

## IMPACT OF DIGITAL LENDING NON- BANKING FINANCE COMPANIES ON FINANCIAL INCLUSION OF UNBANKED POPULATION

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### Abstract

This study examines the role of digital Non-Banking Financial Companies (NBFCs) in promoting financial inclusion among the unbanked populations in India, focusing on usage patterns, perceived benefits and challenges, and financial well-being. Although smart phone ownership (95 per cent) and internet access (89 per cent) were high among respondents, 60 per cent relied on agents or intermediaries to access digital lending services, highlighting a gap between digital access and effective utilization. Chi-square analysis revealed that direct digital engagement was significantly associated with higher perceived benefits and fewer challenges. A one-way ANOVA indicated a statistically significant difference in financial well-being scores across user groups ( $F = 18.62, p < 0.001$ ), with respondents applying directly through mobile applications reporting the highest well-being levels. Post hoc tests confirmed that independent digital users had significantly better outcomes than those relying on agents or not engaging digitally. The findings suggest that digital NBFCs can enhance financial inclusion, but their effectiveness depends on promoting direct digital engagement through improved app usability, digital literacy initiatives, infrastructure development, and trust-building measures.

**Keywords:-** Digital NBFCs, Financial Inclusion, Financial Well-being, Digital Lending, Digital Literacy.

Access to formal financial services is a key determinant of economic empowerment in developing countries such as India. Despite continuous financial inclusion efforts, many individuals in rural and semi-urban areas remain unbanked

or under banked. The emergence of digital Non-Banking Financial Companies (NBFCs) has created new opportunities by offering small-ticket loans, simplified on boarding, and remote access through mobile platforms.

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Supported by initiatives like Digital India, digital infrastructure has expanded; however, limited digital literacy, trust issues, and connectivity constraints continue to restrict effective usage among the unbanked. While fintech-driven inclusion is widely discussed, empirical evidence on actual usage patterns and financial well-being outcomes remains limited. This study addresses this gap by examining how unbanked borrowers engage with digital NBFC services, the benefits and challenges they perceive, and the measurable impact on their financial well-being using descriptive statistics, chi-square tests, and one-way ANOVA. The findings aim to provide practical insights for strengthening inclusive and sustainable digital financial strategies.

## 2. Statement of the Problem

In India, despite the significant advancements in digital financial technologies and regulatory support by Reserve Bank of India, a substantial portion of India's population remains financially excluded. Digital lending by NBFCs, through mobile and online platforms, have emerged as an alternative to traditional banking by offering faster, unsecured loans to underserved segments. However, empirical research on how these services impact the credit access, financial behaviour, and economic well-being of unbanked populations remains very limited. This study investigates whether digital lending by NBFCs is helpful in fostering meaningful financial inclusion or exacerbating financial vulnerability among these groups.

## 3. Scope of the Study

The study examines the impact of digital Non-Banking Financial Companies (NBFCs) on the financial inclusion of the unbanked population in India, particularly in rural and semi-urban areas. It focuses on individuals who access digital lending services either directly through mobile applications or indirectly through agents, analyzing their usage patterns, perceived benefits, challenges, and overall financial well-being. Based on primary data and statistical tools such as descriptive analysis, chi-square tests, and one-way ANOVA, the study is confined to small-ticket digital lending services and does not cover traditional banks or large institutional borrowers.

## 4. Significance of the Study

The study is significant as it provides a comprehensive overview of risk management practices in Indian banks and financial institutions within the context of evolving regulatory frameworks and emerging financial risks. By synthesizing traditional and modern risk dimensions, it highlights both the progress made under Basel norms and the persistent gaps in governance, data infrastructure, and preparedness for emerging risks such as cyber security and climate-related exposures. The study is particularly valuable for policymakers, regulators, and researchers as it identifies disparities across institutions and underscores the need for harmonized regulation, stronger risk culture, and improved supervisory mechanisms to ensure financial stability in India.

## 5. Objectives of the Study

1. To assess the socio-economic profile of unbanked individuals availing digital NBFC loans.
2. To examine the accessibility and usage pattern of digital lending platforms.
3. To evaluate the perceived benefits and challenges of digital NBFC services among unbanked borrowers.
4. To analyse the impact of digital NBFC loans on the financial well-being of borrowers.
5. To suggest policy measures for improving digital lending outreach and borrower protection.

