Payment Banks: Digital Revolution in Indian Banking System

Neha Mehta, Sweety Shah

Abstract: Digital revolution in India has brought paradigm shift in the banking system and financial transactions due to online payment. Payment gateways, e-commerce applications and other benefits boost smartphone users towards digital transactions. This study focuses on identifying factors important for customers to use payment banks for transaction. The identified dimensions for the usage of payment banks are: user friendly, convenience, cost effectiveness, security and easy cash management. People look for the aforesaid factors while they transact through payment banks. To validate the factors and check the model fit, a confirmatory factor analysis was run using AMOS. The analysis confirms constructs convergent validity and reliability, and model fit.

Key words: Payment bank, electronic payment, confirmatory factor analysis, model fit.

I. INTRODUCTION

Indian population has been widely using technology in every segment with the growing penetration of smartphones, mobile and Internet. This has affected all businesses including banks. Banks have also emphasized on preference channels from traditional banking structure to non-branch structure. The banks have well responded to these technology changes with the use of e-banking like ATM, and mobile banking. Alongside the objective of financial inclusion, RBI has additionally followed to acquire auxiliary changes the financial framework. RBI has distributed vision 2018 record for the "installment and repayment frameworks in the nation" which has concentrated on moving to a "cash less" but rather more digital society. RBI had set the phase with the aim to hand the licenses to new entrant. With the new entries of finance banks and payment banks that are required to construct new plans of action dependent on the benefit of being new, nimble, small and innovative. 2013 was the year that saw formation of board for Low-Income Households and small businesses by introduction of Comprehensive Financial Services headed by Nachiket Mor. It was framed by RBI and by 2014 last report with suggestions for the arrangement of another class of the bank called payment bank was added. The declaration of the same was made in the union budget plan 2014-15 wherein it was affirmed, in the wake of rolling out appropriate improvements to existing system. A set procedure for universal banks approval in the private sector in the same budgetary year was also set.

A. Payment banks

Payment bank is a non-full-administration bank which can accept deposits and facilitatemittance. It can't do lending function so they can providedebit card facility, yet can't issue credit card facility (Khatter, 2018). The payment bank gives small deposit or saving accounts, installment and payment and remittance services to low income labors, independent ventures and unorganized sector.

B. RBI Guidelines for Payment Bank

The payment bankscan be registered as a public limited organization under the Companies Act 2013, and authorized under section 22 of the Banking Regulation Act, 1949, with explicit permitting conditions limiting its function to acknowledgment of deposits and provision of payments and settlement administrations. It will be administered by the arrangements of the Reserve bank of India act, 1934; Banking Regulation Act, 1949; Foreign Exchange Management, 1999; Payment and Settlement Systems Act, 2007; other important resolutions and orders, prudential guidelines and different rules/directions given by RBI and different controllers from regularly, including the guidelines of SEBI with respect to public issues and different rules appropriate to listed financial organizations.

C. Eligibility Criteria

Eligible entities: The Non-bank Prepaid Payment Institutes (PPI) that are current financiers approved under 2007 actpayment and settlement systems (PSS), and different organizations, for example, entities of Non-Banking Finance Companies (NBFC), corporate business correspondence, mobile phone service organizations, super store chains, organizations, cooperatives of real sector and public sector segment may apply for payment bank. Indeed, even banks can have stake in a payment bank to the limit allowed under segment 19(2) of the banking regulation act, 1949.

Capital requirement: The base settled paid-up equity capital for payment banks is Rs. 100 crores

Contribution of Promoters: The organizations and promoters or promoter groups as defined in the SEBI guidelines, 2009 ought to be appropriate to be qualified to promote payment bank. Evaluation of a company’s fit status will be provided by based on their past record for 5 years based onapt qualifications and integrity, budgetary sufficiency and effective reputation in maintaining business. The minimum commitment of promoter to the paid-up equity capital for payment bank must be 40 percent at least for the initial five years from inception of business.

