



Impact Of Financial Inclusion On Economic Growth Of India

Kiran Prakash Hegde ¹, Dr. Vinod Krishna M U ²

¹ Student, Department of Management Studies, Dayananda Sagar College of Engineering, Bangalore, India.

² Professor, Department of Management Studies, Dayananda Sagar College of Engineering, Bangalore, India.

ABSTRACT

The term "financial inclusion" describes the affordable and universal availability of a several different financial services. The aim of this analysis is to look into how economic growth is impacted by financial inclusion. growth from 2006 and 2024. In this study, a variety of financial institutions and services such as commercial banks, credit cooperatives, insurance companies, ATMs, deposit accounts, and loan accounts, Credit cards, Debit Cards are considered as independent variables, with GDP growth serving as the dependent variable. Secondary data is used and the data has been analysed by using multiple regression analysis. Before analysis, the adequacy of the information has been checked. Unit root tests are conducted to verify the stationarity of the variable; the Covariance tests are conducted to verify the direction of two variables. Normality tests are conducted to verify the distribution of variables; Correlation analysis tests are conducted to verify the connection between the two variables. The findings show that other financial inclusion variables have an impact on economic development but commercial bank loan accounts, outstanding deposits, and loans from commercial banks do not significantly affect GDP growth.

Keywords: Financial Inclusion, Financial service, Economic Growth, GDP Growth.

INTRODUCTION

The process of assuring access to a range of financial offerings and services to the populations regardless of their geographical location, income, social status thus integrating all excluded individuals into the financial system. the given concept implies the broader participation of people in the economy with their living standard improving. according to the committee of Rangarajan (2008), financial inclusion can be defined as providing prompt and sufficient access to credit and financial services at reasonable rates to the vulnerable and excluded groups.

Nowadays, financial inclusion is essential to the growth of economy of India, that comprises many territories with the predominance of rural location. in this respect, the government and the RBI have developed several programs to achieve better financial access. among them are introduction of basic accounts, ATM facilities, and bank branches networking as well as support for self-help groups. the task of inequality income, limited infrastructure, lacking financial knowledge, etc, are complex and large number of households remain unbanked. regarding the potential perspectives for the long-term development of the nation and the reducing poverty with more empowered human environment the level or amount of financial inclusion has to be developed.

LITERATURE REVIEW

Kwadwo Boateng's (2017) Study represents the need for India to boost existing policies and provide new programs in order to increase financial literacy. This paper examines key policies such as the PMJDY (Pradhan Mantri Jan Dhan Yojana) and Digital India program, identifying challenges such as distance from banks and a lack of infrastructure, and provides solutions such as mobile banking.

Dr. Rashmi Paranjpye's (2020) Study analyses banking facilities, PMJDY success, and credit facilities, revealing a 21% increase in bank branches and a 39% increase in ATMs from 2014. The PMJDY program resulted in the opening of over 35 crore new accounts and significant increases in credit overgrowth.

Ozili Peterson K. (2023) according to the study findings financial inclusion a first effect on economic development through increased availability all financial offerings and services that boost public contribution. goals and actions for the financial accessibility set by policymakers have been acknowledged is important engines for economic expansion

Shailesh Rastogi (2020) the study investigates how open banking can develop financial accessibility and economic development in India. despite various activities more 1/3 of the Indian population lacks of access to financial facilities the success of the UPS is highlighted policymakers were advised to concentrate on increasing financial services to promote economic expansion.

Marc Audu (2019) this study finds that direct banking services, rural credits and money supply all have a positive effect on economic development in India and human well-being. whereas income disparity has detrimental effects financial inclusion is critical for economic development in some Asian countries.

Md. Qaiser Alam (2021) this study finds that direct banking connection between India's decreasing poverty and economic progress and financial inclusion. according to this study long term structural policies and in order to achieve sustained economic growth, programs are essential. and poverty reduction in India.

Ankit Saini (2018) this study analysis the need for India's financial inclusion and its effects on the country's overall economic growth it analyses the existing policies such as Jandan yojana and Atal pension yojana highlighting the issues like corruption, financial illiteracy, an inadequate infrastructure, recommendation consists increasing banking facility to bring more people in the financial system to stimulate economic growth in India.

