



Adoption of payments banks: a grounded theory approach

Rahul Pramani¹ · S. Veena Iyer¹

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Abstract

Payments banks came into existence in India in 2015 when the Reserve Bank of India awarded licenses to eleven applicants to set up these banks specifically to further financial inclusion by providing small savings accounts and facilitating payments and remittances to the financially excluded population. As of March 2020, only six of these were operative and not very successful, both from the profitability and customer growth perspectives. This article seeks to understand the reason for payments banks not taking off as envisaged. Attributing this primarily to low adoption of payments banks by the financially excluded customer segments, this study uses a grounded theory approach based on data collected from interviews of target customer groups and of managers at some payments banks. The primary factors contributing to low adoption by the customer segments studied here, namely migrant labor and small vendors, have been identified as lack of awareness, lack of trust and lack of perceived need for their products/services. These factors arise due to inconsistencies between the business model design and the nature of the target audience. The article further discusses managerial and policy implications of these conclusions.

Keywords Payments bank · Financial inclusion · Financial services · Customer adoption · Bottom-of-the-pyramid (BOP) adoption · Innovation

Introduction

Over 190 million adults in India do not have access to banking services, making India the second biggest nation with respect to unbanked population (Draboo 2020). In the year 2013, the Reserve Bank of India (RBI) commissioned the Nachiket Mor Committee to study and recommend ways to improve financial inclusion and to bring small businesses and low-income households into the banking ecosystem. Their recommendations led to the establishment of payments banks (PB) in India in 2016.

PB are differentiated banks allowed to undertake certain restricted activities permitted to banks under the Banking Regulation Act, 1949. The primary objective for setting up PB was to provide access to financial services to migrant labor, small-business enterprises and low-income households (Carstens 2019). Of the 41 expressions of interest

received by the RBI from corporate houses and other eligible entities, eleven applicants were granted licenses.¹ These were firms from diverse sectors possessing varied competencies equipped to pioneer this new financial business model of financial inclusion through low-cost digital payment systems. However, the hype around these banks quickly tapered off, as only six of the eleven license holders were active as on March 31 2020. As per RBI's report on *Trend and Progress of Banking in India 2019–2020*, PBs have continued to incur losses which subsequently rose to INR 937.1 crores in 2018–19 from INR 517.2 crores in 2017–18.² The net consolidated loss of PBs for the year 2019–20 still remains high at INR 833 crores, and this could be attributed to the high operating expenses of these banks (RBI 2020).

The operating guidelines for PBs introduced in the year 2016 prohibit them from lending and restrict their investment choices. These banks, therefore, rely almost completely on

✉ Rahul Pramani
fpm16rahul_g@mdi.ac.in
S. Veena Iyer
s.veena@mdi.ac.in

¹ Management Development Institute Gurgaon, Sukhrali, Gurugram, Haryana, India

¹ RBI notification dated October 6, 2016: <https://www.rbi.org.in/scripts/NotificationUser.aspx?Mode=0&Id=10635>.

² Report on the Trends and Progress of Banking in India 2019–20, <https://rbi.org.in/scripts/AnnualPublications.aspx?head=Trend+and+Progress+of+Banking+in+India> accessed on 21 July, 2021.



fee income for revenues and profits. They can accept small demand deposits (CASA),³ issue debit cards that can be used to make financial transactions. Since they are barred from lending, they are also not allowed to hold time deposits of longer tenure. This makes their business model volume-centric, which requires high adoption and usage by customers.

Not only were PBs new to the Indian market, the authors did not find a similar banking business model anywhere in the world. In many ways, PBs appear to be similar to mobile money wallets like M-Pesa of Kenya. However, there are distinct dissimilarities between PB and mobile wallets. Mobile wallets are primarily used to make transactions like booking tickets, paying fees and miscellaneous expenses (Singh et al. 2017). The user needs a “reservoir” such as a bank account or credit card from where to load the wallet. The wallet is not an instrument meant for depositing one’s savings, and it is only used to facilitate payments. PBs, on the other hand, are meant to function like banks “on the CASA front” while not allowed credit origination or lending. Other differences from mobile wallets include periodic interest payments on the deposits and the brick-and-mortar form of these banks, lending them a different form of visibility from the mobile wallets whose presence is restricted to the mobile phone in the hands of a user.

Poor customer adoption of PB services has hit at the core of their business model, making it financially unviable. The idea was based on high volume of customers and transactions earning low unit fees, combined with low cost of operations arising from leveraging latest technology that included online, paperless bank account opening, remittances and record keeping. This design of PBs, the authors find, did not align with the objective of financial inclusion, which involves customer segments that are not technologically savvy. The huge unbanked population in India (Neelam and Tiwari 2019) is evidence of the fact that efforts toward financial inclusion have still not yielded the desired results.

The objective of this research, therefore, is to explore the impediments to adoption of the payments banks by the financially excluded customer segments.

Given the novelty of these differentiated banks, a grounded theory approach has been adopted to identify factors and understand the underlying dynamics. Gupta et al. (2019) and Kaur et al. (2020) have explored customer adoption intention with regard to PB. While the former has used the Unified Theory of Acceptance and Use of Technology (UTAUT)

along with perceived credibility as a construct, the latter has used the Technology Acceptance Model (TAM). These models rely upon an individual’s perception of the usefulness of a particular technology and perceived ease of use to study the usage of a particular technology. They presume factors such as awareness of and some experience of the customer with the technology. This study takes a step backwards and makes no such assumptions. It attempts to first understand whether the target audience is even aware of the technology and service. Besides, it looks at two sub-segments within the financially excluded population separately to understand if there are any differences in their motivations and behavior.

In line with the observation by Dahlberg et al. (2015) that despite several years of research, we still know nothing about merchant adoption of mobile payment services, and this exploratory study tries to explore the PB space by bringing to the fore the distinct characteristics that can help understand the adoption of PBs by different sub-segments.

This study thereby contributes to the body of research on business models for financial inclusion both from the management and strategy points of view as well as from a policy perspective. This paper is divided into seven sections. Section 2 reviews the literature on the adoption of technology-based services and provides a background of the Indian banking sector, including the introduction of PBs. Section 3 explains the research design and describes the methodology adopted. Section 4 lays out the findings of this study. Section 5 describes and discusses these findings, while Sect. 6 talks about theoretical and policy implications. Finally, Sect. 7 concludes with future direction for research and limitations of this study.

Research background and review of the literature

Payments banks

Business model of payments banks in India

Introduced in the year 2016, the primary objective of PBs was to contribute toward financial inclusion by providing access to a networked, affordable and efficient payment system (the others being credit and allied services like investment and insurance). This was sought to be made possible by leveraging technology and building on the mobile telephony base in collaboration with “Aadhaar,” the national identification system launched in the year 2009 that had covered close to a billion citizens by March 2016.⁴ The PB business model

³ CASA stands for Current Accounts, Savings Accounts. The former are running accounts used by businesses and are a source of fees for the banks while the latter are typically maintained by individuals to park small amounts of savings and enable transactions. The bank pays a certain minimum interest on the average amount of deposits.

