



(RESEARCH ARTICLE)



## Factors affecting customers' perception towards payment banks: An analytical study

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### Abstract

Payments Banks (PBs) are new model of banks, conceptualised by the Reserve Bank of India (RBI) to widen the spread of payment and financial services to small businessmen, low-income household groups, migrant and labourers in secured technology-driven environment. The article attempts to explore the factors affecting customers' perceptions towards Payment Banks. Data has been collected through a questionnaire from 285 respondents who are customers of payment banks in Amritsar. Factor analysis is employed to analyse the responses given by the customers of payment banks. The findings of the study demonstrated that four factors affect customer perceptions towards payment banks namely, 'User awareness', 'Accessibility and Ease of Use', 'Technological Support' and 'Complaint & Customer Service Management'

**Keywords:** Customers' Perceptions; Payment Banks; User awareness; Accessibility and Ease of use; Technological support; Customer Convenience

### 1. Introduction

Individuals in today's world are highly intelligent and always strive to do more tasks in less time by utilizing technology, such as smartphones, which have completely changed the way people live. With the help of smartphone people can purchase, sold and transfer money with just a click of a button. India is this second largest country in the world after China with the highest number of smartphone users about 659 million in 2022. Smartphone penetration in India reached 71% in 2023 and it is projected that it will reach 96% in 2020. With the increase in availability of 4G/5G networks across the country, digital payments are becoming faster without any inconvenience. Presently India has approximately 350 million digital payment users.

In order to harness technology and with a clear objective to promote financial inclusion across the remote areas of the country, Reserve Bank of India introduced a new category of banks into the Indian financial system namely payment banks. These banks were established in 2015 in order to provide financial services to the economically disadvantage section of the society through technology driven channels. The main objective of payment banks is to provide greater access of financial services to small businessmen, low income household group, migrant workforces and labourers in a secure manner through their smartphones. These banks provide banking services in expedient, safe and cashless mode to every individual with the support of smartphone and internet services without any extra charges.

Payments Banks (PBs) are new model of banks, conceptualised by the Reserve Bank of India (RBI) to widen the spread of payment and financial services to small businessmen, low-income household groups, migrant and labourers in secured technology-driven environment. Reserve Bank of India laid down some regulations for these banks. Payment Banks can accept demand deposits subject to maximum of ₹2,00,000 and are unable to offer credit cards or engage in lending activities. Moreover, these banks are required maintain a minimum capital adequacy ratio of 15% on risk-

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weighted assets and a minimum leverage ratio of 3%. They must have at least 25% of payment banks' physical access points located in rural areas.

For the purpose of reaching clients and facilitating easy transactions, these banks generally rely on digital platforms, smartphone apps, and web interfaces. This digital strategy reduces the cash transactions and encourages users to access the banking services through smartphone apps which require higher financial security and efficiency. Payment banks are changing the banking industry and affecting consumers in a critical way. Thus, it is imperative to analyse how payment banks are impacting users' financial behaviours and which factors affect the users to adopt the payment bank services. Hence, the main aim of the article is to explore the factors affecting customers' perceptions towards Payment Banks.