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The Foreign shareholding: The private sector payment banks has to follow FDI guidelines for the foreign shareholding and subject to change from time to time.

Reserve Requirement: RBI manages amount as Cash Reserve Ratio (CRR) on its outside demand and time liabilities. Amount apart from it will be required to be invested as minimum 75 per cent of its "demand deposit balances" in Statutory Liquidity Ratio (SLR) entitled securities/treasury bills of government with maturity up to one year and hold maximum 25 per cent in current and time/fixed deposits with other scheduled commercial banks for operational purposes and liquidity management. The leverage ratio of payments bank should be of not less than 3 per cent, i.e., outside liabilities not rising beyond 33.33 times its net worth (paid-up capital and reserves).

D. Scope of activities of Payment Banks

- Demand deposits acceptance: The qualified deposits accepted by the payment bank are secured under the deposit insurance scheme of Deposit Insurance and Credit Guarantee Corporation of India (DICGC). Given their essential role is to give payment and settlement services to micro and small businesses and lower income households, Payments bank are at first limited to holding a maximum balance of Rs. 100,000 for each individual client. After the exhibition of the payment bank is measured by the RBI, the maximum balance would be raised.

- Issuance of ATM/charge cards: Payments banks, be that as it may, can't issue credit cards.

- Payments and settlement services: Through different channels including branches, Business Correspondents (BCs) and portable banking. The payment/settlement administration would incorporate acknowledgment of funds toward one side through different channels including branches, BCs, ATMs, however BC of another bank, subject to the Reserve Bank rules on BCs.

- Distribution of Financial products: Financial products like mutual fund units and insurance units and simple non-risk sharing basic financial products.

- Deployment of funds: The payment bank can't deploy loans.

II. LITERATURE REVIEW

The structure of banking sector in India is divided into two categories banks and financial institutions. Banks consists of public sector, private sector, foreign, rural, urban and rural cooperatives. While financial institutions consist of financial institutions at central-level, state-level and others. The growth of Indian banking sector is at good pace with rising disposable income. Access to banking systems has also improved with lot of government initiatives that promotes banking technology and increased usage of unbanked and non-metropolitan region. Government of India is promoting cashless transaction post demonetization which has raised the usage of internet banking, mobile banking and payment banks. Cashless payments in 2016 increased by 22 per cent when compared to 2015 (Waghmare, 2016). This percentage will grow tremendously with the rise and promotion of digital India. It is expected that the users of online banking in the country will increase to 150 million from 45 million by 2020 (Financial Express, 2017). Technology advancement and digital India has also led to trending usage of payment banks. It is a new development in the banking sector which is in some measure similar to banks but with limited services that banks provide.

The main objectives of payment banks in India are cashless transaction and strengthen usage of financial services in different sectors. It is a sort of branchless transaction with certain regulations (Mas, 2009). Payment banks are appropriate for growing economies where the main objective is financial inclusion (Winn, 2015). There are very few researches that have analyzed the concept of payment banks. There are various countries that have implemented the services of non-banking institutions for payment or fund transfer. India is fighting with lot of problems related to fake currency and black money. Hence, cashless/digital transactions are currently very important to curb counterfeiting and other problems (Alvares and Clifford, 2009). Managing currency would become easier with the help of cashless transaction specifically with payment banks…Transactions can be tracked, tax will not be avoided, fraud will be reduced (Das and Agarwal, 2010). Because of the technology advancement there are various new payment systems that are evolving in country. National Electronic Fund Transfer (NEFT), Immediate Payment Service (IMPS) and Aadhaar Enabled Payment System (AEPS) etc already existed, but now is the time of Unified Payments Interface (UPI) payment bank which makes the transaction easier than any other system.

