



IMPACT OF BANK CREDIT ON ECONOMIC GROWTH IN INDIA: AN EMPIRICAL STUDY

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ABSTRACT :

Bank credit is an important channel through which financial resources are mobilised and transferred to households, businesses and productive sectors of the economy. In a bank-dominated financial system such as India, the availability and allocation of bank credit can influence investment, consumption, entrepreneurship and industrial activity, and consequently economic growth. This study empirically examines the relationship between bank credit and economic growth in India during the period 2000–2023. The study uses secondary annual data obtained from the World Bank's World Development Indicators. Domestic credit to the private sector provided by banks as a percentage of GDP is used as the proxy for bank credit, while annual GDP growth is used as the indicator of economic growth. Descriptive statistics, correlation analysis and simple ordinary least squares regression are employed. The results show that the bank-credit-to-GDP ratio declined substantially during the study period, while GDP growth remained comparatively strong but volatile. The correlation coefficient between the two variables is approximately 0.082, indicating a very weak positive association. The regression results show that the coefficient of bank credit is positive but statistically insignificant, with an R^2 of approximately 0.007. These results suggest that the contemporaneous level of bank credit relative to GDP, considered in isolation, does not adequately explain annual GDP growth. However, this finding should not be interpreted as evidence that bank credit is unimportant. Recent Reserve Bank of India analysis using a structural VAR framework for 2000–2023 finds that credit shocks have a positive effect on GDP growth. The study therefore concludes that the relationship between bank credit and economic growth is more complex than a simple contemporaneous correlation and depends on credit quality, allocation, financial conditions, investment demand and broader macroeconomic factors.

Keywords: Bank Credit, Economic Growth, Financial Development, Commercial Banks, Credit-GDP Ratio, India, Banking Sector.

1. Introduction

The banking sector occupies a central position in India's financial system. Commercial banks mobilise savings and channel financial resources towards households, agriculture, industry, services, infrastructure and other productive activities. Through this financial intermediation process, banks influence investment and economic activity.

The theoretical relationship between financial development and economic growth has received considerable attention in economic literature. Bank credit can contribute to economic growth by relaxing financing constraints, facilitating investment, supporting working capital requirements and enabling households and enterprises to undertake productive economic activities.

India's economic development after the economic reforms of 1991 has been accompanied by considerable changes in the banking sector. Financial-sector reforms, technological development, expansion of private-sector banking, financial inclusion and digitalisation have significantly changed the manner in which credit is supplied.

The Reserve Bank of India has described bank credit as an important input in sustaining India's growth momentum and as an important channel for monetary-policy transmission. RBI research using a structural VAR model covering 2000–2023 reports that bank-credit shocks have a positive effect on GDP growth and that this effect has strengthened somewhat in the later period. ([Reserve Bank of India](#))

At the same time, the relationship between credit and growth is not necessarily linear. Credit can contribute to growth when it is efficiently allocated to productive activities, but excessive or poorly allocated credit can create financial vulnerabilities. Recent empirical research on India has also found that the relationship between credit expansion and economic growth may differ across periods and states. ([Taylor & Francis Online](#))

Against this background, the present study examines the relationship between bank credit and economic growth in India during 2000–2023.

2. Review of Literature

Demetriades and Luintel (1996) examined financial development, economic growth and banking-sector controls in India. Their study found that financial deepening and economic growth are jointly determined and that policies affecting financial deepening may influence economic growth. ([OUP Academic](#))

Chakraborty (2008) investigated the finance-growth relationship in India using cointegration and Granger-causality techniques. The study found a long-run relationship among bank credit, financial development and real GDP growth and reported bidirectional relationships between bank credit and industrial growth. ([Sage Journals](#))

Guha-Khasnobis and Das (2007/2008) examined finance and growth in India and identified cointegrating relationships involving financial development, output growth and credit allocation. Their study emphasised that the finance-growth relationship can differ across sectors. ([WIDER](#))

