

## India Post Payments Bank as a Catalyst for Rural Financial Inclusion: Performance Evidence from Karnataka State

Ashok Bhasme<sup>1</sup>

Research Scholar, Vivekananda College, Tiruvedakam West Madurai, TN

Email: [ashokbhasme2011@gmail.com](mailto:ashokbhasme2011@gmail.com),

Dr. K. Karthikeyan<sup>2</sup>

Associate Professor & Head, Department of Commerce

Vivekananda College, Tiruvedakam West Madurai, TN

Email: [Karthikeyan.madurai@gmail.com](mailto:Karthikeyan.madurai@gmail.com),

### Abstract

Financial inclusion is a critical driver of inclusive economic growth, particularly in rural regions where access to formal banking and digital financial services remains limited. To address this gap, the Government of India established India Post Payments Bank (IPPB) by leveraging the extensive network of Indian Post offices to deliver accessible and technology-enabled banking services. The present study examines the role of India Post Payments Bank as a catalyst for rural financial inclusion, with specific reference to Karnataka State, by analyzing its performance in improving financial access and usage of formal banking services.

The study is based on primary data collected from 200 rural respondents across selected districts of Karnataka using a structured questionnaire. Descriptive statistics, Chi-square tests, and regression analysis were employed to analyze the data in line with the study objectives and hypotheses. The findings reveal that digital financial services offered by IPPB such as Aadhaar-enabled Payment System (AePS), mobile banking, bill payments, and digital money transfers have a statistically significant impact on improving financial access among rural customers. AePS emerged as the most influential service due to its ease of use and biometric authentication. Further analysis highlights that accessibility factors, including proximity of post offices, doorstep banking services, and assistance provided by postal staff, significantly influence the adoption and usage of formal banking services. The regression model explains 74 percent of the variation in banking usage, indicating a strong relationship between accessibility and financial inclusion.

**Key Words:** India Post Payments Bank, Indian post, Rural Financial Inclusion, Digital Financial Services, Banking Performance, Financial Access

### 1. Introduction

Financial inclusion has emerged as a central pillar of inclusive and sustainable economic development in India, particularly in addressing the long-standing financial exclusion of rural and semi-urban populations. Despite significant progress in expanding the formal banking network, a large segment of rural households continues to face barriers such as geographical isolation, low-income levels, limited financial literacy, and inadequate access to digital infrastructure. In this context, the Government of India has introduced innovative institutional mechanisms to bridge the gap between formal financial systems and underserved communities. One such landmark initiative is the establishment of India Post Payments Bank (IPPB), which leverages the extensive reach of the Indian Post network to promote rural financial inclusion.

India Post Payments Bank was launched in 2018 with the objective of providing accessible, affordable, and technology-driven financial services to unbanked and underbanked populations. Backed by the Department of Posts under the Ministry of Communications, IPPB integrates traditional postal services with modern digital banking solutions. With more than 1.5 lakh post offices out of which nearly 90 percent are located in rural areas and a large workforce of postmen and Gramin Dak Sevaks, IPPB enjoys an unparalleled last-mile connectivity. This unique institutional framework enables the delivery of essential banking services such as savings accounts, remittances, bill payments, Direct Benefit Transfer (DBT), Aadhaar-enabled payment services, and mobile banking at the doorstep of rural customers.

The role of IPPB as a catalyst for rural financial inclusion becomes particularly significant in states like Karnataka, which exhibits a diverse socio-economic and geographical profile. While urban centers in Karnataka have achieved high levels

of digital banking adoption, many rural and remote regions still struggle with limited financial access and digital literacy. IPPB addresses these challenges by offering simplified banking products, multilingual digital platforms, and assisted banking services, thereby fostering trust and usability among rural users. The bank's emphasis on digital financial services aligns with national initiatives such as Digital India, Jan Dhan Yojana, and financial empowerment programs.

