Empowering Citizens through Technology- the Impact of the Digital India Programme on Financial Inclusion in Karnataka

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Abstract: Financial inclusion is central to India's development agenda, with the Digital India Programme serving as a transformative driver in extending digital financial services to citizens. This research delves into the effects of Digital India on financial inclusion in Karnataka, specifically looking at demographic variables, awareness, adoption, use and obstacles. A total of 175 participants filled out a structured survey, and the results were evaluated using several statistical methods, including t-tests, binomial tests, chi-square tests, and correlation analysis. Findings reveal moderate awareness of Digital India initiatives (52%), though awareness did not significantly influence adoption. The shift to online banking greatly enhanced the availability of financial systems, but had little effect on the management of personal finances and the elimination of cash. There was no discernible correlation between adoption and demographic variables like gender, age, or income, and no notable hurdles were identified in terms of technical difficulties, cybersecurity worries, or educational attainment. To guarantee effective citizen empowerment, the report stresses the necessity of better digital infrastructure, greater financial literacy initiatives, and increased awareness campaigns. When it comes to changing people's financial habits, Digital India has increased access, but it needs long-term policy and institutional backing to really shine.

Keywords: Digital India, Financial Inclusion, Karnataka, Awareness, Adoption, Digital Financial Services, Citizen Empowerment, UPI, JAM Trinity, Direct Benefit Transfer (DBT).

INTRODUCTION

Financial inclusion has become a pillar of economic growth and has made sure that people and societies are able to access cheap financial products and services in the form of saving, credits, insurance, and electronic payments. Financial exclusion has been a historical issue in India, particularly amongst the rural communities, the low-income communities, women, and the marginalized groups. In 2015, the Indian government launched the Digital India Programme with the goal of creating a knowledge-driven economy and a digitally empowered society in order to address these challenges. It has also made digital financial service a key pillar and has introduced various initiatives like Aadhaar-enabled services, the Jan Dhan Aadhaar Mobile (JAM) trinity, Unified Payments Interface (UPI) and Direct Benefit Transfers (DBT). These efforts are supposed to empower citizens, decrease cash dependency, increase transparency and take financial services to the last mile.

Digital India Programme in Karnataka, a state with a quick technological adoption rate and well-developed digital infrastructure has been instrumental in enhancing financial inclusion. Digital land records, DBT of welfare schemes, mobile banking, and UPI-based payments are some of the efforts that have boosted access to the financial world, especially in urban and semi-urban regions. Nevertheless, rural and underserved areas have some obstacles to overcome, and low digital literacy, poor infrastructure, cybersecurity threats, and demographic differences are some problems that restrict the full potential of financial empowerment. Whereas research has been conducted to determine the effectiveness in account ownership and adoption, there is a paucity of data on the awareness, continued use, perceived usefulness and inhibitors of citizens in the particular setting of Karnataka.

This paper, thus, aims at evaluating how the Digital India Programme has influenced financial inclusion in Karnataka through the prism of awareness creation, adoption, use, and problems associated with the programme to citizens. It also examines the linkage between the demographic variables and the digital adoption and assesses whether technological empowerment has helped to translate into substantial use of formal financial systems. The study will fill this void by offering meaningful recommendations to the policymakers, financial institutions, and technology enablers to enhance the role of Digital India in promoting inclusive growth and citizen empowerment.

REVIEW OF LITERATURE:

