



Original Article

BANK CREDIT EXPANSION AND GDP GROWTH: A STUDY OF CREDIT DEEPENING IN INDIA

Dr. Nagnath B. Mathpati

Professor

Shri Vasantnao Naik Arts and Amarsing Naik Commerce College, Mangrulpir Dist.-Washim

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Corresponding Author:

Dr. Nagnath B. Mathpati

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Abstract:

This paper examines the relationship between bank credit expansion (credit deepening) and Gross Domestic Product (GDP) growth in India over the last decade. Using aggregate indicators - domestic credit to the private sector (as % of GDP), annual bank credit growth and GDP growth rates - the study explores whether increased financial intermediation has accompanied or preceded economic expansion, and whether credit growth has been effective in supporting productive investment.

The paper presents a concise literature context, describes data and methodology, shows an illustrative data table and graphical trend, runs a simple correlation/interpretation-based analysis, and concludes with policy implications. The analysis draws on published macro-statistics from the World Bank and Reserve Bank of India (RBI). Findings show a generally positive association between credit deepening and GDP growth, though the strength varies across years and is mediated by banking sector health, structural reforms, and shocks (e.g., the pandemic). Policy recommendations emphasize targeted lending, strengthened risk management, and deeper capital markets to complement bank credit.

Keywords: *Credit deepening, bank credit expansion, GDP growth, India, domestic credit to private sector, financial intermediation*

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Introduction:

The role of the banking sector in economic growth has been central to development theory and policy: efficient financial intermediation mobilizes savings, allocates capital to productive investments, and thereby supports output expansion. “Credit deepening” - an increase in the ratio of credit to

GDP - is often treated as an indicator of financial development. In India, the past two decades have seen phases of rapid credit growth, episodes of stress in the banking system, regulatory reforms, and structural efforts to broaden financial access. Understanding how bank credit expansion relates to GDP growth is vital for policymakers seeking to



promote sustainable growth while containing financial vulnerabilities. This paper examines the empirical relationship between credit deepening and GDP growth in India, emphasizing pattern analysis, interpretation, and policy implications.

Literature Review (brief):

Classical and recent literature connects financial development to economic growth through several channels: improved capital allocation, risk diversification, and facilitation of trade and entrepreneurship (Levine, 1997; King & Levine, 1993). In the Indian context, studies find that bank credit expansion supported industrial and service growth during boom phases, but the impact is conditional on bank balance-sheet health and the efficient use of credit (RBI occasional papers; recent empirical studies).

Post-2014 structural reforms (bank recapitalization, Insolvency and Bankruptcy Code) and the COVID-19 shock altered the dynamics of credit transmission and GDP responsiveness. Empirical evidence for India suggests a positive but non-linear relationship - very rapid credit growth sometimes precedes rising non-performing assets (NPAs), which can blunt future lending and growth.

Objective, Scope and Importance

i. Objective:

To analyze the pattern and association between bank credit expansion (credit deepening) and

ii. GDP growth in India over the recent decade and draw policy-relevant conclusions.

Scope:

The study considers aggregate national-level indicators:

(a) Domestic credit to private sector (as % of GDP) a measure of credit deepening;

(b) Annual bank credit growth rates; and

(c) Annual real GDP growth rates.

The period covered is broadly the 2010s into the early 2020s (illustrative trends), reflecting pre- and post-pandemic episodes. The analysis is macro-level and does not disaggregate by sector or borrower type.

Importance:

Understanding whether and how credit expansion supports GDP growth helps calibrate monetary and macro prudential policies. If credit growth reliably supports output, policymakers may incentivize lending; if it leads to fragility (rising NPAs, asset bubbles), the policy emphasis must shift to risk controls and financial deepening through non-bank channels.

Data and Methodology:

Data sources:

Primary macro indicators are taken from international databases and central bank releases: World Bank indicators (domestic credit to private sector % of GDP; GDP growth) and Reserve Bank of India data releases on bank credit aggregates. These sources provide consistent time-series suitable for descriptive and correlational analysis.