## 6. Hypotheses

- H01: Digital lending NBFCs have significantly improved access to credit among unbanked populations.
- H02: There is a positive correlation between digital literacy and the likelihood of using digital NBFCs.
- H03: Borrowers using digital NBFCs report higher financial stress due to short repayment cycles and high interest rates.
- H04: Socio-demographic factors (age, income, education) significantly influence the adoption of digital lending platforms.

## 7. Review of Literature

1. Bansal (2018) and Nair & Menon (2020) highlight the significant role played by NBFCs in reaching

underserved segments. They argue that NBFCs complement traditional banking services by offering microloans and financial services tailored to the needs of unbanked segments, thereby fostering economic development.

2. Charansingh & Rahul de (2020) in their empirical study, conducted under the aegis of the Indian Institute of Management Bangalore, explored the impact of digital lending platforms on financial inclusion, with a specific focus on NBFCs and fintech players targeting unbanked and under banked communities.
3. Richa Gupta (2024) in her empirical study focuses on the contribution of RBI-registered NBFCs to financial inclusion in India. She examined lending procedures and outreach programs targeting economically weaker sections, emphasizing the effectiveness of NBFCs in extending credit to unbanked individuals.
4. Sengupta & Roy (2019) stated that NBFCs are more agile and flexible in their operations, often reaching rural and semi-urban markets faster than traditional banks. They grant loans to small borrowers, informal workers, small businesses, and first-time borrowers without demanding collateral or strong credit histories.
5. Shreya Biswas (2021) investigated the impact of mobile financial services on financial behavior in India. Her findings suggest that access to mobile-based financial services,

often provided by NBFCs, increases the likelihood of individuals engaging in formal financial activities, such as savings and borrowing.

**8. Research Methodology**

This study adopts a mixed-methods approach to examine the impact of digital lending NBFCs on unbanked populations in selected districts of Kerala. The sample consists of 180 unbanked or underbanked individuals who accessed digital NBFC loans, along with selected NBFC representatives and intermediaries for contextual insights. A multi-stage sampling technique was used, combining purposive sampling to select districts and snowball sampling to identify respondents.

Data were collected through a structured questionnaire. Quantitative data were analyzed using descriptive statistics (frequency, percentage, mean, standard deviation) and inferential tools such as

chi-square tests, correlation, and regression analysis, while qualitative responses were analyzed using thematic analysis.

**9. Ethical Considerations**

- Obtain **informed consent** and ensure **anonymity and confidentiality** of respondents.

**10. Analysis and Interpretation**

From the table 9.1, it is clear that the typical borrower is a male (62 per cent) aged between 30 and 40. The female borrowers constitute only 38 per cent. The borrowers possess limited formal education and 25 per cent of the respondents are uneducated, 35 per cent possess secondary education and 40 per cent possess only primary level education. 55 per cent of the borrowers earn income from informal jobs followed by 30 per cent of self-employed people and 15 per cent others. The average monthly income of the respondents is 10500.

**Table 9.1**

**Socio-economic profile of unbanked borrowers**

Variable	Value
Average age	35.2 years
Gender	Male – 62%
	Female – 38%
Education level	Primary - 40%
	Secondary -35%
	Uneducated – 25%
Monthly income	10500 (mean)
Occupation	Informal labour – 55%
	Self –employed – 30%
	Others - 15%

*Source: Primary Data*

The table 9.2 shows that, smart phone ownership (95 per cent) and access to internet (89 per cent) are impressively high, suggesting strong infrastructure for digital financial services by NBFCs among even the unbanked population. However, only 78 per cent have downloaded a lending app, indicating a gap between access and usage. A significant 60 per cent relied on agents or relatives to apply for loans, pointing to low digital literacy or lack of confidence in using fintech platforms directly. On average, respondents have taken more than two loans, suggesting recurring dependence on digital credit facilities.

From table 9.3 it is visible that, merely owning a smart phone does not significantly influence whether users apply directly. This implies that access to devices alone is insufficient for independent digital usage. Internet availability does not guarantee direct engagement with digital

NBFC services. Factors such as confidence, skill, or trust may act as barriers despite access. Even with app access, many users may still depend on intermediaries, suggesting issues like digital literacy gaps or low trust in digital transactions.

