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Strategy for Financial Inclusion of Informal Economy Workers

Seema Sharma

Arnab Bose

Himanshu Shekhar

Rohit Pathania

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Abstract

Access to finance and financial inclusion has been identified as a key enabler in the modern society. It provides for basic economic security of the family and is instrumental in preventing families from falling back into poverty. The jan-dhan account in India has been a key milestone in this regard, providing access to every family virtually in the country with a formal bank account. But the bank account can only be the first step as financial inclusion in true sense would mean access to various financial schemes and services like credit and insurance, which remain the most crucial for the intended outcomes. Informality of jobs with non-regular un-recorded income becomes the biggest challenge for financial institutions to provide these services to a large section of the society. The informality of jobs may take various shapes and forms. Through this paper we identify the local static informal service providers which have been with any local community for more than two years across India or other emerging economies but may not have enough ‘formality’ to access the financial services. In this paper we will discuss the reasons for such exclusion and a strategy involving a socio-technical transition which can make the intended transformation to financial inclusion of the static workers in the informal economy.

Key words: *Financial Inclusion, Informal workers, Street vendors, Urban Informal sector*

JEL classification: *J46, Informal Labor Markets*

Author’s email: *seema.sharma.phd@gmail.com; sirbose@gmail.com;
goldhimanshu@gmail.com; rohit.pathania@gmail.com*

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Abbreviations

MUDRA	Micro Units Development & Refinance Agency
NCR	National Capital Regional
RWA	Resident Welfare Association
SDG	Sustainable Development Goals

Strategy for Financial Inclusion of Informal Economy Workers

Seema Sharma^{*}, Arnab Bose[#], Himanshu Shekhar[¥], Rohit Pathania⁺

1. Introduction

Access to modern money is associated with the quintessential wellbeing in the modern world. Financial inclusion is critical as increasing the poor's access to financial services is often considered as an effective tool that can help reduce poverty and lower income inequality (Park and Mercado, 2018). While the definition of financial inclusion may vary (Park and Mercado, 2018), it is accepted by several authors that access to the various services and instruments such as saving, credit, pensions and insurance beyond the financial transactions is essential social support for an individual, leading to multiple transformative impacts on lives (Shirazi, Javed, and Ashraf, 2018) (Zhu and Walker, 2018) (Smyzcek and Matysiewicz, 2014) (Gitaharie, Soelistianingsih and Djutaharta, 2018). The focus on financial inclusion cuts across the various goals set under the Sustainable Development Goals – the United Nations Capital Development Fund (UNCDF) notes how the financial inclusion features prominently as an enabler of eight of the seventeen development goals (UNCDF, 2018), including

- Poverty eradication;
- Ending hunger by achieving food security and promoting sustainable agriculture;
- Health and well-being;
- Gender equality and economic empowerment of women;
- Economic growth and jobs;
- Supporting industry, innovation, and infrastructure;
- Reducing inequality; and
- Strengthening the means of implementation by encouraging greater savings for investment and consumption.

Even the International Labour Organization (ILO) has recognized the role of providing inclusive financial services to ensure social security, which it identifies as a human right aimed towards reducing and preventing poverty and vulnerability throughout the life cycle (Bhandari, 2018).

* Seema Sharma : Assistant Professor, University of Delhi, India; External Consultant ICRIER and Founder Resilience Relations; seema.sharma.phd@gmail.com

Arnab Bose: Fellow and Assistant Professor, O.P. Jindal Global University, Haryana, India; External Consultant ICRIER and Co-founder Resilience Relations; sirbose@gmail.com

¥ Himanshu Shekhar: Consultant, ICRIER, Delhi, India; goldhimanshu@gmail.com

+ Rohit Pathania: Program Manager at Center for Science and Environment, New Delhi, India; rohit.pathania@gmail.com

1.1 Financial Inclusion in India

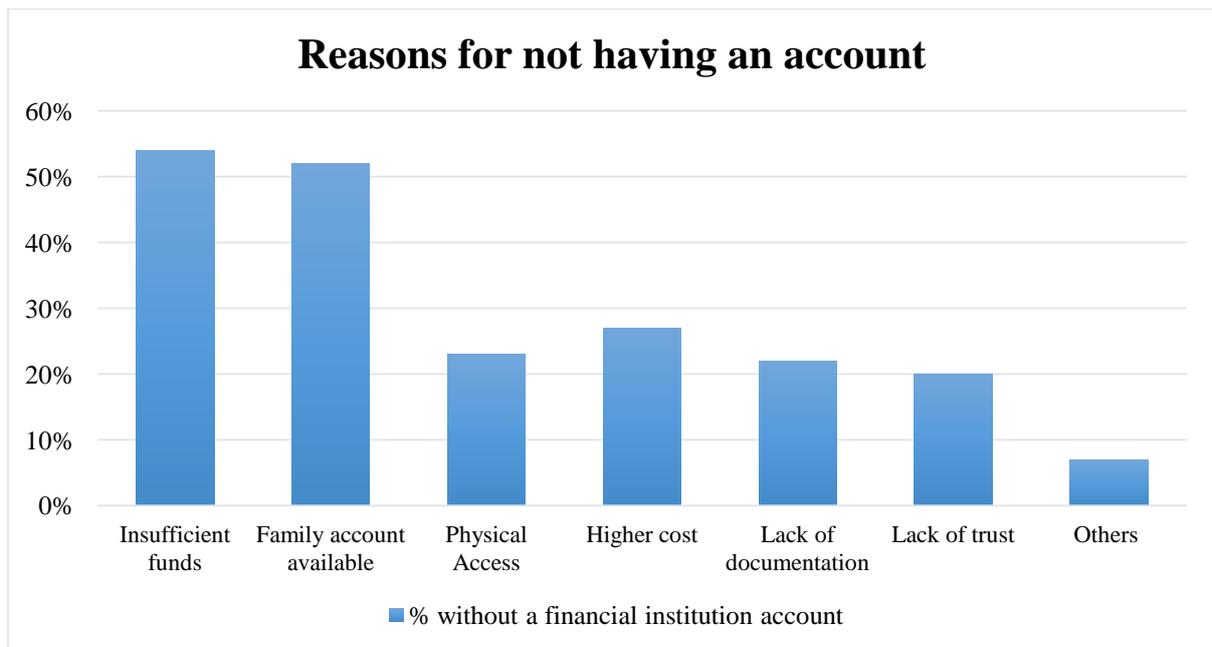
Financial inclusion in India has been a matter of much policy deliberations. Past and present governments have taken numerous initiatives to bring people into the formal systems; however, results have varied over time. Senapati (2018) has noted that the evolution of financial inclusion can be traced from the cooperative movement during the 1920s under the British era, and that India's banking and financial services sector has made several attempts to offer inclusive and affordable services to the poor and unbanked. These include steps such as priority sector lending, lead bank scheme, service area approach, creation of National Bank for Agriculture and Rural Development (NABARD), regional rural banks/ local area banks, microfinance, Kisan credit cards and business correspondence.

Over the last 10- 15 years, increased access to basic financial services has not been driven by the penetration of the branch network of banks in India – in fact, branches are found intermittently. Yet, access to banking and ancillary financial services has grown significantly, mostly due to technology and business correspondent networks, leading to high levels of penetration and subsequent access. The availability of a unique identification system, Aadhar, as an identity proof has been instrumental in addressing the major problem of documentation.

However, even with these steps, a significant number of people, especially those in the fold of informal sector employment and entrepreneurship, still remain outside the fold of the formal economy. Pradhan Mantri Jan Dhan Yojana was the latest effort in bringing the poor and marginalized people into the fold, with some success. According to the CRISIL Inclusix survey (2018), Jan-Dhan accounts launched by the government in 2014 has been instrumental in increasing access to bank accounts for majority of individuals and families. These basic saving accounts have helped to provide services to the all strata of the society irrespective of their financial status in a targeted manner. Poor people brought into the fold have been receiving subsidies directly through the Direct Benefit Transfer initiative. However, CRISIL also highlighted the need for higher focus on other services namely the credit and insurance to achieve higher financial inclusion for all. Even the World Bank Findex report (2018) highlighted the performance of India among developing economies in terms of availability of savings accounts coverage (80% among age group of more than 15 years), but notes that the usage ratio is very low (Only 43% of the account holders withdrew money in the past 12 months).

