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Impact of Financial Literacy and Inclusion Schemes on Digital Banking Behaviour in Nagpur District: An Empirical Study

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Abstract: Digital banking and financial inclusion has become one of the key aspects of the financial sector reforms in India. This paper will discuss the effects of the financial literacy and financial inclusion initiative on digital banking behaviour within Nagpur District with the help of an empirical study. The present research design is descriptive and analytical and the primary data were obtained by use of structured questionnaire to 300 respondents using stratified random sampling. Descriptive statistics, correlation analysis, and multiple regression analysis were used as the statistical techniques to evaluate the association between financial literacy, exposure to inclusion, and the use of digital banking. The results indicate that although the level of access to banking services has been improved at a considerable level due to the financial inclusion schemes, the level of financial literacy is more decisive at the effect it has on determining the probability, confidence and effectiveness of using digital banking services. According to the regression findings, the combination of financial literacy and participation in a scheme identifies a significant amount of variation in the digital banking behaviour. The paper finds that the inclusion initiative needs to be supported by the special literacy and digital awareness campaign to guarantee meaningful involvement of finances and sustainable introduction of digital in Nagpur District

Keywords: Financial Literacy, Financial Inclusion, Digital Banking Behaviour, Financial Inclusion Schemes, Digital Financial Services, Nagpur District, Digital Adoption.

INTRODUCTION

The main focus of the current transformation of the financial sector in India is financial inclusion and digital banking. During the last ten years, the Government of India and the banking industry have undertaken massive inclusion programs (such as PMJDY) and fintech and mobile payment systems have helped increase government access to digital financial services. Each of these two developments, policy driven advancement of accounts and their rapid digitization, is capable of reorganizing households in relation to formal finance, although the consequences are contingent on both financial and digital literacy of users and local infrastructure and institutional competence. Recent research demonstrates that digital financial literacy (DFL) helps determine the capability and desire of adults to engage in digital financial services significantly: people with better DFL tend to use more

and use internet and mobile banking devices more successfully (Ravikumar, 2022).

The Nagpur district is a convenient microcosm when it comes to examining the interaction. The cityzation, the growth of smartphone usage, and the ongoing digital-smart pilot schemes (metro, railways, utilities) have put chronic pressure on cash in Nagpur but heterogeneity in income, education, rural-urban differences all result into a situation where the impact of the financial inclusion programmes and literacy are unlikely to deliver an equal opportunity to digital banking behaviours. Indian evidence on a wider scale indicates that schemes like PMJDY were not only successful at growing the number of account holders but account utilization and useful technology design need supportive inputs such as literacy, trust and user-friendly technology design (Agarwala, 2023).

This paper empirically investigates the effect of financial literacy and inclusion programmes on digital banking behaviour on Nagpur district. The key research questions include the following: (1) How effectively can financial literacy forecast the intensity and extent of digital banking usage by the beneficiaries of inclusion programs? (2) Are documented schemes of inclusion (account opening drives, direct benefit transfer) converted into active digital, or do they mostly lead to dormant accounts? (3) Which socio-demographic and contextual variables are moderating the relationship of literacy-usage? The study will help provide place-specific evidence valuable in policy refinements and the development of the specific literacy interventions.

Literature review

There is an emerging body of literature connecting financial literacy with positive financial behaviours - e.g. budgeting, saving and uptake of formal financial services- and more recently to the digital finance uptake. Cross-national and India-specific authors base their claims on the findings that informational basic finance and digital skills increase the tendency to use mobile banking and other fintechs (Mishra, 2024). Mishra (2024) discovers DFL increases the propensity of women to use fintech products by way of government assistance and outreach it implies that literacy programs would be particularly significant when considering significantly underserved cohorts.

Palanisamy (2025) builds on these results with regard to the behavioural intention constructs revealing that financial literacy correlates to behavioural intentions regarding the adoption of new digital instruments (such as CBDC or new digital products), and the trust in institutions plays a significant interaction role. This is consistent with the predictions of the diffusion theory: literacy decreases the perceived complexity and risk, and, therefore, it increases faster adoption.

