

FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH: GOVERNANCE OF FINANCIAL INSTITUTIONS

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Abstract *India has witnessed significant growth in the economy over the past seven decades. Economic growth has been consistent and higher than many other developed countries even though there were few ups and downs. At the same time, the financial system has seen drastic changes, from composition, to markets and instruments, and to governance systems. In this study, first the process of financial development is studied. The issue of governance in financial systems is discussed. Next, the impact of financial development is studied, using type of financial institution to indicate governance, on the economy's overall development. It is hypothesised that the quality of governance of financial systems will affect financial development and ultimately growth. It leads to the finding that the financial system contributes to economic growth in India. Governance of financial systems is crucial, but does not impede the process.*

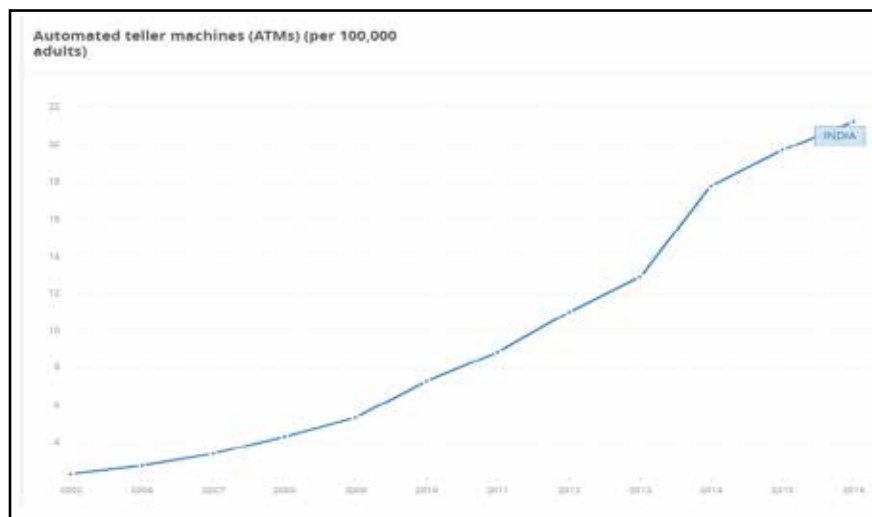
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INTRODUCTION

Over the past seven decades, the financial system of India has witnessed many changes. This process has been rapid especially in the past two and a half decades. This is clearly visible in the depth, variety and scope of activities in India's financial system. At the same time, there has been consistent economic growth. As a result, the mutually correlated processes of financial development and economic growth have garnered a lot of interest. This relationship has been

studied in further detail in India. There have been numerous contributions and widespread attention in the academic arena on economic growth and development in India. This literature review highlights some major studies.

To further elaborate increases in the depth, variety and scope of activities in India's financial system, some data is presented below in graphical form. This data consists of some measures that are typically used to indicate financial development.



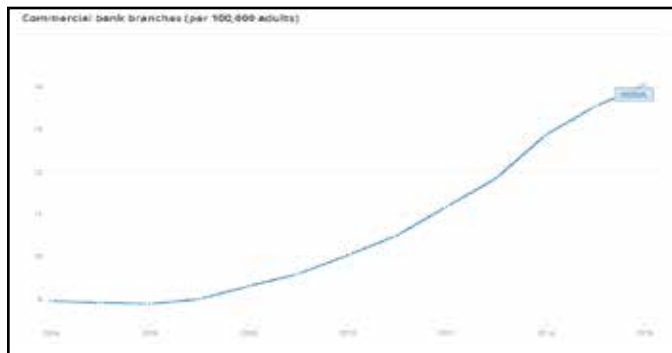
Source: World Bank Development Indicators