Further, to think that technology and documentation have overcome the challenges of penetration is premature. Several other challenges need to be addressed before universalization of banking can be achieved in India. World Bank (2018) had in fact discovered that the primary reasons for the poor to not engage with the formalized financial system were two-fold: lack of sufficient funds to maintain accounts; and the understanding that there should be one account per family (see Figure 1).

Figure 1: Reasons for Not Having an Account India



Source: created by authors from The World Bank Findex Data (2018)

This does not, however, reflect the scenario within the urban centres and agglomerations. Limited data is available on the divide within the financial inclusion initiatives in India with respect to financial inclusion. Bapat and Bhattacharya’s (2016) study among the urban slums of Pune city showed that access to the financial institution is not a major challenge; rather, the absence of valid documentation and actual access to saving services limited the access to formal credit services among these urban poor. The study had noted how 89 percent ratio of households were interested in availing a bank loan, double the ratio of households actually availing the facility (44 percent of the surveyed population).

1.2 The static workforce in communities and stakeholders of interplay

A major proportion of the work force in India is in the informal sector providing essential services to the community but may not have standard and continuous income, and the formal financial sector is not accessed by them. This workforce in the informal sector can be categorized broadly into two categories – static and migratory work forces. *Static workers are those workers in the informal economy who operate from a particular locality in the urban area, usually they have immovable kiosk or movable non-motorised kiosk providing services to the local community.*¹ Static workforces in urban communities are connected to one locality and have stayed or tend to stay in that locality for long periods of time [for example, domestic workers , laundry man (*dhobis*), cobblers (*mochi*), snack-sellers/ street vendors using push carts (e.g. *golgappa walas*, vegetables and fruits vendors, etc.), tailors,

¹ This definition has been coined by the two authors of the paper Dr. Seema Sharma and Arnab Bose as a result of their work on urban resilience through their social enterprise ‘Resilience Relations’. <http://resiliencerelations.in/>

electricians, plumbers, gardeners . They are usually those informal workers who are attached to a society/RWA/community for over two years. These need to be distinguished from the migratory or non-static/fluid workers, who are mostly construction workers, courier delivery personnel, etc. These people may be working in one society for a short-term and on project/activity basis.] The informal nature of work of static informal workers adds another level of variability in their livelihoods and income, needing the maximum support from the larger establishment. While the personal linkages within the members of the community and the service providers may be well established, the necessary ‘paper work / documentation’ may not be available. This exclusion in documentation makes it difficult for the individual to access formal financial services and forces them to resort to informal financing services. This also make them invisible in the formal set up, prevents them from accessing the government support systems and may also cause damage to the local environment. . For e.g. the local *dhobi* may not have access to a formal electricity connection forcing them to use charcoal based power for laundry creating local pollution for the family as well as the community.

This community based static workforce which provides essential services and its formalization and access to financial services has two other key stakeholders with whom interactions happen on a regular basis:

- Residents Welfare Associations (RWAs) and other local residents – RWAs are a unique feature, since these bodies are legally recognized platforms of interaction of local residents with government officials to address daily challenges, attempting to bridge the gap between these two categories of stakeholders. Usually they elect officials among themselves to formally conduct these affairs. Daily acquaintance with the static workforce makes the RWAs develop a better understanding of these people.
- Local bank branches – Major Banks have local neighborhood level branches, especially in the urban sphere, which usually cater to local formal businesses – shops, dairy booths, small firms - and the local residents of the area. The nature of services offered by the branches vary with the category of customers. Public sector banks tend to dominate, and some of them also work as conduits of the government to help disadvantaged groups. Banks usually provide only the saving service to the informal static work force through no frills accounts like the Jan-Dhan Account but have apprehensions towards providing credit.

1.3 The Objective

The objective of this study is to identify the static workforce in the informal sector in a neighborhood, and suggest a strategy to formalize them through a combination of financial inclusion, spatial management, contract design and technological development as shown below.

1. **Financial Inclusion:** It involves looking beyond the basic saving services to other important aspects– availability of credit, contingency planning (insurance), and investment opportunities. Financial inclusion also includes aspects to reduce asymmetric

information between financial mechanisms and the informal sector worker. For example, a static worker may not keep more than INR 2.5 lakhs in a bank account as (S)he fears that he/she will have to pay an income tax. Even if (S)he has an account in a bank, (S)he may not be eligible for a loan, as there is no employment guarantee or proof of employment.

2. **Spatial management:** It means that due to lack of legal validity of the work done by the urban informal workers, they often work in spaces which are definitely not optimum, do not have formal provisions like electricity, water and toilet etc. In the instance of the neighbourhood, dhobi/laundry man, the worker, uses primitive coal based irons to press clothes. This is an exhausting and laborious process and is a serious health threat as well as coal dust is a category one carcinogen.
3. **Contract Design:** Normally there are no contracts with the urban informal sector workers. Taking an example of the laundry man/dhobi, he has no contract with any entity in the locality. This is often the very reason that there can be no financial inclusion or spatial management. One problem is that all activities, say that of a dhobi, will require space. This space is managed; however, the erroneous notion is that formalizing would mean that the dhobi will get the right over the land or of that space. This kind of contract will be difficult to negotiate (one reason is that land prices are relatively high to per capita income in India). There is another way to define the contract – that of a *service contract*. One way to think of this is like regular employees of a locality who have variable pays, but essentially are mini monopolies who have stable and certain cash flows throughout. The working conditions and occupational health and safety (OHS) are major challenges for informal sector workers which can be addressed by formalizing the informal sector.
4. **Technology:** While the access to mobile and data is widespread, the usage for financial services is limited. Cutting edge technology may be a great enabler in the process of formalizing the above contracts. Process maps using technologies such as Distributed Ledger Technology (DLT) and Artificial Intelligence (AI) will then be drawn out to generate scalable contracts which will ensure trust and traceability without disrupting the existing mechanism. The current social media applications are more standardized to familiarization and entertainment aspects leading to a big void in terms of local utility and professional services. The SeenAb² app would not only collect the data from the user for this purpose but would also bridge the data inconsistencies among the users. Details can be further sought in the figure titled ‘technology based approach to formalizing the informal urban sector’.

The study focuses on the interplay between these three stakeholders - the *service provider* (static workforce), the *community* (represented by people and RWAs) and the *financial institutions*. It attempts a holistic approach to the question of financial inclusion of the static workforce in the communities, and tries to find the challenges as well as the potential

² SeenAb is an online platform to instill social and ecological resilience at the level of neighbourhoods or localities. It is based on alternative flow of information particularly keeping Indic cultural narrative of ‘inward reflection and outward assimilation’ in mind. For more information refer to: resilience.relations.in