⁴ UIDAI Annual Report 2017–18, <https://uidai.gov.in/images/Annual-Report-ENG-2017-18-Final-18072019.pdf>; accessed on 21 July, 2021, pp.15.



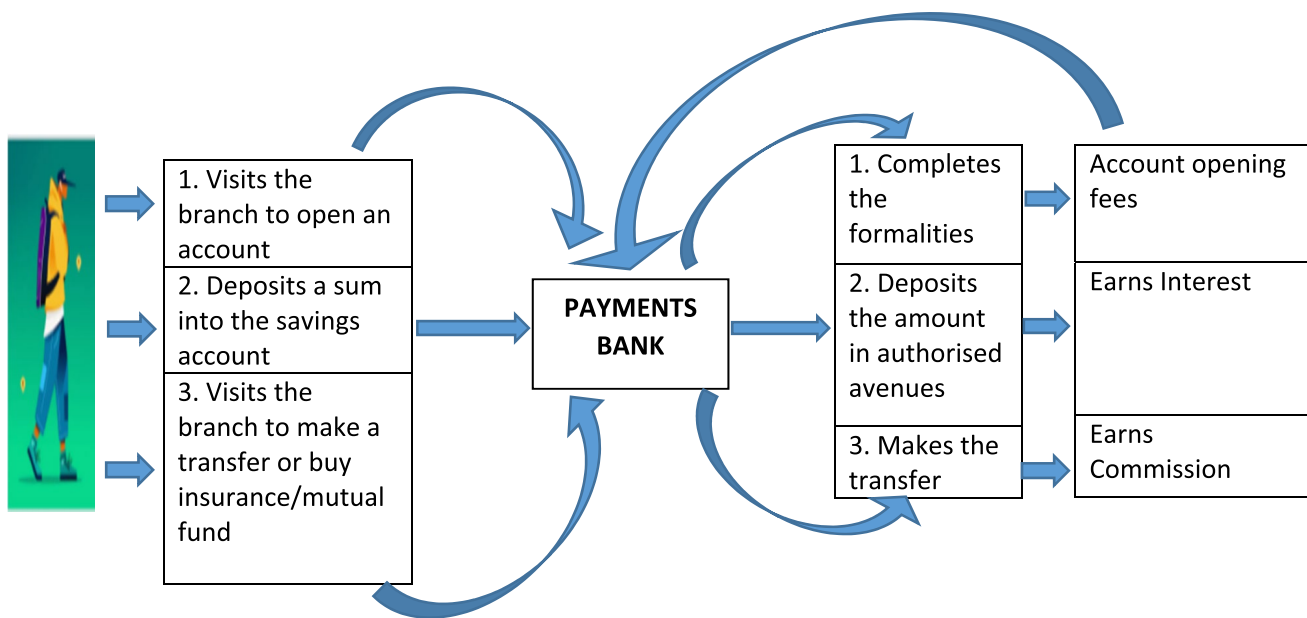


Fig. 1 Working model of a Payments Bank

has been cast as a subset of the universal banking model; PBs cannot take on credit risk (RBI 2014)—they are not allowed to lend and issue credit cards. They were originally meant to cater only to the payments and transactions services space and earn fee income. Therefore, they can operate only current and savings deposit accounts and not take term deposits. Subsequently, they have been also permitted to sell mutual fund units, pension and insurance-related products to further financial inclusion and earn fee income (see Fig. 1). The payment space in India is quite competitive where PBs have to co-exist with other players including:

1. Mobile wallets
2. Aadhaar Enabled Payment System (AEPS)
3. United Payment Interface
4. Online banking platforms of commercial banks

PBs were primarily meant to solve the problems pertaining to savings and payment/remittance services among the unorganized sector, migrant workforce and low-income households. The essential business model of PBs envisaged offering payment and remittance services at low cost by providing multiple access points through branches and through ‘business correspondent’ networks while leveraging the power of technology. Therefore, the RBI had set a minimum equity capital requirement of Rs. 1 billion in order to fund the significant technological infrastructure requirement. In order to ring-fence the activities and related risk exposure of the PBs, the RBI has applied a cap on the maximum balance

PBs could hold in each account,⁵ prescribed high amounts to be invested in safe government securities and subjected them to tighter capital adequacy norms. However, the RBI has permitted these banks to participate in the money market as both lenders and borrowers with a view to give them more investment flexibility for better returns as well as access to funds to manage liquidity.

The eleven applicants who were granted PB licenses in 2015 included telecom players, non-bank lenders and mobile wallet platforms that were seen to possess resources (geographical reach and client base like telecom companies and lenders) or capabilities (mobile wallets) that could be leveraged to get the PB business off the ground quickly and profitably. Subsequently, five players surrendered their licenses and as of March 31 2020, only six PBs were operational (Airtel Payments Bank, Paytm Payments Bank, Fino Payments Bank, India Post Payments Bank, Jio Payments Bank and NSDL Payments Bank). PBs had posted high negative Return on Assets (ROA) and Equity (ROE), owing to their huge operating expenses.⁶

⁵ This amount was increased from Rs. 100,000 to Rs. 200,000 in April 2021, in order to provide scale and flexibility to PBs “to enhance their capability for financial inclusion”. However, assuming that the financially excluded population typically would not have access to such funds, it remains to be seen how this step might help with financial inclusion.

⁶ Source: “Operations and Performance of Commercial Banks”, Reserve Bank of India, 29 December, 2020: <https://m.rbi.org.in/scripts/PublicationsView.aspx?id=20270#TIV.41>.