Pruthiranjana Dwivedi (2023) this study discusses how financial accessibility is defined differently based on the needs of every country. the study concentrates on the increases the SBI's branch network and ATM's availability in addition to their impact on India's GDP growth. It represents a lack of financial product knowledge and availability in rural areas where the most of India's population lives.

Dr. N. Rajasekaran (2023) Barriers to financial accessibility in rural India include financial illiteracy, low level of infrastructure and poor income. The RBI's initiatives, including Basic Deposit and Savings Accounts (BDSA) and DBT (Direct Benefit Transfer), seek to develop financial accessibility by developing digital infrastructure.

Sanjaya Kumar Lenka and Ruchi Sharma (2017) this study provides evidence of effect of financial accessibility on India's economic growth based on banking sector data from 1980 to 2014. As stated by the study's findings, financial inclusion has positive impact on both short term and long-term economic growth. the objective is to provide affordable financial facilities to all citizens of the nation to raise their standard of living and increase the economic development in India

Jyoti Prasad Mukhopadhyay (2016) this study analyses the gender, higher education, and having a bank account all are positively correlated. this study recommends development of financing and focusing on states such as Uttarakhand, Himachal Pradesh and Uttar Pradesh the banking infrastructure of India possesses benefited from the expansion of microfinance institutions and payments banks.

Ms. Jisha Joseph (2016) this study divides government and RBI (Reserve Bank of India) actions towards financial accessibility into 4 categories such as reach, access, products and transactions. this study elaborates the India's increased banking operation, particularly in rural areas, through branches development and rural credit facilities. focusing on the contribution of savings mobilization and profitable investment to economic growth in India.

Amit Pandey and Ravi Kiran (2022) this study identifies that digitization, technology and usage as key drivers of financial accessibility in India. This research paper concentrates on the necessity of national financial literacy for long term development with financial activities and accessibility benefiting India's economic growth.

Kumar Bijoy (2017) this study focuses on establishment of jobs and steady income as essential requirements for financial accessibility in India. This research paper examines the effect of Pradhan Mantri

Jandhan yojana noting a notable rise in the bank account and transaction and suggests focusing on job creation and improving financial infrastructure in all regions.

Vinay Kandpal and Rajat Mehrotra (2019) Examine the increase in transactions made without cash in India due to globalization and banking sector development. Government initiatives such as demonetization and cashless transactions encourage innovation and digitization of financial products, but the study also emphasizes security concerns and the need for strong control mechanisms.

RESEARCH GAP

(Ahmad et al. 2023) Over 22 years, researchers examined the connection between mobile banking, telecom services, and economic development in 146 countries, concluding that mobile money boosts economic growth, especially in nations where the use of mobile phones is widespread, and increases financial inclusion.

(Awasthi and Chauhan 2022) pointed out microfinance's role in financial inclusion in India, demonstrating that it empowers rural entrepreneurs, promotes job creation, and contributes to GDP growth.

(Pandey and Kiran 2022) highlighted the effect of digitization and technology on financial inclusivity, emphasizing that national literacy is critical for long-term economic growth.

(Singh and Ghosh 2021) analysed the effect of financial accessibility on economic development in India, and discovered a the underlying connection between economic activity and financial inclusion, with changes observed after demonetization.

(Haider 2018) examined how digital technologies such as mobile banking and biometric authentication increase accessibility to financial services and practical for low-income people in developing countries, thereby contributing to economic stability and growth.

From the above, we conclude that Most of the research studies focused only on the Percentage of adults with a transaction account, Number of financial agents per 100,000 adults, Percentage of adults using mobile money or internet banking, Percentage of adults with a loan or credit facility, Percentage of adults with insurance coverage, Percentage of adults with basic financial knowledge, Gender equality, Poverty without focusing on commercial banks, credit cooperatives, insurance companies, ATMs, deposit accounts, and loan accounts, Credit cards, Debit Cards.

METHODS AND MATERIALS

Research Methodology

In this study, analytical instruments such the Jarque-bera normality test, ADF Unit root test, Covariance and correlation analysis, and Multiple linear regression analysis (using E views) are used for understanding the correlation and effect of financial accessibility indicators on GDP Growth of India from 2006 to 2024.