Big inclusion program policy reviews indicate a two-phase effect, where quick gains in account ownership are usually followed by quantifiable gains in transactional use. The existing studies on the appraisal of PMJDY and similar bank programs report high levels of gains in access and prominent levels of active utilization, with liquidity, transaction costs, low levels of awareness, barriers to usability as the perilous culprits (Singh, 2021; Agarwala, 2023). The efficiency analysis of Indian banks provided by Agarwala (2023) under PMJDY reveals that the performance of a bank, as well as the quality of its outreach, are important factors to transform access to active digital interaction.

In brief, account proliferation should be done but not enough complementary literacy initiatives and service quality should be enhanced to produce the long-term digital banking behaviour.

Recent literature highlights the fact that digital financial literacy is theoretically different than general financial literacy, including navigation of applications, security

behavior, and troubleshooting of transactions, and that DFL has a stronger predictive validity of safe and lasting use of digital banking (Ravikumar, 2022; Chhillar, 2025). Indian studies show that individuals with high DFL do not just use digital channels faster, but they also show improved security hygiene and increased confidence in making digital payments as well, which decreases the dropout rates post initial sign-in.

Unsurprisingly, empirical interrogations are invariably situated by demographic moderators: education, age, income and gender modify the power of the literacy adoptions relationship. Such as, the use of mobile banking is increasing with education and income, and older generations are slower in digital adoption without the help of specific training (Almanaseer et al., 2024). Regional studies are providing evidence that local infrastructure (quality of internet accessibility, density of network of agents) and institutional outreach (training of Bank led, customer service) have the potential to significantly enhance or eliminate the impacts of literacy programs.

Research Gaps

Although there is strong evidence at the national level, other district level empirical research that integrate financial literacy, exposure to particular inclusion schemes, and more digital banking behaviour, particularly in mid-tier cities such as Nagpur, is a lack of empirical evidence. This paper bridges that gap by utilizing both primary survey measures of DFL and financial literacy with exposure records of program exposure to evaluate behavioural results. Results will be used to determine which of these two, literacy campaign or service redesign, is important in the enhancement of digital banking in Nagpur and other districts with similar requirements.

Objectives:

The main aim of this research is to test the role of financial literacy and financial inclusion program in increasing digital banking behaviour in the area of Nagpur District and to study the effect of socio-economic and demographical variables on the adoption of digital banking services, their frequency of use, and their effectiveness among beneficiaries.

Methodology:

This research utilises descriptive research design and analytical research design in order to review the influence of financial literacy and inclusion initiatives on digital banking behaviour within Nagpur District. Primary data will be gathered by use of a structured questionnaire which will contain close-ended and Likert-scale questions. Stratified random sampling will take a sample of 300 respondents so as to make them representative of the urban and rural community, different age group, sex, and income.

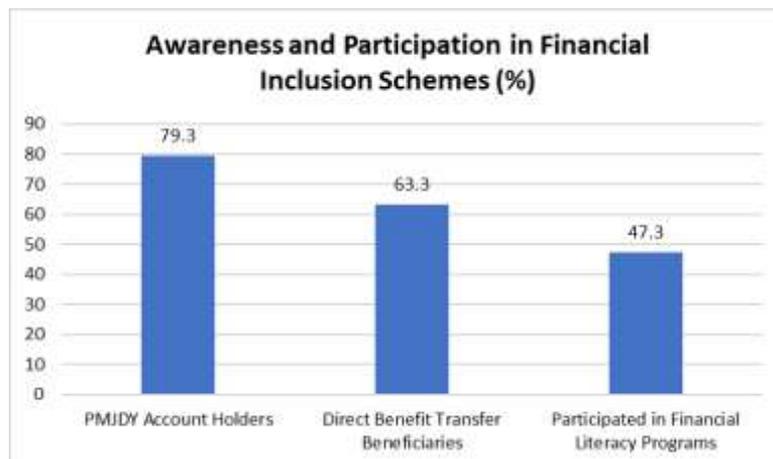
Results and Discussion

The respondents in the study were sampled at the Nagpur District (300 respondents) using the stratified random sampling. Descriptive statistics, correlation, and regression analysis were used to analyse the data to determine the effect of financial literacy and inclusion schemes on digital banking behaviour.

