

India Post Payments Bank and Financial Inclusion in Rural Karnataka: A Demographic Study of Belagavi District of Karnataka

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Abstract: Financial inclusion is a key component of inclusive economic development in India, particularly in rural and semi-urban regions where access to formal banking remains limited. India Post Payments Bank (IPPB) was established with the objective of extending basic banking services by utilizing the extensive postal network across the country. The present study examines the role of India Post Payments Bank in promoting financial inclusion in the rural areas of Belagavi District of Karnataka, with special emphasis on demographic factors influencing service usage.

The study is based on primary data collected through a structured questionnaire from 200 IPPB customers. Descriptive analysis and chi-square tests were applied to assess the relationship between demographic variables such as gender, age, and educational qualification and selected dimensions of IPPB usage, including frequency of use, service preference, satisfaction level, and perceived difficulty in accessing digital services. The analysis reveals that demographic factors significantly influence the frequency of usage of IPPB services, while variations in satisfaction and service preference are comparatively limited.

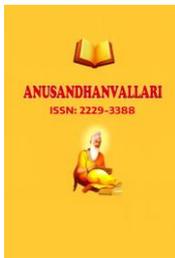
The findings indicate that India Post Payments Bank has contributed positively to improving access to banking services in rural areas. However, challenges related to digital literacy and regular usage remain, particularly among older and less-educated users. The study suggests that focused awareness programmes and user-oriented support mechanisms can further strengthen IPPB's role in advancing financial inclusion in rural Karnataka.

Keywords: India Post Payments Bank, Financial Inclusion, Rural Banking, Demographic Factors, Digital Banking, Belagavi District.

I. INTRODUCTION:

Financial inclusion has emerged as a crucial element of inclusive economic development in India, especially in rural and semi-urban areas where a significant section of the population continues to face difficulties in accessing formal banking services. Limited banking infrastructure, low levels of financial awareness, and challenges related to digital literacy have restricted the effective use of financial services among rural households. To address these issues, the Reserve Bank of India introduced Payments banks, and Department of Posts has launched India Post Payments Bank (IPPB) in 2018, leveraging the vast postal network of around 1.65 lakh post offices to extend banking services to the unbanked and underbanked. The IPPB aims to bridge financial disparities by combining physical outreach with digital banking services, IPPB seeks to improve access to affordable and reliable financial services for underserved populations.

India has made notable progress in expanding formal banking through policy initiatives and institutional reforms; however, disparities in access and usage remain pronounced in rural regions. Conventional banking institutions often face limitations in outreach due to physical distance, operational costs, and low transaction volumes in rural areas. Payments banks were introduced as a complementary model to address these gaps, focusing on small-value transactions and digital delivery of basic financial services. Among them, India Post Payments Bank occupies a distinct position due to its integration with the Department of Posts, which provides an extensive physical presence



even in remote locations. This unique institutional framework enables IPPB to serve rural populations by combining doorstep banking services with digital platforms, thereby making it a suitable case for examining the effectiveness of financial inclusion efforts at the grassroots level.

This study examines the role of IPPB in promoting financial inclusion in the rural areas of Belagavi district of Karnataka, focusing on customer adoption patterns, satisfaction levels, usability challenges, and demographic influences such as gender, age and education. Through a comprehensive analysis of service accessibility, digital literacy, and marketing strategies, this research seeks to highlight key areas for improvement and provide actionable recommendations to enhance IPPB's effectiveness in achieving its financial inclusion objectives.

Research Problem

Despite various initiatives to promote financial inclusion in India, rural populations continue to face difficulties in accessing and regularly using formal banking services. India Post Payments Bank (IPPB) was introduced as a government-backed initiative to address these gaps by leveraging the existing vast postal network for digital and physical banking. The present study focuses on assessing the role of IPPB in promoting financial inclusion in the rural areas of Belagavi District of Karnataka, with emphasis on demographic influences on service usage and accessibility.