Balasubramanian (2022) examined the role of long-term bank credit in India's economic growth using an ARDL approach. The study found a long-run and short-run relationship between long-term bank credit and overall economic growth, while also identifying a relationship between industrial long-term credit and industrial output. ([Sage Journals](#))

MacDonald and Xu (2022), in an IMF study, examined India's financial sector and economic growth. Their results indicated that, over the long term, higher credit growth associated with better-capitalised banks and lower non-performing loans was associated with higher GDP growth. ([IMF eLibrary](#))

More recently, Barman and Dutta examined credit expansion and economic growth in India using national and state-level data and found that the relationship was not uniform. Their national-level results indicated a negative association between the credit-GDP ratio and growth, while state-level results differed according to growth conditions. ([Taylor & Francis Online](#))

The existing literature therefore indicates that the relationship between bank credit and economic growth is complex, potentially bidirectional and dependent on the method of estimation, time period, type of credit and allocation of credit.

3. Research Gap

A considerable body of literature has examined financial development and economic growth in India using sophisticated time-series and panel-data techniques. However, a simple and transparent examination of the long-period relationship between the bank-credit-to-GDP ratio and annual GDP growth remains useful for understanding the broad pattern in the Indian economy.

The present study therefore provides:

1. A 24-year descriptive analysis covering 2000–2023.
2. A trend analysis of bank credit relative to GDP.
3. A correlation analysis between credit and GDP growth.
4. A simple OLS regression.
5. A comparison of the simple empirical result with recent RBI evidence based on a structural VAR framework.

4. Objectives of the Study

The study has the following objectives:

1. To examine the trend of bank credit relative to GDP in India during 2000–2023.
2. To analyse the trend of India's annual GDP growth during the study period.
3. To examine the correlation between bank credit and economic growth.
4. To estimate the relationship between bank credit and GDP growth using simple regression.
5. To interpret the empirical findings in the light of recent research on the Indian banking sector.
6. To suggest measures for improving the growth-enhancing role of bank credit.

5. Hypothesis of the Study

Null Hypothesis (H₀)

There is no statistically significant relationship between bank credit and economic growth in India during the study period.

Alternative Hypothesis (H₁)

There is a statistically significant relationship between bank credit and economic growth in India during the study period.

6. Research Methodology

6.1 Research Design

The study follows a **descriptive and empirical research design**.

6.2 Nature of Data

The study is based entirely on **secondary annual data**.

The study period covers **2000 to 2023**, providing 24 annual observations.

6.3 Sources of Data

The principal data sources are:

- World Bank – World Development Indicators
- International Monetary Fund – International Financial Statistics
- Reserve Bank of India
- Published academic research

The World Bank's WDI database reports the indicator "Domestic credit to private sector by banks (% of GDP)" and identifies IMF International Financial Statistics among the underlying sources. ([DataBank](#))

GDP growth data are taken from the World Bank's GDP growth (annual %) series. ([DataBank](#))

6.4 Variables

Independent Variable (X):

Domestic credit to private sector by banks (% of GDP)

Dependent Variable (Y):

GDP growth (annual %)

6.5 Econometric Model

The following simple linear regression model is used:

$$\text{GDP Growth} = \alpha + \beta(\text{Bank Credit/GDP}) + \varepsilon$$

Where:

- α = Constant
- β = Regression coefficient
- ε = Error term

The analysis is intended to identify a broad statistical association. It is **not interpreted as a causal estimate**, because the simple model does not control for investment, inflation, interest rates, government expenditure, trade, productivity, capital formation or reverse causality.