Table 1 No. of debit cards outstanding with payments banks *Source: RBI*

| Bank | No. of outstanding cards as at the end of the month | | | | | |
|-----------------------------------|---|-------------|-------------|-------------|-------------|-------------|
| | Apr'18 | Sept'18 | Apr'19 | Sept'19 | Jan'20 | Aug'20 |
| Aditya Birla Idea Payments Bank | 3 | 2634 | 4808 | 4808 | 0 | 0 |
| Airtel Payments Bank | 1,338,589 | 1,898,447 | 949,155 | 1,043,273 | 1,088,158 | 1,749,278 |
| FINO Payments Bank | 248,703 | 282,744 | 464,140 | 702,146 | 963,101 | 1,532,460 |
| India Post Payments Bank | 2309 | 0 | 0 | 0 | 30 | 30 |
| Jio Payments Bank | 0 | 0 | 0 | 0 | 0 | 0 |
| NSDL Payments Bank | 0 | 0 | 100 | 12 | 283 | 65,676 |
| PayTm Payments Bank | 34,312,263 | 41,591,704 | 45,335,254 | 51,538,916 | 55,998,002 | 60,025,345 |
| Total | 35,901,867 | 43,775,529 | 46,753,457 | 53,289,155 | 58,049,574 | 63,372,789 |
| Total of Airtel and PayTm | 35,650,852 | 43,490,151 | 46,284,409 | 52,582,189 | 57,086,160 | 61,774,623 |
| Share (%) of above in total of PB | 99.30 | 99.34 | 98.99 | 98.67 | 98.34 | 97.48 |
| Total of all Banks | 906,356,781 | 982,449,131 | 884,775,739 | 835,593,848 | 816,726,429 | 858,710,451 |
| % Share of PB | 3.96 | 4.45 | 5.28 | 6.37 | 7.10 | 7.37 |

<https://rbi.org.in/Scripts/ATMView.aspx>

Adoption of payments bank services

PBs are confronted with high operating leverage, which implies high break-even levels of operation, huge volumes of transactions and scale. It further intensifies the need for PBs to invest heavily to enlarge their customer base (RBI 2020). Scale requires greater adoption of PB services by customers, and increasing number of bank accounts. While some PB may achieve scale and, hence, profitability, whether they will achieve RBI's objective of financial inclusion, is another matter. This requires investigating their business model against the requirements, and studies focusing adoption and non-adoption motivation of the appropriate target segments. Table 1 shows the trend in the number of debit cards outstanding with PBs since inception. Number of debit cards outstanding with each PB is used as a proxy to measure the accounts held with PBs.

For the period March 2018 to January 2020, Airtel Payments Bank and PayTM Payments Bank held a combined share of around 98% of the total number of debit cards outstanding issued by PBs. Both these players have a captive customer base owing to their telecom network and mobile wallet network, respectively. PayTM started by offering payment gateway solutions and e-wallets, which allowed its users to pay utility bills and grocery bills besides making person-to-person payments on the move through its digital platform. Meanwhile, Airtel m-commerce Services, now known as Airtel Payments Bank, began its operations in the year 2011 and provided services like money transfer and semi-closed wallet services. While other PB aspirants too had unique advantages such as customer base and financial services experience (Cholamandalam Finance, a non-bank), or geographical spread (India Post), they have been unable to scale up to match Airtel PB and PayTM PB. This perhaps

indicates that technological dominance and reach override other resources and capabilities in this business.

Much of the customer base of these two PB comprises urban youth who are tech-savvy and find e-wallets a convenient and quick way to transact on the move. They are people who already possess bank accounts and other financial products. Besides the two players mentioned above, the record of the PBs has been quite dismal. India Post PB initially showed some promise with respect to the issuance of debit cards. But after August 2018, when it showed an outstanding of 322 debit cards, it moved on to reporting 'zero' debit cards outstanding for all the following months. Bank level volume and share data for payment transactions via the Electronic Clearing System, National Electronic Fund Transfer (NEFT), Real Time Gross Settlement (RTGS) and Mobile Transactions show that PBs' contribution to the overall volumes is negligible. For example, data obtained from the RBI's official website show that NEFT-based outward debits and inward credits by PBs constituted only 0.36% and 0.22%, respectively, of the total banking transactions for the month ending March 2019. The corresponding figures for RTGS transactions were abysmal at 0.00006% and 0.0005% of the total value. However, PBs' share in the volume of mobile transactions for the month ending March 2018 stood at 22.54%—with PayTM PB and Airtel PB contributing to more than 99% of these transactions.

The poor adoption of PBs as shown in Table 1 by its intended audience is, we believe, a ripe ground to study consumer behavior among a relatively less researched cohort for financial services. Gupta et al. (2019) studied this issue using the Unified Theory of Acceptance and Use of Technology (UTAUT) framework along with perceived credibility as an additional construct to investigate the adoption intention of the PBs by the underbanked and unbanked population



in the capital city of India. Here, the authors were able to explain 67.5% of the behavioral intention of adoption of PBs through their proposed model. Another study by Kaur et al. (2020) has explored the behavioral intention to adopt PBs through extended technology acceptance model (TAM). TAM relies upon an individual's perception of the usefulness of a particular technology and perceived ease of use to study the usage of a particular technology. These technology adoption models presume the customer's awareness of the technology and a certain experience with the technology. We felt it was important to enter the field with no assumptions whatsoever, especially when dealing with a customer segment that was likely to be uneducated, having poor access to information.

Adoption of new services and technology-based services

Advances in technology have always brought multiple services to the fore and created new functionalities that can empower users including employees, management, and customers alike (Brown 1997). Academic literature on the adoption of technology by consumers is rich and vast. Industries and governments, often to expand their scope and reach, launch an array of new products and/or services which in turn provide a stimulus to the economic activity of the region.

Ryu (2018) had recognized the ability that advances in technology had provided the non-banking organizations to offer novel financial services, while IT and Telecommunications companies have been trying to change the status quo in the financial sector (Arner et al. 2016). Oliveira et al. (2016) observed that technology shows promise when deployed for delivery of financial products and services, such as crowd-funding, bill payment, account transfers, person-to-person transfers among others. Technology has also enabled banks to respond to customer inquiries and problems quickly, increase internal efficiency and productivity, reduce labor costs, and assist in achieving financial inclusion in most parts of the world. However, the impact of technology, as observed by Mick and Fournier (1998), is something of a double-edged sword: It can be both detrimental and beneficial and have rarely come with exclusively positive or negative implications for the customers (Walker et al. 2002). Services that are rendered using technology, often end up reducing access, frustrating and intimidating users, depersonalizing the service experience, and creating a difference between customers and service personnel (Walker et al. 2000).

Studies undertaken in the past to understand customer response to new technology adoption have used models like TAM, UTAUT, task-technology fit theory, theory of reasoned action, and theory of planned behavior among others

(Dahlberg et al. 2015). Walker et al. (2002) observed that customer hostility increases when customers are forced to adopt technology with unintelligible complexities. Walden and Browne (2009) observed that the adoption of information technology and its information are not just an accident, but it is often trailed by the information that is gathered by a person, which is in-turn conveyed through the person's behavior. Therefore, it becomes imperative for regulators, banks, and other financial institutions to figure out the most effective way in which banks and their services can become an acceptable solution for the unbanked section of the populace, through technology.

