FINANCE INDIA
© Indian Institute of Finance
Vol. XXXV No. 2, June 2021
Pages – 417 - 428

# The Relationship Between the Credit Flow and Economic Growth: An Empirical Study in Indian Context

SUPRIYA DUTTA\*

### Abstract

This paper empirically evaluates the relationship between flow of bank credit and economic growth of India. We have analyzed the relationship between the bank credit flow and real economic growth. For more in depth analysis this study tries to capture the sectorial relationship, the relationship between the nonfood credit supply and manufacturing production and again the relationship between total output production of different industries and bank credit flow in these industries. The study finds that cyclical movement in the GDP growth of the Indian economy is not followed by the cyclical movement of the bank credit flow but the ups and downs in the manufacturing production being influenced by the ups and downs in the non-food credit supply mostly for the current years. The study also finds that there exist no strong relationship between the bank credit flow and GDP growth, but there exists a relationship between the non-food credit flow and manufacturing production in some extent.

# I. Introduction

A SIGNIFICANT POSITIVE relation exists between the financial sector development and economic growth (Samantaraya, 2007). Financial development can foster economic growth by raising savings through improving allocative efficiency of loanable funds and promoting capital accumulation in productive activity. Credit is mostly related to the pro-cyclical movement of economic growth, the boom and bust phases of the business cycle (Banerjee, 2011). The supply of credit changes in different phases of the business cycle, more credit flows for investment during the boom phase for higher profit, and during recession less investment takes place because of lower profit earning. Thus we may hypothesize that bank credit flow and economic growth are causally related. More credit flow to the real productive sector enhances productivity growth leading to higher economic growth.

<sup>\*</sup> Assistant Professor, Techno India University, Department of Economics, EM-4, Sector V, Salt Lake, Rajarhat, Kolkata, West Bengal 700091, INDIA.

426 Finance India

shows that an increase in bank credit flow is associated with increase in output production in different industries. 1% increase in gross bank credit flow increases total output production 0.91 %, which is large in magnitude. Therefore bank credit flow is strongly influencing production in different industrial units. Thus it can be said that productions of different manufacturing industries depend on the availability of credit in Indian economy. Chakraborty (2008) also found using granger causality test on Indian quarterly data from the period March-1996 to January-2005 that a bidirectional causal relationship exists between industrial growth and total bank credit in India. This may be due to more technology based industries, which incline to more credit.

## V. Conclusion

There exists no strong relationship between the bank credit flow and GDP, but there exists to some extent positive relationship between the non-food credit flow and manufacturing production. The ups and downs in GDP is not solely influencing by the ups and downs in the bank credit supply. There may exist some other factors not only the credit supply which is influencing the productivity in the real economy. Therefore in a developing country like India total GDP is not solely influenced by credit investment.

The ups and downs in the manufacturing production is influencing by the ups and downs in the non-food credit supply. The relationship between the non-food credit flow and manufacturing production is valid one. Manufacturing is more technology augmented and more capital intensive sector. Thus production in manufacturing sector in the developing country like India is based on credit flow condition along with the other factors.

In more in-depth study, it is also found that different manufacturing industrial productions strongly depend on bank credit flow in different industries. Manufacturing industries' productions are highly influenced by the deployment of gross bank credit. In industries there remains some time gap between the production and sale of the product. Thus more credit is needed for continuation of production (Banerjee (2011)). Again India is a developing country so Indian industrial sector is continuously incorporating more technology based capital intensive production process. New method of production and product innovation also need credit. Therefore bank credit flow hugely influences the production of manufacturing industries.

## Reference

Banerjee, K., (2011), "Credit and Growth Cycles in India: An Empirical Assessment of the Lead and Lag Behaviour", W P S (DEPR): 22, Department of Economic and Policy Research, Reserve Bank of India

Basel Committee on Banking Supervision, (2011), "The transmission channels between the financial and real sectors: a critical survey of the literature", Working Paper, No. 18, pp. 5-57, Bank for International Settlements.

Bencivenga, V.R. and B.D. Smith, (1991), "Financial Intermediation and Endogenous Growth", The Review of Economic Studies, Vol. 58, No. 2, pp. 195-209

© Indian Institute of Finance

Chakraborty, I., (2008), "Does Financial Development Cause Economic Growth? The Case of India", *South Asia Economic Journal*, Vol. 9, No. 1, pp. 109–139.

CSO (2013), "Annual Survey of Industries (2013-2014 to 2007-2008)", Central Statistics Office, Government of India, Ministry of Statistics and Programme Implementation.