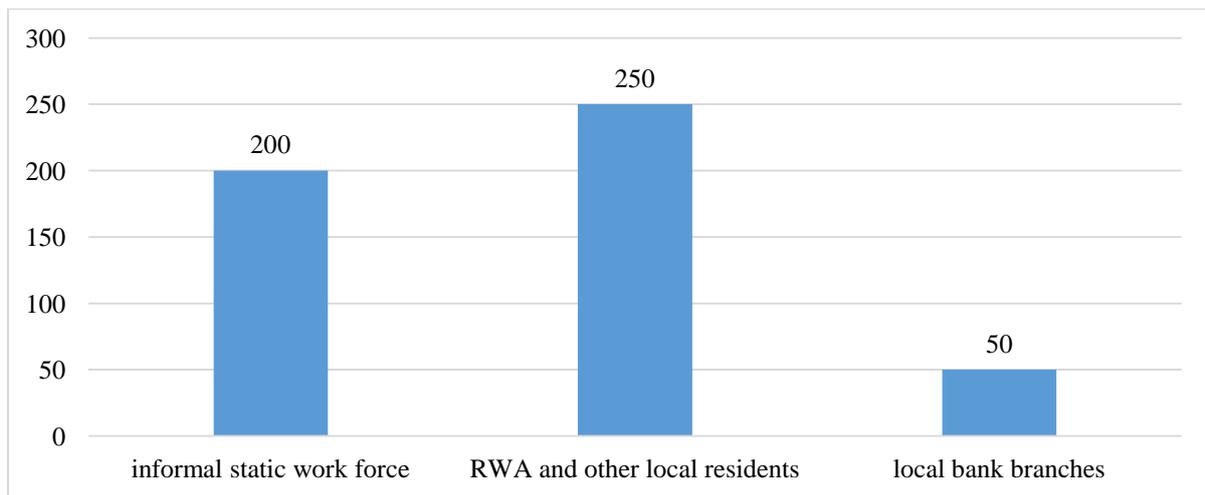
solutions to these challenges within the ambit of the three stakeholders. The major research questions include:

- Who is the static workforce?
- How is the static workforce (special focus on laundry person - *dhobi*) engage with the community?
 - What are the financial / nonfinancial transactions beyond direct service?
 - How does the workforce access the basic services like power?
 - Is there a semi-formal arrangement which can be formalized?
- What are the challenges for the static workforce to avail the formal financial schemes and services?
- How can the community / financial institutions work towards providing the financial services to this workforce?
 - What are the challenges that the community might face while making this provision?
- Can a technology system be designed to overcome the challenge of formality?
 - Will such a facility be accepted as a formal engagement which can be used by the workforce for its various needs?
- How can such a system improve governance and reduce transaction costs for government schemes and services?

1.4 Methodology

A survey was conducted with 250 static workers in the informal sector in 10 localities in the National Capital Regional (NCR). Around 100 meetings with internal stakeholders like users of workforce's services, local governance bodies like the RWAs and municipalities were conducted to identify the static workforce in the informal sector present within the neighborhood, as it houses a mixture of residential and non-residential stakeholders. A sample size of 500 was targeted for this survey, which consisted of three categories of stakeholders present within the neighborhood - namely, the static workers, RWAs and local residents, and local bank branches (see Figure for Breakdown of Survey participants)

Figure 2: Breakdown of Survey participants



Source: Authors; based on data collected

Additionally, meetings were also conducted with external stakeholders like state and central policy makers, lawyers and urban planners. The purpose of consultations with this specialized set of stakeholders was to understand the nature of service contracts that can be drawn between the informal workforce and the RWAs. This in turn could be of use in designing model contracts for the formalization of the informal sector.

Qualitative research methods used in the past by the authors revealed the existing trust between the static workers and the neighborhood residents' associations, albeit an informal one. Therefore, the authors decided to rely on qualitative research methods for the present survey as well. Through this survey, the authors tried to capture this informal trust in such a manner that elements of possible service contracts which enhance the trust factor can be identified. Further, the survey methodology attempted to ensure that there is no reinvention or discontinuity of the already existing social infrastructure - the service contract subsequently identified should result in an enhancement in the working and living conditions of all stakeholders.

A typical example of understanding this paradigm lies in the example of the local laundry man or dhobi. A sketch of the dhobi typically constitutes the following aspects:

1. Financially excluded: (S)he may not keep more than INR 2.5 lakhs in a bank account as (S)he fears that (S)he will have to pay income tax. Even if (S)he has an account in a bank, (S)he may not be eligible for a loan, as there is no employment guarantee or proof of employment.
2. Illegality of service operations: Illegality of the work is the norm, a result of their informal nature. The dhobi often work in spaces not allotted to them legally, which are definitely sub-optimal in nature, do not have electricity connections, and are exposed to vagaries, both natural and man-made. Moreover, the dhobi typically uses primitive

charcoal based irons, which exposes them to carcinogenic fumes, in addition to being an exhausting and laborious process.

Moreover, the dhobi has no contract with any entity in the locality due to the illegality of the service on offer. Yet, these entities are mini monopolies of a locality, with a stable income and assured cash flow available throughout the year. Therefore, designing a contract that can accommodate the dhobi's various challenges, namely the right to access to some space, the right to formal recognition and the subsequent right to financial inclusion is necessary. However, these contracts also need to be pragmatic. For instance, it would be wrong to believe that formalization would give the dhobi the right of land or that space – this is difficult to negotiate, given the high land prices relative to per capita income in India. Instead, ways in which realistic service contracts that help enhance the financial inclusion of informal workers is needed.

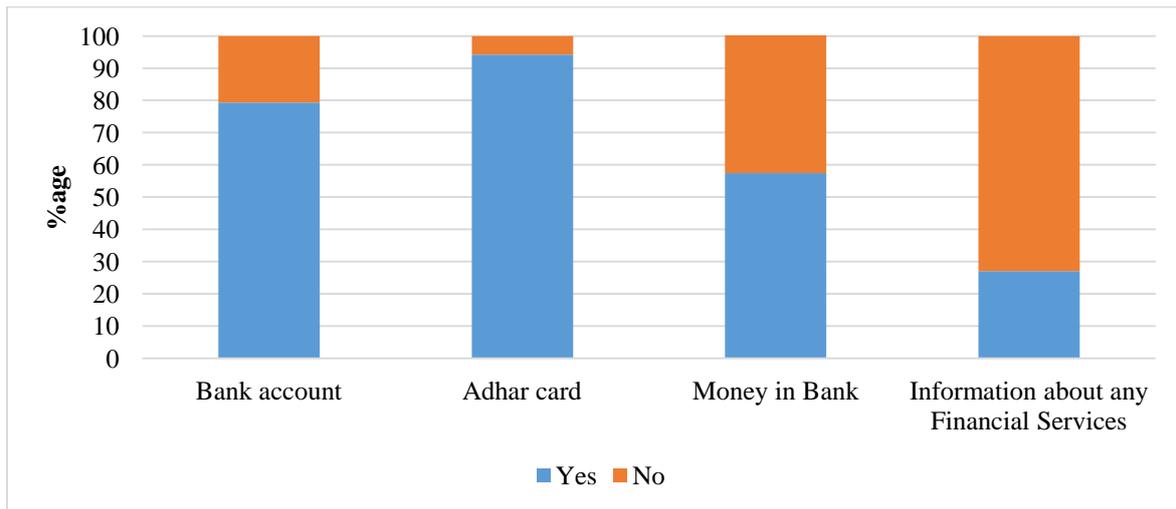
2. Survey Results and Findings

2.1 Challenges to the informal Sector workers

Amongst the static workers in the informal sector that were surveyed, it was found that nearly 80% of the respondents had a bank account, while Aadhar card, the universal identification card issued by the government of India for multiple government services, was held by nearly all of the respondents. This alignment reflects on the attempts of the government of India in 2015, which tried to ensure that bank accounts for the poor and marginalized sections under the Pradhan Mantri Jan Dhan Yojana (PMJDY). Interestingly, the overlays gets further strengthened by the fact that 40% of the respondents holding bank accounts did not have any money in them.

Awareness on the financial services was poor amongst all the respondents. Barely 30% of the respondents could tell the surveyors about financial services and schemes that they can avail. This is a poor reflection, given that the government has aggressively promoted a variety of financial schemes it had announced, prominent among them being MUDRA (Micro Units Development & Refinance Agency) Yojana meant for promoting micro level entrepreneurial activities. Given the ticket sizes available under the scheme (INR 50,000/- to INR 1,000,000/-) the scheme should be known better. Other synergistic schemes such as the National Rural Livelihoods Mission (NRLM) and the Deendayal Antodaya Yojana (DAY) were also not known by the respondents (MUDRA, n.d.).