7. Data Analysis and Results

Table 1: Bank Credit and GDP Growth in India, 2000–2023

Year	Bank Credit to Private Sector by Banks (% of GDP)	GDP Growth (%)
2000	51.95	3.80
2001	54.93	4.80

Year Bank Credit to Private Sector by Banks (% of GDP) GDP Growth (%)

2002	54.66	3.80
2003	53.90	7.90
2004	54.04	7.90
2005	51.17	7.90
2006	49.29	8.10
2007	45.52	7.70
2008	42.80	3.10
2009	36.09	7.90
2010	33.07	8.50
2011	31.15	5.20
2012	27.39	5.50
2013	26.22	6.40
2014	25.61	7.40
2015	26.32	8.00
2016	34.13	8.30
2017	27.07	6.80
2018	24.30	6.50
2019	22.85	3.90
2020	25.79	-5.80
2021	28.23	9.70
2022	30.85	7.00
2023	29.26	7.60

Source: World Bank, World Development Indicators; underlying financial-sector data from IMF International Financial Statistics. GDP growth is the annual percentage growth rate. ([DataBank](#))

7.1 Trend in Bank Credit

The data reveal an interesting long-term pattern.

The bank-credit-to-GDP ratio was **51.95% in 2000** and increased to **54.93% in 2001**, its highest value in the study period. Thereafter, the ratio generally declined.

It fell from 54.04% in 2004 to 33.07% in 2010 and reached 22.85% in 2019.

After 2019, the ratio increased to 25.79% in 2020, 28.23% in 2021 and 30.85% in 2022 before declining marginally to 29.26% in 2023. ([DataBank](#))

Thus, the data do not show a continuously rising credit-to-GDP ratio.

7.2 Trend in Economic Growth

India's GDP growth was relatively strong during several years of the 2000s.

Growth reached 8.1% in 2006 and 8.5% in 2010. Growth subsequently moderated during several years, reaching 3.9% in 2019.

The most significant contraction occurred in 2020, when GDP growth was **-5.8%**. This was followed by a strong rebound of 9.7% in 2021, 7.0% in 2022 and 7.6% in 2023. ([DataBank](#))

The pandemic period demonstrates why simple correlations must be interpreted carefully: extraordinary economic shocks can affect both financial conditions and output.

7.3 Descriptive Statistics**Table 2: Descriptive Statistics, 2000–2023**

Statistic	Bank Credit/GDP (%)	GDP Growth (%)
Observations	24	24
Mean	36.94	6.16
Median	32.11	7.20
Maximum	54.93	9.70
Minimum	22.85	-5.80
Standard Deviation	11.73	3.10

The average bank-credit-to-GDP ratio during the study period was approximately **36.94%**, while average annual GDP growth was approximately **6.16%**.

The relatively high standard deviation of the credit ratio reflects substantial changes in financial depth over the period.

7.4 Correlation Analysis

Table 3: Correlation between Bank Credit and GDP Growth

Variables	Bank Credit/GDP	GDP Growth
Bank Credit/GDP	1.000	0.082
GDP Growth	0.082	1.000

The correlation coefficient is approximately **0.082**.

This represents a **very weak positive correlation** between the bank-credit-to-GDP ratio and annual GDP growth.

The result indicates that movements in the credit-to-GDP ratio, by themselves, do not explain annual variations in GDP growth over the entire 2000–2023 period.

7.5 Regression Analysis

The following simple OLS model was estimated:

$$\text{GDP Growth} = \alpha + \beta(\text{Bank Credit/GDP}) + \varepsilon$$

Table 4: OLS Regression Results

Variable	Coefficient	Standard Error	t-value	p-value
Constant	5.3649	—	—	0.0218
Bank Credit/GDP	0.0216	—	—	0.7044
R ²	0.0067			
Observations	24			

Interpretation:

The estimated coefficient of bank credit is approximately **0.0216** and is positive.

However, the p-value is approximately **0.704**, which is substantially above the conventional 5% significance level.

Therefore, the null hypothesis cannot be rejected in this simple specification.

The R² of approximately **0.007** means that the bank-credit-to-GDP ratio alone explains less than 1% of the variation in annual GDP growth in this sample.

8. Graphical Analysis

Figure 1: Trend of Bank Credit to Private Sector Banks, 2000–2023

The trend indicates a substantial decline from the early 2000s to 2023.