This study aims to analyze the impact of IPPB on financial inclusion, investigating whether demographic factors influence service adoption and satisfaction, and identifying areas where IPPB can enhance accessibility and engagement. Considering research problem this study emphasizes on following objectives:

Research Objectives

1. To examine the role of IPPB in improving financial inclusion, particularly in rural areas of Belagavi District of Karnataka.
2. To analyze the influence of demographic factors such as gender, age, and educational qualification on service adoption, usability, and satisfaction levels.
3. To assess the frequency of usage, service preference, and level of satisfaction among IPPB customers in rural areas.
4. To identify key challenges affecting customer engagement, including digital literacy and infrastructure constraints.
5. To suggest suitable measures for improving service accessibility and enhancing the effectiveness of IPPB in advancing rural financial inclusion.

Based on the above objectives, a series of hypotheses have been developed to investigate how demographic variables influence customer interaction patterns and perceptions regarding India Post Payments Bank's services

Gender-Based Hypotheses

H1a: Gender significantly affects customer preference for IPPB's financial services.

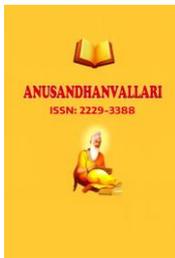
H1b: Gender plays a role in shaping the level of customer satisfaction with IPPB's services.

H1c: There is a notable variation in service usage frequency at IPPB based on gender.

H1d: Gender influences the perceived ease or difficulty of accessing and utilizing IPPB's digital and mobile banking facilities.

Age-Based Hypotheses

H2a: Age impacts how frequently customers engage with IPPB's financial services.



H2b: Different age groups exhibit varying degrees of difficulty when accessing and using IPPB's financial offerings.

H2c: Age affects customers' preference for IPPB's services compared to conventional banking systems.

H2d: Satisfaction with IPPB's financial services differs across various age categories.

Educational Qualification-Based Hypotheses

H3a: Customers' educational qualifications significantly affect their preference for using IPPB's financial services.

H3b: The frequency of usage of India Post Payments Bank's digital banking services is influenced by customers' level of educational attainment.

H3c: Customers with different educational backgrounds experience varying levels of difficulty in using IPPB's mobile and digital banking platforms.

H3d: Educational qualification plays a role in shaping customer satisfaction levels with IPPB's financial inclusion initiatives.

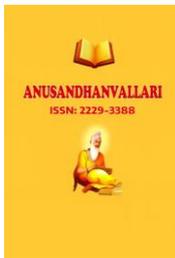
II. LITERATURE REVIEW:

Financial inclusion has been widely recognized as an essential component of inclusive and sustainable economic development, particularly in developing countries such as India where a large proportion of the population resides in rural areas. Financial inclusion refers to the process of ensuring access to appropriate and affordable financial products and services, including savings, payments, remittances, credit, insurance, and pension facilities, in a transparent and secure manner. Researchers and policymakers have consistently emphasized that inclusive access to financial services plays a crucial role in reducing poverty, promoting economic stability, and improving household welfare (Allen et al., 2016). From the researcher's interaction with rural banking customers, it is evident that access to financial services does not always translate into regular usage, especially among elderly account holders.

Earlier studies on financial inclusion primarily focused on the expansion of physical banking infrastructure, such as bank branches and automated teller machines. However, subsequent research has pointed out that physical access alone does not guarantee meaningful financial inclusion. The Global Findex Report highlights that active usage of financial services, rather than mere account ownership, is a more reliable indicator of effective financial inclusion (Demirgüç-Kunt et al., 2018). In the Indian context, despite the significant increase in bank accounts under initiatives such as the Pradhan Mantri Jan Dhan Yojana, a considerable number of accounts remain inactive, particularly in rural and semi-urban regions (Ministry of Finance, 2022).

To address the limitations of traditional banking models, the Reserve Bank of India introduced payments banks with the objective of facilitating small-value transactions, digital payments, and remittance services. Payments banks were designed to leverage technology to reduce operational costs and extend financial services to underserved populations (RBI, 2018). Among the payments banks operating in India, India Post Payments Bank (IPPB) holds a distinctive position due to its integration with the Department of Posts and its extensive network of post offices, most of which are located in rural areas.

Several empirical studies have examined the adoption and effectiveness of payment banks in India. Mittal, Pant, and Bhadauria (2017) found that ease of use, security, and customer awareness significantly influence customer preference for payment bank services. Their study suggests that customers are more likely to adopt digital banking services when they perceive them as simple, reliable, and trustworthy. Similarly, Kaur et al. (2020) observed that digital literacy and educational attainment play a vital role in shaping customers' intention to use mobile and



digital banking platforms. These findings emphasize that technological availability must be supported by adequate user understanding to ensure sustained usage.