Fig. 1: ATMs per 100,000 Adults

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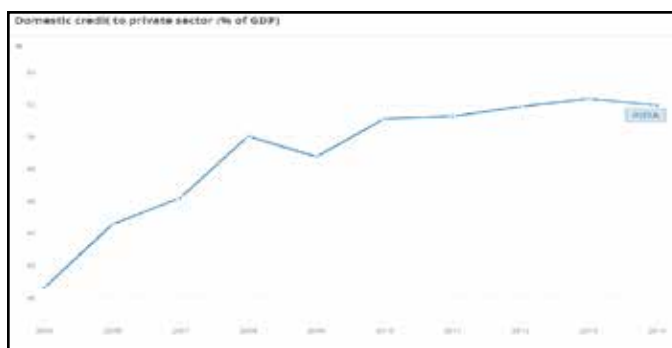
Fig. 1 shows that the number of ATMs per 100,000 adults has grown rapidly in the past ten years. This is one of the dimensions of better financial inclusion. With technological advancements, commercial banks have invested lot of resources to increase the number of ATMs. However, a policy issue that has arisen is, every ATM has certain fixed and variable costs. The Indian government is attempting to reduce cash transactions due to the associated costs. To recover some of these costs, banks have increased the service charges of using ATMs across all customers.

Fig. 2 shows that the number of commercial bank branches per 100,000 adults has risen significantly in the past ten years. In most developing countries, banking is still the primary means of almost all financial transactions in the formal sector. There is a large and unrecorded informal financial sector. A policy issue that is noteworthy here, is that profit-oriented banks expand only in urban and semi-urban areas, where economic incentives are greatest.



Source: World Bank Development Indicators

Fig. 2: Commercial Bank Branches per 100,000 Adults



Source: World Bank Development Indicators

**Fig. 3: Domestic Credit to Private Sector
(as a % of GDP)**

Fig. 3 shows that in recent years, the credit to private sector has not grown as in previous years. The graph seems to taper-off at a point. There may be many reasons for this, all of which have governance related implications. The government must also create incentives, which facilitate the

flow of funds from the banks to businesses. It is argued that lower interest rates and greater financial access are required. However, in the wake of recent events, better screening is also crucial.

The next section covers the literature review. It is organised as follows: beginning with a review of the studies on finance and growth, the review also briefly covers the studies on governance and financial institutions.

LITERATURE REVIEW

The phenomenon of economic growth has puzzled researchers for decades. There has been a steady progression of thought, from the classical theory to the endogenous growth theory. Factors that will augment productivity must lead to growth. In India, rapid economic growth has occurred in the tertiary sector. The secondary sector has performed well, but not grown as rapidly as tertiary sector. The primary sector has witnessed a decline in its share of contribution to Gross Domestic Product (GDP). Even then, it is still the most important sector for the economy. Efficiency of factors of production and technological progress are the two main factors for productivity to rise.

All three sectors of the economy need financial support to develop, and the main source of finance in India's formal sector is through banks. The literature has many important papers on the relationship between financial development and growth. These are discussed in the next section. There have been numerous contributions and widespread attention in the academic arena on growth and development. These have been discussed slightly later.

Further, it is stated that the quality of governance of financial systems plays an important role in financial development. Therefore, the ability of finance to contribute to growth, especially in developing countries, depends on whether strong governance has been established. In recent literature, it has been clearly seen that strong institutional frameworks and property rights lend a strong base for economic development. These are also discussed in a later section.

Financial Development and Economic Growth

Earliest published studies include few descriptive and narrative analyses of the finance-growth link. These papers are the foundation of much of the current understanding. Prominent economists like Bagehot, Schumpeter, McKinnon, and Shaw, among others, have written on the importance of finance in the process of growth. The topic is too important to be overlooked.

Along with a better understanding of financial development, simultaneously over the years, newer theories of economic growth were continuously being refined. Whereas the neoclassical theory focuses on supply-side factors, the endogenous growth very appropriately incorporates the idea of internal factors to contribute to growth. One such very important endogenous factor is the level of financial development of a country.