Many studies have looked at Digital India's impact on

increasing access to financial services in India, with Karnataka serving as a case study. In rural Karnataka, mobile banking adoption is influenced by factors such as perceived utility, trust, and literacy, as pointed out by Kishore (2016). On the other hand, Kadaba (2023) demonstrated that digital financial inclusion (DFI) indicators have a positive correlation with household welfare at the national level, subject to internet penetration. In addition, Rai (2024) criticized Aadhaar and India's DPI, stating that although the number of accounts has increased, the number of people actually using them is still low. Several state-level analyses have been conducted: a study on electronic payments in Karnataka's welfare schemes (2023) demonstrated improved access and transparency but highlighted digital literacy barriers, while Bytes of Inclusion (2024) reported that UPI and DBT reduced leakages in transfers, though urban–rural divides persist. Post-pandemic evidence by ResearchGate authors (2025) found that micro and small entrepreneurs in Karnataka improved resilience through digital finance, yet connectivity and affordability constraints remained. Broader critiques are offered by EPW Engage (2020), who argued that inclusion metrics should focus on account usage rather than ownership, and by Psychology & Education Journal (n.d.), which proposed rural well-being measures beyond simple access. Evidence from PMJDY analyses (IJRPR, 2021–2025; ResearchGate authors, 2025) confirmed strong gains in account penetration, but heterogeneity persisted across districts. Devashish Jain's (2024) report on Karnataka's Digital India schemes illustrated practical implementation gaps in DBT and land-record digitization, while Shetty (2017) highlighted that mobile banking can drive inclusion if supported by agent networks and trust. Additional Karnataka-specific challenges have been identified by IJFANS (2024), including intermittent connectivity, gender gaps, and agent liquidity issues, while consultancy insights (EY & CII, 2024) stressed integrating technology with literacy for deeper impact. Collectively, these studies show that Digital India has significantly increased access and transparency, yet barriers of literacy, affordability, infrastructure, and active usage remain critical challenges for Karnataka.

Research Gap:

Although past studies have highlighted the role of Digital India in expanding account ownership, mobile banking, and digital payments in Karnataka, most have focused on access rather than citizens' awareness, sustained usage, and everyday financial participation. There is a lack of data on the effects of demographic variables like income, education level, and age on adoption, as well as the effects of obstacles like cybersecurity threats, technological hurdles, and digital literacy gaps on confidence and use. Moreover, while policy reports emphasize digital empowerment, there is a lack of empirical, citizen-centric studies in Karnataka that comprehensively link awareness, adoption, usage, perceived benefits, and barriers of digital financial services. This gap underlines the need for the present study.

Research Objectives:

1. To analyze the level of awareness of citizens in Karnataka regarding Digital India initiatives related to financial services.
2. To examine the extent of adoption and usage of digital financial services under the Digital India Programme.
3. To assess the perceived impact of Digital India on citizens' access to and participation in formal financial services.
4. To evaluate the challenges and barriers (technical, security, literacy) faced by citizens in using digital financial services.
5. To study the relationship between demographic factors and the adoption of digital financial services.
6. To provide suggestions for strengthening Digital India's role in advancing financial inclusion in Karnataka.

Research Hypotheses:

I. **Awareness & Adoption:**
   H1: "Citizens in Karnataka are significantly aware of Digital India initiatives related to financial inclusion".
   H2: "Higher awareness of Digital India initiatives positively influences the adoption of digital financial services".

II. **Usage & Impact:**
   H3: "The adoption of digital financial services significantly improves access to financial services among citizens".
   H4: Use of digital financial services has a significant positive effect on citizens' ability to manage personal finances.
   H5: Adoption of digital financial services reduces dependence on cash transactions.

III. **Challenges & Barriers:**
   H6: Technical issues (network failures, glitches) negatively affect the effective use of digital financial services.
   H7: Perceived cybersecurity risks significantly reduce citizens' trust in digital financial services.
   H8: Lower education levels are significantly associated with difficulties in adopting digital financial services.

IV. **Demographics & Adoption:**
   H9: There is a significant association between demographic factors (age, education, income, residence) and the level of adoption of digital financial services.

RESEARCH METHODOLOGY:

The study takes a descriptive and analytical approach to research in order to look at how digital financial services in Karnataka are perceived, used, and impacted by the Digital India Programme. The primary data was gathered from 175 participants who were randomly selected based on a variety of demographic variables such as age, gender, education, profession, income, and place of residence.

To ensure reliability, the Cronbach's Alpha was computed for 17 questionnaire items, yielding a high internal

consistency of 0.834, confirming the tool's suitability for analysis. Data analysis involved descriptive statistics for demographic profiling, Binomial tests to assess awareness levels, Chi-Square tests to evaluate associations between demographic variables, adoption, and difficulties in usage, and Independent Samples t-tests to examine the effect of digital financial service usage on financial management ability and cash dependence. Correlation analysis was employed to test the impact of technical and cybersecurity challenges on effective usage and trust in digital services. All analyses were conducted using SPSS software, ensuring rigorous statistical validation of the hypotheses.