Based on the requirements and objectives of the research the study used the publicly available data source as it is more appropriate. This topic is mainly related to macroeconomic factors so the publicly available data approach is more accurate than the primary data collection method. After considering all the above factors study adopted the alternative technique for getting data from the authentic and authorized websites namely the database of RBI and the World Bank statistical database are the main data sources. Some data points for specific years are taken from the RBI-published reports and verified their authenticity by cross-checking with other data sources.

Sample size

The study's sample size refers to the time series data starting from 2006 to 2024 (2023 and 2024 values are forecasted values using linear forecasting technique in Excel). 17 independent variables are identified based on the literature review and using statistical tools namely ICB (Institutions of commercial banks), NCUCC (Number of credit unions and credit cooperatives), NIC (Number of insurance corporations), Branches CUCC (Branches of credit unions and credit cooperatives), ATMs (Automated Teller Machines), DACB (Deposit accounts with commercial banks), PIC (Policies with insurance corporations), Borrowers CUCC (Borrowers from credit unions and credit cooperatives), Number of Debit Card, Number of Credit cards, ODDT (Outstanding deposits with other deposit takers), OLCB (Outstanding loans from commercial banks), OLD T (Outstanding loans from other deposit takers), BCB (Branches of Commercial banks), NODT (Number of other deposit takers), LACB (Loan accounts with commercial banks), ODCB (Outstanding deposits with commercial banks). The yearly data of Every variable listed here is gathered from 2006 to 2024. The GDP Growth of India is interpreted as the replacement for Economic growth. Thus, we may say that the study's sample size is 17 independent variables and One Dependent variable (GDP Growth) for 19 years.

Hypothesis 1

H0 (Null Hypothesis): The data is following a normal distribution.

H1 (Alternate Hypothesis): The data does not following a normal distribution.

Hypothesis 2

H0 (Null Hypothesis): The time series data has a unit root; Indicating It is non-stationary.

H1 (Alternate Hypothesis): The time series data doesn't have a unit root, indicating data is stationary.

Hypothesis 3

H0 (Null hypothesis): There is no significant correlation among the variables.

H1 (Alternative Hypothesis): There's a significant correlation among at least one pair of the variables.

Hypothesis 4

H0 (Null Hypothesis): There is no significant connection between the financial inclusion Indicators (ATM, BCB, Borrowers CUCC, Branches CUCC, Credit Cards, DACB, Debit cards, LACB, NIC, NODT, ODCB, ODDT, OLCB, OLDT, PIC, ICB, NCUCC) and India's GDP.

H1 (Alternative Hypothesis): There is a significant connection between Financial Inclusion indicators and India's GDP.

DATA ANALYSIS AND RESULTS

In this project various statistical tools such as Jarque-Bera normality test, ADF unit root test, covariance and correlation analysis, multiple linear regression analysis are employed to comprehend financial inclusion indicators effect on economic growth of India over 19 years. EViews software are employed to comprehend the normality of variables, stationarity of variables, covariance and connection between the variables and multiple liquidation analysis are employed to comprehend the effect of financial inclusion indicators on GDP growth of India.

Jarque-Bera normality test:

This is a statistical tool that used to find out the normal allocation of a variable. it analyses the skewness and kurtosis of the data to see If any modifications are made to the normality distribution. the aim of this test is critical most of the statistical analysis because the normality of residuals or errors is an important assumption in parametric models such as linear regression. If there is a substantial departure from normalcy in the data, it may indicate that model is improper which could result in biased or poor estimations.

	Jarque-Bera	Probability (P-Value)
ATM	1.488599	0.475067
BCB	1.507395	0.470623
Borrowers CUCC	1.704402	0.496047
Branches CUCC	1.639083	0.440634
Credit Cards	2.666159	0.263664
DACB	1.722528	0.422627
Debit Cards	1.804343	0.405688
ICB	9.152246	0.010295
LACB	2.277248	0.320259
NCUCC	10.03022	0.006637
NIC	0.921621	0.630772
NODT	1.135389	0.566831
ODCB	1.420068	0.491628
ODDT	2.906407	0.23382
OLCB	1.34674	0.509987
OLDT	2.185495	0.335294
PIC	0.623276	0.732247
GDP Growth	1.044264	0.593255

(Table 1: Jarque-Bera Normality test results)

The Thumb Rule for Hypothesis 1:

If the P value < 0.05: We accept an alternate hypothesis.

If the P value > 0.05: We accept the null hypothesis.