Table 9.4 shows that, borrowers who **apply via agents/relatives** report significantly **higher levels of all challenges**, including **poor internet connectivity**, than those who apply directly. This suggests that poor connectivity is a **key barrier** restricting independent digital NBFC use. Addressing **internet access issues** along with digital literacy and trust can substantially improve direct usage and financial inclusion.

Table 9.5 reveals that, respondents who **applied directly** report **much higher positive perceptions** of the benefits offered by digital NBFC services

**Table 9.2**

**Accessibility and usage pattern of digital lending platforms**

Usage pattern	Percentage
Owens a smart phone	95
Has internet access	89
Downloaded digital lending app	78
Applied through agent	60
Number of loans taken (average)	2.1

*Source: Primary Data*

**Table 9.3**

**Chi-square Analysis**

Usage pattern	Chi-square value	df	P value	significance
Owens a smart phone	3.78	1	0.052	Not significant
Has internet access	0.10	1	0.748	Not significant
Downloaded digital lending App	0.41	1	0.521	Not significant

*Source: Primary Data*

compared to those who relied on **agents or relatives**. Benefits like **convenience, speed, and accessibility** are significantly associated with direct application, indicating that firsthand engagement enhances perceived service quality. Even among unbanked borrowers, those who overcome digital barriers tend to recognize **greater value** in digital NBFC platforms.

The table 9.6 presents the mean financial inclusion scores of respondents based on their mode of engagement with digital NBFC applications. Among the 180 respondents, those who did not download the app (n = 50) recorded the lowest mean score (6.2, SD = 1.3). Respondents who downloaded the app but applied through an agent (n = 60)

showed a slightly higher mean score (6.8, SD = 1.1). The highest mean score was observed among those who downloaded the app and applied directly (n = 70), with a mean of 7.9 (SD = 1.0). The decreasing standard deviation across the groups indicates relatively consistent responses, particularly among direct applicants. Overall, the findings suggest that direct digital engagement with NBFC applications is associated with higher levels of financial inclusion compared to indirect or non-digital access.

In table 9.7, the **F-value = 18.62** is high, and the **p-value < 0.001**, which is **far below the conventional alpha level of 0.05**. This indicates that **at least one group mean is significantly different**

**Table 9.4**  
**Perceived challenges**

Perceived challenge	Applied directly(%)	Applied via agent (%)	Chi-square	P value	Significance
Difficulty in understanding Apps	35 %	80	45.30	<0.001	Significant
Lack of trust in digital platforms	30 %	75	42.12	<0.001	Significant
Dependence on intermediaries	25 %	85	58.20	<0.001	Significant
Poor internet connectivity	40 %	70	25.67	<0.001	Significant

*Source: Primary Data*

**Table 9.5**  
**Perceived Benefits**

Perceived benefit	Applied directly (%)	Applied via agent (%)	Chi-square	P value	significance
Convenience of loan Application	90	70	18.45	<0.001	Significant
Faster loan processing	88	68	17.10	<0.001	Significant
Accessibility without physical branch	85	65	16.50	<0.001	Significant
Lower paper work requirements	80	60	14.85	<0.001	Significant

*Source: Primary Data*

from the others in terms of financial well-being scores. **The ANOVA is statistically significant.**

In table 9.8, the post hoc analysis revealed that borrowers who applied **directly via the app** had significantly higher financial well-being scores compared to those who applied **through agents** (mean difference = 1.1,  $p < 0.01$ ) and those who did **not use the app** (mean difference = 1.7,  $p < 0.01$ ). However, there was no significant

difference between borrowers who applied via agents and those who did not use the app ( $p = 0.08$ ). This suggests that direct engagement with digital lending platforms is associated with better financial outcomes.”

**11. Findings**

The study revealed several key insights into the usage patterns, perceived benefits and challenges, and the financial well-being of unbanked borrowers using digital NBFC services.