Research design

Methodology

This study uses a grounded theory approach, which helps develop a detailed and carefully crafted account of the area under investigation (Martin and Turner 1986). We have used this alternative qualitative research technique, because we do not seek to verify hypothesis; instead, we want to get insights into the behavior of our target groups that hinder their adoption of PBs. Our main goal is to develop a coherent understanding of their decision-making process which is grounded in the experiences of the non-users of PB among other financial services. Grounded theory uses theoretical sampling that is not defined in the beginning but develops in parallel with the theory. The revealed results and newly emerging problems drive the researchers toward new situations, places and people until the investigation reaches its so-called saturation point (Horváth and Mitev 2015).

The initial round of data generation and analysis helped in generating codes and concepts around the non-adoption of PB. The researchers kept moving back and forth between the interviews leading to constant comparison of the data with the concepts that had already emerged. Based on these codes, the authors employed theoretical sampling to identify the nature of data to be collected next and where to find them, in order to develop a theory. In the process, participants relevant to the research like the bank managers of PB were interviewed by the researchers to identify the causes for the non-adoption of the PB. This was carried on until the categories reached a saturation.

This study was conducted on a consumer cohort comprising of one contractual laborers, and two of small businesses and self-employed migrants, clubbed together as small merchants, who have no access to basic financial services. Given the nature of the respondents, a questionnaire method would have been difficult to administer, lending itself to low validity and reliability. A grounded theory approach, with personal unstructured interviews, was seen as a more effective



approach. We interviewed a total of 34 respondents—22 contractual migrant laborers, five self-employed migrants and seven small-business owners. In order to conduct face-to-face interviews with the migrant laborers and small businesses, and to ensure the reliability of the data collected the researchers traveled separately to mandis,⁷ construction sites, vegetable markets and bus stands in and around the northern states of Haryana, Rajasthan, and Delhi. The semi-urban, rural and urban settings were deliberately chosen so as to enhance the reliability of the findings of this study. The respondents were all male in the age group of 25–60 years.

The participants were first informed about the research, and only after receiving their consent for the interview did we move forward with our questions. The interviews were conducted in Hindi, and the conversations transcribed into English. An attempt has been made to maintain the spirit of the responses and not lose/alter any key information in the translation. We focused on selecting respondents who had remitted money to their friends or family members at least once in the last two years. The interview structure was initially left free flowing, without any strict protocols to avoid imposing any theoretical frameworks on the respondents' thought process. Few initial questions like, "*Do you take the help of any bank to send money?*" or "*How often do you use banking services for your financial needs?*" were used to start the conversation (see Appendix for the Interview Protocol). This evolved into a semi-structured interview framework with broad interview protocols to avoid diversion from the object of our study. All questions were open-ended which allowed the respondents time and an unbiased canvas to speak about their adoption or non-adoption of PB services. After obtaining due consent from the interviewees, we recorded the interviews to make sure we had our concentration on the conversation. When we framed the initial questions we made sure that our beliefs, theoretical understanding or even our interests were not imposed or made known to the interviewees. The interviewees were constantly encouraged to elaborate more and express their reasons. Initial questions about the kind of work the respondents were involved in and their level of financial activity helped weed out those who already had an operative bank account (financially included). We continued conducting interviews with more respondents until we reached theoretical saturation with further interviews not providing additional insights (Horváth and Mitev 2015; Papathanassis and Knolle 2011). Besides the 34 respondents comprising the target customer segment, theoretical sampling and constant comparison led us to interview three PB branch managers to understand their perspective on the subject and for possible additional

insights. These interviews were conducted as person-to-person conversations at the PB premises and also helped in triangulation and validating the arguments, themes and insights derived from our main respondents (Creswell 1998; Denzin and Lincoln 2011).

Analysis

Open coding

Interview transcription and open coding were the first steps of data analysis which helped identify key points emerging from the transcriptions and assigning a 'code' to each of them. The constant comparison method and theoretical sampling herein helped us to formulate a strategy which would then drive the process of data collection (Giske and Artinian 2007). The constant comparison technique required us to verify that ever code created was new (Gandomani and Nafchi 2016) and hence paved the way for creating emerging categories for non-adoption of PB. Each category takes the analysis further, encompassing several-related concepts (Glaser 1978). Memos were maintained to help establish relationship between interviews and the concepts that emerged from those interviews. The initial analysis allowed us to group small pieces of data and label them based on their characteristics. The emergence of new concepts and categories guided us with the theoretical sampling process. This included looking for respondents possessing different perspectives to the problem at hand, for example, interviewing PB managers in addition to the target customer segments.

Glaser (1978) proposes to hold progression to selective coding until a core category is found during the open coding phase. These core categories act like the first step around which we aim to explain the phenomena under study. Each core category was worked out after making sure that other emerging categories and their properties were meaningfully related to the core category and all the primary issues of the respondents revolved around the core category of this study. Our analysis of the data revealed '*Impediments to adoption*' as the core category leading to low customer adoption of PB services. These impediments appeared to be a serious challenge faced by the target customers which were reconfirmed by our conversations with the bank managers. Finally, to begin with the process of integration and refining the findings, we moved on to selective coding to identify categories that were closely related to the core category.

Selective and theoretical coding

After establishing the core category, this study moved on to selective coding, wherein codes were restricted to those variables which were related to the core category (Glaser

⁷ Mandi is a market place for agricultural commodities: Mandi. (n.d.) in Collins Dictionary. Retrieved from <https://www.collinsdictionary.com/dictionary/english/mandi>.