Payment bank makes bulk and frequent transactions quick and easy. This system gives consumers facility of less operating cost rather no operating cost whereby they can access and use certain types of banking services like paying bills, fund transfer directly to account or to account of other party’s payment bank, and recharges (Clark, 2008). There are several factors due to which consumers are preferring usage of payment banks. These kinds of services are easy to use, less time consuming as the interface of applications are made such along with the safety feature (Venkatesh et al. 2003, Sharma and Singh, 2009). Payment banks are affordable as the operating cost is minimum or zero and there are lots of discounts and offers are available (Polatoglu and Ekin, 2001,Karjaluoto, et al, 2002). There are also issues related to these services which are perceived negatively by consumers like financial cheating, malpractice of account and problems with the application user friendliness (Sharma and Singh, 2009, Sukkar&Hasan, 2005).

Studies also show that consumers perceive that determinants of payment banks are features like less time consumption, independence of accessing and using the service at any time from anyplace and privacy (Karjaluoto, et al, 2002). Though, there are perceived risk and worry about security issues affects the growth of this service (Bamoriya and Singh, 2012, Hooper & Zhou, 2007, ...
Wang, et al, 2003). The service adoption process by consumer will increase only if they find it useful and safe (Ali, et. al. 2010). Even consumer awareness (knowledge, conviction and action) affects adoptions of technology and payment banks ((Rogers and Shoemaker, 1971, Sathe, 1999). A study conducted in US found factors that help adoption of this facility are comparative advantage, level of difficulty, compatibility, etc. (Celik, 2008, Comninos, et al, 2008, Gan, et al, 2006, Kolodinsky, et al, 2004). There are also studies that show vast difference in the demographical profiles of users and non-users of these types of technologies in terms of demography, behavior and attitude (Venkatesh et al. 2003, Akinci, et al, 2004). Consumers also appreciate along preferring dimensions like trust (Rousseau et al, 1998), basic service quality, value addition, and cross-buying facility as dimensions for this type of financial services (Bauer, et al, 2005). Social factors enhance the adoption process as individual thinks how other perceives their usage of new system (Venkatesh et al. 2003).

III. METHODOLOGY
A. Problem Statement
There is a little research done on newly introduced financial services like payment banks and few studies discusses about the consumer perception, preferences and attitude towards payment banks. The study wants find out the dimensions along with impact of various demographic factors on the usage of payment banks.

B. Research Objectives
Based on literature review and confirmations from past studies, the present investigation has been arranged with the following objectives:
1) To identify the major dimensions influencing the preferences and usage of payment banks
2) To analyse the effect of demographic variables on use of payment banks

C. Research design and Sampling
The study was conducted in the Ahmedabad region of Gujarat, and a sample size of 196 respondents was chosen on judgmental basis to meet the research objectives of the study. The total numbers of questionnaires distributed were 200 but some of them had one or more missing responses. Such questionnaires were discarded and were not considered for additional analysis. The final sample size after discarding the questionnaires with missing responses was 190. In this way, the response rate was 90% which is viewed to be acceptable for a research study. The survey was carried out in August-September, 2019.

The research design for the study is descriptive in nature. The structured questionnaire constructed for the study covered several questions of continuous and categorical in nature. The survey included questions of demographics, awareness of payment banks, financial attitude and preferences towards payment banks, and reasons for not adopting the said services.

D. Data Analysis Approach
Analysis is done using SPSS software 19.0 and Microsoft excel.
Description of Analytical Tools:
- To identify the factors considered for Usage and Non-adoption of payment banks; Principal Component Factor Analysis (PCA) is applied.
- To find out the association between usage of payment banks and various demographic variables viz. gender, age, income, education, profession, Chi-square has been applied.