The more significant earlier contributions in this area were by Greenwood and Jovanovic (1990), Pagano (1993), and King and Levine (1993). The initial studies point towards the fact that financial development can be a significant factor that influences economic growth, through channels such as capital formation, saving rates, factor productivity, and technology.

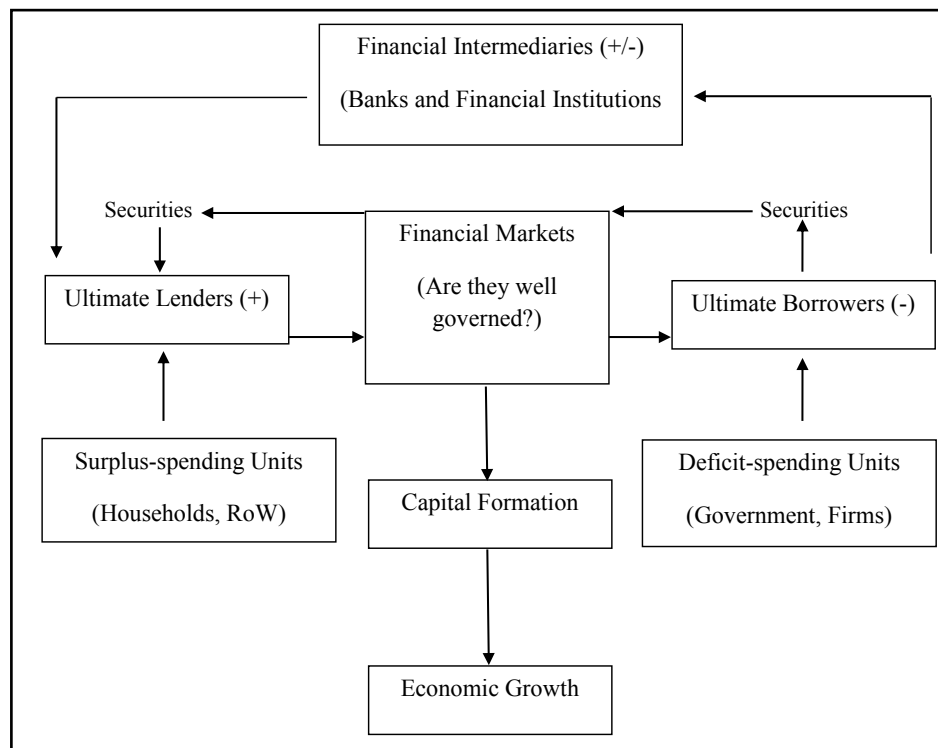
Several authors had also questioned whether a higher concentration of banks as compared to stock markets in an economy could potentially alter the results. It is observed that both banks and stock markets complement each other in the finance-growth nexus. This is shown by Boyd and Prescott (1986), Boyd and Smith (1998), and Blackburn, Bose, and Capasso (2005).

The techniques used for econometric analysis have also evolved over the years. From basic descriptive analyses, to

cross sectional studies, the focus has now gradually shifted to multivariate models. In recent years, researchers have used techniques of time-series analysis. The most prominent ones are Jung (1986), Neusser and Kugler (1998), Bell and Rousseau (2001), Rousseau and Sylla (2005), among others.

Among earlier and recent work in Indian context, several authors have used econometric techniques. To name a few, Demetriades and Hussein (1996), Bell and Rousseau (2001), Chakraborty (2007, 2010), Sinha and Sinha (2007), Acharya, Amanulla and Joy (2009), Pradhan (2011), Jotwani, (2014, 2016), among others. The broad areas of study have been related to the importance of availability of funds, the long-term relationships and more recently, the link with ease of doing business.

Fig. 4 below depicts the circular flow diagram, commonly used in academic texts. The Fig. has been modified to also include the role of financial markets and governance. Along with the traditional function of matching surplus and deficit, the circular flow diagram also shows that financial systems need to be efficient and well governed, in order for them to lead to formation of new capital in the economy. If new capital is formed, the process of economic growth is facilitated.