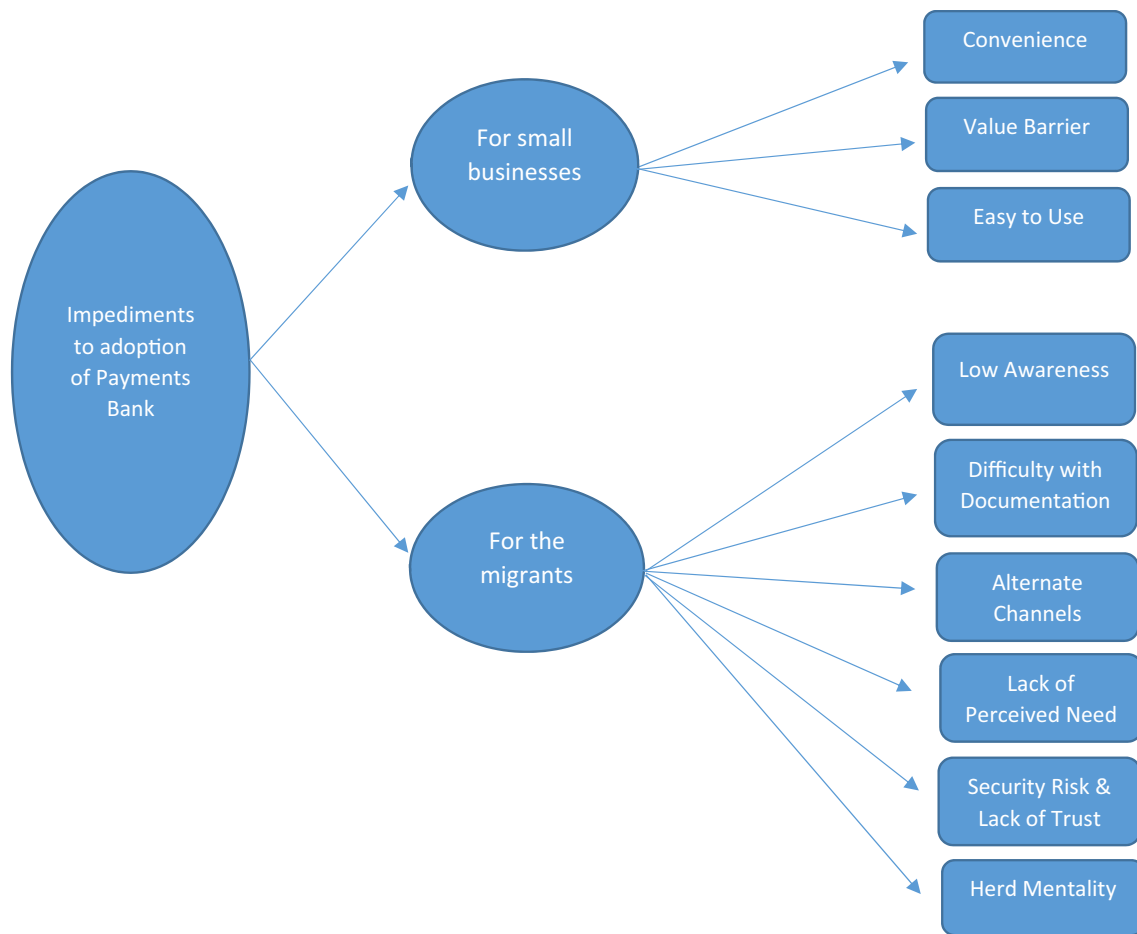


Fig. 2 Impediments to adoption of payments banks

1978). Codes at this stage were integrated, and they in turn helped us to refine the findings and build a framework for the core category of our study. Memos from the interviews highlighted factors such as awareness about the PB, process impediments like documentation issues faced by the non-users and others. The coding reports that were manually generated and the memos in particular were helpful as we could see how these concepts and patterns naturally emerged from the data and were not forced.

Theoretical coding was the last step undertaken during the course of the analysis. Theoretical codes give integrative scope, broad pictures and a new perspective (Glaser and Holton 2004). It was used to study and look for connections that existed between the core category and other categories of impediments that emerged from the data analysis. At this stage, the core category and other categories like *adoption facilitators for the PB* were framed. As we moved forward with the theoretical coding, we looked at different ways of relating the findings to each other, so that the impediments to adoption could be woven together into a model.

Findings

In this section, the researchers analyze the factors or categories affecting the adoption of the PB by the intended customers that act as impediments. An important insight of this research was that the factors that affect the adoption of PB differ across both our respondent categories. The researchers analyzed the factors or categories affecting the adoption of the PB which is a central phenomenon and present propositions derived from the interviews conducted with the migrant laborers, migrant self-employed population, small-business owners and branch managers of PBs. Our findings have automatically led to these respondents getting grouped under two categories: factors affecting the adoption of PB by migrant laborers and factors affecting the adoption of PB by small businesses, which includes migrants who are self-employed (see Fig. 2). The branch managers' responses have been used to corroborate the findings emanating out of the interviews of the primary respondents.



Impediments to adoption of PB by small businesses

Convenience

Convenience as a research construct has been widely discussed in the marketing and consumer behavior literature (Berry et al. 2002; Jih 2007; Ng-Kruelle et al. 2002). During the analysis, we found several factors contributing to this phenomenon. Most of the vendors, suppliers and shopkeepers interviewed belonged to the unorganized sector and they preferred cash to any other mode of payment, which is in line with their workflow, practices and habits. Small businesses that we interviewed during the course of this research revealed how cash was preferred over any other mode of payment, as only cash was extensively used by all the suppliers of these small businesses. Cash still remains a preferred choice of payment for most Indians, and this can also be substantiated by the fact that around 84–93% of the transactions conducted in the mandis of India in the year 2018–2019 were conducted on cash basis (RBI 2019b). Introducing digital mode of payments in this scenario brings resistance and requires the consumers to compromise cash.

As one of our respondents (Respondent 14) puts it, “*I have a small family. Me and my wife live here and I work here as a small-time tailor. Whoever we know, accepts cash. Why to go through so much of trouble when I can conveniently use cash? The suppliers ask for cash. They do not accept any other mode as it is also very convenient for them.*”

Value barrier

Innovations that entail modifications in users’ routine require a comparatively elongated course before it begins to gain consumers’ acceptance (Herbig and Day 1992). Molesworth and Suortti (2002) explain value as the price-performance ratio in comparison to the substitutes of the product available in the market. Apart from being convenient, cash carries the reputation of being the cheapest mode of exchange. The respondents revealed how they thought that upfront costs with respect to opening an account, withdrawing funds and maintaining the account, offered them no incentive to switch over to PB. Studies in the past have shown how lack of value acts as single biggest inhibitor for adoption of innovations (Kleijnen et al. 2007).

In the words of Respondent 16, “*Each time I use the PB service, I’ll have to spend money. There are costs associated with these transactions. Firstly, I’ll have to spend money to open the account. Secondly, my vendor will not accept this, so I’ll have to withdraw money through a cheque or ATM card. You tell me with the small business that I have, does this really make sense? If I spend on all these things, what will I save?*”

Easy to use

The Wallis Report (1997) highlights that technological innovations that are perceived as easy to use’ see maximum adoption by the customers. For a total of 12 interviews that we conducted of small businesses and self-employed migrants, ease of use was seen to be of utmost importance for five of our respondents. Respondents revealed that they do not want to open an account with the PB because applications of PB are difficult to operate. These respondents also found usage of technological products troublesome.

In the words of Respondent 20: “*Sometimes after the customer sends money, we do not receive any message. Then I am expected to open the application on my phone and see if the money has been deposited into my account. Who will do this? I don’t know how to use this smart phone properly. It is a big trouble.*”

Impediments to adoption of PB by migrant labor

Low awareness

In order for the adoption of a new service or product to take off, it is necessary to create awareness among the consumers about it (Sathye 1999). One of the most dominating factors in the low adoption of PB among migrant labor turned out to be a lack of awareness of the product/service. During our interaction on the field, we realized that 12 of our 22 respondents were unaware of the existence of PB, much less the process or the benefits of opening an account with a bank. This was corroborated by the managers and is validated in almost all the interviews we conducted. Quaddus and Hofmeyer (2007) state that awareness of new businesses often leads potential consumers to seek the implied potential benefits of the products and services offered, which in turn, influence their decision to adopt a service.