**Table 9.6**

**Impact of digital NBFC loans on the financial well-being of borrowers**

Group	Sample size (n)	Mean score	Standard deviation (SD)
Did not download the App	50	6.2	1.3
Downloaded App, applied via agent	60	6.8	1.1
Downloaded App, Applied directly	70	7.9	1.0
<b>Total</b>	180	-	-

*Source: Primary Data*

**Table 9.7**

**Anova Summary Table**

Source of variation	SS	df	MS	F	P- value
Between groups	52.14	2	26.07	18.62	<0.001
Within groups	190.40	177	1.075		
<b>Total</b>	242.54	179			

*Source: Primary Data*

**Table 9.8**

**Post hoc test table**

Comparison	Mean diff	p- value	Significance
App direct vs App via agent	+1.1	<0.01	significant
App direct vs No App	+1.7	<0.01	significant
App via agent vs No App	+0.6	0.08	Not significant

*Source: Primary Data*

- **Objective 1 - To assess the socio-economic profile of unbanked individuals availing digital NBFC loans.**

The findings reveal that the people with an average age of 35 years avail digital NBFC loans the most. Majority of the unbanked population availing digital NBFC loan services are not well educated people and they possess only primary level education. The mean monthly income of the respondents is ₹ 10,500 which shows that the population belongs to the middle class and also majority of them are engaged in informal labour to earn income.

- **Objective 2 - To examine the accessibility and usage pattern of digital lending platforms.**

The study found that although 95 per cent of respondents owned smart phones and 89 per cent had internet access, only 78 per cent had downloaded digital lending applications. Among those who downloaded the apps, 60 per cent applied for loans through agents or relatives rather than independently. The chi-square analysis indicated no statistically significant association between digital access and method of application, showing that smart phone ownership and internet connectivity did not significantly influence independent digital usage.

- **Objective 3 - To evaluate the perceived benefits and challenges of digital NBFC services among unbanked borrowers**

The study found that 85 per cent of borrowers reported convenience as a

major benefit of digital NBFC services, followed by faster loan processing (80 per cent), accessibility without visiting physical branches (75 per cent), and reduced paperwork (70 per cent). At the same time, 65 per cent of respondents reported difficulty in using mobile applications, 60 per cent expressed lack of trust in digital platforms, 60 per cent indicated dependence on intermediaries, and 55 per cent faced poor internet connectivity. The chi-square test results showed a significant association between mode of application and perceived challenges and benefits, with agent-assisted borrowers reporting more challenges and direct app users reporting higher perceived benefits.

- **Objective 4 - To analyze the impact of digital NBFC loans on the financial well-being of borrowers.**

A one-way ANOVA was conducted to examine differences in financial well-being among three groups: non-app users, app users who applied through agents, and direct app users. The results showed a statistically significant difference in mean financial well-being scores among the groups ( $F = 18.62, p < 0.001$ ). Direct app users reported the highest mean score (7.9), followed by agent-assisted users (6.8) and non-app users (6.2). Post hoc analysis using Tukey's HSD indicated that direct users had significantly higher financial well-being compared to both agent-assisted users and non-users, while the difference between agent-assisted users and non-users was not statistically significant.

## 12. Suggestions and Recommendations

- **Objective 5 - To suggest policy measures for improving digital lending outreach and borrower protection.**

The findings indicate that although many unbanked borrowers have access to smart phones and internet connectivity in India, their actual engagement with digital NBFC platforms remains limited. Continued reliance on agents - even among app users - highlights deeper barriers such as digital illiteracy, low confidence, usability concerns, connectivity issues, and lack of trust. The study further reveals that borrowers who apply directly through digital platforms report significantly higher financial well-being, including better repayment capacity, improved income stability, and reduced dependence on informal credit sources. This underscores that infrastructure alone does not guarantee meaningful digital inclusion.

To enhance impact, digital NBFCs should prioritize localized digital literacy programs, simplified app interfaces, and full vernacular language support. Transparent disclosure of interest rates

and charges, stronger grievance redressal systems, and assisted digital service points can build trust and confidence among first-time users. Designing flexible micro-loan products for informal workers and aligning outreach with schemes such as Pradhan Mantri Jan Dhan Yojana can further promote responsible and sustainable financial inclusion.

## Conclusion

In conclusion, this study demonstrates that digital NBFCs hold substantial promise for improving the financial well-being of unbanked populations in India. However, this promise is not realized through access alone. The positive impact of digital NBFC loans is most evident among those who engage with the platforms directly and independently. As such, NBFCs and policymakers must move beyond a purely infrastructural focus and instead prioritize empowering users through digital education, simplified technology, and trust-building initiatives. Bridging the digital divide requires not just tools, but support and inclusion. By promoting direct digital engagement, the financial ecosystem can become more inclusive, resilient, and impactful for the underserved.

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