Figure 3: Penetration of financial service in Static Informal Sector



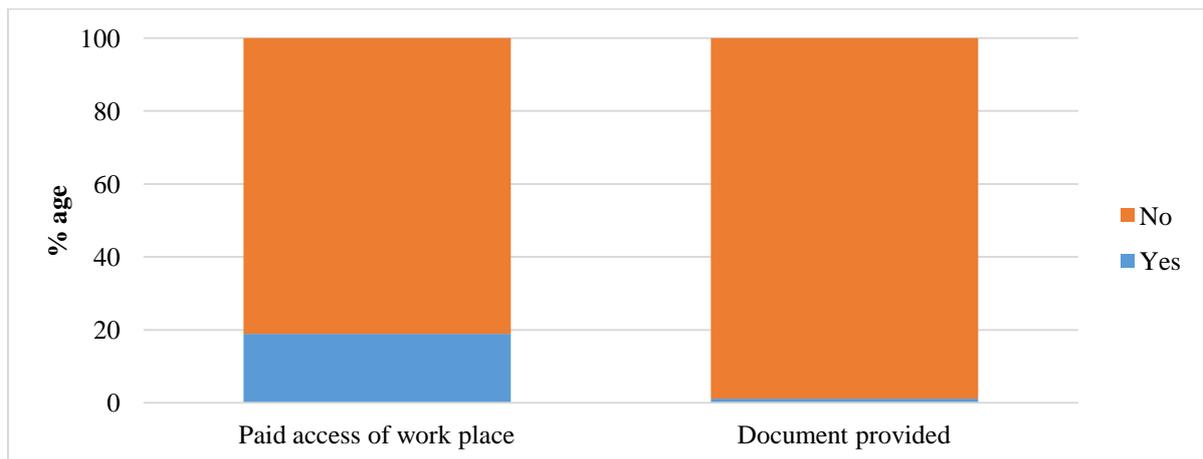
Source: Authors; based on data collected

Workplace access challenges of various kinds were affirmed by the respondents. A few of the respondents admitted to paying for access to the workspace; at the same time, they admitted to the lack of documentation to prove their right to access and usage of their workspace. This is contrary to the The Street Vendor's Act 2014, which seeks, among other objectives (MoHUA, 2014):

- To give street vendors a legal status by hawking licenses in their natural market
- To provide facilities for appropriate use of identified space including the creation of hawking zones in the urban development/ zoning plans

However in the absence of uniform street vendor policies within the Delhi NCR region (due to the various jurisdictions involved) and lack of awareness of the rights that informal sector workforce has under the policy, street vendors continue to face situations of illegality. For instance, many of them did not possess certificates of vending that they are entitled to under the street vending policy.

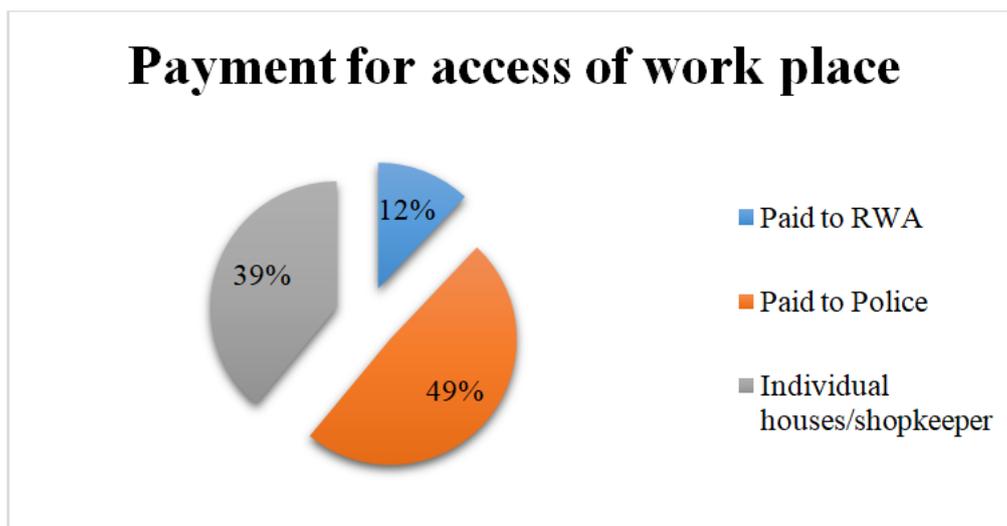
Figure 4: Status of documentation for work among the static workforce



Source: Authors; based on data collected

In the absence of information and access to rights, the respondents from the informal sector admitted to paying people in order to access their place of operation. Nearly half of all the payments were made to the police officials, a form of rent seeking for plying operations. Another 39% of the respondents paid to individual houses/shopkeepers from whose premises they operated for their trade and services. Interestingly, 12% of the respondents were paying money to the RWAs, which allowed them to operate within their locality premises, though the kind of services they get in return remained unclear and inconsistent.

Figure 5: Payments made by the static workforce for access of work place



Source: Authors; based on data collected

The inconsistency in all of these matters was more than visible when the example of the dhobi was picked up again. For instance, over half of the *dhobi* kiosks did not have any access to electricity, and this included those who paid rents to either shopkeepers or to the RWAs. This affected the source of energy that the dhobis were reliant on to deliver their

services. Overwhelmingly, the dhobis showed reliance on thermal sources of energy for ironing, with charcoal being the dominant choice. Electricity was used only by 5% of all the dhobis surveyed.

Figure 6: Access to electricity for dhobi (washerman) kiosk

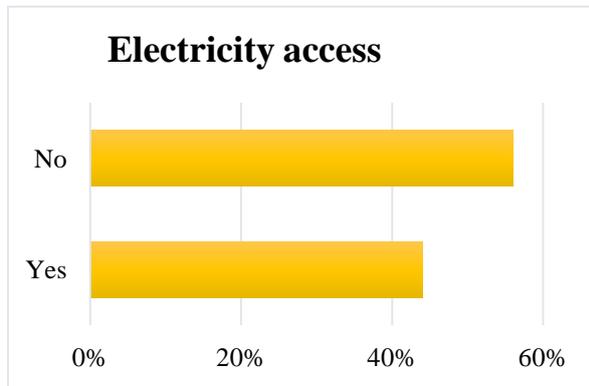
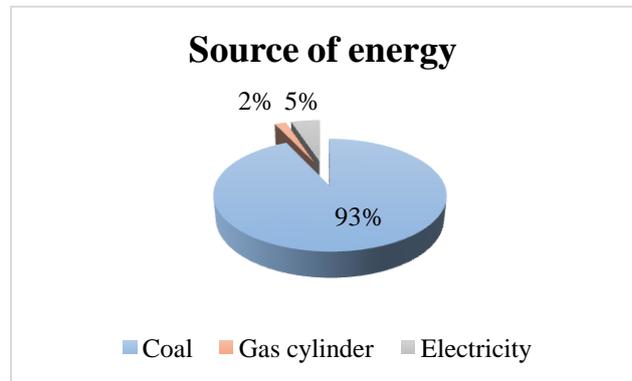