Difficulty with process (documentation)

Our research revealed that the migrant labor population hesitates in getting a bank account opened because their understanding is that the banks demand a local address proof, which they may not possess. Most migrant labor stays on in a city only till such time they see a job market that can sustain them and enable them to send money back home. Such *perceived complexities* emerge as barriers to the adoption of PB, as seen in the case of other financial services too (Szmigin and Bourne 1999; Laukkanen and Lauronen 2005). Respondents during our interaction revealed that officials at the PB demand for a local address proof to open an account with them. Incidentally, the requirement for a local address proof had long



been discontinued by the central bank,⁸ but seems to not have been properly communicated to the target audience (migrant laborer, small business units). Additionally, the Government of India has also eased the rules and norms for migrant laborers permitting them to give a self-declared local address as a proof of residence.⁹ Lack of awareness, as discussed in Sect. 4.2.1, further compounds the problem, especially when it affects at various levels of adoption.

According to Respondent 2, *“It is very difficult to open a bank account for me. I don’t have a local address proof to open a bank account. The last time I went to the bank to get an account opened, they asked me for a local address proof. I do not have that so I left it.”*

Alternate channels available at lower costs

In the year 2006, the RBI devised the business correspondent (BC) model to reach financial services into the hinterland, across populations belonging to different economic strata. The BC model deploys BCs or bank *mitras* (*mitra* stands for friend in Hindi) that work as multiple customer service points (CSP), to deliver doorstep banking to the millions of unbanked Indians (Uzma and Pratihari 2019). The Bank Mitras are responsible for delivering financial services like transfer of money, opening of a bank account, facilitating withdrawal and deposits on a commission basis (Ujjawal et al., 2012). The commission that these BCs charge for an account-to-account transfer usually varies from Rs. 5 to Rs. 10 per transfer, or 0.2% to 0.5% of the amount deposited, typically more for withdrawals than deposits. Almost all the migrant labor interviewed was found to be using the Bank Mitras, informally also known as the ‘Money Transfer Agents’ to send money to their families back home. Here, the sender and the receiver do not need bank accounts to transfer or receive money. The receiver can collect the money from the agent at a collection point on furnishing an identity proof. These agents charge a minimal fee which is usually favored by the migrant laborers as seen from the statement of Respondent 7:

The agent sends money for Rs. 25–30 to my home.
Why should I pay the bank Rs. 400 to open an account that I would need to use only once a month?”

Lack of perceived/real need

Customers have been found to resist innovations that were incompatible with their existing workflows, practices and

behaviors (Ram and Sheth 1989). With over 95 percent of all transactions in India still conducted with cash (Litvack and Vigne 2017), PB as an innovation seems to have fallen into this trap. In its report submitted to the RBI, Mohanty (2015) recommended greater use of technology in financial services. In their words, *“... despite improved financial access, usage (of financial services) remains low, underscoring the need to better leverage technology to facilitate usage”* (Recommendation 2.1, p.13). In our sample, 7 of the 22 migrant laborers interviewed, showed no inclination to adopt a cashless service like PBs among others. Sathye (1999) observes that if the existing mode of service or product delivery is perceived to adequately fulfill the customers’ needs, this perception becomes an impediment in the adoption of an alternative product or service. This would be especially true if the target audience for a cashless service is the bottom-of-the-pyramid segment.

In the words of one of the migrant laborers, *Respondent 4: “When we have to pay in cash then it makes no sense (to open a bank account). All the things are bought and sold in cash. It (the PB service) is not useful”.*

Security risk and lack of trust

Dahlberg et al. (2015) concluded that security and trust were important pre-requisites for the adoption and use of mobile payments. Extrapolating this to technology, especially technology involving personal money and wealth, we find this to be true for the target customer segments of our study as well. Prior research has documented security, more often than not, to be important to the perceived reliability of a product where significant money is involved (Roboff and Charles 1998). The migrant labor population is generally not tech-savvy and needs physical evidence that instills a sense of security and trust with the bank. A study by Cooper (1997) revealed “the level of risk” as a significant feature from a probable user's perspective in the adoption of innovation. Our analysis revealed that lack of physical documents like a pass book which a PB is not allowed to issue impedes the process of adoption of PBs.

This is evident from the words of the bank manager of one of the PBs:

Respondent 34: “These people ask for pass book (bank statement). We are not allowed to issue any statements. This in turn, questions our credibility. People need proof of their deposits, the money that they have kept in their accounts. A mere text message from the bank is not enough. We lose our customers here.”

Herd mentality

Herd mentality is a phenomenon, wherein “everyone does what everyone else is doing, even when their private

⁸ RBI Master Circular Dated 01/07/2015: <https://www.rbi.org.in/commonperson/English/Scripts/Notification.aspx?Id=1581>.

⁹ <https://www.firstpost.com/business/govt-eases-aadhaar-kyc-norms-for-opening-bank-account-for-migrants-allows-self-declared-local-address-as-proof-7655681.html>.



information suggests doing something quite different” (Banerjee 1992). The initial decision to adopt a product or technology has been found to be often not a product of rational thinking, but guided by herd mentality (Sun 2013). Herd mentality, in our research, has emerged as one of the factors that has inhibited the adoption of PB. Many non-users had formed opinions based on hearsay or word-of-mouth with little or no evidence. The sense of security and trust in a known channel is enhanced when there is evidence of its successful use by other members of the cohort. A sense of comfort and confidence in using cash and other modes of money transfer trumps over the promise of benefits a PB account brings. To put it in the words of the bank manager of a PB:

Respondent 33: “There is something known as herd mentality. If one goes there, everybody will go there. Moreover, this becomes a trend if it is easier to do something this way and if it is cheap. We try to convince them to open an account with us but when his friends/relatives send money through these agents who work for a small commission, it becomes very difficult to convince them. People have this kind of mentality, so on one hand we talk about financial inclusion and on the other, there are these firms who are authorized to collect and transfer money thus, acting as an impediment to financial inclusion. How and why will they come to us?”

Discussion

Financial inclusion in a country is extremely important for inclusive and equitable growth (RBI 2019a); it becomes even more important in a scenario where millions still do not have access to the formal banking system. PBs were conceived as one of the means toward this end but have not been successful as envisaged. The business model of PBs was visualized as high volume—low margin that required embracing of this model by the population at large. This study examines the reason for low adoption of PB services in India by one of the main target customer sub-segments—the financially excluded population.