Note: + (surplus); - (deficit)

Source: Pathak, B (2014), pp. 16 and modified by Author

Fig. 4: Finance and Growth

Governance and Financial Development

A lot of empirical work on financial development has been published from Western countries. This is probably because of ease of availability of data and sufficient resources devoted to research. Yet, we have also seen financial crises in these countries as well. Such economic fluctuations have also laid the basis for more unanswered questions. Governments cannot be complacent during such events, because whenever we felt that we have found an answer, a newer financial crisis shook our confidence.

At the same time, it is quite possible that crises and volatility of underdeveloped countries is really not being reported. The same level of academic interest is probably not present. In general, there are many distinctive features of crises prone countries.

For example, if a country is well developed and has sound financial development, the costs of a crisis, in terms of loss of GDP, restoration of balance etc., are much more reasonable, than in cases of developing or under-developed countries. This is also influenced by the existing macroeconomic indicators, and the institutional framework that supports the country. Hence, the effects on different countries may differ, and governance may have a very significant role.

The level of development of financial systems in industrial countries is very different from that of many developing and transition countries. Many countries of the latter group are still in the first two phases of financial system development. They normally have a stubborn historical legacy of primitive forms of economic, political and social organisation. This prohibits the process of financial system development in transition countries. It could also simply be that the process of development was shattered at an early stage and failed to take off at all, as in the case of many developing countries.

Governments now realise that it is in the interest of powerful countries to bring weaker countries on to the path of sustainable development. Proper governance in the financial sector can enable vulnerable countries to achieve economic stability. To summarise a few points, many weaker countries lack proper laws and systems, and the required strictness in actions. There is an acute shortage of human resources to run the system. Depositors are not protected, hence they lack confidence in banks. Banks are supposed to perform the functions of screening, auditing and designing contracts, as they represent weaker and unaware depositors.

Therefore, banks themselves need proper governance by apex bodies that can assure these missing activities. This assimilates other checks and balances, such as capital adequacy norms, which also act as a means to reduce the asymmetry of information. Further, laws on borrowing

and lending need to be strong, so that the moral hazard is minimised. Within these laws, properly governed banks will surely act as a step towards financial and economic development.

In underdeveloped and developing countries, there are great inequalities in wealth and power structures. Decisions of governance are often under interference by powerful private individuals and firms. Factors such as improved training, better resources and evolved frameworks will guide the financial system. Therefore, the apex body should be thus developed, more power should be allotted to it, and political interference should be reduced. These are difficult obstacles to overcome.

There are many benefits of having these basic governance systems in place. Countries with stable macroeconomic indicators and robust systems are well prepared to face turbulences. With proper governance, banks are not bound to serve the interests of a few greedy industries. They are empowered to invest in a portfolio of their choice, thus reducing possibilities of non-performing assets (NPAs) as well. If firms are not up to the mark in terms of efficiency, banks will not lend to them. Such enterprises may rely more on retained earnings, and thus reduce their debt exposure. This puts all the more pressure on the economic agents to improve on their productivity. This reduces the chances of crises.

In India, a committee was formed in 2014¹ to review the governance systems of banks. The findings and recommendations of the committee were very clear. Public sector banks were found to be in a very fragile state of affairs. Boards of such banks were not found to be empowered, and governance was found to be weak. Weaknesses were found in both internal and external systems of these banks. For private sector banks, the challenges were found to be different. One of the issues is the ownership constraints stipulated by The Reserve Bank of India (RBI), which may lead to a misalignment between the interests of shareholders and management. This may lead to a limitation in the amount of capital the bank can raise, via fragmented shareholders who may be disinterested. It is found that larger shareholders are more engaged in the bank's operational success.