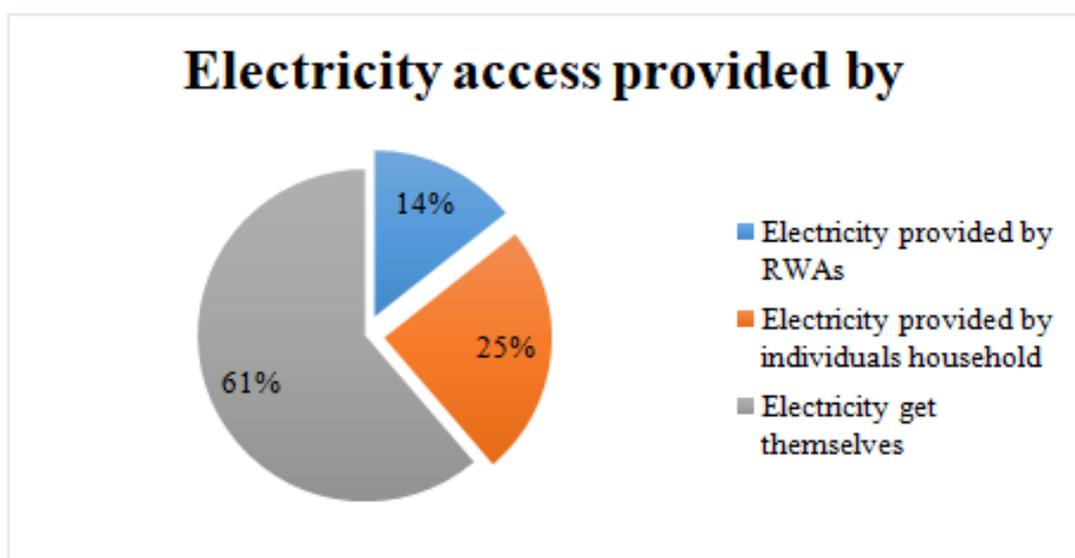
Figure 7: Source of energy for pressing clothes by Dhobis



Source: Authors; based on data collected

Amongst the dhobis that had access to electricity, 61% of all the dhobis sourced electricity on their own, while another 38% sourced from the RWA and/or the individual household. However, it is interesting to note that in all of these cases, the nature of transaction falls in a gray area in the absence of legally valid service contracts in varying shades. RWAs and households provide electricity, but the nature of the transaction would render them as service providers as well. Given this circumstance, differential tariff rates for electricity would be applicable to them; however, there are no clear mandates or guidance on the same.

Figure 8: Source of electricity access for dhobis



Source: Authors; based on data collected

2.2 RWAs can provide the Answer

RWAs were surveyed to understand the perceptions about the informal sector workers, and the level of intersectionality that the RWAs and the informal sectors workers would have. RWAs and residents broadly expressed interests in having formal relationships with the dhobi kiosks, even though there was a section of people who strongly expressed disapproval for such arrangements.

Figure 9: Outlook of the community towards providing privileges to the dhobi

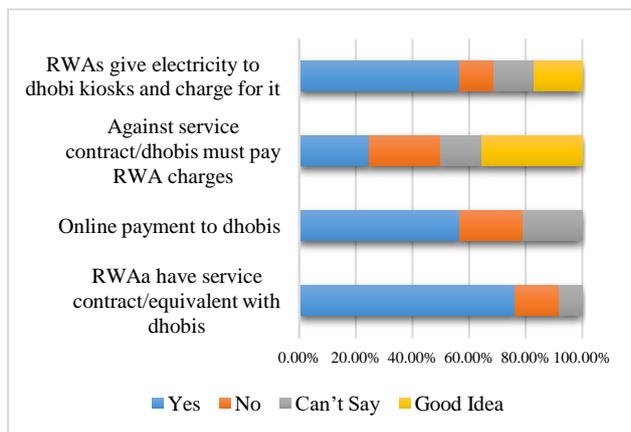
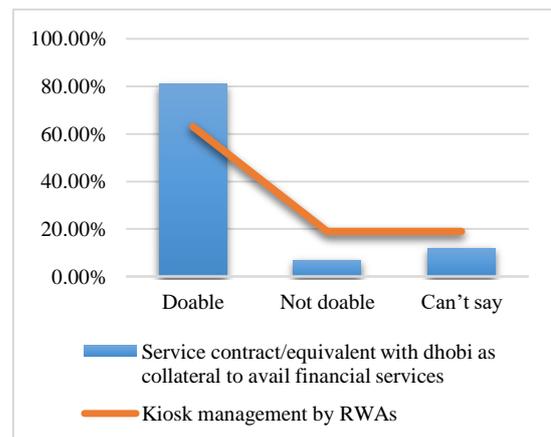


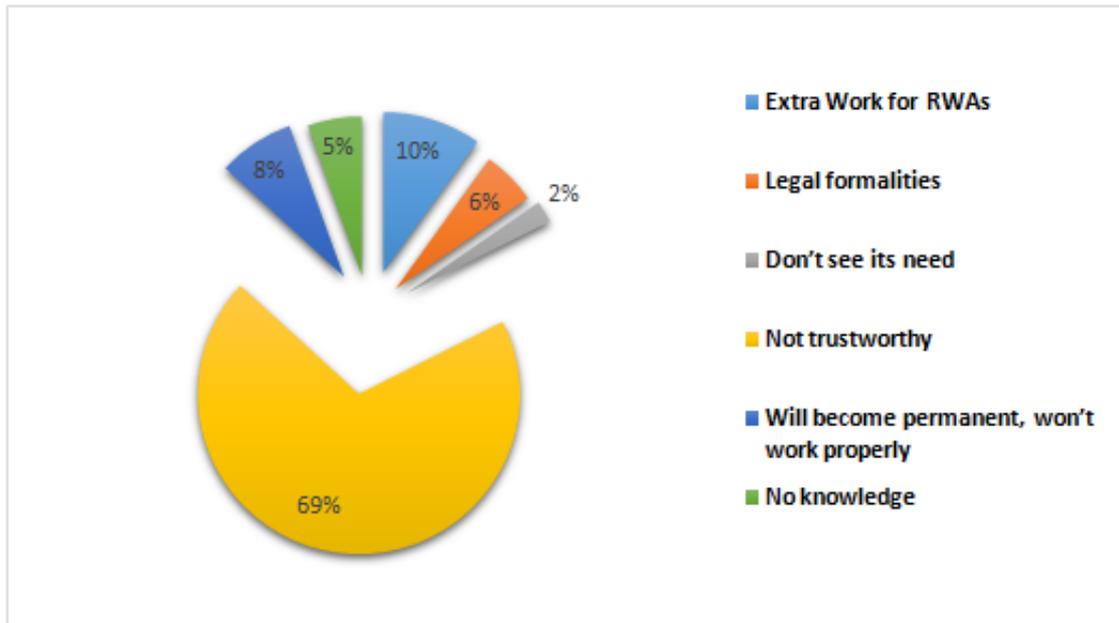
Figure 10: Outlook of the community towards providing a service contract to the dhobi



Source: Authors; based on data collected

However, the nature of the engagement to be taken up saw varied responses. When asked if RWA must levy charges, be it for electricity or for being allowed by the RWA to operate in the premise, there was a high degree of agreement from the respondents. This was interesting, as RWAs were indicating their desire to participate in the policy implementation process despite being aware of it. In the erstwhile, National Urban Renewal Mission, there was a principle of participatory governance mechanism, akin to the mohalla sabhas that Delhi had tried. Under this, community level bodies would directly be involved in the decision making and implementation process by the municipal corporations, for which additional funding could be released. Even the Bhagidari scheme within Delhi aimed to bridge the implementation gap for similar purposes; however, such ideas could not attain its objective with the rationale that the municipal corporations/ local government authorities were supposed to serve the purpose. Interestingly, these responses came after sharing information on the ability of such contracts to help informal sector workers to get access to formal financial services. Half of the respondents were even willing to pay through online modes of payment if it became possible.