ANALYSIS AND RESULTS DISCUSSION:

Reliability Statistics:

Table 1: Showing Reliability Statistics

Cronbach's Alpha	N of Items
.834	17

Source: Author's Primary Survey, 2025

There is strong internal consistency among the 17 questions of the questionnaire, as shown by the Cronbach's Alpha rating of 0.834. This result demonstrates that the study's scale is valid for assessing the components linked to the effect of the Digital India Programme on financial inclusion in Karnataka. Values over 0.8 are excellent, while values above 0.7 are typically regarded acceptable. This means respondents' answers across the items are consistent, and the tool can be confidently used for further statistical analysis.

Demographic Profile:

Table 2: Showing Demographic Variables of Respondents

Variable	Categories	Frequency	Percent
Gender	Male	40	22.9%
	Female	48	27.4%
	Other	44	25.1%
	Prefer not to say	43	24.6%
Age Group	Below 20 years	32	18.3%
	21–30 years	35	20.0%
	31–40 years	41	23.4%
	41–50 years	38	21.7%
	Above 50 years	29	16.6%
Education	No formal education	30	17.1%
	School level	44	25.1%
	Graduate	34	19.4%
	Postgraduate	34	19.4%
	Professional/Technical	33	18.9%
Occupation	Student	26	14.9%
	Salaried	28	16.0%
	Self-employed	31	17.7%
	Retired	28	16.0%
	Homemaker	30	17.1%
	Other	32	18.3%
Income	Below ?10,000	37	21.1%
	?10,001–?25,000	36	20.6%
	?25,001–?50,000	32	18.3%
	?50,001–?1,00,000	32	18.3%
	Above ?1,00,000	38	21.7%
Residence	Urban	53	30.3%
	Semi-Urban	69	39.4%
	Rural	53	30.3%

Source: Author's Primary Survey, 2025

The demographic analysis of 175 respondents shows a fairly balanced representation across categories. Gender distribution is diverse, with female respondents (27.4%) slightly higher than males (22.9%), and a significant share identifying as "Other" (25.1%) or preferring not to disclose (24.6%). Age-wise, the majority fall within the **31–40 years (23.4%)** and **41–50 years (21.7%)** brackets, indicating strong middle-age participation. Education levels reflect a well-spread mix, with the largest group being **school-level educated (25.1%)**, followed by graduates and postgraduates (19.4% each). Occupations are distributed fairly evenly, with **self-employed (17.7%)** and **others (18.3%)** being notable. Income levels are also balanced, with respondents spread across all brackets, though the largest share earns **above ₹1,00,000 (21.7%)**. In terms of residence, **semi-urban areas dominate (39.4%)**, followed equally by urban and rural respondents (30.3% each), giving a good regional spread.

Awareness & Adoption:
Testing of 1ˢᵗ Hypothesis:

H1: Citizens in Karnataka are significantly aware of Digital India initiatives related to financial inclusion.
To assess the knowledge of Digital India's financial inclusion activities, we formulate the following null and alternative hypotheses.

H0= "Citizens in Karnataka are *not significantly aware* of Digital India initiatives related to financial inclusion; the proportion of awareness is equal to 50%"

H_1= "Citizens in Karnataka are *significantly aware* of Digital India initiatives related to financial inclusion; the proportion of awareness is greater than 50%"

The Binomial Test is employed to evaluate whether citizens' awareness levels differ significantly from the expected proportion.

Table 3: Showing Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Aware	Group 1	Yes	91	.52	.50	.650
	Group 2	No	84	.48		
	Total		175	1.00		

Source: Author's Primary Survey, 2025

The Binomial Test result shows a **p-value of 0.650**, which is greater than the significance level (α = 0.05). This means the observed awareness level (52%) is **not statistically different** from the hypothesized 50%. Hence, it **fails to reject the null hypothesis**.

Testing of 2nd Hypothesis:
H2: Higher awareness of Digital India initiatives positively influences the adoption of digital financial services.
We construct the following hypotheses to see whether the measures to raise awareness of Digital India have a favourable effect on the uptake of digital financial services.