Corporate governance in India has gained importance in recent years, especially with an alarming increase in the number of lapses. Various authors have studied the Indian context, though studies that specifically deal with the Indian Banking sector are few. There are also a few studies on governance of listed firms, as well as governance of stock exchanges themselves.

¹ Report of The Committee to Review Governance of Boards of Banks in India, May 2014.

Gupta, Nair, and Gogula (2003), based on content analysis, have examined 30 Indian companies which constitute the Sensex. The authors find that though compliance is present, a deeper level of proper disclosures are missing, and a lack of standard practices. To add, Garg (2007) finds that smaller boards, upto a size of 6–8 members, are much more efficient. Independent directors do not necessarily add value to the board, though they do not erode value either. There are also constraints on the availability of independent directors. About half of the board should consist of independent directors.

In a research thesis, Gogia (2013) has studied the practices of corporate governance in public and private sector banks in India (taking a sample for study). The study finds that awareness of governance is low among employees and customers of public sector banks. Indicators like handling of complains or being courteous with customers show better scores in private sector banks. Disclosures and reporting of private sector banks were found better. Finally, audit and sub-committees had enhanced functioning in private sector banks. Arora and Sharma (2016) in a study of firms in 20 important industries, find that a larger board brings deeper intellect in decision making and performance. However,

indicators of profitability may not always related to corporate governance indicators. Good governance is still essential to reduce agency costs and improve market performance.

In a recent 2017 report by the Oliver Wyman Group, it is clearly stated that the public sector banks are crippled under rising levels of NPAs, and the entire banking sector is close to a breaking point. Apart from the State Bank of India (SBI), all public sector banks are losing money. Questions are raised about the whole idea of government ownership of banks. A major consolidation effort is required, and this includes reforms in corporate governance as well.

METHODOLOGY, DATA AND RESULTS

The literature review points to the issue that governance practices of private sector banks are better than public sector banks. Therefore, the basic question that is being addressed here, is there a difference in the contribution to economic growth between private sector banks and public sector banks? The financial development and growth link can be empirically tested. We may use certain variables as under:

Table 1: Study of Financial Sector (w.r.t. banking data)

Name of Variable	Code	Description	Data source
Financial development variables	Credit	Total credit disbursed by banks (private vs. public)	RBI Handbook of Statistics; Calculated by author
Economic Growth	Growth	Rate of change of real domestic product	

Source: Compiled by Author

As mentioned in the literature review earlier, many empirical studies use bank credit disbursed as an indicator of financial development, especially in developing countries, where the share of equity markets is still quite low. In the Indian context, RBI classifies Scheduled Commercial Banks as follows:

- State Bank and associates
- Nationalised Banks
- Other SCBs (Private Banks)

Other smaller categories include Regional rural banks and Foreign banks.

Fig. 5 shows a very steep rise in the credit provided by SBI and associate banks. For other nationalised banks, the graph shows a similar steep curve, which has tapered-off recently. For private banks, it again shows a very steep rise in the credit provided by private banks.

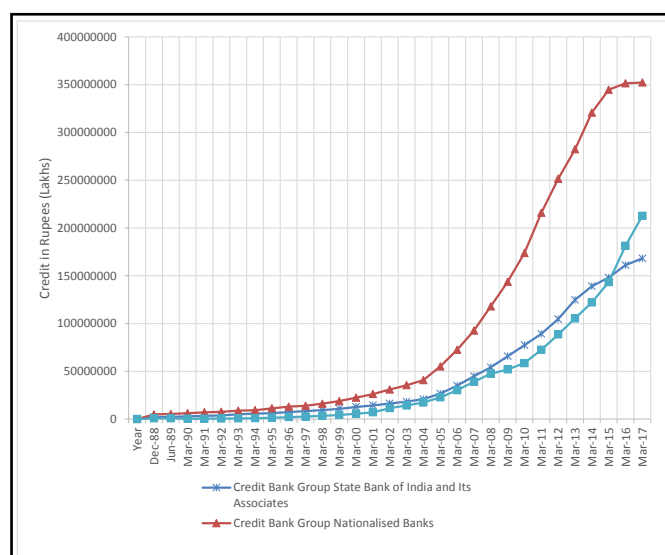


Fig. 5: Outstanding Credit of Banks Group-Wise

This data is available from 1972 onwards. However, up until the early nineties, there was no major visible difference in the trend-lines of available data. Hence the above graph excludes earlier periods.