Evaluating the performance of India Post Payments Bank in Karnataka provides valuable insights into its effectiveness in enhancing financial access, promoting digital transactions, and supporting inclusive growth. Performance indicators such as account penetration, transaction volumes, outreach of digital services, and customer engagement reflect IPPB's contribution to strengthening the rural financial ecosystem. Thus, the present study focuses on examining India Post Payments Bank as a driver of rural financial inclusion in Karnataka State, highlighting its role in expanding financial access, improving banking performance, and supporting the broader goal of inclusive economic development.

## 2. Review of Literature

(Yadav, M., et.al., 2024) defined that bank performance in rural areas is a major worldwide topic that presents particular difficulties because of the lack of access to financial services, the limitations of the infrastructure, and the differences in socioeconomic status. This study examined the relationships between financial inclusion, sustainability, and fintech adoption related to operational efficiency in rural banks. This research offered insights into the intricate dynamics of rural banking through an extensive review of the literature and case studies from international rural banking. The integration of financial inclusion, sustainability, and fintech provides a transformational approach to the improvement of bank performance in rural India. Fintech would help banks overcome geographical and infrastructural barriers through mobile banking platforms, digital wallets, and online microcredit platforms for rural populations to access formal services. This study provided assistance for policymakers, regulators, and banking professionals by putting forth workable ideas for inclusive finance methods and sustainable rural development.

(Sikdar, P., & Kumar, A., 2016) the study investigated how newly licensed payment banks can favourably achieve inclusion goals of the Indian banking regulator by engaging with marginalised and migrant groups within the population pie, as envisaged by the banking regulator. The role of digitisation in making basic financial services available to such excluded groups has been explored within the study. In addition, the article attempted to critically assess the competitive implications such a new financial institution will have on the existing full-service banks. The study was grounded on the concept of payment banks as a crucial cog in a differentiated banking regime. Secondary information extracted from occasional reports/working papers of Reserve Bank of India (RBI) has been used to gauge the efforts towards realising inclusion goals. Perspectives of CEOs and banking practitioners have provided valuable inputs as to how the banking fraternity views payment banks and perceives them as a competitive threat. As the payment banking business model necessitated forging alliances with full-service banks, implications of such strategic alliances warrant research. The present study is an initial attempt to fill this gap in the extant literature.

(Tejasmayee, P., et.al., 2025) discussed that India is an agriculture-based developing country where financial technology and financial literacy play a crucial role in financial inclusion, poverty reduction, and rural development that cannot be avoided. This study examines the impact of financial inclusion on rural economic development through post offices, India Post Payments Banks, and regional rural banks. A total of 800 responses are collected initially through offline surveys and interviews using a structured questionnaire of rural youth from eastern Uttar Pradesh, and 650 viable responses are taken after eliminating incomplete, multivariate, and too consistent responses. This study employed PLS-SEM 4.0 for statistical analysis. The results show that financial inclusion positively affects rural economic development through these banks. The policymakers and stakeholders can use these findings, and they can also provide information through the campaigns about financial technology platforms and services that are available for rural people so that they can easily adopt technology and services.

## 3. Methodology

### 3.1. Problem Statement

Financial inclusion remains a critical challenge in rural India despite the expansion of formal banking institutions and digital financial initiatives. Traditional commercial banks often face constraints such as limited branch penetration, inadequate last-mile connectivity, and low adoption of digital services in rural and remote areas. To address these

challenges, the Government of India introduced India Post Payments Bank (IPPB) by leveraging the vast network of Indian Post offices to deliver basic banking and digital financial services to underserved populations.

Although IPPB has been operational since 2018 and plays a significant role in promoting rural financial inclusion, there is a noticeable lack of region-specific empirical studies assessing its performance and effectiveness. In particular, limited academic research has examined how IPPB contributes to improving financial access, digital financial service usage, and overall banking performance in rural areas of Karnataka State. Existing studies tend to focus on national-level assessments or conceptual discussions, leaving a gap in understanding the actual performance outcomes and ground-level impact of IPPB at the state level.