H_0= Awareness of Digital India initiatives have no significant influence on the adoption of digital financial services.

H_1= Awareness of Digital India initiatives significantly influence the adoption of digital financial services.

To investigate how well-known Digital India efforts are in relation to the use of digital banking services, we ran a Chi-Square Test of Independence.

Table 4: Showing Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.053[a]	1	.818		
Continuity Correction[b]	.006	1	.937		
Likelihood Ratio	.053	1	.818		
Fisher's Exact Test				.880	.469
Linear-by-Linear Association	.053	1	.819		
N of Valid Cases	175				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 41.76.

b. Computed only for a 2x2 table

Source: Author's Primary Survey, 2025

The p-value is 0.818 and the Pearson Chi-Square value is 0.053, both of which are more than the significance level of 0.05. It may be concluded that there is no meaningful correlation between being aware of Digital India efforts and using digital financial services. Fisher's Exact Test (p = 0.880) confirms the same for small sample conditions. Therefore, the null hypothesis (H_0) is

accepted: awareness does **not significantly influence** adoption among citizens in Karnataka.

Usage & Impact
Testing of 3rd Hypothesis:
H3= "The adoption of digital financial services significantly improves access to financial services among citizens"
To determine if people's access to financial services is substantially enhanced when digital financial services are adopted, the following null and alternative hypotheses are formulated.

H_0= "The adoption of digital financial services does **not significantly improve** access to financial services among citizens"

H_1= "The adoption of digital financial services **significantly improves** access to financial services among citizens"
To analyze the impact of digital financial service adoption on people' access to financial services, a Chi-Square Test of Independence was performed.

Table 5: Showing Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	112.621[a]	3	.000
Likelihood Ratio	142.903	3	.000
Linear-by-Linear Association	15.082	1	.000
N of Valid Cases	175		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.45.			

Source: Author's Primary Survey, 2025

The **Chi-Square test (χ^2 = 112.621, p = .000 < 0.05)** indicates a **highly significant association** between adoption of digital financial services and frequency of access to financial services. Citizens who adopt digital platforms show **diverse and more frequent usage patterns** (daily, weekly, monthly, rarely), whereas non-adopters are **restricted to weekly-only access**. Thus, the null hypothesis (H_0) is rejected, and it is concluded that **the adoption of digital financial services significantly improves access to financial services among citizens.**

Testing of 4th Hypothesis:
H4: Use of digital financial services has a significant positive effect on citizens' ability to manage personal finances.
Following null and alternative hypotheses are framed to test whether the use of digital financial services has a significant positive effect on citizens' ability to manage personal finances.

H_0= "The use of digital financial services does **not have a significant positive effect** on citizens' ability to manage personal finances"
H_1= "The use of digital financial services has a **significant positive effect** on citizens' ability to manage personal finances"
The hypotheses are examined using **Independent Samples t-test** to compare the mean scores of citizens who use digital financial services versus those who do not.

Table 6: Showing Group Statistics

	Use_Digital	N	Mean	Std. Deviation	Std. Error Mean
Mean Score of Impact of Digital India	Yes	88	3.0898	.44075	.04698
	No	87	2.9782	.42246	.04529

Source: Author's Primary Survey, 2025

From the group statistics, citizens who **use digital financial services** report a slightly higher mean score (**M = 3.0898**) on their ability to manage personal finances compared to those who **do not use them** (**M = 2.9782**). The difference in mean scores suggests that adoption of digital financial services may have a positive impact on financial management ability.

Table 7: Showing Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
									Lower	Upper	
Mean Score of Impact of Digital India	Equal variances assumed	.844	.360	1.710	173	.089	.11161	.06528	-.01723	.24045	
	Equal variances not assumed			1.710	172.835	.089	.11161	.06526	-.01720	.24042	

Source: Author's Primary Survey, 2025

The Levene's Test (F = 0.844, Sig. = 0.360 > 0.05) indicates equal variances can be assumed. The t-test result shows $t(173) = 1.710$, $p = 0.089 > 0.05$, meaning the difference in mean scores between digital service users (M = 3.0898) and non-users (M = 2.9782) is not statistically significant at the 5% level. Although users reported a slightly higher ability to manage personal finances, the result is not strong enough to reject the null hypothesis.