Test of Stationarity

The Augmented Dickey-Fuller (ADF) test is used to test the time series data for stationarity (see Table 2). The test estimates the following three equations:

$$\Delta Y_t = \delta Y_{t-1} + \sum_{i=1}^m \alpha_i \Delta Y_{t-i} + \varepsilon_t \quad (1)$$

$$\Delta Y_t = \beta_1 + \delta Y_{t-1} + \sum_{i=1}^m \alpha_i \Delta Y_{t-i} + \varepsilon_t \quad (2)$$

$$\Delta Y_t = \beta_1 + \beta_2 t + (\delta) Y_{t-1} + \sum_{i=1}^m \alpha_i \Delta Y_{t-i} + \varepsilon_t \quad (3)$$

The null hypothesis for the ADF test is that which means that the series has a unit root (non-stationary). The alternative hypothesis, that indicates that the series is stationary. This leads to rejection of the null hypothesis.

The test is conducted assuming a time series with an intercept, and a times series with an intercept and trend component. It is done at both level and first differences of the time series. The results are included in Table 2 below.

Table 2: Results of Stationarity Tests

Variable	ADF statistic at Level		ADF statistic at First Difference		DF statistic at Level		DF statistic at First Difference	
	Constant	Constant and trend	Constant	Constant and trend	Constant	Constant and trend	Constant	Constant and trend
India								
Growth	-6.11***	-8.43***	-	-	-3.63***	-8.54***	-	-
Credit SBI	1.37	0.25	-5.53***	-6.18***	-1.33	-0.84	-4.10***	-2.09
Credit Others	-3.56**	-4.14**	-1.69	-1.81	-1.39	-0.05	-2.27	-5.43***
Credit Private	-2.99**	-1.72	5.42	5.03	-1.59	-2.87	-0.48	-2.29

***, **, * indicates test value is significant at 1%, 5% and 10% level of significance respectively; For DF constant model, critical values at 1%, 5% and 10% level of significance are, -2.62, -1.95 and -1.61 respectively; For DF constant and trend model, critical values at 1%, 5% and 10% level of significance are -3.77, -3.19 and -2.89 respectively; For ADF constant model, critical values at 1%, 5% and 10% level of significance are, -3.59, -2.92 and -2.60 respectively; For ADF constant and trend model, critical values at 1%, 5% and 10% level of significance are -4.18, -3.51 and -3.19 respectively.

The ADF and DF statistics for the variable economic growth are stationary at levels. The variable is expressed in percentage change, and is not a time series variable. For the other three variables, Credit disbursed by SBI is not stationary at levels. This implies that the same test has to be performed at first differences for the same. The analysis cannot be run on level data in such a case, since it may most likely yield spurious results. Thus, further tests of stationarity are performed at first differences. Now, all the calculated ADF and DF values exceed the critical values. These indicate that the variable is stationary at first differences. The variables that depict Credit disbursed by other PSU Banks and Credit disbursed by Private Banks, are both stationary at levels.

Test of Causality

To further test the relationship between the variables, the analysis involves a test of causality.

The Granger Causality Test is used to investigate the direction of causality between two variables, one pair at a time.