### 3.2. Objectives of the Study

Based on the research problem that have been defined above, the objectives of the study are mentioned below:

- To examine the role of India Post Payments Bank in promoting rural financial inclusion in Karnataka State.
- To analyze the performance of IPPB in terms of financial access and digital financial services among rural customers.
- To assess the impact of IPPB's banking services on improving accessibility and usage of formal financial systems in rural areas of Karnataka.

### 3.3. Hypothesis of the Study

With concerns to the objectives mentioned above, the hypothesis of the study is mentioned below:

**H<sub>01</sub>:** India Post Payments Bank has no significant impact on rural financial inclusion in Karnataka State.

**H<sub>11</sub>:** India Post Payments Bank has a significant impact on rural financial inclusion in Karnataka State.

**H<sub>02</sub>:** There is no significant relationship between IPPB's digital financial services and financial access in rural Karnataka.

**H<sub>12</sub>:** There is a significant relationship between IPPB's digital financial services and financial access in rural Karnataka.

### 3.4. Scope of the Study

The study is confined to Karnataka State, with a specific focus on rural and semi-rural regions. It covers the services offered by India Post Payments Bank, including savings accounts, digital payments, remittance services, Direct Benefit Transfers, and doorstep banking facilities. The study evaluates IPPB's performance using selected indicators such as outreach, service utilization, digital transaction adoption, and accessibility of banking services. The scope excludes other commercial banks and private payment banks, thereby maintaining a focused assessment of IPPB's role in rural financial inclusion.

### 3.5. Societal Importance of the Study

This study holds significant societal relevance as it highlights the contribution of India Post Payments Bank in empowering rural populations through enhanced financial access. By promoting digital financial services and basic banking facilities, IPPB helps reduce financial exclusion, dependence on informal credit systems, and transactional vulnerabilities among rural households. The findings can assist policymakers, financial institutions, and postal authorities in strengthening rural banking strategies, improving service delivery, and expanding digital literacy initiatives. Ultimately, the study supports inclusive economic growth, social equity, and financial empowerment in rural Karnataka, contributing to the broader national objective of sustainable development and inclusive finance.

## 4. Data Analysis and Interpretation

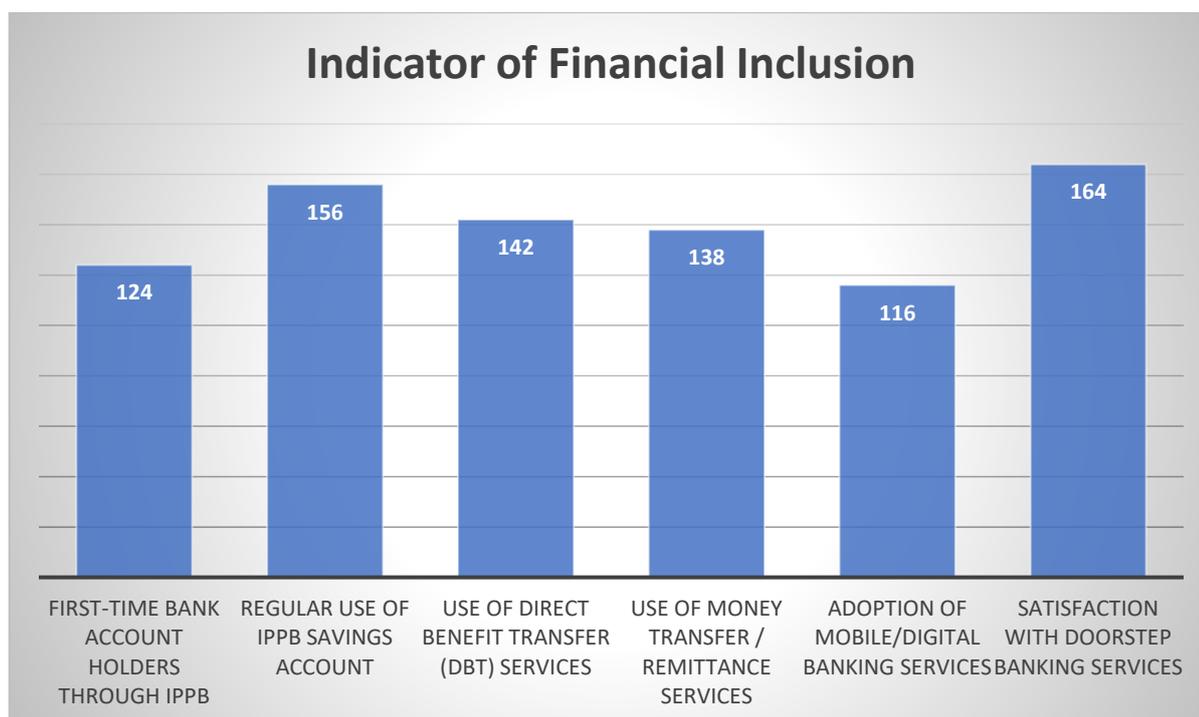
**Table 1: Role of IPPB in Expanding Financial Inclusion**