Methodology:

1. Descriptive trend analysis of credit deepening (credit/GDP ratio) and GDP growth across years.
2. A simple bivariate correlation to indicate association strength (Pearson's r) between credit expansion (either as change in credit-to-GDP ratio or annual credit growth) and real GDP growth.
3. Visual inspection via a trend table and a line-plot (credit deepening vs GDP growth) to illustrate co-movement and divergence during shock years (e.g., 2020).



4. Interpretive analysis considering structural factors (bank health, regulatory changes, pandemic disruption).

Note: This study uses high-level aggregate indicators suitable for conference-length analysis. For causal inference, a panel, vector auto regression (VAR), or an instrumental-variables approach with sectoral data would be preferable.

Data-Based Table and Graph (illustrative):

Year	Domestic credit to private sector (% of GDP)	Annual bank credit growth (y-o-y, %)	Real GDP growth (annual %)
2010	53.0	18.0	10.3
2012	52.5	15.0	5.5
2014	51.8	12.0	7.2
2016	53.5	11.0	8.3
2018	50.5	10.5	6.1
2020	53.4	6.0	-6.6 (COVID shock)
2021	54.0	7.5	8.9
2022	54.5	12.0	6.9
2023	55.0	15.0	7.0

(Source Data: World Bank; RBI.)

Table 1 presents the trend in domestic credit to the private sector (% of GDP), annual bank credit growth, and real GDP growth in India over the period 2010 - 2023. A careful analysis of the table reveals important insights into the dynamics of credit deepening and economic growth.

First, the domestic credit to private sector as a percentage of GDP shows a moderate but gradual increase over the long run, rising from 53.0 per cent in 2010 to 55.0 per cent in 2023. However, this trend is not linear. A decline is visible between 2012 and 2018, when the ratio fell to 50.5 per cent, reflecting a phase of subdued credit expansion caused by rising non-performing assets (NPAs), banking sector stress, and cautious lending behaviour. Post-2020, the credit-to-GDP ratio improved steadily, indicating renewed financial deepening supported by policy interventions,

The table below summarizes selected annual values of Domestic credit to private sector (% of GDP) and Real GDP growth (annual %) for representative years. Values are compiled from World Bank and RBI series (sources cited). The table is presented for illustrative trend analysis in the short conference paper format.

Table 1 Selected Indicators (illustrative trend, 2010–2023)

liquidity measures, and improved banking sector balance sheets.

Second, annual bank credit growth demonstrates a clear cyclical pattern. In 2010, credit growth was robust at 18.0 per cent, coinciding with high GDP growth. Thereafter, credit growth declined consistently until 2018 (10.5 per cent), reflecting tighter credit conditions and risk aversion among banks. The sharp slowdown to 6.0 per cent in 2020 highlights the severe disruption caused by the COVID-19 pandemic. Subsequently, credit growth recovered strongly, reaching 15.0 per cent in 2023, suggesting a revival of lending activity driven by economic normalization, increased demand from industry and services, and improved credit confidence.

Third, real GDP growth broadly mirrors the movements in credit expansion, reinforcing the linkage between banking activity and economic



performance. High GDP growth in 2010 (10.3 per cent) coincided with rapid credit expansion. Slower GDP growth during 2012–2018 corresponds with the phase of declining credit growth and financial sector stress. The sharp contraction in 2020 (-6.6 per cent) represents an extraordinary external shock, during which GDP collapsed despite the maintenance of credit lines through policy support. The strong rebound in 2021 (8.9 per cent) and stable growth in 2022–2023 align with the recovery in bank credit growth, suggesting that renewed lending supported post-pandemic economic revival.

Overall, the table indicates a positive association between bank credit expansion and GDP growth in India, though the relationship is influenced by structural factors and external shocks. Credit deepening appears to support economic growth during normal periods, but its effectiveness depends on banking sector health, quality of credit allocation, and macroeconomic stability. The divergence observed during the pandemic year underscores that credit expansion alone cannot offset severe real-sector disruptions, highlighting the importance of complementary fiscal, monetary, and structural policies.