From the above Jarque-Bera normality test results we can observe the probability value of ATM (0.475067), BCB (0.470623), Borrowers CUCC (0.496047), Branches CUCC (0.440634), Credit Cards (0.263664), DACB (0.422627), Debit cards (0.405688), LACB (0.320259), NIC (0.630772), NODT (0.566831), ODCB (0.491628), ODDT (0.23382), OLCB (0.509987), OLDT (0.335294), PIC (0.732247) and Dependent variable GDP Growth which shows that at 5% significance level for the variables P-value is greater than 0.05. We agree the null hypothesis of **Hypothesis 1** and all the variables are **normally distributed**. And, probability value of ICB (0.010295), and NCUCC (0.006637) shows that at a 5% significance level for the variables P value is less than 0.05 so we did not succeed in rejecting the null hypothesis so these 2 variables are **not normally distributed**.

ADF Unit Root Test

This test is used to determine whether a time series variable is non-stationary and possesses a unit root, indicating that the series is driven by a stochastic rather than a deterministic trend. A unit root's existence suggests that shocks at the series' level can have long-term consequences. This test is important in time series analysis because many statistical models assume stationarity. If a series is discovered to be non-stationary, it must be differenced to achieve stationarity prior to moving on with more analysis, ensuring the validity of model predictions and interpretations.

		Augmented Dickey-Fuller Unit Root Test		Significance level		
		ADF (t-Statistic)	Probability (P-Value)	1% level	5% level	10% level
Independent Variables	ATM	0.017986	0.9486	-3.857386	-3.04039	-2.660551
	BCB	0.10111	0.9565	-3.857386	-3.04039	-2.660551
	Borrowers CUCC	-1.903305	0.3234	-3.857386	-3.04039	-2.660551
	Branches CUCC	-0.659659	0.833	-3.857386	-3.04039	-2.660551
	Credit Cards	-2.516633	0.1301	-3.92035	-3.06559	-2.67346
	DACB	-0.480812	0.8727	-3.886751	-3.05217	-2.666593
	Debit Cards	0.176394	0.9627	-3.857386	-3.04039	-2.660551
	ICB	-3.996457	0.0075	-3.857386	-3.04039	-2.660551
	LACB	0.223834	0.9645	-3.959148	-3.081	-2.68133
	NCUCC	-4.223774	0.0047	-3.857386	-3.04039	-2.660551
	NIC	-0.968897	0.7409	-3.857386	-3.04039	-2.660551
	NODT	-0.492176	0.8715	-3.857386	-3.04039	-2.660551
	ODCB	0.615893	0.9859	-3.857386	-3.04039	-2.660551
	ODDT	-0.460086	0.8781	-3.857386	-3.04039	-2.660551
	OLCB	0.734929	0.9894	-3.857386	-3.04039	-2.660551
	OLDT	0.888638	0.9927	-3.857386	-3.04039	-2.660551
	PIC	-2.398787	0.1557	-3.857386	-3.04039	-2.660551
	GDP Growth	-0.520676	0.8655	-3.857386	-3.04039	-2.660551

(Table 2: ADF Unit Root test results)

The Thumb Rule for Hypothesis 2:

If the P-value < 0.05 = We accept an alternate hypothesis.

If the P-value > 0.05 = We accept the null hypothesis.

Here The statistical analysis unequivocally demonstrates that the P-value of ICB (0.0075), and NCUCC (0.0047) variables is below 0.05. and for the other variable like ATM (0.9486), BCB (0.9565), Borrowers CUCC (0.3234), Branches CUCC (0.833), Credit cards (0.1301), DACB (0.8727), Debit cards (0.9627), LACB (0.9645), NIC (0.7409), NODT (0.8715), ODCB (0.9859), ODDT (0.8781), OLCB (0.9894), OLDT (0.9927), PIC (0.1557), and Dependent variable GDP Growth (0.8655) shows that P-value is higher than the 0.05 Thus, we may say that we accept alternate hypothesis of **Hypothesis 2** for P-Value below 0.05 variables, through the Null Hypothesis' rejection for P-Value greater than 0.05 variables we reject the alternate hypothesis, by agreeing the Null Hypothesis.