Indicator of Financial Inclusion	Percentage of Respondents (%)	Frequency (N = 200)
First-time Bank Account Holders through IPPB	62	124
Regular Use of IPPB Savings Account	78	156

Use of Direct Benefit Transfer (DBT) Services	71	142
Use of Money Transfer / Remittance Services	69	138
Adoption of Mobile/Digital Banking Services	58	116
Satisfaction with Doorstep Banking Services	82	164

(Source: Data Outcome)

**Figure 1: Role of IPPB in Expanding Financial Inclusion**



(Source: Data Outcome)

The table and figure 1 indicates that 62% of respondents opened their first bank account through IPPB, highlighting its critical role in onboarding financially excluded rural populations. A high percentage of respondents actively use savings accounts (78%) and DBT services (71), demonstrating improved financial access and inclusion. The strong satisfaction level (82%) with doorstep banking services reflects IPPB’s effectiveness in overcoming geographical and infrastructural barriers in rural Karnataka.

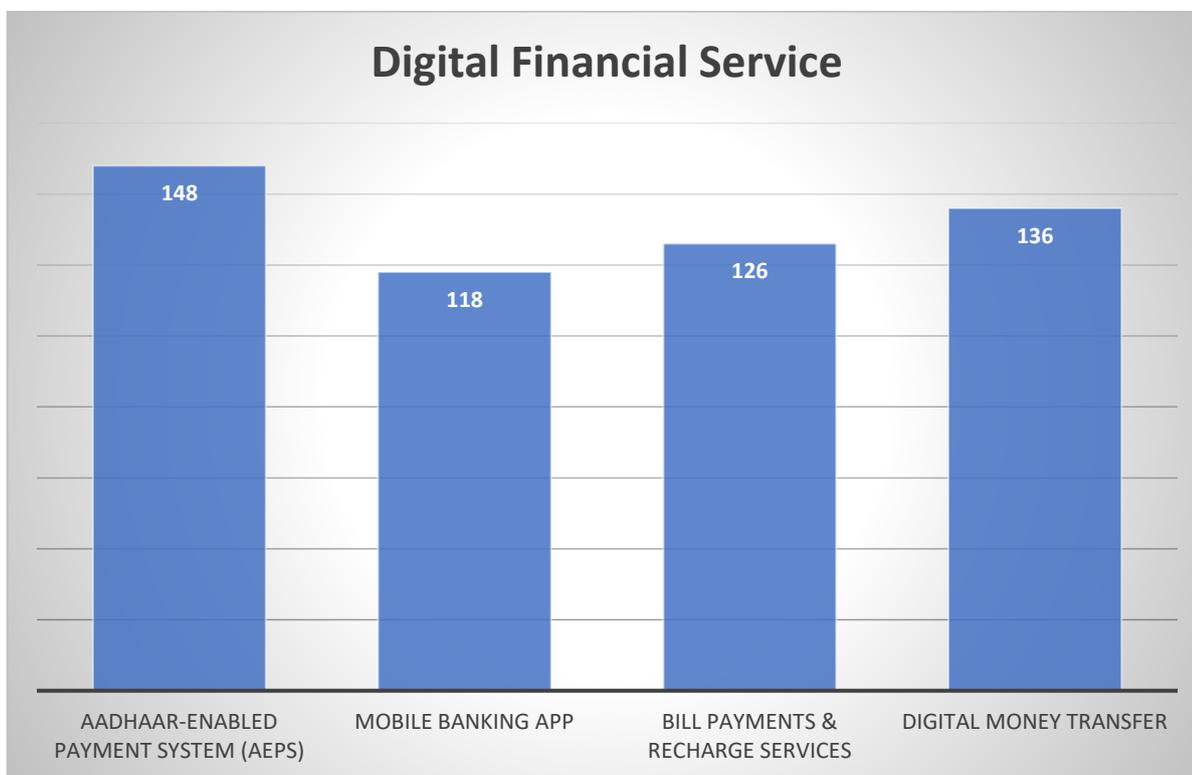
**Table 2: Impact of Digital Financial Services on Financial Access in Rural Areas of Karnataka State**