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## 2. Review of Literature

Payment Banks provides access of banking services via smartphones to the underprivileged groups of the society. Numerous researchers have carried out theoretical investigations about their role, opportunities, and problems concerning Payment Banks in India. Garg and Kapoor [1] conducted research on identifying the opportunities and difficulties faced by payment banks in India. The findings of the study revealed that payment banks were more inventive and revolutionary and had a lot of chances to perform better. Nazneen and Sreevani [2] investigated how the demonetisation affected Paytm services. The results disclosed that demonetisation had forced customers to use Paytm services like online settlements, broadband payments, flight ticket booking, cellphone recharges etc. Mittal et al. [3] looked into the factors which influenced Delhi NCR consumers to use payment banks. It was noted by the researchers that customers favored universal banks for savings but they utilized payment banks for services like bill payment and mobile recharge. Shivnani and Siwach [4] investigated Indian consumers' perceptions towards Airtel payment banks. The study concluded that in order to attract customers Airtel payment bank gave greater interest rates. Vijaya and Manthiri [5] assessed the awareness of India Post Bank services among customers. The study found that customers were sufficiently aware about the services of India Post Bank. Kumari [6] analysed the performance of India Post Payment Bank. The results disclosed that India Post Payment Bank had a number of issues such as low network connectivity, frequent staff turnover, and lack of technological use. Rathod et al. [7] checked the extent of public awareness about Payment Banks. The study discovered that number of individuals were unaware about payment banks. Vaishnavi and Shruti [8] examined pioneering services of payment banks. The study emphasized that payment banks were the efficient means of conducting digital transactions. Moreover, the adoption of payment banks impacted on customers' financial penetration. Komirisetty and Simha [9] gauged the development of Paytm in India. The study unveiled that customers were afraid to use payment bank services because of their poor awareness and poor technical knowledge. Naik et al. [10] studied the role of payment banks in India. The study resolved that competition with traditional banks with payment banks would improve quality of payment banks service which finally leads for financial inclusion. Suja [11] analyzed the performance of payment banks in terms of their success and obstacles. The study reported that the main obstacle faced by payment banks were intense competition from other banks. Additionally, the study discovered that payment bank did not follow customer-centric approach and were profoundly relied on third-party retailers. Bansal [12] examined the awareness level among low-income group people about payment banks in India. The study also analysed the acceptability of payment banking services among low-income group. The results exposed that low-income people were not much aware about the payment banks. Karthika and Lekshmi [13] studied the facilities provided by Airtel payment bank in Kanyakumari district. The study found that Airtel Payment Bank provide an efficient platform for transferring fund from one account to another account. Jingar and Gupta [14] analysed the promotional strategies selected by Paytm & BHIM to entice customers in Udaipur district of Rajasthan. The study discovered that risk of fraud & security limits the tribal people to use services of payments banks. Kavitha and Rajeswari [15] studied the behaviour of Paytm users. The study exposed that new innovative technology inclined the behavior of customers of Payment banks. Chandrasekaran & Vinothkumar [16] studied the influence of payments bank on financial inclusion in India. The study reported that with payment banks financial inclusion among customers had increased. Joshi [17] compared the acceptability of payment banks among retail organized and unorganized sectors in Ahmedabad city. The study disclosed that customers had sufficient awareness about the services of Paytm, Airtel Payment Bank, and Jio Payment Bank. Both organized and unorganized sector in Ahmedabad adapted services of payment banks for their small transactions. Kalaiselvi & Karthika [18] evaluated the customer loyalty towards Paytm. The study emphasized that convenience, better security, ease of use and offers influenced the customer to adopt services of Paytm. Moreover, customers were extremely satisfied with the Paytm services. Prakash [19] studied the cognizance level and perspective of college students in Coimbatore City regarding Payment banks during the pandemic period. The study uncovered that male students use more payment bank services than females to settle their business transactions. Further, under 30 years students were the majority of users of cashless transactions in comparison to aged people. Sharma [20] examined the factors affecting users' intention in using payments bank services in India. The results of the study disclosed that satisfaction among customer and their intentions to use payment banks had a significant effect on their actual usage.

Vetrivel [21] identified the foremost factors that induce the customers to utilize the services of India Post Payments Bank (IPPB). The findings showed that customers from the urban area had higher problems in comparison with other customers.

According to the literature review, most of the studies provide a narrative explanation about the evolution of payment banks and their functions and difficulties. There is a dearth of research that has empirically examined the factors that influence the customers to use the Payment banks. Additionally, some researchers have analysed the perception of customer for selected bank only. The results cannot be applied to all payment banks, and this only offers a restricted interpretation about the banks. Furthermore, no research has examined the factors that influence the users of Amritsar's Payment Banks. Hence, the purpose of this study is to fill the gap in the literature.

### 3. Research Methodology

Data has been collected from customers of payment banks in Amritsar through structured questionnaire. Questionnaire contains 20 statements which are rated on a five-point Likert scale ranging from 5= Strongly Agree to 1= Strongly Disagree to know the level of agreement/ disagreement of the respondents with these statements. 300 questionnaires were distributed out of which 15 questionnaires were found incomplete thus they were excluded for the purpose of further analysis. Effective sample of 285 respondents were taken to conduct the study. For the purpose of examining the data, Factor analysis using Principal Component Method have been used. Factor analysis offers the means to analyze the structure of the inter-correlations among a large number of variables by creating sets of highly correlated variables into a factor. The study formed following hypotheses to attain the objective:

H01: There are no significant factors affecting customers' perception towards Payment Banks.

### 4. Results and Analysis

#### Factors affecting customers' perception towards Payment banks

To examine the factors affecting customers' perceptions towards Payment Banks, 20 statements have been framed to bring out the important factors influencing the perception of customers. Before applying factor analysis, it is required to check whether data so collected is appropriate for factor analysis test or not. Kaiser-Meyer-Olkin Measure of Sampling Adequacy is useful method to show the appropriateness of data for factor analysis. Kaiser recommended that the value greater than 0.5 is acceptable. In the present study, KMO statistic is found to be 0.892 thereby indicating that sample is adequate. Bartlett's Test of Sphericity is another test applies in the study for verifying appropriateness and its value is significant.