The literature also highlights the importance of institutional trust in promoting financial inclusion, particularly in rural areas. In many rural communities, lack of familiarity with formal banking institutions often acts as a psychological barrier to adoption. Studies on postal banking models indicate that post offices enjoy a high level of trust due to their long-standing presence and regular interaction with local populations (Universal Postal Union, 2016). Kumar and Mishra (2019) argued that the involvement of postal employees as banking intermediaries significantly reduces resistance to formal financial services, especially among elderly and less-educated individuals.

Research specifically focusing on India Post Payments Bank has highlighted its potential to strengthen last-mile delivery of financial services. Sahu and Minj (2021) examined the operational framework of IPPB and found that doorstep banking services, Aadhaar-enabled payment systems, and integration with government welfare schemes have improved accessibility for rural households. The authors noted that IPPB plays an important role in facilitating direct benefit transfers, pension payments, and social security schemes, thereby linking financial inclusion with broader welfare objectives.

Despite these advantages, several studies have identified challenges faced by payment banks in achieving deep financial inclusion. The Economic Survey of India pointed out that digital adoption in rural areas remains uneven due to limited digital infrastructure, low smartphone penetration, and inadequate digital skills (Ministry of Finance, 2022). Gupta, Manrai, and Goel (2021) emphasized that fintech-driven financial inclusion initiatives must be complemented by continuous financial literacy programmes and personalized support mechanisms. Without such measures, initial adoption may not translate into regular usage of digital banking services. Recent policy discussions have also highlighted operational and regulatory challenges faced by India Post Payments Bank, particularly in relation to customer awareness, transaction volume, and sustainability of the payment bank model in rural areas (Economic Times, 2024).

Demographic factors have been widely studied as determinants of financial service usage. Age has been identified as a significant variable influencing digital banking behaviour. Younger individuals tend to adapt more easily to mobile and internet-based banking platforms, while older users often face difficulties due to unfamiliarity with technology and fear of transaction errors (Singh & Srivastava, 2021). However, studies have also noted that older customers may still express satisfaction with banking services if adequate support and assistance are provided (Sharma & Govindaluri, 2014).

Gender-based studies on financial inclusion suggest that although access to banking services among women has improved in recent years, differences persist in terms of frequency and purpose of usage. Chawla and Joshi (2019) found that women are more likely to use banking services for savings and welfare-related transactions, while men tend to engage more frequently in transactional activities. However, several studies report minimal gender differences in satisfaction levels once access barriers are reduced and services are made convenient.

Educational qualification has consistently emerged as a strong predictor of digital banking adoption. Higher levels of education are associated with greater financial awareness, confidence in using technology, and problem-solving ability (Gaur, 2021). Customers with lower educational attainment may require assisted service delivery models to overcome usability challenges. This finding supports the relevance of IPPB's service model, which combines digital banking with physical assistance provided by postal staff.

Policy-level studies and regulatory reports also emphasize the role of payment banks in strengthening the digital payments ecosystem. The Reserve Bank of India's annual reports highlight that payment banks contribute to reducing cash dependency, improving transaction transparency, and enhancing financial inclusion in rural areas

(RBI, 2023). However, these reports also caution that the long-term sustainability of payment banks depends on customer retention, transaction volume, and continuous engagement.

Regional and district-level studies are increasingly recognized as important for understanding localized dynamics of financial inclusion. Karnataka, with its diverse socio-economic structure and significant rural population, provides a suitable context for examining the effectiveness of payment banks. Belagavi district, in particular, represents a mixed rural economy where traditional banking access remains limited in certain areas. Examining IPPB's role in this district helps capture ground-level realities that may not be evident in national-level analyses.

In summary, the reviewed literature indicates that while institutional innovations such as India Post Payments Bank have significantly expanded access to financial services, effective financial inclusion depends on sustained usage, demographic adaptability, and supportive literacy initiatives. Existing studies highlight the importance of examining demographic influences on service usage, satisfaction, and perceived difficulty, particularly in rural contexts. Building on these insights, the present study seeks to empirically analyze the role of IPPB in promoting financial inclusion in the rural areas of Belagavi district of Karnataka.