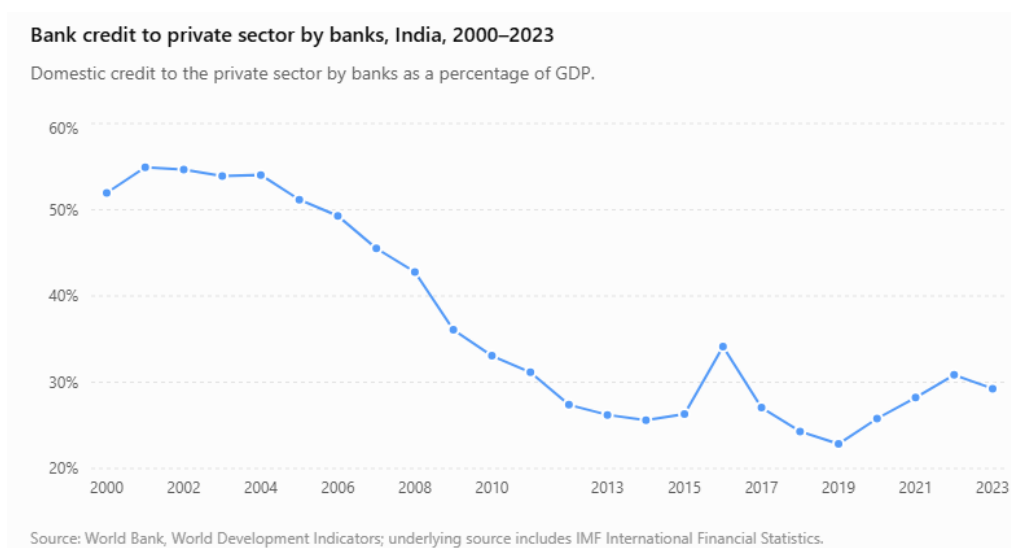
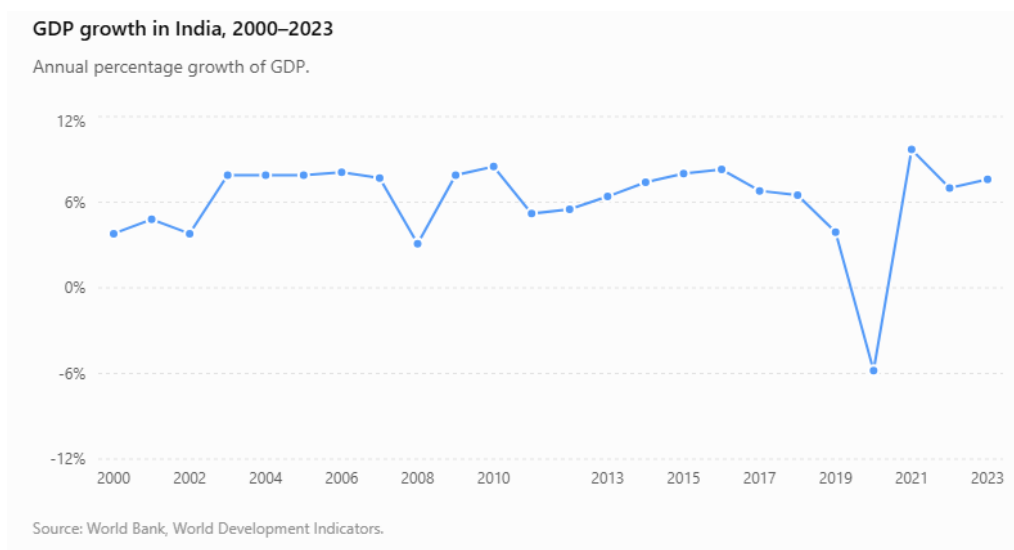
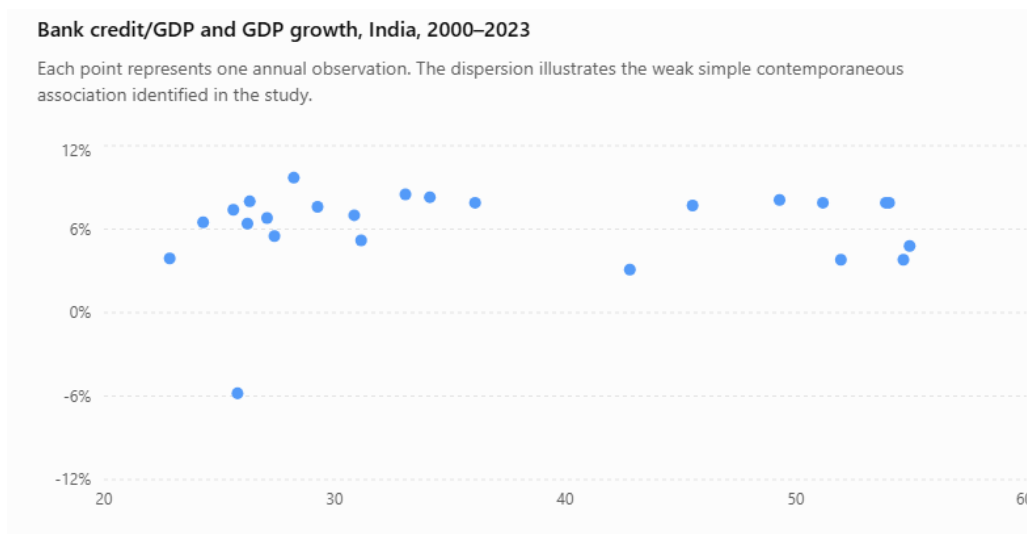