Covariance Analysis

One statistical tool is a covariance test used to determine the connection between two variables, specifically measuring how changes in one variable is linked to another with changes in another. The covariance value, which can be zero, positive, or negative, is calculated by the test. as two variables have a positive covariance, they are said to move in the same direction that is, as one variable rises, the other also tends to rise. A negative covariance suggests that the variables move in opposition to one another, with a propensity for the other to drop as the first one rises. There isn't association between the variables if the covariance is 0.

Evaluating the covariance value's sign and magnitude is necessary for interpreting the results of a covariance test. A strong positive association, where the variables are strongly related and have a tendency to increase together, is indicated by a big positive covariance value. A significant inverse association is shown by a big negative covariance.

	Dependent Variable	
	GDP Growth	
Independent Variable	ATM	6.70E+16
	BCB	2.52E+16
	Borrowers CUCC	5.37E+18
	Branches CUCC	1.51E+15
	Credit Cards	1.18E+19
	DACB	5.22E+20
	Debit Cards	2.60E+20
	GDP Growth	6.07E+23
	ICB	-1.30E+13
	LACB	5.67E+19
	NCUCC	5.30E+14
	NIC	1.05E+13
	NODT	-1.01E+14
	ODCB	3.90E+19
	ODDT	1.07E+17
	OLCB	2.83E+19
	OLDT	1.21E+18
	PIC	6.88E+19

(Table 3: Covariance analysis test results)

From the above covariance test result table, we find out that ATM ($6.70\text{E}+16$), BCB ($2.52\text{E}+16$), Borrowers CUCC ($5.37\text{E}+18$), Branches CUCC ($1.51\text{E}+15$), Credit Cards ($1.18\text{E}+19$), DACB ($5.22\text{E}+20$), Debit cards ($2.60\text{E}+20$), LACB ($5.67\text{E}+19$), NIC ($1.05\text{E}+13$), ODCB ($3.90\text{E}+19$), ODDT ($1.07\text{E}+17$), OLCB ($2.83\text{E}+19$), OLDT ($1.21\text{E}+18$), PIC ($6.88\text{E}+19$), NCUCC ($5.30\text{E}+14$) variables have the positive covariance with the GDP Growth, means they are said to move in the same direction that is, as one variable rises, the other also tends to rise. Further, we can find out that ICB ($-1.30\text{E}+13$), and NODT ($-1.01\text{E}+14$) have a negative covariance with the GDP Growth, which represents that the variables oppose one another, having a propensity for the other to drop as the first one rises.

Correlation Analysis

Analysis of correlations quantifies the strength and direction of a two-variable linear connection, using correlation coefficients ranging from -1 to 1. A correlation of 1 represents a perfect positive relationship, -1 is a perfect negative relationship, and 0 is no linear relationship. This analysis is critical for identifying potential predictors in regression models and determining the connection between variables in exploratory data analysis. Additionally, it supports the detection of multicollinearity in multiple regression, where high correlations between independent variables distort the estimation of regression coefficients, resulting in unreliable results.

	Dependent Variable	
	GDP Growth	
Independent Variable	ATM	0.967745
	BCB	0.970079
	Borrowers CUCC	0.854602
	Branches CUCC	0.93111
	Credit Cards	0.83838
	DACB	0.980086
	Debit Cards	0.977568
	GDP Growth	1
	ICB	-0.844999
	LACB	0.946377
	NCUCC	0.182839
	NIC	0.966255
	NODT	-0.985005
	ODCB	0.987839
	ODDT	0.78877
	OLCB	0.987151
	OLDT	0.962352
	PIC	0.901013

(Table 4: Correlation Test results)

The Thumb rule for Hypothesis 3:

Based on the above correlation coefficients we can say that is a strong positive correlation in the variables. So, we accept the alternative hypothesis. If strong negative correlation in the variable we failed to accept the null hypothesis.

From the above Correlation test results table, we to sum up that GDP has a high positive correlation with ATM (0.967745), BCB (0.970079), Borrowers CUCC (0.854602), Branches CUCC (0.93111), Credit Cards (0.83838), DACB (0.980086), Debit Cards (0.977568), LACB (0.946377), NCUCC (0.182839),

NIC (0.966255), ODCB (0.987839), ODDT (0.78877), OLCB (0.987151), OLDT (0.962352), PIC (0.901013) which means that as independent variable increases, the Dependent variable GDP tends to increase as well so we accept the alternative hypothesis of **Hypothesis 3**

ICB (-0.844999), and NODT (-0.985005) indicate a strong negative relationship with the GDP Growth, this implies that as the independent variable increases, The variable that is dependent GDP tends to decrease so we failed to accept the null hypothesis.