Dickey, D., and W. Fuller, (1979), "Distribution of the Estimators for Autoregressive Time Series with a Unit Root", *Journal of the American Statistical Association*, Vol. 74, No. 366, pp. 427-431.

Dickey, D., and W. Fuller, (1981), "The likelihood ratio statistic for autoregressive time series with a unit roots", *Econometrica*, Vol. 49, No. 4, pp. 1057-1072.

Hausman, J.A., (1978), "Specification Tests in Econometrics", Econometrica, Vol. 46, No. 6, pp. 1251-1271.

Hodrick, R.J., and E.C. Prescott, (1997), "Postwar U.S. Business Cycles: An Empirical Investigation", *Journal of Money, Credit, and Banking*, Vol. 29, No. 1, pp. 1–16.

Kapila R., and U. Kapila, (2004), "Economic Development in India", Academic Foundations Continuing Series: EDI82, Academic Foundation, Delhi.

King, R.G., and R. Levine, (1993), "Finance, entrepreneurship, and growth: Theory and evidence", *Journal of Monetary Economics*, Vol. 32, pp. 513-542.

Kiyotaki, N., (1998), "Credit and Business cycles", *The Japanese Economic Review*, Vol. 49, No. 1, pp. 18-35.

Kiyotaki, N., and J. Moore, (1997), "Credit Cycles", Journal of Political Economy, Vol. 105, No. 2, pp. 211–248.

Levine, R., (1991), "Stock Markets Growth and Tax Policy", *Journal of Finance*, Vol. 46, No. 4, pp. 1445-1465.

Levine, R., and S. Zervos, (1998), "Stock Markets, Banks, and Economic Growth", *The American Economic Review*, Vol. 88, No. 3, pp. 537-558.

Mordi, Charles N.O., (2010), "The link between the Financial (Banking) Sector and the Real Economy", *Economic and Financial Review*, Vol. 48, No. 4, pp. 7-30.

Perron, P., (1989), "The Great Crash, The oil price shock, and the unit root hypothesis", *Econometrica*, Vol. 57, No. 6, pp. 1361-1401.

Ravn, M.O., and H. Uhlig, (2002), "On Adjusting The Hodrick-Prescott Filter For The Frequency Of Observations", *The Review of Economics and Statistics*, Vol. 84, No. 2, pp. 371–380.

RBI, (2014,2016), " $Handbook\ of\ Statistics\ on\ Indian\ Economy\ (2014,2016)$ ", Reserve Bank of India.

Samantaraya, A., (2007), "An Empirical Analysis of Pro-cyclicality of Bank Credit in India: Role of Basel Prudential Norms", paper presented in the 43rd Annual Conference of the Indian Econometric Society, IIT, Mumbai, January 2007.

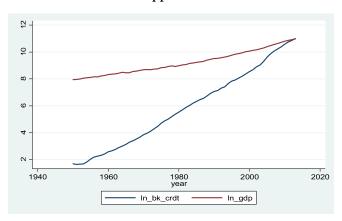
Schumpeter, J.A., (1911), "The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle", *Harvard Economic Studies*, Harvard University press.

Unel B., (2003), "Productivity Trends in India's Manufacturing Sector in the Last Two Decades", IMF Working Paper:WP/03/22, International Monetary Fund.

Xu T.T. (2012), "The Role of Credit in International Business Cycles", Working Paper, 2012-36, Bank of Canada.

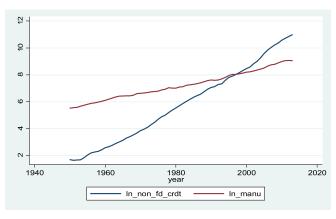
428 Finance India

# Appendix



Source: Handbook of statistics on Indian Economy 2014, RBI.

Figure A1 log series of bank credit and GDP



Source: Handbook of statistics on Indian Economy 2014, RBI.

Figure A2 log series of non-food credit and manufacturing production

Table VI

Result of Hausman test
x <sup>2</sup> (1)
0.04

Notes: 1. x² (1) denotes chi-square distribution with 1 degrees of freedom.

2. In our model, calculated value of x² is less than the tabulated value of x².

Therefore we reject the alternative hypothesis and we select the random effect

Source: Author's estimation based on data from Handbook of statistics on Indian Economy 2016, RBI and Annual Survey of Industries (2013 2014 to 2007-2008), Central Statistics Office.

© Indian Institute of Finance