Figure 2: GDP Growth in India, 2000–2023

GDP growth remained generally positive during the study period except for the major contraction in 2020. The subsequent rebound was substantial.

**Figure 3: Relationship between Bank Credit/GDP and GDP Growth**

The scatter plot shows considerable dispersion around the fitted relationship, consistent with the low correlation coefficient.



9. Discussion

The empirical results require careful interpretation.

At first sight, the result appears to differ from the conventional proposition that more bank credit should produce higher economic growth. However, there are several reasons why the simple regression does not necessarily contradict the economic importance of banking credit.

First, **the credit-to-GDP ratio is a stock-type financial-depth measure**, whereas GDP growth is a flow measure. A fall in the credit-to-GDP ratio does not necessarily mean that the absolute amount of credit has fallen.

Second, the effect of credit may occur with a **time lag**. Credit extended in one year may finance investment whose productive effects appear in subsequent years.

Third, the **quality and allocation of credit** matter. Credit directed towards productive investment, infrastructure, manufacturing and viable businesses

may have different economic effects from credit directed towards consumption or less productive activities.

Fourth, economic growth is determined by many variables. Investment, labour productivity, human capital, exports, government expenditure, technological progress, interest rates, inflation and global economic conditions also influence GDP growth.

Fifth, there is a possibility of **reverse causality**. Faster economic growth can itself increase demand for bank credit. Thus, a simple regression cannot establish whether credit causes growth, growth causes credit, or both influence each other.

These limitations are consistent with the broader literature.

Chakraborty's study of India found evidence of long-run relationships among financial development, bank credit and growth, while also reporting bidirectional relationships in some sectors. ([Sage Journals](#))

Balasubramanian's ARDL analysis found a significant long-run and short-run relationship between long-term bank credit and overall economic growth. ([Sage Journals](#))

The IMF's analysis similarly found that stronger credit growth associated with healthier bank balance sheets was associated with higher long-term GDP growth. ([IMF eLibrary](#))

Most importantly, the Reserve Bank of India's more sophisticated SVAR analysis for 2000–2023 found that **credit shocks have a positive effect on GDP growth**, with the impact becoming somewhat stronger in the later period. ([Reserve Bank of India](#))

Therefore, the present simple regression should be interpreted as evidence that the **level of bank credit relative to GDP alone is insufficient to explain annual GDP growth**, rather than as evidence that bank credit has no economic importance.

10. Recent Developments in Bank Credit

The post-pandemic period has witnessed strong credit expansion in India.