Multiple Linear Regression Analysis

Multiple linear regression is a statistical technique that models the relationship between a dependent variable and two or more independent variables. The primary goal is to recognize the impacts of each predictor variable. the dependent variable while preserving every other variables constant. This method estimates the effect size and significance of each predictor, providing insights into the underlying relationships in the data. It is widely used in forecasting, risk assessment, and decision-making in a variety of disciplines, including economics, finance, and social sciences, allowing researchers to make predictions and infer causal relationships between variables.

Dependent Variable: GDP_GROWTH				
Method: Least Squares				
Date: 07/20/24 Time: 21:02				
Sample: 1 19				
Included observations: 19				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ATM	12942526	1523846.	8.493332	0.0034
BCB	18746033	2074225.	9.037607	0.0000
BORROWERS CUCC	19855.87	8582.550	2.313516	0.0343
BRANCHES CUCC	-73298293	15755724	-4.652169	0.0187
CREDIT CARDS	31166.30	4339.811	7.181488	0.0056
DACB	-3316.788	301.7951	-10.99020	0.0016
DEBIT_CARD	3223.723	214.3565	15.03907	0.0006
ICB	-2.09E+10	2.27E+09	-9.214584	0.0027
LACB	1683.687	1426.963	1.179910	0.3231
NCUCC	71666501	7654355.	9.362840	0.0026
NIC	1.44E+10	4.17E+09	3.464770	0.0405
NODT	2.09E+09	9.72E+08	2.150711	0.1206
ODCB	6363.807	6895.144	0.922940	0.4241
ODDT	-4741969.	480507.2	-9.868674	0.0022
OLCB	-22042.03	8309.532	-2.652620	0.0768
OLDT	672433.9	110426.6	6.089418	0.0089
PIC	1412.477	166.3824	8.489338	0.0034
C	-9.40E+11	8.72E+11	-1.077430	0.3602
R-squared	0.999926	Mean dependent var	2.24E+12	
Adjusted R-squared	0.999555	S.D. dependent var	8.00E+11	
S.E. of regression	1.69E+10	Akaike info criterion	49.77444	
Sum squared resid	8.54E+20	Schwarz criterion	50.56976	
Log likelihood	-456.8572	Hannan-Quinn criter.	49.90904	
F-statistic	2698.015	Durbin-Watson stat	3.230936	
Prob(F-statistic)	0.000010			

(Table 5: Multiple linear regression analysis output)

The Thumb rule for hypothesis 4:

P-value < 0.05: The coefficient is statistically significant, suggesting the independent variable is associated with the dependent variable.

P-value > 0.05: The coefficient is not statistically significant, suggesting the independent variable perhaps not a significant predictor.

Considering the aforementioned multiple linear regression output table, we conclude that p-values of ATM, BCB, Borrowers CUCC, Branches CUCC, Credit cards, DACB, Debit cards, ICB, NCUCC, NIC, ODDT, OLCB, OLDOT, PIC are less than 0.05. So, the null hypothesis [There is no significant connection between the financial inclusion Indicators (ATM, BCB, Borrowers CUCC, Branches CUCC, Credit cards, DACB, Debit cards, ICB, NCUCC, NIC, ODDT, OLDOT, PIC) and India's GDP] is rejected. Also, it rejects all the sub hypothesis as Every independent variable has a statistically meaningful relationship impact on the dependent variable. Furthermore, Considering the aforementioned output p-values of LACB, NODT, ODCB, OLCB are higher than 0.05. So, the null hypothesis [There is no significant connection between the financial inclusion Indicators (LACB, NODT, ODCB, OLCB) and India's GDP] cannot be rejected.

DISCUSSIONS

From the above comprehensive analysis conducted on impact of financial inclusion indicators impact on GDP Growth of India which includes Jarque-Bera normality test, ADF unit root test, Covariance analysis, correlation analysis and multiple linear regression analysis that yields several important discussions.