Digital Financial Service	Respondents (%)	Frequency (N = 200)	Chi – Square Value	Sig Value
Aadhaar-enabled Payment System (AePS)	74	148	13.571	0.000**
Mobile Banking App	59	118	14.364	0.000**

Bill Payments & Recharge Services	63	126	19.325	0.000**
Digital Money Transfer	68	136	15.254	0.000**

(Source: Data Outcome)

**Figure 2: Descriptive of Digital Financial Services on Financial Access in Rural Areas of Karnataka State**



(Source: Data Outcome)

**H<sub>0</sub>**: India Post Payments Bank has no significant impact on rural financial inclusion in Karnataka State.

**H<sub>1</sub>**: India Post Payments Bank has a significant impact on rural financial inclusion in Karnataka State.

The table and figure 2 presents the relationship between selected digital financial services of India Post Payments Bank and the level of improved financial access reported by rural respondents in Karnataka State. Out of a total sample of 200 respondents, Aadhaar-enabled Payment System (AePS) shows the highest impact, with 74% (148 respondents) reporting improved financial access. The Chi-square value of 13.571 with a highly significant p-value of 0.000 indicates a strong and statistically significant association between AePS usage and enhanced financial access. This highlights AePS as a critical digital service for rural users due to its simplicity and biometric-based transactions.

Similarly, the Mobile Banking App is reported to improve financial access by 59% (118 respondents), and the Chi-square value of 14.364 with a significance level of 0.000 confirms a statistically significant relationship. Although adoption is comparatively lower than AePS, the result indicates growing acceptance of app-based banking among rural customers.