Figure 11: Outlook of the community towards providing a service contract to the static workforce



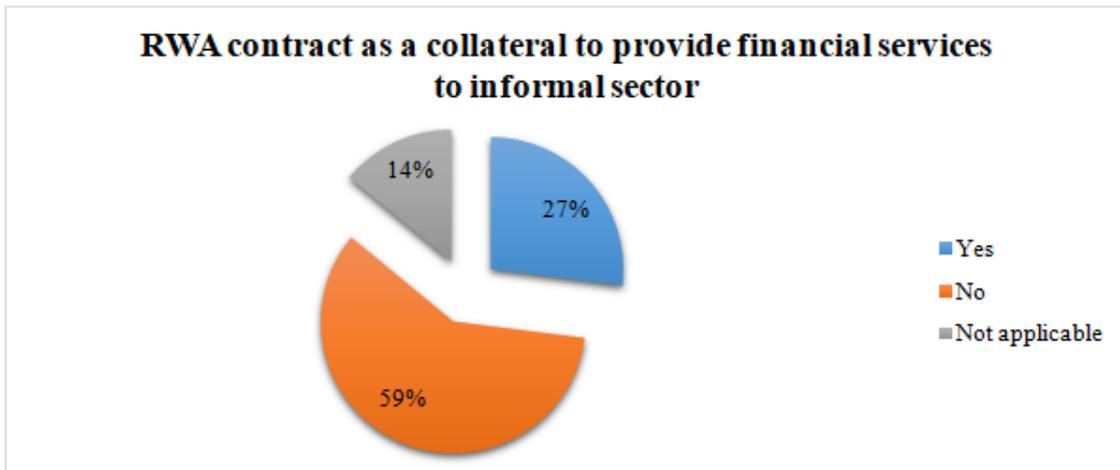
Source: Authors; based on data collected

An analysis of the answers given by 16% respondents who refused to have such contracts was conducted. People expressed unwillingness for such contracts (70% of the negative respondents) primarily due to lack of trust. Further, a small percentage also saw that it was causing too many formalities and unnecessary work load for the RWA office bearers and residents in general. However, during the survey, it was also noted that a general lack of awareness of such a possibility was prevalent, and a positive response only emanated when the concept was explained to the stakeholders. .

2.3 Financial Institutions and the Problem of access

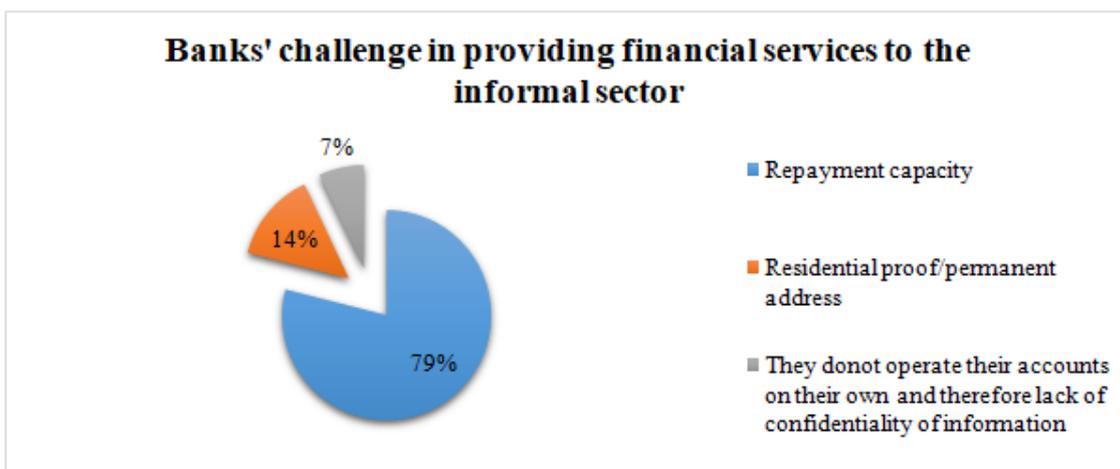
Bank branches interviewed in the study clearly showed apprehensions in providing financial services to the informal sector workers. 79% of the respondents identified the repayment capacity as a major challenge. This clearly highlights that banks are seeking some kind of risk mitigation on the financial services provided to this segment. This is particularly true for debt servicing ability of this segment.

Figure 12: Outlook of the banks towards recognizing a service contract as a collateral for credit service



Source: Authors; based on data collected

Figure 13: Challenges faced by the banks towards providing credit service to the static workforce



Source: Authors; based on data collected

However, the big challenge is that even if service contracts or equivalents are put forth by the RWAs, the financial institutions will find it impossible to finance any debt service requests from the workers in the informal sector. In fact, 14% of the respondents also went as far to state that it is impossible to entertain such requests. This is surprising – in any case, financial institutions, particularly public sector banks, have been mandated by the government to disburse loans under the MUDRA scheme without collateral for small ticket sizes. This reflects on the particular problem of lack of institutional knowledge when it comes to working with the decentralized, informal sector, as has been seen across several other categories. While the formal banks may not be very forthcoming to provide the credit services, the informal sector has been relying very heavily on the informal financing services

when in need. It has been well documented that the excessively high interest rates from the informal sources has also been a major problem in alleviating poverty in many cases across developing countries(Srinivas H, 2016) (Nguyen Viet & Van den Berg, 2011).

3. Discussion

The survey identifies the challenges of the informal sector and the interplay of this sector with other stakeholder sets found at the community level. While there are several schemes available, lack of recognition and subsequent entitlements ensure that the access to such benefits continues to elude the needs of the marginalized communities. . This brings us to the two fold point of working closely with communities on these issues, while also identifying and introducing necessary technology solutions that can address these challenges in an easy manner.

This survey brings to the fore the need to work closer with the community to understand the implementation challenges in various sectors. One key takeaway that has till date not been discussed enough is the distinction within the informal sector work force when it comes to their permanency of occupation. Often, informal sector work force is lumped into a single monolith, whereas that is certainly never the case. As shown in this survey, there is a distinct category of informal sector work force that is highly static both in its operations as well as location, and needs to be categorized appropriately through a division. A clear identification, beyond the street vendor license (as it is restrictive and has limited impact), needs to be mooted with higher participation of the community itself. This can then allow policy makers to better implement such schemes as MUDRA, the intended benefits of which are extremely suitable to the likes of the static workers in the informal economy. Once such a categorization can be brought into recognition by policy, legal rights beyond just the hawkers and vendors policies can be drawn up as well, since the current policies keep talking about designated zones instead of identifying the basic tenets of this category of work force – this results in contradictory positions on the ground. For instance, while the local administration is supposed to provide designated zones, it instead keeps labeling the static workforce as encroachers, and this is preyed upon by law enforcement agencies, who indulge in rent seeking, which results in increasing the costs and risks of doing business for the marginalized service providers.

The footprint of technology on financial inclusion is well acknowledged in various parts of the world. Fintech, or financial technologies, are becoming the norm in various ways, with positive results. Abor et al (2018) have found strong correlations between mobile ownership and usage and reduction in household poverty alongside significantly higher per capita consumption expenditures as well. Tuwei (2018) has also noted that financial technology provided entrepreneurial opportunities for business operators in the informal economy, and was fundamental to enable financial flows, both at local-local and global-local levels. Even Kim et al (2018), in their comprehensive review of literature on the subject note repeated claims of beneficial impacts of financial inclusion via technology on poverty alleviation and economic development. Benefits can be seen in other areas as well – Anshari et al (2018) note that digital marketplaces with Fintech enabled have the potential to transform