III. RESEARCH METHODOLOGY:

The study employed a structured questionnaire to conduct descriptive research, ensuring a systematic approach to data collection. Purposive sampling was utilized to obtain responses from 225 individuals who had access to mobile phones. Among the total responses, 200 were deemed suitable for analysis. The participants were categorized based on various demographic and behavioral factors, including gender, age, Educational status, frequency of usage, and purpose of mobile phone usage.

For data analysis, the Statistical Package for Social Sciences (SPSS) was used to process and interpret findings. Chi-square tests and Bivariate correlation analyses were conducted to derive meaningful insights. Additionally, Cronbach's alpha was employed as a measure of reliability and internal consistency of the dataset, with 0.71 considered an acceptable threshold. In this research, the Cronbach's alpha value of 0.796 indicates strong reliability, ensuring the validity of the findings.

IV. DATA ANALYSIS AND INTERPRETATION:

1. Age (Gender-wise Distribution)

Age Group (in Years)	Male Respondents	Female Respondents	Total
18-30	50	25	75
31-45	35	25	60
46-60	30	20	50
60 +	5	10	15
Total	120	80	200

Table-1

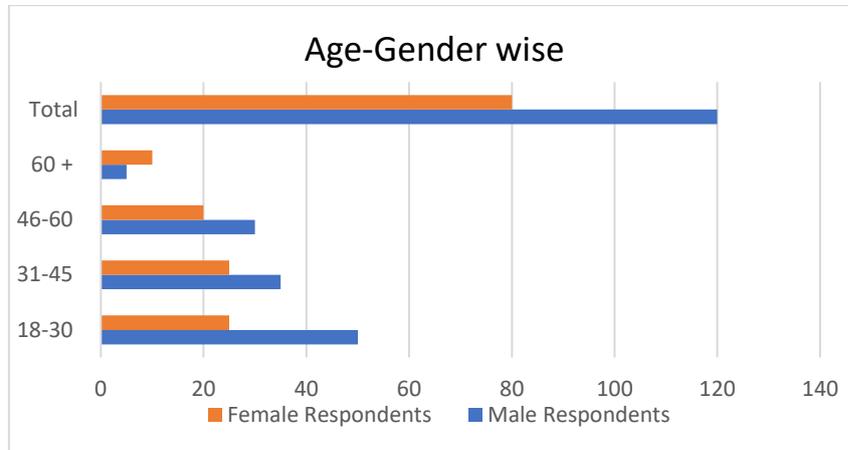


Chart-1

2. Education Level (Gender-wise Distribution)

Education Level	Male Respondents	Female Respondents	Total
High School	25	15	40
Undergraduate	40	20	60
Graduate	30	20	50
Postgraduate	25	25	50
Total	120	80	200

Table-2

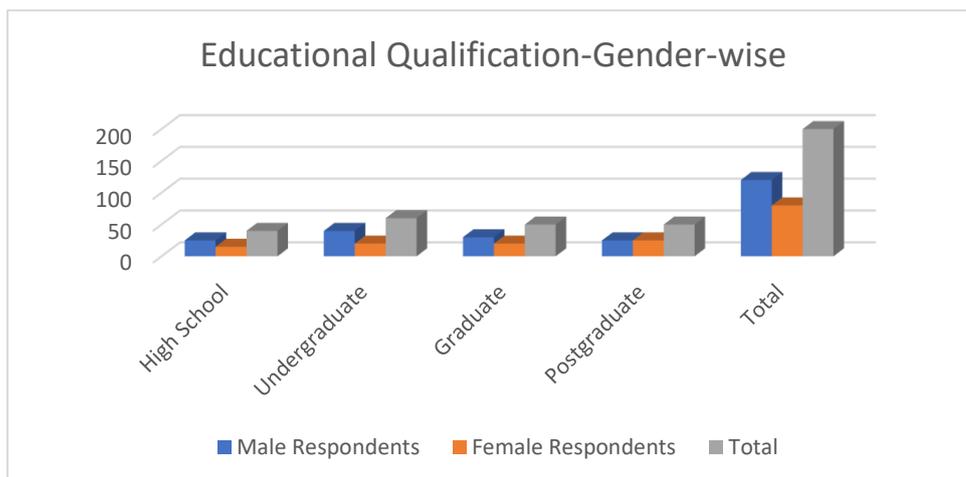


Chart-2

This dataset enables a **demographic comparison** of IPPB service adoption, usability challenges, and satisfaction levels across different groups.