The test involves the following bi-variate regression model:

$$Y_t = \alpha_0 + \sum_{i=1}^m \alpha_i Y_{t-i} + \sum_{j=1}^n \beta_j Y_{t-i} + \varepsilon_{1t} \quad (4)$$

$$X_t = \omega_0 + \sum_{i=1}^m \gamma_i Y_{t-i} + \sum_{j=1}^n \theta_j Y_{t-i} + \varepsilon_{2t} \quad (5)$$

where it is assumed that the error terms are uncorrelated. If all the coefficients of X in the first regression equation are significant, then the null hypothesis that X does not cause Y will be rejected. If all the coefficients of Y in the second regression equation are significant, then the null hypothesis that Y does not cause X will be rejected.

Thus, this test is a simple way to check for long term predictive power that one-time series variable shares with another. It is an OLS technique applied to time series data, after having checked for stationarity.

The results of this analysis are summarised in Table 3 below:

Table 3: Granger Causality Tests

Null Hypothesis	F-stat.	Prob.
Cr-SBI does not cause Growth	5.43**	0.02
Growth does not cause Cr-SBI	4.43**	0.04
Cr-Oth does not cause Growth	4.93**	0.03
Growth does not cause Cr-Oth	4.22**	0.05
Cr-Pvt does not cause Growth	4.95**	0.03
Growth does not cause Cr-Pvt	0.45	0.51

*** denotes rejection of hypothesis at 0.01 level, ** denotes rejection at 0.05 level, * denotes rejection at 0.1 level

In most cases, the null hypothesis of no causality is rejected. This implies that there is a bidirectional causal relationship between bank credit and growth. It is observed that economic growth does not lead to an increase in the credit disbursed by private banks.

FINDINGS AND DISCUSSION

A strong causality is seen between growth and bank credit. The relationship is bidirectional. Economic growth causes more bank credit to be disbursed, and the increased bank credit leads to further economic growth. Public sector banks, including the SBI group and other banks, constitute a major share of bank credit. While the literature points towards governance issues in public sector banks, it is seen here that they facilitate the process of economic growth. Stricter governance, better screening and vigilant monitoring is required, to prevent large scale scams. Private sector banks, in spite of a small share of total credit, show a strong causality towards economic growth. Reverse causality from growth to private bank credit is not seen. This may imply that firms prefer private banks in initial stages, especially for smaller loans. As the businesses grows, firms start borrowing from public sector banks.

Financial development is significantly dependent on institution building. Over the past seven decades, Indian governments have taken significant steps to build a well governed financial system. On the other hand, economic growth is a very long term process. It occurs when the factors of production are efficiently transmitted towards productive uses. It involves the combined efforts of small and large firms, and the government. This process is very broad, and goes beyond just Micro, Small and Medium Enterprises (MSMEs). However, in developing countries, MSMEs constitute a large part of the productive activities.

In countries where financial institutions are not strong, and much of the economy relies on MSMEs, it is crucial to offer a greater amount of services to those sectors. For many countries, they are high priority sectors. This is mutually beneficial for banks and such firms, as here there will also be a lot of diversification. Many smaller firms, from diverse sectors, take small loans. This reduces risks for the banks too. As a policy matter, such countries will require:

- Properly skilled staff, with fast and result oriented training.
- Availability of short term finance for MSMEs.
- Establishing relationships between banks and firms, so that gradually the loans and collaterals can actually be raised.

This makes both the lender and the borrower mutually benefitted, and a chain of self-sustaining development

begins. Further, reliance on international lenders should be minimised. Rather, technical and process knowledge should be borrowed from other countries.

CONCLUSION

In the absence of proper governance systems, commercial banks have a high probability of getting into contracts that have inherent moral hazards. In India, this has happened to the largest banks with the best training. It has happened in the past, and has also happened very recently.

Firms, both small and large, are constantly in need of funds. Apart from a few well established firms, their risk of failure is always high. This cannot be generalised, as even reputed firms have failed to repay debt.

Financial institutions across the world can aid in the process of innovation by participating in the firm's growth. One may also look at possibilities of strategic partnerships, long term credit (with stakes), or acquisition of ownership share in firms. This may reduce the agency problem to an extent.

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