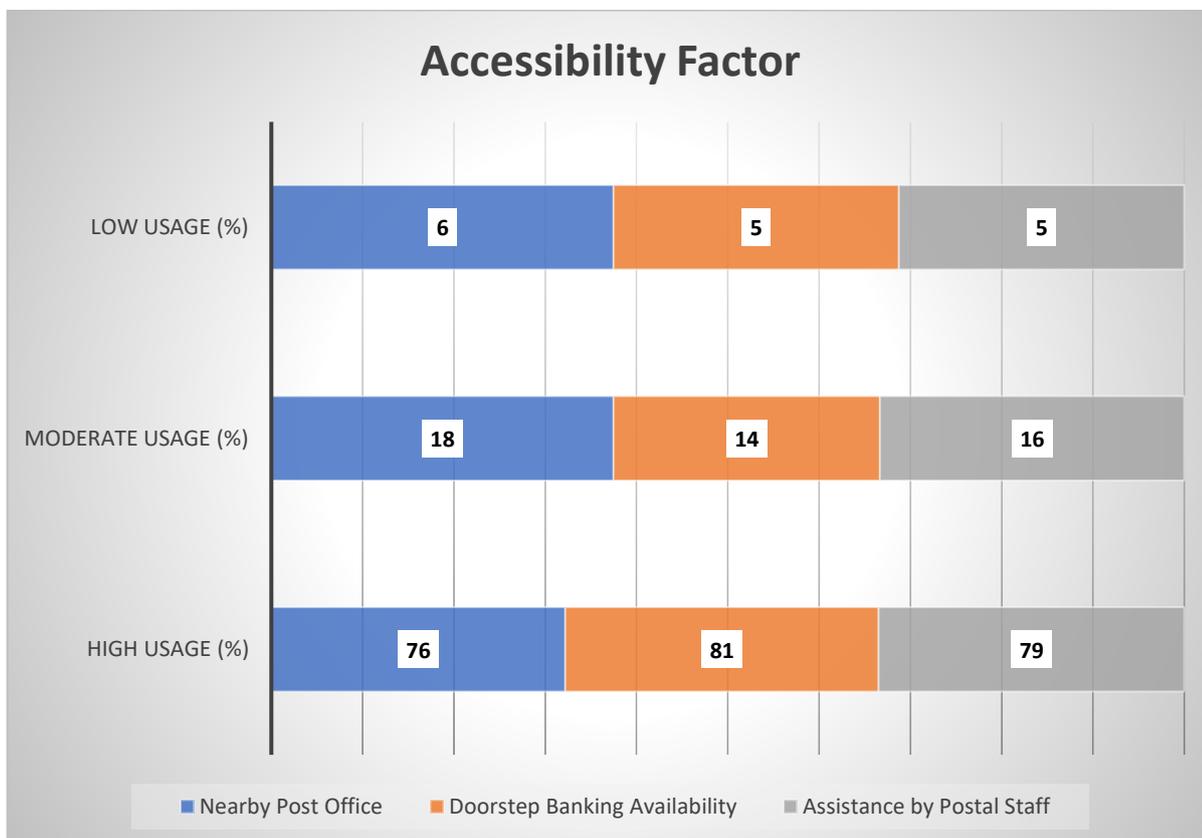
Bill Payments and Recharge Services demonstrate improved financial access for 63% (126 respondents), with the highest Chi-square value (19.325) among the listed services, suggesting a very strong association between usage and financial accessibility. This reflects the convenience and time-saving benefits of digital utility payments in rural areas. Likewise, Digital Money Transfer services show that 68% (136 respondents) experienced improved financial access, supported by a Chi-square value of 15.254 and a highly significant p-value (0.000).

**Table 3: Accessibility & Impact of IPPB Services and Usage of Formal Banking**

Accessibility Factor	High Usage (%)	Moderate Usage (%)	Low Usage (%)	Adjusted R Square	F Value	P Value	Slope (β)
Nearby Post Office	76	18	6	0.74	7.894	0.000*	1.412
Doorstep Banking Availability	81	14	5		6.458	0.000*	2.228
Assistance by Postal Staff	79	16	5		8.631	0.000*	1.645
ANOVA	0.000*						
Intercept	2.365						

(Source: Data Outcome)

**Figure 3: Accessibility of IPPB Services and Usage of Formal Banking**



(Source: Data Outcome)

**H02:** There is no significant relationship between IPPB’s digital financial services and financial access in rural Karnataka.

**H12:** There is a significant relationship between IPPB’s digital financial services and financial access in rural Karnataka.

The table and figure 3 highlight the influence of key accessibility factors of India Post Payments Bank (IPPB) on the usage of formal banking services among rural respondents in Karnataka State. The results clearly indicate a high level of service utilization driven by IPPB’s accessibility-oriented model. The presence of a nearby post office records 76% high usage, suggesting that physical proximity plays a crucial role in encouraging rural populations to engage with formal banking.

The statistically significant F value (7.894,  $p = 0.000$ ) confirms that accessibility through post offices has a meaningful impact on banking usage.

