acquisition process went through multiple iterations because of inadequate paper and awareness. Verification of the documents was complex. Aadhaar had the potential to fix a part of the problem. By permitting the banks to be registrars and use that occasion to acquire customers, Aadhaar was defraying a part of the customer acquisition costs.
- The customers had small ticket transactions resulting in a high cost per transaction. In addition the customers were unlettered – taking more time at the counter. Both these issues could be handled by technology. Complete computerisation of banks had the technological architecture for transaction processing. The ticket size of transactions could almost be rendered irrelevant. Similarly, the lack of literacy could be handled through technological fixes like fingerprint verification. However, most of these fixes were in dispensing cash where the denomination and the channel through which the customer approached the bank were under the control of the bank. However, the problem was complex when cash was to be accepted. The technological fixes reduced the burden on transaction recording and trail, but did not reduce the burden of cash logistics at the last mile.
- The customers did not leave any "float" in the account and usually cashed out completely. These accounts were not a source of low cost funds. If, over a period of time, there was a greater chance of retaining "float" and reducing the movement of cash within the system, this market would be attractive.
- The pricing of the products was controlled. While the RBI decontrolled the rates for all loans and the banks could technically charge a risk and channel adjusted rate, there was a glass ceiling on how much could be charged. While the differential pricing could and was being used for loan products, it became impossible to pay lesser on deposits because the transaction costs were higher. Therefore all the incremental costs had to be loaded on to the loan products. The deposit products could then ride on the channel. This made the business case even more difficult.

The business case of financial inclusion show that the problems are complex; the last mile problem could not be addressed purely by technology; and there was the complexity of cash logistics. The technological fixes reduced the transaction capture, recording and reconciliation costs and the communication costs.

As has been evident, there were significant pipeline costs involved in the transactions between the bank and the customer. While Aadhaar reduced the customer acquisition costs by providing a de-duplicated identity, its enthusiasm to move beyond identity verification into the arena of transaction authentication added a layer of costs for every transaction. This is recognised by the UIDAI (2010):

> Eventually, indirectly, a customer always bears all the costs. A seemingly innocuous payment is actually a complex operation. For cash payments, costs include cash management, security, and foregone interest, among others. Electronic payments are run by a complex network of service and infrastructure providers, each of which provides value and adds to the transactions cost.

The customer's identity (signature, PIN, fingerprints or password) was being done locally or through a related bank. The

inter-bank charges were for the entirety of the transaction: involving authentication/verification and the dispensing of cash, when the transaction was OFF-US (transactions physically handled by bank A, while the account holder belongs to bank X). The ON-US transactions (between customer and the same bank) were fully internally authenticated. Maintaining the authentication database outside of the bank's system added one layer of cost of the data packets moving to the server and returning. It was also not clear as to how the liabilities arising out of authentication of false positives and false negatives would be handled. Adding transaction costs by another agency between the bank and the customer would make the cause of inclusion more expensive.

The financial inclusion policy focused on providing physical access by asking banks to open branches in unbanked locations, ultra small branches, customer service points, etc. While physical access is an important aspect of providing access to financial services, it has not been sufficient. The extent of exclusion in the urban areas was a good indicator as to why providing physical access does not solve the problem of inclusion. The cause of inclusion had to be addressed by design of products, pricing strategy and convenience.

While Aadhaar seemed to solve the identity and de-duplication problem, it does not significantly address the last mile delivery of comprehensive financial services. For instance, UIDAI has been talking about micro ATMs (ibid). However on perusal of the documents put out by the UIDAI, the micro ATMs were neither machines nor automatic. They were designed in order to have a human interface, with UIDAI providing the authentication service and the BC having an authentication device and working as a teller.

The task force on Aadhaar-Enabled Unified Payment Infrastructure (GOI 2012) had recommended "a payment of a last-mile transaction processing fee of 3.14% with a cap of Rs 20 per transaction". This rate was benchmarked against commissions on money order and commissions paid to mobile operators for top-up coupons. However, if this were to be benchmarked against the inter-bank charges for use of ATMs between banks (where there is no human interface) we would find that they are significantly higher and deal with larger amounts with minimal transit and other risks.

Till such time, cash happened to be an integral part of the transactions, it would be difficult to pull the inclusion model off. The two hopes on which a big breakthrough in financial inclusion could happen were on reduced usage of cash and settlement of debits and credits on technology enabled machines – cards or mobiles. This could also happen with a large amount of transactions moving in from the informal sector to the formal sector with an equally attractive pricing opportunity.

The microfinance experience in the country showed that this was possible. However, most of the success stories of financial inclusion had to do with cracking the logistics, aggregation of transactions, usage of social collaterals and surrogates for risk coverage and regular follow-ups. None of these hinged on the availability of authentication technology for getting the customers into the mainstream market based institutions. The Aadhaar project has caused enough disruption in this arena by not only changing the discourse from inclusion to "payments" and from transactions to "weeding out petty corruption". It is time that we put the agenda of comprehensive financial inclusion on track and move away from the distraction of identity, opening accounts and payments.

Conclusions

Based on the arguments above, it seems to be clear that while identity, de-duplication, and authentication were some of the issues that have affected the pace of financial inclusion, it was not the most significant problem to be fixed. By allowing Aadhaar to set the discourse of financial inclusion, the state has moved away from the RBI's definition of comprehensive and meaningful financial inclusion towards a model that facilitates transactional aspects, with significant costs added at the intermediary levels. It is important to recognise that there are larger issues of the last-mile cash logistics, the diversity of products that should be available to the customer and profitability for the banks. We are short on big ideas at this time.

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