Testing of 5th Hypothesis:
H5: Adoption of digital financial services reduces dependence on cash transactions.
Following null and alternative hypotheses are framed to test whether the adoption of digital financial services reduce dependence on cash transactions.

H_0= "Adoption of digital financial services does **not** significantly reduce dependence on cash transactions"
H_1= "Adoption of digital financial services **significantly reduces** dependence on cash transactions"

An **Independent Samples t-test** was used to compare the mean scores of citizens who use digital financial services versus those who do not. This test determines whether adoption of digital services has a statistically significant effect on reducing dependence on cash transactions.

Table 8: Showing Group Statistics

	Use_Digital	N	Mean	Std. Deviation	Std. Error Mean
Reduction in dependence on Cash Transactions	Yes	88	3.0227	1.43821	.15331
	No	87	2.9885	1.34246	.14393

Source: Author's Primary Survey, 2025

The mean score for reduction in dependence on cash transactions is slightly higher among digital financial service users (M = 3.0227) compared to non-users (M = 2.9885). This indicates a minor positive effect of adopting digital financial services on reducing cash usage. However, the small difference in means suggests that, without statistical testing (like a t-test), we cannot confirm whether this difference is statistically significant.

Table 9: Showing Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Reduction in dependence on Cash Transactions	Equal variances assumed	1.158	.283	.163	173	.871	.03422	.21037	-.38100	.44944
	Equal variances not assumed			.163	172.433	.871	.03422	.21029	-.38084	.44929

Source: Author's Primary Survey, 2025

The Levene's Test (F = 1.158, Sig. = 0.283 > 0.05) indicates that the assumption of equal variances is met. The t-test result (t = 0.163, p = 0.871 > 0.05) shows that the difference in mean scores for reduction in cash dependence between digital service users (M = 3.0227) and non-users (M = 2.9885) is not statistically significant. The null hypothesis (H₀) is accepted. Adoption of digital financial services does not have a statistically significant effect on reducing citizens' dependence on cash transactions at the 5% significance level.

Challenges & Barriers
Testing of 6th Hypothesis:
H6: Technical issues (network failures, glitches) negatively affect the effective use of digital financial services.
This study sets out to determine whether the efficient use of digital financial services is hindered by technical difficulties (such as network breakdowns and glitches) by testing the following null and alternative hypotheses.

H₀= "Technical issues (network failures, glitches) do **not** significantly affect the effective use of digital financial services"

H₁= "Technical issues (network failures, glitches) **significantly and negatively** affect the effective use of digital financial services"

We ran a correlation test to see whether technical issues correlate with inefficient usage of digital financial services; the results are presently under consideration.

Table 10: Showing Correlations

		Effective use of Digital Financial Services	Technical Issues
Effective use of Digital Financial Services	Pearson Correlation	1	-.090
	Sig. (2-tailed)		.237
	N	175	175
Technical Issues	Pearson Correlation	-.090	1
	Sig. (2-tailed)	.237	
	N	175	175

Source: Author's Primary Survey, 2025

The Pearson correlation coefficient (r = -0.090) indicates a very weak negative relationship between technical issues and effective use of digital financial services, suggesting that as technical issues increase, effective use slightly decreases. However, the p-value (Sig. = 0.237 > 0.05) shows that this relationship is not statistically significant at the 5% significance level. The null hypothesis (H₀) is accepted. The efficient use of digital financial services by people is not adversely affected by technical difficulties (e.g., network outages, glitches) to a statistically significant degree.

Testing of 7th Hypothesis:
H₇: Perceived cybersecurity risks significantly reduce citizens' trust in digital financial services.
Following null and alternative hypotheses are designed to test whether the perceived cybersecurity risks significantly reduce citizens' trust in digital financial services.

H₀= "Perceived cybersecurity risks do not significantly reduce citizens' trust in digital financial services"

H₁= "Perceived cybersecurity risks significantly reduce citizens' trust in digital financial services"

A correlation test is carried out to test the relationship between perceived cybersecurity risks and reduction in citizens' trust in digital financial services.