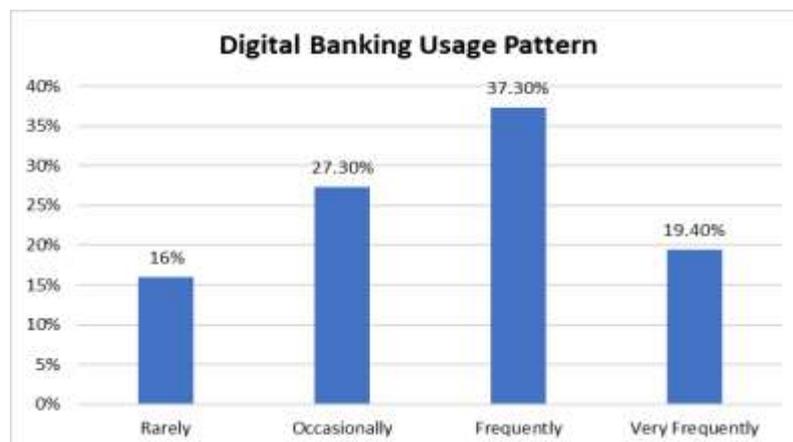
Table 1 Level of Financial Literacy

Literacy Level	Score Range	Frequency	Percentage (%)
Low	0–4	64	21.3
Moderate	5–7	152	50.7
High	8–10	84	28.0

Out of the respondents, more than 50.7% are of moderate literacy with 28% of the respondents being highly financially literate. Nevertheless, 21.3 percent remain low literate that can influence the use of digital banking.



Sixty-nine point three percent of them already own PMJDY accounts, though only 47.3 of them had been taught structured literacy programs. It means that holding an account does not always mean financial empowerment and digital literacy.



Digital penetration is moderate with almost 56.7% (Frequent + Very Frequent) of the respondents actively using digital banking. Nonetheless, only 43.3 per cent are occasional or rare users, which indicates behavioural gaps.

Table 2 Correlation

Variables	Financial Literacy	Inclusion Exposure	Digital Banking Behaviour
Financial Literacy	1	0.52**	0.68**
Inclusion Exposure	0.52**	1	0.61**
Digital Banking Behaviour	0.68**	0.61**	1

There exists a positive correlation of a strong nature ($r = 0.68$) between financial literacy and digital banking behaviour. There is also a great amount of positive association between inclusion exposure and inclusion exposure ($r = 0.61$). This validates the fact that literacy (as well as scheme participation) has an effect on digital adoption.

One of the regression models used was multiple regression to establish the predictive value of independent variables on digital banking behaviour.

Table 3 Regression Result

Variable	Beta Coefficient (β)	t-value	Significance (p-value)
Financial Literacy	0.49	9.12	0.000
Inclusion Exposure	0.37	7.45	0.000
Constant	1.12	3.98	0.001

$$R^2 = 0.58$$

$$\text{Adjusted } R^2 = 0.57$$

$$F\text{-value} = 203.45 (p < 0.001)$$

The model of regression describes 58 percent of the change in the digital banking behaviour. The strongest predictor is financial literacy ($b = 0.49$), then there is inclusion exposure ($b = 0.37$). The two variables are both significant at the level of 1% which proves that effective inclusion schemes and improved literacy are both beneficial towards better utilization of digital banking.

Through the analysis, it is found out that as much as the financial inclusion schemes have been able to boost the account penetration in Nagpur District, the use of digital banking is largely dependent on the level of financial literacy. The more literate respondents portray ambitious and repeated use of digital banking websites. The findings empirically determine that the inclusion that lacks literacy results into partial utilization, but when literacy occurs, inclusion programs become effective.

Conclusion

The research paper finds out that financial literacy, as well as financial inclusion, programs, influence digital banking behaviour in Nagpur District significantly and positively. Though inclusion efforts have significantly bolstered the number of accounts owned and those having access to formal banking services, the active and continued use of digital banking platforms is mostly determined by the degree of financial literacy in the beneficiaries. The empirical results show that more financially literate people exhibit increased confidence, use frequency and a diversity of digital banking services. Hence, financial literacy is a notably important enabling mechanism that makes financial access meaningful digital financial behaviour.

Recommendations:

It is suggested that the policies, banks, and other financial institutions should intensify the programs of structured financial literacy and digital awareness especially working with the rural society, elderly people, and low-income earnings. Mandatory digital training modules during the account opening should be part of the inclusion schemes. In order to develop trust between the digital platforms and users, banks must improve the user-friendly interface, regional language support, and cybersecurity awareness projects. The partnership with schools and town-county organizational authorities within Nagpur District can also add to the outreach and help make digital banking

sustainable.

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