**Table 1** KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.892
Bartlett's Test of Sphericity (Approx. Chi-Square)	3597.974*
*Significant at 1% level of significance	

Bartlett test of Sphericity has approximate Chi-square value of 3597.974 which is significant at 1% level of significance. Thus, the data collected is fit for factor analysis. After verifying the suitability of the data for reduction, Factor Analysis technique using Principal Component Analysis method was applied.

The application of Principal Component Analysis method with the varimax rotation reduced the 20 statements to 4 factors. Hence, hypothesis H<sub>01</sub> stands rejected as 4 significant factors affecting perceptions of customers towards payment banks are derived. These factors explained for 66.819% of the total variance. Factors with Eigen value equal to 1 or above are regarded to be most significant in determining the customers' perceptions towards Payment Banks. The first factor explained 22.492%, second explain 20.817%, third explain 14.264% and the last factor explains 9.246% of the total variance of the data. The study used varimax type of factor rotation. Through rotation, the factor matrix is transferred into simple matrix which is easy to interpret.

**Table 2** Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.856	44.282	44.282	8.856	44.282	44.282	4.498	22.492	22.492
2	2.116	10.582	54.865	2.116	10.582	54.865	4.163	20.817	43.309
3	1.371	6.853	61.718	1.371	6.853	61.718	2.853	14.264	57.573
4	1.020	5.101	66.819	1.020	5.101	66.819	1.849	9.246	66.819
5	0.864	4.321	71.140						
6	0.771	3.855	74.995						
7	0.761	3.806	78.802						
8	0.542	2.711	81.512						
9	0.519	2.594	84.106						
10	0.467	2.333	86.439						
11	0.430	2.150	88.589						
12	0.379	1.897	90.485						
13	0.330	1.652	92.137						
14	0.311	1.554	93.692						
15	0.286	1.428	95.120						
16	0.245	1.224	96.344						
17	0.215	1.074	97.419						
18	0.209	1.045	98.463						
19	0.174	0.870	99.333						
20	0.133	0.667	100.000						

Extraction Method: Principal Component Analysis.

**Table 3** Rotated Component Matrix

Statements	Component			
	1	2	3	4
I have complete awareness about payment bank mechanism and its procedures.	0.786			
I am aware about all the services provided by the payment bank.	0.745			
I am aware about the benefits provided by my payment bank.	0.735			
I do not experience any difficulty while using the payment bank application.	0.703			
I find payment banks expediting the transactions	0.623			
Payment bank has more customer friendly services.	0.586			
All services provided by the payment bank are completed on time		0.801		
Graphics used in payment banking applications are very meaningful to content.		0.794		

Payment Banks provide online /e-wallet facility (Any time anywhere bank facilities).		0.725		
Payment Banks serve their customers 24x7		0.628		
Payment Banks provide fastest services of Transfer of funds and remittance of payments services		0.599		
Payment Banks encourage Digital Payments		0.593		
Payment Banks meet cash requirement of their customer even after the bank is closed.		0.545		
Payment bank application has very strong encryption system.			0.740	
It is easy to navigate and use the application / interface of the payment bank.			0.601	
Payment banks are using effective interface for customer convenience.			0.593	
It is easy to understand every feature of the payment bank interface.			0.587	
Payment Banks help in reducing the complaints of their customers immediately, in terms of delivery of products and services				0.851
It is very easy to get any information from the payment bank's Online Customer Service executive.				0.691
Extraction Method: Principal Component Analysis.				

#### 4.1. Factor 1: User Awareness and Convenience

The study revealed a significant factor that accounted for 22.492 of the variances, with an Eigen value of 8.856. The first statement has a factor loading of 0.786, indicating the extent of users' awareness about the payment banks mechanism and procedures which draws attention to the comprehensive understanding that users have about the operational aspects of the payment banks platform. The second statement have a factor loading of 0.745 that emphasizes user possess a clear knowledge of the services provided by these banks, which is essential for success of any bank. The third statement have substantial factor loading of 0.735 indicates that users are aware about the benefits provided by the payment banks. The fourth statement have factor loading of 0.703 which indicates that users do not experience any difficulty while using the payment bank application. The next statement addresses users' belief in the ease of learning payment bank services, with a substantial factor loading of 0.623. This suggests that users perceive the platform as having a relatively low learning curve, implying that they can quickly grasp and adapt to the services provided. Lastly, the customer friendly services of payment bank's application/interface are addressed in the sixth statement. The factor loading of 0.586 underscores the significance of seamless and user-friendly services provided by the banks.