The classical models of adoption in the literature, like the *hierarchy-of-effects model* (Lavidge and Steiner 1961) and the *innovation adoption model* (Rogers 1962), have put forth awareness as the primary step in the process of adoption. Any prospective customer has to first gain awareness of a product or service (Guilinand and Donnelly 1983) and then will experience phases of knowledge conviction and decision confirmation before finally adopting it (Rogers and Shoemaker 1971). Quaddus and Hofmeyer (2007) found that awareness of a product or service helps in forming the perception of both indirect and direct benefits, which eventually drives the attitude concerning the intention to adopt

the innovation. Creating awareness requires the vendor or service provider to take up activities that will communicate the existence of, need for and benefits of the service, which can actually increase the likelihood of the adoption of the said innovation (Frambach et al. 1998).

More than 50% of the migrants interviewed, showing no awareness of the PB. The low awareness among the intended audience could possibly be owing to lack of effective communication from the PB ecosystem. Lack of awareness and information is played upon by a herd mentality, which further crystallizes the biases and prejudices against a change and any willingness to become aware and learn more about the new system, thus creating a vicious loop. The probable ineffectiveness of the communication channels adopted by the PB, and the regulator is leading to information asymmetry between the potential users and PB.

When financial services are easy and convenient to use and tailored to the financial needs of people, they enjoy the broadest adoption (Mohanty 2015). Economist and banker, Agustin Carstens, while delivering a speech at the 17th C.D. Deshmukh Memorial Lecture at the RBI on Central Banking and Innovation in the year 2019, emphasized on the aspect of documentation in the following words, “*Bank accounts cannot be opened without basic documents such as a birth certificate or identity card.*” In this scenario, potential users usually make their decisions based on seen and heard evidence rather than gathering information about a new alternative and vetting it against the familiar one. In a study conducted by Li (2004), it was found that the adoption of technology often takes place *en masse*. Social connections and group-think are far higher at the bottom-of-the-pyramid sections (Sridharan and Viswanathan 2008), and it is but natural that they adopt channels that are tried and tested by their peers for financial transactions and transfers. The convenience of and entrenchment of the existing mode by habit coupled with the attendant costs of switching have resulted in resistance and inertia to even experiment with PB. Herd mentality further accentuates the problem of lack of perceived need and creates trust deficit. All these result in an inertia to change, thereby further eroding the perceived need for the service.

The analysis of data obtained from the RBI’s website on currency in circulation from the year 2016–2020 shows that the total notes in circulation have grown over 32.11% from the year 2016. This has happened despite demonetization of high value notes undertaken in November 2016 by the Government of India. For migrant labor, there is a concern around costs associated with opening a bank account, and for small businesses, there are concerns associated with the costs of depositing and withdrawing money from their bank accounts. Besides the direct costs involved, effort involved in learning and becoming comfortable with technology has proven to be a big barrier in switching to PBs. Existing



channels like the bank *mitras* are giving a tough fight to the PB model in showing any incremental value they can bring to the customer given the monetary, time and effort related cost it involves. These costs include the money and time to switch to and learn the new technology, time to be spent for opening an account and understanding the workings, further adding to the perception that there is no real need to switch.

The impact of mistakes made in the business model initially sometimes becomes difficult to erase even after these mistakes are rectified. In order to maintain a low-cost delivery model, PBs' were initially not allowed to provide paper-based bank statement or pass books. Physical documents showing transaction record and account details were imperative to create a sense of security and confidence in the minds of this segment of the population. The sense of insecurity became so deep-seated that even when this regulation was relaxed, it has not seemed to have helped the situation. This seems to have been partly due to a perceived lack of trust and security while probably more due to loss of interest in the product once the potential customer was disillusioned by it.

Implications for theory and policy-makers

Given the importance of financial inclusion for a country, several steps have been taken to include the unbanked into the banking system. The PB seem to have been introduced as a product into a market that already had existing viable alternatives like microfinance institutions and small finance banks. This is over and above those held with regional rural banks and cooperative banks that specifically cater to small savers. Financial services business models, that leverage technology and have been popularized by Fin-tech startups, have seen significant traction in this environment. As a result, the innovations are becoming finer, catering to the specific needs of narrower markets. In their eagerness to come up with the next big breakthrough, firms sometimes fail to scrutinize all elements of the business model thoroughly. In itself, this is not a big deal in the world of start-ups and innovation. But when this is backed by state regulation, huge budgets involving big money and effort by the entrepreneurs, the failures can be more expensive. Also, failure caused due to a poor business model can kill an otherwise good idea or need, financial inclusion in this case. This study has implications for both academic research in the area of financial services and technology adoption. Besides, it has relevance for policy-makers.

Theoretical implications

An important contribution of this study is that it brings to the fore the unique reasons for non-adoption of PB by different target audience and customer segments. At the beginning

of this study, our aim was to understand the low-adoption rate of PB by the target customers bunched together, but as we moved ahead with our interviews we realized that these target customers cannot be grouped under one segment. They—migrant labor and small businesses/merchants, where the latter includes migrants who evolve to start something on their own and are hence, self-employed—are indeed two different segments as each faces its own unique set of factors contributing toward the non-adoption of PB. There has been no study so far which has looked at the motivations and issues of the different customer segments the PB are meant to cater to.

We find that adequate levels of awareness of PB do not exist among its intended audience, especially among the migrant labor. Creating awareness about the product or service is an important factor for the adoption of an innovative service (Sathye 1999). Communication channels and messaging being used, feedback on the service and further corrections and their communication outward, mitigating security and trust concerns of the populace are some very important factors regulators and policy-makers need to work on when launching a new service or product. Most of all, any consumer has to be convinced of the need for the service and how it will be more beneficial over existing alternatives. While we have not examined the communication strategy and channels used to popularize PB among the financially excluded, the ineffectiveness of any such communication to create awareness and comfort seems apparent. A related aspect for recall and comfort is observability and visibility of the innovation. As Black et al. (2001) conclude that the probability of an innovation being adopted is directly related to its observability.

The authors believe that these nuanced insights could not have been achieved with a quantitative survey that would restrict the free flow of thought and conversation. The findings of this study also shed light on how information is processed in the bottom-of-pyramid (BOP) population, and it paves the way for creating its own financial ecosystem. Moreover, no qualitative study has been conducted to understand the various factors that impede the adoption of PB. Applying existing models of technology adoption or innovation using existing survey instruments pre-supposes certain levels of awareness, and existence of behaviors or attitudes. This research uses the grounded theory approach precisely to enter the field with a blank slate and understand the core issues underlying the poor adoption of PB.