Hypothesis	Mean Value (Expected)	p-Value (Chi-Square/T-Test)
H1a: Gender & Preference	3.8	0.460
H1b: Gender & Satisfaction	3.6	0.558
H1c: Gender & Frequency	4.1	0.003 (Significant)
H1d: Gender & Difficulty Level	3.2	0.614
H2a: Age & Frequency	4.3	0.000 (Significant)
H2b: Age & Difficulty Level	3.4	0.270
H2c: Age & Preference	3.9	0.088
H2d: Age & Satisfaction	3.5	0.995
H3a: Education & Preference	3.9	0.623
H3b: Education & Frequency	4.5	0.000 (Significant)
H3c: Education & Difficulty Level	3.5	0.132
H3d: Education & Satisfaction	3.7	0.491

Table-3

Analysis of Hypotheses

To examine the influence of demographic variables on customer engagement with India Post Payments Bank (IPPB), Chi-square tests were conducted using SPSS. The analysis focused on three key demographic dimensions: gender, age, and educational qualification, each tested against four dependent variables—preference, satisfaction, frequency of usage, and perceived difficulty in accessing digital services.

Among the gender-based hypotheses, only **H1c** (Gender & Frequency of Usage) yielded a statistically significant result ($p = 0.003$), indicating that service usage frequency at IPPB varies notably between male and female respondents. Other gender-related hypotheses (H1a, H1b, H1d) did not show significant associations.

In the age-based category, **H2a** (Age & Frequency of Usage) was statistically significant ($p = 0.000$), suggesting that age plays a critical role in determining how frequently customers engage with IPPB services. However, age did not significantly influence satisfaction, preference, or perceived difficulty.

For educational qualification, **H3b** (Education & Frequency of Digital Usage) was found to be significant ($p = 0.000$), highlighting that educational attainment affects how often customers use IPPB's digital banking services. Other hypotheses under this category were not statistically supported.

These findings underscore the importance of frequency of usage as a key behavioral outcome influenced by demographic factors.

V. DISCUSSION OF RESULT:

The findings of the present study provide valuable insights into the role of India Post Payments Bank in promoting financial inclusion in the rural areas of Belagavi district, with particular reference to demographic influences on service usage and customer experience. The analysis reveals that demographic variables have a differential impact on various dimensions of IPPB service usage, with frequency of usage emerging as the most sensitive outcome variable.

The study found that gender has a significant influence on the frequency of usage of IPPB services, while its effect on satisfaction, service preference, and perceived difficulty was not statistically significant. This finding aligns with earlier studies which suggest that gender differences are more evident in transaction behavior rather than in overall satisfaction. Previous research indicates that male customers tend to engage more frequently in transaction-based activities, whereas female customers often use banking services primarily for savings and receipt of welfare



benefits. However, once access barriers are reduced, satisfaction levels tend to converge across genders, which is consistent with the present findings.

Age was found to significantly influence the frequency of usage of IPPB services. Younger and middle-aged respondents reported higher levels of engagement compared to older users. This result supports existing literature which emphasizes that younger individuals are more adaptable to digital and mobile banking platforms. Older customers, although appreciative of the availability of services, often face challenges related to digital literacy and technology usage. Interestingly, age did not significantly affect satisfaction or service preference, suggesting that older users value IPPB's presence and accessibility even if they use the services less frequently.

Educational qualification emerged as a critical determinant of digital banking usage frequency. Respondents with higher educational attainment were found to use IPPB's digital services more frequently. This finding is consistent with earlier studies that highlight the role of education in enhancing financial awareness, digital confidence, and problem-solving ability. However, educational qualification did not significantly influence satisfaction levels, indicating that customers across education levels perceive IPPB services positively once they are able to access them. Comparative studies on payment banks in India indicate that customer usage patterns and sustainability challenges are common across payment bank models, reinforcing the relevance of demographic and digital literacy factors in determining service adoption (Saxena & Goyal, 2025).