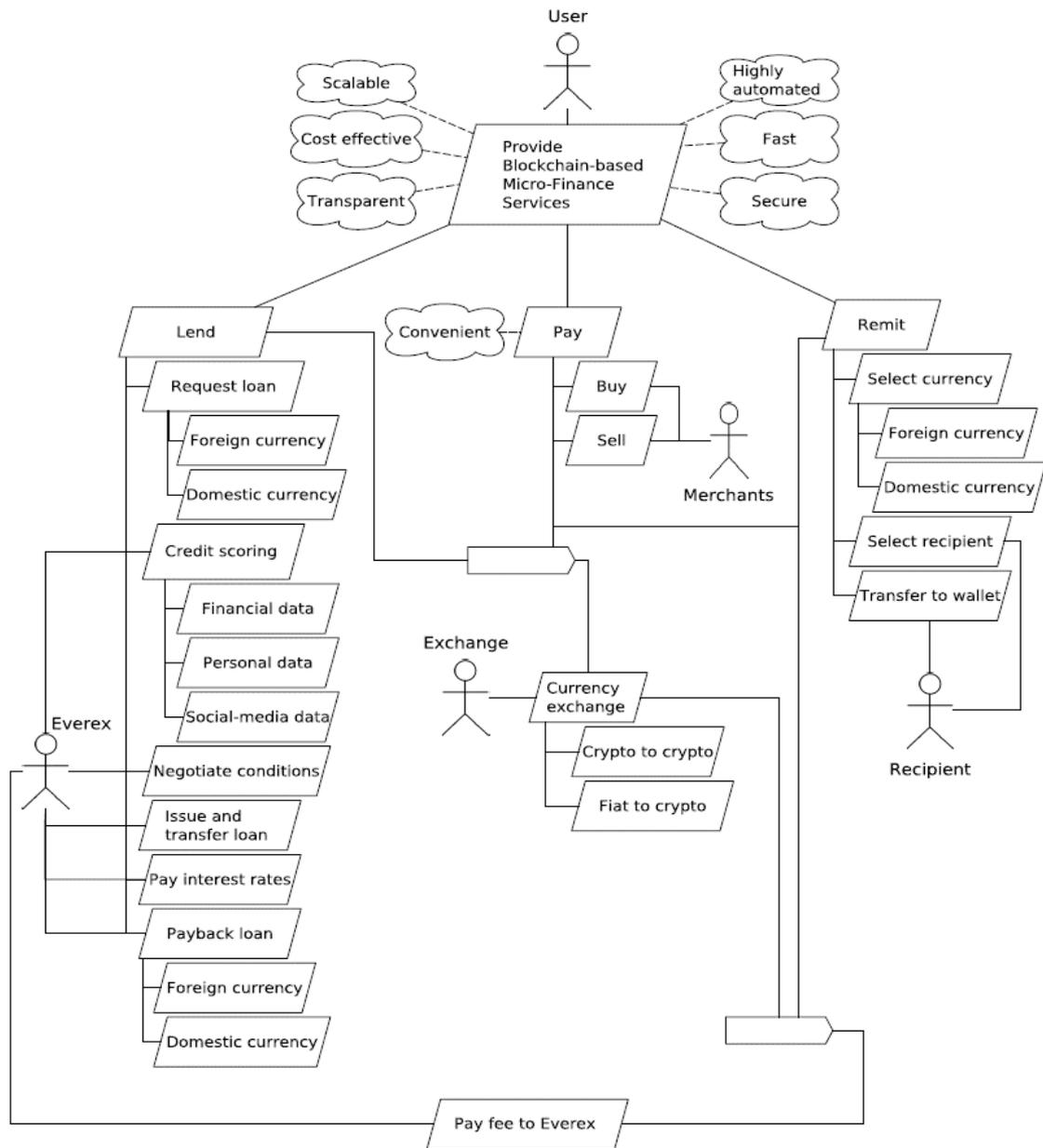
agriculture's business process more sustainable in terms of funding and distribution. However, this is viewing the problem in a narrow sense.

Technology's role has to be multidimensional in nature, enabling transactions between various stakeholders in both monetary and non-monetary ways. Legally tenable and enforceable contracts that are based on non-monetary relationships may provide the necessary confidence to the banks to start looking at these as 'monetizable'. Such contracts may be used by the financial institutions to take a next step towards providing credit to the informal sector workforce. The same 'service contract' may be the first step towards recognizing the 'formality' of the Indian informal sector. The static nature of business may need to redefine the formality paradigm and may also help design policies which not only provide the credit but also insurance service. The current budget, envisages providing minimum insurance coverage to the informal sector. The quasi-formal work contracts and its recognition in the formal domains may further alleviate the risks of higher policy provisions and leakages in such forward looking policy provisions.

Role of technology in providing formal financial services to informal sector is crucial. Technology can be leveraged to address both the gaps identified above first, the information asymmetry about the policy and second the formalization of contracts. Due to the diffused nature of the engagements at the community levels, it is necessary that the particular concerns and peculiarities get addressed suitably. Most suitable technology platforms, which are not only robust but also easily accessible, need to be identified to undertake the cumbersome exercises with significant transaction costs attached to them. Further, a lot of these contracts also have to be allowed by emerging technologies in real time to ensure the objectives of reducing both time and costs stated earlier in a secure, trustworthy manner. In such a scenario, platforms based on blockchain technology emerges as a viable option to ameliorate these challenges. Swan (2017) has identified four specific applications where the usage of blockchain technologies offer economic benefits - digital asset registries (Swan, 2017), leapfrog technology for financial inclusion (Swan, 2017), long-tail personalized economic services (Swan, 2017), and net settlement payment channels (Swan, 2017). All of these benefits indeed have utility for each of the stakeholder sets that we have identified and interacted with during the survey. The use of blockchain to extend financial services is already being witnessed in the global south (Kshetri, 2017), with uses pertaining to property registration, insurance and risk management, and prevention of cheque counterfeiting. A typical architecture for the same (See Figure 14: Refined goal model of the Everex capital transfer system) has been proposed by Everex, a wallet company that uses Ethereum cryptocurrency. Everex wallet aims to enable greater financial inclusion by applying blockchain technology for cross-border remittance, online payment, currency exchange and micro lending, without the volatility issues of existing, non-stablecoin cryptocurrencies (Lane et al, 2017). This architecture model has potential for replication and could serve as a starting point of discussion for serious efforts, given how Everex is already collaborating with banks in Thailand for providing financial technology services to their customers. Such a platform could be focused only on fiat pegged digital currencies that represent units of national

currencies, powered by smart contract and can exist in any blockchain token format, similar to the case of Everex (Everex, 2019).

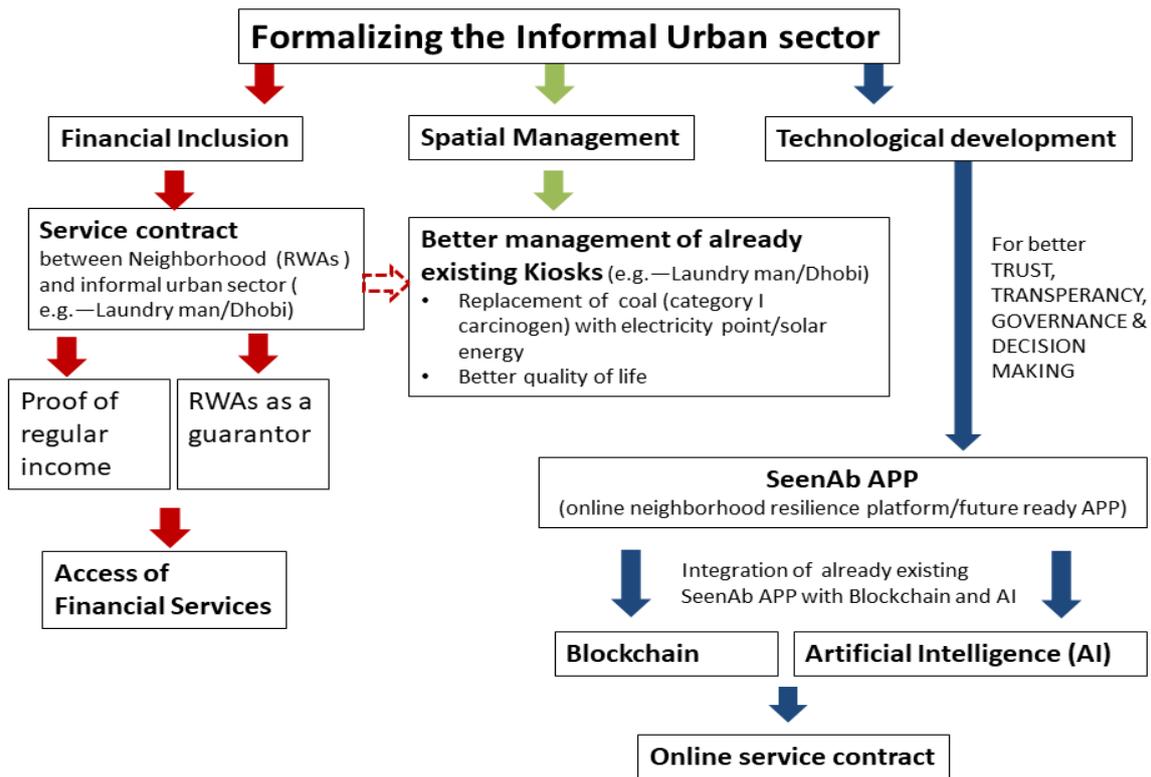
Figure 14: Refined goal model of the Everex capital transfer system



Source: Lane et al, 2017

Therefore, the survey also points to the need of bringing in specific platforms of interaction that are easy to use and understand and allow the different functions in an integrated manner. A sample technology solution towards the formalization is illustrated below (Figure 15: technology based approach to formalizing the informal urban sector).