Practical implications

An important finding of this study was the incompatibility of the business model of PB (need for a lean cost structure through digitization and technology) leading to certain



regulations and practices, e.g., non-issue of paper-based account statement, with the need, issues and psychology of the intended audience—unfamiliarity and wariness of technology to be alleviated by physical proofs. As Yap (2017) points out in the words of Kumar Saurabh Singh, partner at Khaitan and Co; “*Though the small accounts with payment banks are subject to simplified know your customer, anti-money laundering and combating the financing of terrorism norms, the thresholds differentiating a small account from a regular account aren't that different, and the otherwise not needed compliance may become difficult to manage for payment banks*” (p. 1). Ubiquity and testability can help in reducing the perceived security risk that often accompanies an innovation (Ram and Sheth 1989; Johnson et al. 2018). Inertia and resistance to change are natural human tendencies, and costs act as an important determinant to adopt financial services (Kleijnen et al. 2004). Switching costs—monetary, time and effort—only add to the inertia.

Given the preference for cash in the Indian society, it becomes imperative for the regulators to look into how the PB model can fit into the existing system. They need to understand how the non-users can be encouraged to adopt this route for their payment solutions. Regulators and PB will have to develop markets and estimate how their service can fit within the existing activities undertaken by the target audience such as migrant laborers and small businesses. This can also be done by integrating the preceding activities of the migrant laborers with the PB; for example, can a wage account be opened like conventional salary accounts? The critical mass thus obtained can be users on one side and then used to attract the other side (small merchants) to also adopt the system. The regulator needs to provide operational flexibility to PB so that these banks can cater to the needs of the intended audience.

Limitations of the study and scope for future research

This study focuses on the BOP segment of the population to understand factors that impede their adoption of PB. One of the major limitations of the study, therefore, is its limited generalizability—its results cannot be applied to customer segments with vastly different demographic and social characteristics as well as different sets of needs. PB seem to have been more successful with the youth of the

country, especially the Gen-Y and Gen-Z sections, who are looking for a quick, inexpensive and reliable payment system that can reside inside their smartphones and can be completely driven by technology. We also believe that it would be hasty to speculate on the generalizability of the factors to the entire population. The findings of this study are derived from the respondents which were all men. The women migrant labours when approached for this study always directed us toward the men of the house, and for small businesses we were always confronted by men who used to manage the business. Therefore, future studies should focus on conducting similar exploratory or interpretive studies focusing on the migrant labor and small businesses from other parts of the country. Researchers undertaking a qualitative study are generally looking to understand a phenomena and not for a finding which can be generalized. The current study is exploratory in nature, and it needs to be followed by a thorough quantitative analysis which can also help in validating the findings of this study.

The migrant population still remains the most vulnerable section of our society, and this has been observed during the lockdown imposed by the Indian government to curb COVID-19 (Dev and Sengupta 2020; Ranjan 2021). Small businesses were also badly affected during this phase. The way forward in our opinion would be to understand the needs, motivations and also apprehensions of these groups and afford customized solutions for them. It would be worthwhile to conduct an interpretive study of the PB to understand any strategies laid down by them to overcome the issues raised in this research. Future research can also look at gauging the customer satisfaction with the alternative payments channels, and also customer satisfaction of the existing PBs' users. Future studies can also look at the inter-relationship of these factors and factors which can moderate the smooth adoption of PB.

Appendix

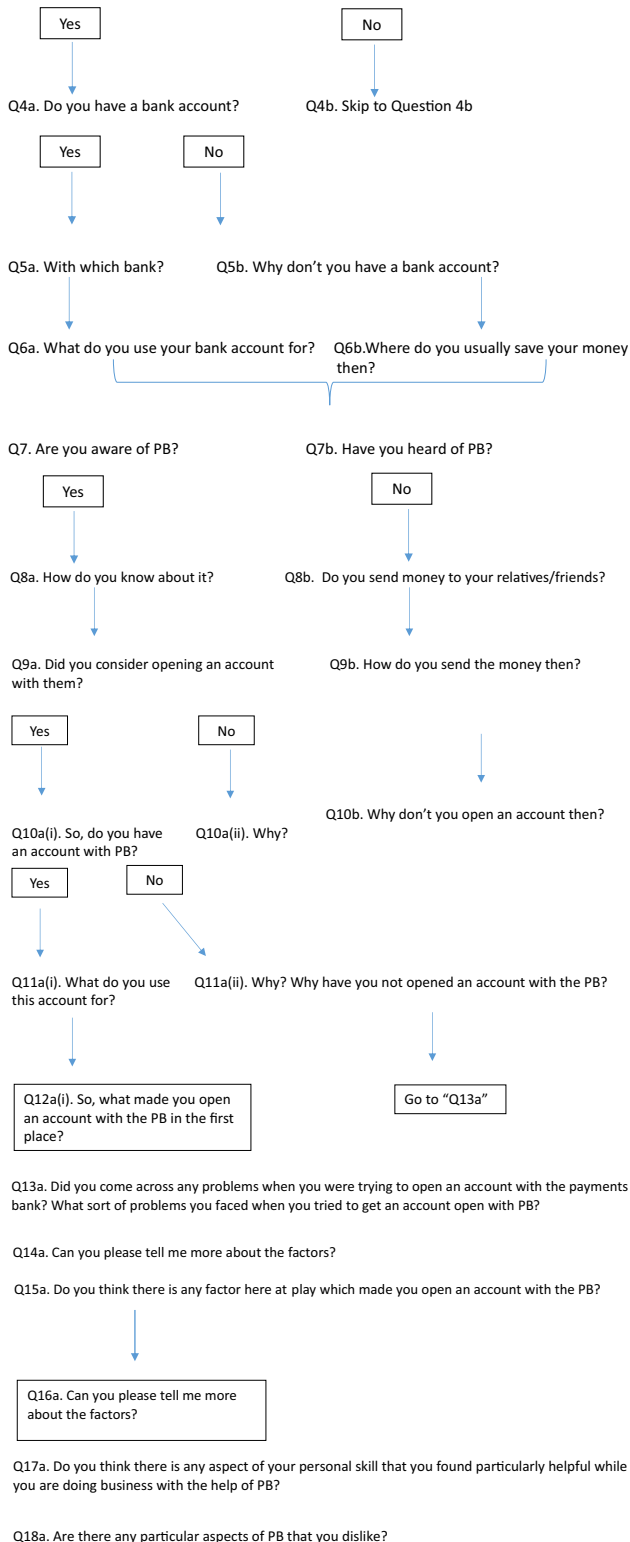
Hello. I'm a research scholar from MDI Gurgaon. Over a period of time, we have realized the importance of banking and financial inclusion in the development of an economy. Realizing this the government established the norms for setting up payments banks so that the unbanked population can be brought into the ambit of financial services. It is in this regard that I want to talk to you as we are conducting a research on the non-adoption of payments banks (PB).

I've a few questions which I think will not take much of your time. So, if you don't mind can I proceed with my questions?

(Common for both small businesses and migrant labors)



- Q1. What do you do here (mandi/construction site/etc.)?
 Q2. Where are you coming from? Since how long have you been working here?
 Q3. Are you aware of banks?



Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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