#### 4.2. Factor 2: Accessibility and Ease of use

The study revealed a significant factor that accounted for of the variances 20.817, with an Eigen value of 2.116. The first statement with a factor loading of 0.801 highlights that users believe that services provided by the payment bank are completed on time. It is easy for users to send and receive their payments on time with the help of payment bank. The second statement indicates that graphics used in payment banking applications provide meaningful content to the users. The factor loading of 0.794 signifies that users perceive it is easy to get the information about any services through the graphics of payment banks. Payment Banks provide online /e-wallet facility at anytime and anywhere is the third statement, with a 0.725 factor loading. Payment Banks serve their customers 24x7 with a factor loading of 0.628 indicates that users find it to access the services of payment banks 24x7 which is vital for fostering positive user experiences. Furthermore, Payment Banks provide fastest services of Transfer of funds and remittance of payments services is encapsulated in the next statement with loading of 0.599. Payment Banks encourage Digital Payments and Payment Banks meet cash requirement of their customer even after the bank is closed are the subsequent statements in this factor with loading of 0.593 and 0.545 respectively. This indicates that users' belief payment banks enhance their efficiency in completing transactions digitally. Moreover, the users perceive the platform as a facilitator in meeting their cash requirements more effectively thus contributing to increased satisfaction and engagement.

#### 4.3. Factor 3: Technological Support

The study revealed a significant factor that accounted for 14.264 of the variances, with an Eigen value of 1.371, The first statement addresses users' recognition of the strong encryption system employed by payment banks, with a substantial

factor loading of 0.740. The ease of navigating and utilizing the payment bank's application/interface is addressed in the second statement. The factor loading of 0.601 underscores the importance users place on interface that is easy to navigate consequently contributes significantly to a seamless user experience, reducing barriers to engagement. The third statement highlights the effective payment bank's interface to cater to individual customer preferences with a factor loading of 0.593. Lastly, the fourth statement with a factor loading of 0.587 indicates that users feel it is easy to understand every feature of the payment bank interface. This operative interface plays a crucial role in enhancing user satisfaction and fostering a sense of comfort while interacting with the platform.

#### **4.4. Factor 4: Complaint & Customer Service Management**

The study revealed a significant factor that accounted for 9.246 of the variances, with an Eigen value of 1.020. The first statement highlights payment banks reduces the complaints of their customers immediately, in terms of delivery of products and services, with a substantial factor loading of 0.851. This suggests that users place a strong level of confidence in the payment banks that they will resolve their complaints immediately and provide the expected services consistently. This element of customer service management is crucial for cultivating trust and sustained usage. The second statement addresses the effectiveness of the payment bank's Online Customer Service executive to provide any information to their users. The factor loading of 0.691 signifies that users perceive that customers service executives will provide necessary support to assist them. Adequate customer support contributes significantly to user satisfaction and loyalty, as it ensures a smooth experience and addresses potential issues.

Thus, the factor analysis has provided valuable insights into various factors namely "User Awareness", " Accessibility and Ease of use", "Technological Support" and " Complaint & Customer Service Management" that affects the users' perceptions towards payment banks.

This section should be typed in character size 10pt Cambria and alignment justified. All the main points of the research work are written in this section. Ensure that abstract and conclusion should not same. Conclusion should be concise, informative and can be started with summarizing outcome of the study in 1-2 sentence and ended with one line stating: how this study will benefit to the society and way forward.

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## **5. Conclusion**

Payment Banks have emerged as a significant development in the banking sector, offering advantages such as financial inclusion, accessibility, cost-effective services, and promotion of digital payments. The study explores the factors affecting customers' perceptions towards Payment Banks. The findings of the study demonstrated that the factor analysis has provided valuable insights into various dimensions of users' perceptions and interactions with payment banks. The identified factors, namely "User Awareness", " Accessibility and Ease of use", "Technological Support" and " Complaint & Customer Service Management" collectively paint a comprehensive picture of users' experiences and attitudes toward payment banks. Collectively, these factors showcase the multifaceted nature of users' interactions with payment banks. The findings of the study provide enlightening suggestions for improving customer service options, marketing strategies, security measures, and user interface design.

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## **Compliance with ethical standards**

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

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