Figure 15: Proposed approach for formalizing the informal workforce



Source: Proposed and designed by Seema Sharma

India has been extremely successful in providing each household with an access to deposit services. However, the next steps in complete financial inclusion with access to credit and insurance services need a new paradigm which addresses deeper challenges faced by the working structure and income sources. The new paradigm, as suggested, needs to base itself on modern technology reaching the last individual, and empowering them to a better life.

4. Conclusion

With an overwhelming part of workers in India remaining ‘informal’, contractual, unorganized or simply not having any channel to be formal; a strategy for formalization is pivotal to address the most basic of developmental issues. To note the root causes of informality becomes important to create strategies. Technology becomes important to scale and accelerate an intended transition towards financial inclusion. This paper has brought out one strategy for financial inclusion of the static workers in the informal economy. It draws out a blueprint for a socio-technical transition involving Distributed Ledger Technology. Now the stage is set to start the niche stage of a socio-technical transition.

References

About Everex, viewed at <https://www.everex.io/about> on 30 April 30, 2019

Anshari, M., Almunawar, M.N., Masri, M., and Hamdan, M., Digital Marketplace and FinTech to Support Agriculture Sustainability, *Energy Procedia* 156 (2019) 234–238

Bhandari, B.S. (2018), Life Insurance - Social Security & Financial Inclusion, *Bimaquest*-Vol. 18 Issue 2, May 2018

CRISIL Inclusix (2018). CRISIL Inclusix: Financial inclusion surges, driven by Jan-Dhan Yojana viewed at <https://www.crisil.com/en/home/our-analysis/reports/2018/02/crisil-inclusix-financial-inclusion-surges-driven-by-Jan-Dhan-yojana.html> on 10 February 2019

Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, Saniya Ansar, and Jake Hess. 2018. The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution. Washington, DC: World Bank. doi:10.1596/978-1-4648-1259-0. License: Creative Commons Attribution CC BY 3.0 IGO

Geels, F. W. (2012). A socio-technical analysis of low-carbon transitions: introducing the multi-level perspective into transport studies. *Journal of transport geography*, 24, 471-482.

Gitaharie, T., Soelistianingsih, L., and Djutaharta, T.(2018), Financial inclusion: The impacts of bank loans on household welfare, in *Competition and Cooperation in Economics and Business – Gani et al. (Eds) 2018 Taylor & Francis Group, London, ISBN 978-1-138-62666-9*

Joshua Yindenaba Abor, Mohammed Amidu & Haruna Issahaku (2018): Mobile Telephony, Financial Inclusion and Inclusive Growth, *Journal of African Business*, DOI:10.1080/15228916.2017.1419332

Kim, M., Zoo, H., Lee, H., and Kang, J., Mobile financial services, financial inclusion, and development: A systematic review of academic literature, *E J Info Sys Dev Countries* 2018;84:e12044, viewed at <https://onlinelibrary.wiley.com/doi/full/10.1002/isd2.12044> on 10 February 2019

Kshetri, N., Will blockchain emerge as a tool to break the poverty chain in the Global South?, *Third World Quarterly* Volume 38, 2017 - Issue 8, viewed at https://libres.uncg.edu/ir/uncg/f/N_Kshetri_Will_2017.pdf accessed on 30 April 2019

Lane, A., Leiding, B., and Norta, A., Lowering Financial Inclusion Barriers With a Blockchain-Based Capital Transfer System Whitepaper - Version 1.1, viewed at <https://uploads->

ssl.webflow.com/59157962bdb4300afa8771a9/5b5f15adffd24da27d8aa7ef_Everex_WP-version-1.1.pdf on 30 April 30, 2019

MoF, 2018, The Budget Speech 2019, viewed at <https://www.indiabudget.gov.in/bspeecha.asp> on 10 February 2019

MoHUA, (2014), THE STREET VENDORS (PROTECTION OF LIVELIHOOD AND REGULATION OF STREET VENDING) ACT, 2014 viewed at [http://www.mohua.gov.in/upload/uploadfiles/files/StreetVendorAct2014_English\(1\).pdf](http://www.mohua.gov.in/upload/uploadfiles/files/StreetVendorAct2014_English(1).pdf) on 12 February 2019

MUDRA, (n.d.), Mudra Offerings viewed at <https://www.mudra.org.in/Offerings> on 10 February 2019

Nasim Shah Shirazi, Sajid Amin Javed, Dawood Ashraf (2018). The Interlinkage between Social Exclusion and Financial Inclusion: Evidence from Pakistan, IRTI Policy Paper No. PP/2018/01, Jeddah: Islamic Research and Training Institute.

Nguyen Viet, Cuong and Van den Berg, Marrit (2011). The impact of Informal Credit on Poverty and Inequality: The Case of Vietnam. Viewed at <https://mpra.ub.uni-muenchen.de/54758/> on 10 February 2019

Park, CY, & Mercado (2018), Financial Inclusion, Poverty, and Income Inequality, The Singapore Economic Review, Vol. 63, No. 1 (2018) 185–206

Senapati, P.S.(2018), A Study Of Pradhan Mantri Jan Dhan Yojana (Pmjdy) Scheme In Odisha And Challenges Of Financial Inclusion, International Journal of Research in Humanities, Arts and Literature, 2018 6(3), 155-160

Smyczek, S., and Matysiewicz, J.(2014), Financial Exclusion as Barrier to Socio-Economic Development of the Baltic Sea Region, Journal of Economics & Management, 2014 (15) 80-104

Srinivas, Hari(2016), 14 Reasons why the Informal Credit Market is used by the Poor: Policy Implications for Microcredit Programmes in Developing Countries. Case Study Series E-111. April 2016. Viewed at <http://www.gdrc.org/icm/14reason.html> on 10 February 2019

Swan, M., Anticipating the Economic Benefits of Blockchain, Technology Innovation Management, Review, October 2017 (Volume 7, Issue 10), viewed at https://timreview.ca/sites/default/files/Issue_PDF/TIMReview_October2017.pdf#page=6 on 10 February 2019

Tuwei, David Kiplagat. "Communication technology, capabilities and livelihoods: the role of mobile money in facilitating financial inclusion and development in rural Kenya." PhD (Doctor of Philosophy) thesis, University of Iowa, 2018, viewed at

<https://ir.uiowa.edu/cgi/viewcontent.cgi?article=7648&context=etd> on 10 February 2019

UNCDF (2018), Financial Inclusion and the SDGs, United Nations Capital Development Fund (UNCDF), 2018, viewed at <http://www.uncdf.org/financial-inclusion-and-the-sdgs> on 9 February 2019

Zhu, H. and Walker, A.C. (2018) orcid.org/0000-0002-3169-2738 Pensions and social inclusion in an ageing China. *Ageing & Society*. ISSN 0144-686X

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