The study sheds light on the connection between financial inclusion metrics and GDP growth in India. The Jarque-Bera normality test shows that most variables, including ATM, BCB, Credit Cards, NIC, and GDP Growth, are normally distributed, but ICB and NCUCC are not. The ADF unit root test further distinguishes between stationarity and non-stationarity variables with ICB and NCUCC exhibiting stationarity while others such as GDP growth do not. covariance and correlation analysis reveal that NODT&ICB have a negative connection with GDP growth even though other variables have positive correlation.

The multiple regression model confirms the data stationarity and finds a significant connection between financial inclusion indicators and India's GDP growth with the high R-squared values indicating strong explanatory power. this emphasizes the importance of expanding financial services and improving credit availability for economic development while key indicators such as BCB and borrowers CUCC are critical for increasing GDP, the lack of significance for LACB, NODT, ODCB and OLCB have not impacting on GDP but they have positive relationship with GDP except NODT. so, it implies that certain regions could necessitate a different approach or additional research to uncover their potential indirect effects on economic growth.

CONCLUSION

The analysis reveals a strong positive connection between financial accessibility and economic growth in India, as determined by rigorous statistical tests and regression modelling. The study presents evidence for the financial accessibility has a significant effect on economic development of India, highlighting the function of financial inclusions in determining India's economic future. This study's analyses the Jarque-Bera normality test, the ADF unit root test, covariance and correlation analysis, and multiple regression, shows a positive connection between financial accessibility indicators like availability of ATMs, credit amenities, and commercial banks and debit and credit cards and GDP growth. This highlights the significance of promoting financial inclusion indicators in encouraging the expansion of the economy in India.

This study represents the function of financial literacy in encouraging the expansion of the economy in India. Financially literate people are better equipped to make wise judgments, use banking services properly, and participate in the economic development of India. educational programs to improve financial knowledge has the capacity to empower people. and businesses boosting productivity and economic growth in India. at the end this study suggests the role that financial inclusion plays in India's economic growth by promoting financial services, literacy and economic contribution, India can achieve the long-term development and make certain that the advantages of economic development all over the India.

IMPLICATIONS AND FUTURE SCOPE OF STUDY

Managerial Implications:

The studies finding at represent the significance of financial inclusivity in driving India's economic development. The findings suggest that market leaders inside the financial services and banking sector should focus on expanding the availability of financial product and services particularly in rural locations where financial inclusion metrics significantly improve GDP growth of India. initiatives to boost the banking and credit services infrastructure should be given top priority by market leaders especially in underprivileged areas. negative correlation between an NODT and ICB and GDP growth suggest a potential area of improvement, these negative effects can be reduced through strategic interventions. since that better credit and debit card policies and NIC services are positively connected with the GDP growth, market leader ought to consider the reallocating resources in these areas.

Academic Implications:

This study provides contribution to the academic debate on the connection between financial accessibility indicators and economic development of India. The outcome of this investigation indicates the most financial accessibility indicators have a positive connection with GDP growth of India support the conceptual structure that financial accessibility indicators are an important driver of economic development in India. the study highlights the complicated dynamics of this relationships by pointing out that how some indicators like ICB and NODT, have negative connection with GDP growth of India. This

offers fresh chances for investigating the root causes for these negative correlations and for improving the current models of financial accessibility. the normality and stationarity tests conducted provide a methodological basis for further investigation in the future into the effect of financial indicators on GDP growth of India the studies strong statistical tools like ADF unit root test and Jarque-Bera normality test enhance the truth of its conclusions and establishes a strong structure for additional investigation.

Future Scope of Study

This study based on secondary data and multiple regression analysis accustomed to analyses the effect of financial accessibility indicators on GDP of India. this study does not go in detailed analysis about the regional or country specific variations in this relationship. financial inclusions effects may different on economic growth in developed versus underdeveloped nations are even in particular regions as well, because of the differences in financial inclusion, regulatory and socioeconomic factors. future research study could fill the study gap by the use of comparative analysis across different regions or countries.

Study primarily focuses on traditional financing institutions and services such as commercial bank, credit unions, loans and ATM's and their impact on economic growth of India. the rapid advancement of financial technology (fintech) in recent years, it is important to investigate how digital fintech services such as online payment methods and mobile banking and fintech start-ups contribute to the economic growth of India. Because of the innovations in financial technology how the possibility of boosting financial inclusion, particularly among underserved populations, their removal from consideration signifies a significant gap. future research should include fintech variables to attain a more complete picture of connection between financial inclusion indicators and economic growth of India in the digital era.

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