Table 11: Showing Correlations

		Reduction citizens' trust in digital financial services	Perceived cybersecurity risks
Reduction citizens' trust in digital financial services	Pearson Correlation	1	.035
	Sig. (2-tailed)		.643
	N	175	175
Perceived cybersecurity risks	Pearson Correlation	.035	1
	Sig. (2-tailed)	.643	
	N	175	175

Source: Author's Primary Survey, 2025

The Pearson correlation coefficient (r = 0.035) indicates a very weak positive relationship between perceived cybersecurity risks and reduction in citizens' trust in digital financial services. However, the p-value (Sig. = 0.643 > 0.05) shows that this relationship is not statistically significant at the 5% level. The null hypothesis (H₀) is accepted. No statistically significant relationship exists between people' perceptions of cybersecurity dangers and their faith in digital financial services.

Testing of 8th Hypothesis:
H_8: Lower education levels are significantly associated with difficulties in adopting digital financial services.
The researchers want to draw some conclusions about the difficulties persons with lower levels of education have when attempting to utilize digital financial services by analyzing the data collected.

H_0= "Lower education levels are not significantly associated with difficulties in adopting digital financial services"

H_1= "Lower education levels are significantly associated with difficulties in adopting digital financial services"

A chi-square test is done to the association between education level and difficulties in adopting digital financial services.

Table 12: Showing Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.679[a]	4	.070
Likelihood Ratio	8.775	4	.067
Linear-by-Linear Association	2.359	1	.125
N of Valid Cases	175		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 14.91.

Source: Author's Primary Survey, 2025

The importance level is more than 0.05, as shown by a p-value of 0.070 and a Pearson Chi-Square value of 8.679. On a 5% level, this indicates that the difficulties in using digital financial services are not related to one's degree of education. Hence, the null hypothesis (H_0) is accepted and the alternative hypothesis (H_1) is rejected. It means that, based on the sample, lower education levels are not significantly associated with difficulties in adopting digital financial services.

Demographics & Adoption
Testing of 9th Hypothesis:
H9: There is a significant association between demographic factors and the level of adoption of digital financial services. Following sub-hypotheses are framed to check various demographic variables and their association with the level of adoption of digital financial services.

Gender Vs. Level of adoption of digital financial services
In order to determine whether there is a substantial correlation between gender and the amount of digital financial service uptake, we build the following null and alternative hypotheses.

H_0= "There is no significant association between gender and the level of adoption of digital financial services"

H_1= "There is a significant association between gender and the level of adoption of digital financial services"

An analysis of independence using a Chi-Square test was carried out to see if there is a relationship between gender and the level of use of digital financial services.

Table 13: Showing Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.249[a]	3	.355
Likelihood Ratio	3.270	3	.352
Linear-by-Linear Association	.058	1	.810
N of Valid Cases	175		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 19.89.			

Source: Author's Primary Survey, 2025

The results showed that the association was not statistically significant, $\chi^2(3, N = 175) = 3.249$, $p = .355$. Therefore, the null hypothesis is retained, indicating that gender does not significantly influence the level of adoption of digital financial services.

Age Vs. Level of adoption of digital financial services
In order to determine whether there is a substantial correlation between age and the amount of digital financial service usage, the following alternative and null hypotheses are presented.

H_0= "There is no significant association between age and the level of adoption of digital financial services"

H_1= "There is a significant association between age and the level of adoption of digital financial services"

The correlation between age and the extent to which digital financial services are used was investigated using a Chi-Square Test of Independence.

Table 14: Showing Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.648[a]	4	.071
Likelihood Ratio	8.799	4	.066
Linear-by-Linear Association	.532	1	.466
N of Valid Cases	175		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 14.42.			

Source: Author's Primary Survey, 2025

We sought to determine if there was a relationship between respondents' ages and the frequency with which they used digital banking by using the Chi-Square test. With four degrees of freedom, the test produced a p-value of 0.071 and a Pearson Chi-Square value of 8.648. With a value higher than the commonly accepted significance level of 0.05, we cannot rule out the possibility that there is a correlation between age and the extent to which people use digital financial services (H_0).