IV. DATA ANALYSIS
A. Identification of dimensions of usage of payment banks
To define the significant factors affecting the preferences for usage of payment banks, varimax rotation in Principal Component Factor Analysis (PCA) was carried out for 20 variables estimating perception. The result indicates that Bartlett’s Test of Sphericity (Bartlett, 1954) was critical (Chi square 3789.826, p-value<0.0001). The Kaiser-Mayer Olkin (KMO) measure of sampling adequacy was high at 0.710 is exceeding the suggested value of 0.6 (Kaiser, 1974). The two results of (KMO and Bartlett’s) shows appropriateness of the data for factor analysis (Malhotra, 2010).

After conducting Exploratory Factor Analysis (EFA) the factors with Eigen value more than 1 were retained and considered significant. The outcome was that there was a sum of 5 factors consisting 19 items, which explained for 72.264% of the total variance. One item has communality less than 0.5 i.e. discarded from the analysis. The inter-item correlation and inter-item consistency of each factor was also measured by calculating each factor’s Cronbach’s alpha (Cronbach, 1951).

Factor 1 loaded on four variables and is labeled as User Friendly and it comprises of dimensions related to easy usability, application interface, linking of banking accounts with payment bank and innovative features of payment bank with values 0.849, 0.796, 0.577 and 0.486 respectively. The reliability of the variables constitutes the factor is 0.865 (Cronbach’s alpha). The factor extracted is very important to people for doing their financial transaction and at ease it can be done. Consistent with our expectation based on review of literature, it was found that people prefer financial transaction if technology is simple and user friendly.

Factor 2 loaded five variables and is labeled as Convenience with reliability 0.808 (Cronbach’s Alpha). The factor comprises statements that relate to convenience of transaction, less transaction time, good customer services, not required to visit bank for transactions and details for fund transfer with values 0.749, 0.771, 0.715, 0.521 and 0.683 respectively. Considering time constraints people are using payment banks where they are not required to visit bank branches.
Factor 3 loaded on four variables and has reliability 0.737 (Cronbach’s Alpha). The dimension is labelled as Cost Effectiveness. It includes variables like discounts/offers available on payment bank usages like points, wallets and discounts. Payments banks are even beneficial for expenditure tracking and perform cash less transaction without extra charges. The values of the variables are 0.693, 0.417, 0.720 and 0.698 respectively.

Factor 4 loaded on four variables with reliability of 0.710 (Cronbach’s alpha). The factor is labelled as Security which is also one of the most important factors considered by the users while they transacting in money. The factor consists security and confidentiality of transaction, immediate proofs of transactions and safety of money deposited with payment bank values are 0.745, 0.843, 0.744 and 0.529 respectively.

Factor 5 loaded on two variables with reliability of 0.581 (Cronbach’s alpha). The factor is labelled as Easy Cash Management consisting statements like hassle free transaction of not small denomination of currency and instant refund facility with values 0.709 and 0.837 respectively.

**B. Confirmation of factors and Model**

Confirmatory factor analysis was conducted to find out reliability, and convergent validity. Table 2 shows item loadings of factors mostly are higher than 0.5, with Average Variance Extracted (AVEs) exceeding 0.5 and Composite Reliability (CR) values exceeding 0.7. The Cronbach Alpha values also exceeded 0.5. Since, all the AVEs are greater than 0.5 and CRs are greater than 0.7, the constructs have convergent validity and reliability respectively.

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<th>Construct</th>
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<th>Item Loading</th>
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The fit indices indicated that the data fit for measuring hypothesized model well. The usage of model fit indices like Standardized Root Mean Square Residual (SRMR), Tucker-Lewis Index (TLI), Non-normed Fit Index (NFI), Root Mean Square Error of Approximation (RMSEA) and Comparative Fit Index (CFI) for evaluation of model fit for the purpose of construct validity. For SRMR and RMSEA, Hu and Bentler (1999) recommends using values maximum 0.08 and 0.06 respectively. While the minimum value of TLI, NFI and CFI should be 0.95 for good model fit (Bentler and Bonett 1980). The Goodness-of-Fit index (GFI) and Adjusted Goodness-of-Fit index (AGFI) between 0.8 to 0.89 are considered as reasonably fit, while the scores of 0.9 or higher are considered evidence of good fit (Joreskog and Sorbom 1984). Similarly, the values of Incremental Fit Index (IFI) should be 0.9 or higher for good model fit. The ratio of chi square to degree of freedom gives relative efficiency of model. Researchers recommend ratio between 2 to 5 for reasonably fit model (Marsh and Hocevar, 1985).