One notable observation from the study is that satisfaction and perceived difficulty did not vary significantly across most demographic groups. This suggests that IPPB has been relatively successful in delivering a uniform service experience to diverse customer segments. The presence of postal staff, doorstep banking facilities, and assisted service delivery may have played a crucial role in mitigating usability challenges, particularly for less-educated and older customers.

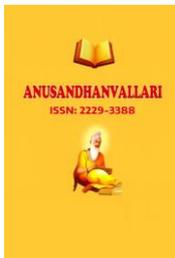
The findings also reinforce the argument that financial inclusion should be evaluated not merely in terms of account ownership but in terms of active usage. While IPPB has succeeded in expanding access to banking services in rural areas, the variation in usage frequency across demographic groups indicates the need for targeted interventions. Continuous digital literacy programmes, personalized assistance, and awareness campaigns can help convert access into sustained engagement.

Overall, the results of the study are broadly consistent with existing literature on payment banks and rural financial inclusion. By focusing on demographic influences at the district level, the study contributes to a deeper understanding of how institutional innovations like IPPB function in rural contexts. The findings underscore the importance of combining digital infrastructure with human support mechanisms to achieve meaningful financial inclusion.

VI. FINDINGS AND CONCLUSION:

The present study examined the role of India Post Payments Bank (IPPB) in promoting financial inclusion in the rural areas of Belagavi district of Karnataka, with special emphasis on the influence of demographic factors on service usage and customer experience. The analysis of primary data collected from 200 IPPB customers provides important insights into how different sections of the rural population interact with payment bank services.

The findings of the study indicate that frequency of usage is the most demographically sensitive dimension of IPPB service adoption. Gender, age, and educational qualification were found to significantly influence how frequently customers use IPPB services. Male respondents reported higher usage frequency compared to female respondents, suggesting that transaction behaviour differs across genders even though access to services is broadly similar. This may be attributed to differences in income-earning activities, mobility, and transaction needs in rural households.



Age emerged as a significant determinant of usage frequency, with younger and middle-aged respondents showing higher engagement with IPPB services than older customers. Although older users value the availability and accessibility of IPPB, their lower frequency of usage points to challenges related to digital familiarity and confidence. This highlights the importance of assisted banking and continuous support for elderly customers in rural areas.

Educational qualification was also found to have a significant impact on the frequency of usage of IPPB's digital banking services. Customers with higher educational attainment exhibited greater engagement with mobile and digital platforms, reflecting higher levels of digital literacy and financial awareness. However, education did not significantly influence satisfaction levels, indicating that IPPB's service delivery model is perceived positively across different educational groups once access is established.

Interestingly, customer satisfaction, service preference, and perceived difficulty in using IPPB services did not show statistically significant variation across gender, age, or educational categories. This suggests that IPPB has been relatively successful in offering a consistent service experience to diverse demographic groups. The presence of doorstep banking services, familiarity with postal staff, and integration with Aadhaar-enabled systems may have helped reduce usability barriers, particularly for less-educated and older customers.

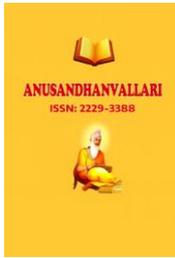
The overall findings suggest that India Post Payments Bank has made a meaningful contribution to expanding access to formal banking services in rural areas of Belagavi district. However, the variation in usage frequency across demographic groups indicates that financial inclusion should not be assessed solely on the basis of account ownership. Sustained and regular usage remains a key challenge, especially among older and less-educated populations.

Based on the results of the study, it is suggested that IPPB should strengthen targeted awareness and digital literacy programmes, particularly focusing on elderly customers and individuals with lower educational attainment. Enhancing user-oriented support mechanisms, simplifying digital interfaces, and increasing personalized assistance through postal staff can further improve service engagement. Periodic training for postal employees and the use of local language communication may also enhance customer confidence and trust.

In conclusion, India Post Payments Bank has emerged as an effective institutional mechanism for promoting rural financial inclusion by combining digital banking with an extensive physical outreach network. While access to banking services has improved significantly, the findings of the study underscore the need for focused efforts to enhance regular usage and deepen customer engagement. By addressing demographic-specific challenges and strengthening digital literacy initiatives, IPPB can further consolidate its role in advancing inclusive and sustainable financial development in rural Karnataka.

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