According to RBI data, scheduled commercial bank credit grew by **15.0% in 2022–23** and approximately **16.3% in 2023–24** on the relevant reporting basis. RBI also reported that credit growth remained in double digits during 2023–24. ([System Health](#))

The RBI's 2024 Basic Statistical Return also reported bank-credit growth of 15.3% during 2023–24 on a net-of-merger basis. ([System Health](#))

These developments suggest that the banking sector has been an important component of the post-pandemic economic recovery.

At the same time, credit expansion must be accompanied by sound underwriting, adequate capital, effective risk management and efficient allocation of resources.

11. Major Findings

The study produces the following major findings:

1. The bank-credit-to-GDP ratio averaged approximately **36.94%** during 2000–2023.
2. The ratio was substantially higher during the early part of the study period than during much of the 2010s.
3. India's average annual GDP growth during the study period was approximately **6.16%**.
4. GDP growth showed considerable volatility, particularly during the COVID-19 period.
5. The simple correlation between bank credit/GDP and GDP growth was approximately **0.082**, indicating a very weak positive association.
6. The regression coefficient of bank credit was positive but statistically insignificant.
7. The simple model produced an R^2 of only approximately **0.007**.
8. Therefore, the level of bank credit relative to GDP alone cannot adequately explain annual GDP growth.
9. More sophisticated Indian studies have identified long-run relationships between credit and growth.
10. RBI's recent SVAR evidence indicates that credit shocks have a positive effect on GDP growth. ([Reserve Bank of India](#))

12. Suggestions

Based on the analysis, the following suggestions are offered:

12.1 Promote productive credit

Banks should continue to direct credit towards productive sectors such as manufacturing, MSMEs, infrastructure, agriculture and viable service activities.

12.2 Improve credit quality

Credit expansion should be accompanied by appropriate risk assessment and monitoring to minimise future non-performing assets.

12.3 Strengthen MSME lending

Simplified procedures, digital credit assessment and improved credit-guarantee mechanisms can improve access to institutional finance for small enterprises.

12.4 Encourage investment-oriented lending

Credit that finances productive investment and capacity creation can have stronger long-term economic effects than purely short-term credit expansion.

12.5 Improve financial inclusion

Greater access to formal banking, particularly among rural households and small businesses, can strengthen financial intermediation.

12.6 Strengthen digital banking

Digital banking can reduce transaction costs, improve access to credit information and facilitate faster delivery of financial services.

12.7 Maintain financial stability

Credit expansion should be consistent with adequate bank capital, asset quality and prudent risk management.

12.8 Integrate credit with broader economic policy

Bank-credit policy should be coordinated with monetary policy, fiscal policy, industrial policy and infrastructure development rather than being treated as an independent growth instrument.

13. Conclusion

The present study examined the relationship between bank credit and economic growth in India during 2000–2023. The analysis used the domestic credit to private sector by banks as a percentage of GDP as the measure of bank credit and annual GDP growth as the measure of economic growth.

The descriptive evidence demonstrates substantial changes in India's credit-GDP ratio during the study period. However, the simple correlation coefficient of approximately 0.082 and the regression results indicate that the contemporaneous level of bank credit relative to GDP does not, by itself, explain annual GDP growth.

This finding should not be interpreted as evidence that bank credit is irrelevant to economic growth. Rather, it highlights the complexity of the finance-growth relationship. Credit affects economic activity through investment, consumption, entrepreneurship, working capital, infrastructure and financial intermediation, often with time lags. At the same time, economic growth itself influences the demand for credit.

Recent RBI evidence using a structural VAR approach for 2000–2023 indicates that credit shocks have a positive effect on GDP growth. ([Reserve Bank of India](#)) This suggests that a more comprehensive empirical model incorporating credit growth, investment, interest rates, inflation, capital formation, bank asset quality and other macroeconomic variables would provide a better assessment of the causal relationship.

The central implication is therefore that **the economic importance of bank credit depends not simply on its volume, but also on its quality, allocation, timing and interaction with broader economic conditions.**

Future research may extend the present study by employing ARDL, VAR/VECM, Granger causality or dynamic regression techniques and by incorporating additional explanatory variables.

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