Data Analysis and Findings:

1 Descriptive observations:

- **Credit deepening trend:** Over the period, India's domestic credit to private sector (% of GDP) shows a gradual upward tendency with fluctuations related to cyclical credit cycles and macro events. Periods of strong credit growth (high y-o-y credit growth) tend to correspond with higher or recovering GDP growth rates.
- **Cyclicality and shocks:** The COVID-19 shock in 2020 caused a sharp GDP contraction even as policy support (liquidity measures, moratoria, and special refinance operations) helped maintain credit lines; hence credit ratios and

nominal credit outstanding behaved differently from real GDP.

- **Lagged relationships:** Historically, credit expansion often precedes investment-led GDP upswings, but with lags. Banks extend credit, businesses invest, and output response follows. In some years, rapid credit growth preceded a rise in NPAs (a banking health signal) that later constrained further lending.

2 Correlational insight (simple): Using the illustrative series in Table 1, a simple Pearson correlation between annual bank credit growth and real GDP growth over the selected years shows a positive coefficient (indicative rather than decisive), suggesting that higher credit growth is associated with stronger GDP growth in the bivariate sense. However, correlation does not imply causation: the causality direction can be both ways (credit - growth and growth - credit demand), and omitted variables (policy, global cycles) matter.

3 Interpreting the relationship:

- **Productive vs. speculative credit:** Credit supports GDP growth most when it finances productive investment (manufacturing, infrastructure, SME expansion). When credit growth channels into speculative or consumption-driven activities without productivity gains, the long-run growth effect is weaker.
- **Banking sector health:** The impact of credit expansion depends on balance-sheet quality. High NPAs reduce banks' willingness to lend, even when credit demand exists. Post-2015 efforts at bank recapitalization and resolution (e.g., IBC) improved the transmission mechanism, while pockets of stress remain important.
- **Macroprudential and monetary settings:** RBI policy rates, liquidity operations, and macroprudential norms shape both credit growth



and GDP. Tightening credit exposure to risky unsecured segments in 2023–24 affected the composition and pace of lending even as the overall economy expanded.

Discussion: Policy and Structural Factors:

- 1. Complementary financial development:** Banking credit alone is not sufficient. Deep capital markets, bond markets, and non-bank financial institutions complement bank credit and offer alternative long-term financing for infrastructure and corporate investment.
- 2. Targeted credit policies:** Encouraging credit to productive sectors (SMEs, manufacturing, green infrastructure) via priority-sector frameworks, credit guarantees and structured lending improves the growth effect of expanded credit.
- 3. Risk management & supervision:** Strengthening bank supervision, early warning systems, and resolution mechanisms ensures that credit growth does not translate into unsustainable balance-sheet deterioration.
- 4. Inclusive access & financial inclusion:** Credit expansion that reaches micro-entrepreneurs and underserved segments broadens the base for demand and employment-led growth, provided credit is accompanied by capacity-building.

Conclusion:

This paper presents a descriptive analysis showing that credit deepening in India is positively associated with GDP growth in broad terms. However, the relationship is nuanced: the quality and allocation of credit, banking sector health, macro shocks, and complementary financial infrastructure determine whether credit expansion translates into sustainable growth.

Policy should therefore focus on channeling credit into productive uses, enhancing non-bank financing sources, and maintaining strong regulatory

oversight to mitigate systemic risk. For rigorous causal inference, future work should apply time-series econometrics (VAR, Granger causality, cointegration) or micro-level panel analysis that controls for endogeneity and sectoral heterogeneity.

Limitations and Further Research:

- Limitations:** This study is descriptive and relies on aggregate indicators. It does not establish causality. The illustrative table summarizes trends but precise econometric work will require carefully cleaned time-series and controls for policy and global shocks.
- Further research:** Suggested directions include (a) VAR analyses to test lead-lag relationships between credit growth and GDP; (b) Sectoral studies to assess which types of credit most strongly affect output; (c) Investigation into the role of NPAs and bank capitalization in moderating the credit-growth channel; (d) Microdata studies of firm-level investment responses to credit availability.

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