From the analysis it is found that the value of ratio of chi square to degree of freedom is 3.8 which is between 2 and 5 hence, the model is reasonably fit. The values of GFI and RFI are 0.8 which means the model is reasonably fit. While values of SRMR, NFI, TLI, IFI and CFI are 0.9 which means there is good model fit. Only the value of AGFI is 0.7 but if there are at least 4 values from model fit which are preferred or good, in that case the model is considered fit. The RMSEA value is 0.118 that is also acceptable hence, the model is well fit.

**Table – 1 Assessment of Fit**

**Figure – 1 Model**

**V. CONCLUSION AND MANAGERIAL IMPLICATION**

To infuse the financial inclusion, payment banks have been introduced in India and they are more innovative and transformative in nature compared to other categories of banks.
The usage of payment banks/online application for money transactions received significant rise during demonetization. This research notably contributes to the existing body of literature mentioned further. People look for the aforesaid factors while they transact through payment banks. The most important factors among these factors are ‘Ease to Use’, ‘Customer Service’, ‘Easy Accessibility’, ‘Privacy’ and ‘Instant Refund’. These factors must be strengthened and made stronger. Most of the households in India today have dual spouse income. Since, both the spouse work, hence there is little time to go banks for availing its services. Factor analysis also gave similar results, where the constructs reduced into factors were divided into user friendly, convenience, cost effectiveness, security and easy cash management. Out of all these factors user friendliness was the most reliable factor which was reduced. Further, a confirmatory factor analysis was run on these five factors and its constructs to confirm convergent validity, reliability and theoretical model (model fit). From the analysis it was found that the constructs have convergent validity and reliability. It also proves model fit hence; through this study it can be said that intention of using payment banks for transaction is dependent on aforesaid factors. This theoretical model can be used for further studies.

Also, the timings of banks are within the working hours which make it more difficult. The Reserve Bank of India and the owners of payment banks in India must try linking and extending banking services with payment banks. It is observed that most of the respondents feel the same. KYC can be used to check the credibility of the user to avoid fraud cases. This will help people to use smart banking systems rather than traditional branch wise banking. There are large numbers of rural areas in the country where bank branches are less. People residing in rural and the migrants need to often send money home which is usually done in cash with help of some traveler. Hence, the usage of bank account reduces. Marketer must try spreading awareness and impart knowledge to this segment related to usage of payment banks and its features which will enhance the banking operations.

Marketers must also provide more secured and transparent transactions to boost up payment banks usage as people trust the traditional banking systems. The penetration of payment banks can be enhanced by reducing the difficulty of digital transaction, changing perception of customers related to it and promoting cashless transactions. Most of the retailers do not have the facility of digital transaction. If a customer wants to make cashless transaction, aforesaid reason becomes hindrance. Marketers must tie-up with retailers and promote usage of payment banks for convenient cashless transactions.

Payment banks must link up with some major financial institutions and provide some sort of offers, discounts, and schemes to increase its usage. All this will lead to rapid growth and more money into banking system. There are many bottlenecks and challenges which need to be addressed in terms of real benefits, technology, safety, perception, etc. The current users of this facility are the early adopters and majority who are using it because of ease of transaction, time convenience and most importantly cashless transaction. Security concern of users should be answered by marketers soon upgrading their systems. Government, banks and marketers should communicate and create awareness and knowledge regarding payment banks, its importance and usability to increase subscribers or users which will increase adoption of this system.

REFERENCES


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