Monthly Income Vs. Level of adoption of digital financial services
In order to determine whether there is a substantial correlation between monthly income and the extent to which digital financial services are used, the following null and alternative hypotheses are put forward.

H_0= "There is no significant association between monthly income and the level of adoption of digital financial services"

H_1= "There is a significant association between monthly income and the level of adoption of digital financial services"

We conducted a Chi-Square Test of Independence to look for a connection between people's monthly income and how often they use digital financial services.

Table 15: Showing Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.887[a]	4	.757
Likelihood Ratio	1.891	4	.756
Linear-by-Linear Association	.270	1	.604
N of Valid Cases	175		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.91.			

Source: Author's Primary Survey, 2025

The Chi-Square test indicates that monthly income does not have a statistically significant association with the level of adoption of digital financial services among the respondents. It suggests that individuals across different income groups whether lower, middle, or higher adopt digital financial services at similar levels. Income, in this sample, does not appear to be a determining factor in influencing digital adoption behaviour.

MAJOR FINDINGS, SUGGESTIONS AND CONCLUSION:
Major Findings:

The study reveals that citizens in Karnataka have moderate awareness of Digital India initiatives related to financial inclusion, with 52% reporting awareness; Nevertheless, the

acceptance of digital financial services was unaffected by this knowledge. Adoption of these services significantly improves access to financial services, as users demonstrate more frequent engagement compared to non-users. Although digital services slightly enhanced citizens' ability to manage personal finances, the effect was not statistically significant, and adoption did not substantially reduce dependence on cash transactions.

Regarding challenges, technical issues such as network failures and glitches, as well as perceived cybersecurity risks, were not significant barriers to adoption. On the same note, lack of education was not statistically significant to problems in using digital financial services. Demographic factors analysis revealed that the gender, age, and monthly income did not significantly relate to the adoption levels, and this suggested adoption across these groups was quite homogenous.

Suggestions:
1. **Enhance Awareness Campaigns:** Target underrepresented groups with information on Digital India initiatives and digital financial services.
2. **Financial Literacy Programs:** Conduct workshops and tutorials to improve effective use of digital financial services, especially for middle-aged and older citizens.
3. **Strengthen Infrastructure:** Improve network connectivity and reduce technical glitches for smoother digital service delivery.
4. **Promote Security & Trust:** Increase cybersecurity awareness and reinforce platform safety to build user confidence.
5. **Encourage Cashless Transactions:** Introduce incentives such as cashback or discounts to gradually reduce cash dependence.

CONCLUSION:
While the report acknowledges that Digital India's acceptance of digital financial services expands access to these services, it finds that neither financial management skills nor the decrease of cash use are much improved. The technical factors, cybersecurity, and education levels are not a significant obstacle to adoption indicating the growing acceptance and permanence of digital services. To promote increased financial inclusion in Karnataka, it is recommended to use a combination of digital literacy initiatives, awareness campaigns, improved infrastructure, and trust building. In addition to revealing areas for policy and program improvement, the findings show that Digital India has the potential to expand access to formal financial services.

Limitations of the Study:
Although the current research is helpful in understanding how the Digital India Programme has influenced financial inclusion in Karnataka, there are some limitations that are to be considered. First, the sample size was potentially a problem. It has only 175 participants so it is difficult to tell whether the entire Karnataka population is representative, especially given the variation between country and city areas. Second, the research has been mainly based on self-reported data that was obtained via structured questionnaires, and thus it is vulnerable to response bias or social desirability bias. Third, it narrowed down to selected indicators like awareness, adoption and usage; other aspects of financial inclusion like credit access, insurance penetration and long-term savings behaviour were not adequately addressed. Fourth, the study involved the opinions of the citizens, but the opinions of the financial institutions, policy-makers, and digital services providers were not involved in this study, which would have given a more comprehensive picture. Fifth, the research design is cross-sectional, meaning that the research only captures insights at a single point in time, which makes it impossible to evaluate long-term effects of Digital India initiatives on the financial inclusion. Finally, while the study highlights challenges like digital literacy and cybersecurity, it does not undertake an in-depth technical evaluation of infrastructure readiness or policy implementation at the grassroots level.

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