Similarly, doorstep banking availability shows the highest level of high usage at 81%, emphasizing the importance of last-mile delivery in rural financial inclusion. The significant F value (6.458,  $p = 0.000$ ) indicates that doorstep services substantially increase transaction frequency and customer participation in formal banking systems. This finding underscores IPPB's effectiveness in overcoming mobility, time, and distance-related constraints faced by rural households.

The role of assistance provided by postal staff is equally significant, with 79% of respondents reporting high usage. The strong F value (8.631,  $p = 0.000$ ) demonstrates that guidance and support from trusted postal personnel enhance confidence, usability, and sustained engagement with banking services, particularly among digitally less-literate users.

The Adjusted R Square value of 0.74 indicates that approximately 74% of the variation in the usage of IPPB services is explained by the selected accessibility factors, reflecting a strong explanatory power of the model. The ANOVA significance ( $p = 0.000$ ) confirms that the regression model is statistically sound. Thus, the null hypothesis regarding no impact of accessibility on banking usage is rejected, and it is concluded that IPPB's accessibility features significantly influence the adoption and usage of formal banking services in rural Karnataka. Based on the above result received to measure the impact, the regression line which have been drawn is mentioned below:

$$Y = \alpha + \beta_1(X_1) + \beta_2(X_2) + \beta_3(X_3)$$

$$Y (\text{Usage of IPPB}) = 2.365 + \beta_1(\text{Nearby Post Office}) + \beta_2(\text{Doorstep Banking}) + \beta_3(\text{Postal Staff Assistance})$$

$$Y (\text{Usage of IPPB}) = 2.365 + 1.412 (\text{Nearby Post Office}) + 2.228 (\text{Doorstep Banking}) + 1.645 (\text{Postal Staff Assistance}) \dots \dots \dots (1)$$

## 5. Findings & Conclusion

### 5.1. Findings of the Study

Based on the data analysis, interpretation, and hypothesis testing, the following key findings have emerged:

- The study reveals that digital financial services offered by India Post Payments Bank significantly improve financial access in rural Karnataka. All selected digital services i.e. Aadhaar-enabled Payment System (AePS), Mobile Banking App, Bill Payments & Recharge Services, and Digital Money Transfer recorded statistically significant Chi-square values ( $p = 0.000$ ), indicating a strong association between service usage and enhanced financial access.
- Among the digital services, AePS emerged as the most impactful service, with 74% of respondents reporting improved financial access. This reflects its suitability for rural users due to biometric authentication, ease of use, and minimal dependence on smartphones or internet connectivity.
- The findings further show that accessibility factors play a crucial role in influencing the usage of formal banking services. High usage levels were observed for nearby post offices (76%), doorstep banking availability (81%), and assistance provided by postal staff (79%).
- The regression analysis confirms that accessibility factors explain 74% of the variation in formal banking usage, as indicated by the Adjusted R Square value of 0.74. This demonstrates the strong explanatory power of IPPB's accessibility-driven service model. The ANOVA results and significant F values ( $p = 0.000$ ) establish that the regression model is statistically valid, confirming that IPPB's infrastructure and human support mechanisms significantly encourage rural populations to shift from informal to formal banking systems.

### 5.2. Conclusion of the Study

The study concludes that India Post Payments Bank acts as a strong catalyst for rural financial inclusion in Karnataka State by effectively combining digital financial services with an extensive and trusted postal network. The rejection of both null hypotheses confirms that IPPB has a significant impact on improving financial access and that its accessibility features strongly influence the usage of formal banking services among rural populations.

Digital financial services, particularly Aadhaar-enabled payment systems and digital money transfer facilities, have enhanced convenience, security, and inclusiveness for rural users. At the same time, accessibility elements such as doorstep

banking, proximity of post offices, and assistance from postal staff have reduced operational and psychological barriers to banking adoption. Together, these factors have strengthened customer confidence, increased transaction frequency, and promoted sustained engagement with the formal financial system.

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