Financial Liberalisation in India: measuring relative progress
by

Peter Lawrence (Keele University)
Ibotombi Longjam (AMEX, India)

Date December 2003

Abstract This paper details and analyses aspects of the development of India's financial sector particularly after 1990 when financial liberalization began, focusing on the ratios of private sector credit to GDP, liquid liabilities of the financial sector to GDP, commercial bank assets to total banking sector assets, and stock market capitalisation to GDP. The Indian evidence shows that though there is a general rise in the trends of all the financial indicators, liquid liabilities and private credit grow particularly slowly after financial liberalization, having stagnated during the 1980s. However, the bank assets and stock market capitalization have shown significant increases during the 1990s. The cross-country analysis shows that Indian performance in the financial sector is slow compared to the high-income and fast growing countries.

Keywords financial development indicators, financial reforms, financial deepening

J.E.L. Class O11, O16, O23

Notes This paper is an output of Research Project R7968 'The Effects of Macro-financial policy on household micro-financial behaviour' funded by the Department for International Development (DFID) Social Science Research (formerly ESCOR). The views expressed here do not necessarily represent those of DFID.

Address *Peter Lawrence* (correspondence): Department of Economics, Keele, Staffordshire ST5 5BG, United Kingdom.

Download www.keele.ac.uk/depts/ec/web/wpapers/kerp0308.pdf

Introduction

The development of the financial sector plays a major role in stimulating and stabilizing the growth of an economy. Finance essentially involves the efficient transfer of funds in exchange for goods, services or promises of future return. Several authors have argued that development in financial intermediation has a positive relationship with economic growth. Empirical evidence shows that a more developed financial system is associated with higher rates of economic growth, although the nature of any causal relationship is disputed (Lawrence, 2003). A number of developing countries, including India, have undertaken financial sector reforms in order to pursue the goals of economic growth and improved living standards.

This paper details and analyses aspects of the development of India's financial sector particularly after 1990 when financial liberalization began. The usual belief is that liberalization process allows for the development of a competitive financial system, which aids the efficient allocation of resources by mobilising savings through the growth of financial intermediation and asset diversification. In order to assess the progress of any liberalization process, the first question to be addressed is how to measure financial development. Based on the existing literature on various indicators of financial sector development (Levine et al, 2000), this paper focuses on four indicators: the are the ratios of

a) private sector credit to GDP,
b) liquid liabilities of the financial sector to GDP,
c) commercial bank assets to total banking sector assets, and
d) stock market capitalisation to GDP.

The importance of these indicators lies in the fact that they basically capture respectively, the degree of financial intermediation, monetization of the financial system, the role of commercial banks in allocating funds, and relative importance of the stock market.

The cross-country evidence during 1960-99 as found by this paper on the relation between these financial indicators and per capita GDP, shows that the countries in the high-income group tend to perform better in the financial sector. The Indian evidence shows that there was a stagnating phase in most of the indicators during the 1980s, although there was a generally increasing trend over the sample period. Though these findings give some broad idea of the development of the financial sector, we need to know how this compares internationally. Therefore, this paper attempts to find both the measures of the level of financial sector development in both the absolute and relative sense.

Since it is cumbersome to do a cross-country analysis for each financial indicator separately, the paper tries to construct a single value aggregated with weights of the constituent indicators being the coefficients of their (positive) relation with per capita real GDP. The paper then uses the index to compare the performance of India's financial sector development with selected groups of high-income countries, fast-growing countries, and countries that have undertaken financial sector reforms.

Though there is a general rise in the trends of all the financial indicators, liquid liabilities and private credit grow particularly slowly after financial liberalization, having stagnated during the 1980s. However, the bank assets and stock market capitalization have shown significant increases during the 1990s. The cross-country analysis shows that Indian performance in the financial sector is poor and slow compared to the high-income and fast growing countries.

The rest of the paper is organised as follows. Section 2 presents the motivation for this analysis and the main questions addressed. In Section 3, we focus on measures of financial sector development. In Section 4, the construction of an aggregate index is explained. The results of India's performance with respect to the index and other constituent indicators are examined in Section 5 which also gives a picture of the level of India's financial sector development vis-à-vis other countries. Concluding comments are offered in Section 6.6.

2 Motivation

Finance essentially involves the transfer of funds in exchange for goods, services, or promises of future return. Development in the financial sector has been widely understood as a stimulant in accelerating the growth of an economy[1]. An efficient financial sector mobilizes savings and allocates it those investments which yield the highest rate of return. Developed countries have mature financial systems delivering services that contribute to the prosperity of their economies. The reason that finance is important in the growth of the economy lies in four key areas viz. i) mobilizing savings; ii) allocating capital funds; iii) monitoring managers; and iv) transforming risk. Therefore it is considered that getting the financial systems of developing countries to function more

[1] See for example Levine (1997).

effectively in providing the full range of financial services is an important requirement for promoting higher economic growth and providing a stable macro-economy.

3 India’s Financial Reforms

. .

Before financial liberalisation, the key factors that highlighted India’s financial sector were

i) nationalisation of banks;

ii) directed credit and administered interest rates and

iii) the growth of public sector deficits and increasing pre-emption of bank lending rates.

The nationalisation of 14 private banks in 1969 reflected the perceived need for state control to use banks as a public instrument of development so that communities' savings could be used for ‘economic and social objectives’ (Sen and Vaidya (1997). Meanwhile, the banks were used as an arm of fiscal policy through directed lending and increased low cost public sector borrowing from banks. The interest rate structure in India had been by and large an administered one until the financial liberalisation policy started in 1991-92. The term deposit rates were kept close to the rate of inflation except when inflation rose sharply. The savings deposit rates were typically much lower than inflation. On the lending side, the Reserve Bank of India (RBI) set up a ceiling rate that allowed loans at high rates of deposits (20% during the seventies), which was eventually reduced in the 1980s and ultimately a floor rate was set in 1998. Though the lending rate, apart from the priority sector lending (33% of advances in 1977) to small-scale agriculture, gave positive returns, the rates were much below the market rate. All these control measures weakened banks’ and financial institutions’ incentives to form a sound financial system. They were also put at high risk.

It is important to note that the share of credit in total bank deposits declined over time as Government increasingly pre-empted resources through high cash reserves and the statutory liquidity requirement. Hence as a share of commercial bank deposits, credit to the private sector was always low. Thus the regulations and restrictive policies made the channeling of funds rather narrow and fairly public sector centred. This is one reason that financial deepening essentially slowed down and remained stagnant. In addition to this, as Hanson (1999) argues, savers and investors react negatively to the already deteriorating macro-indicators, during the late 1990s, such as the current account, reserves and the government deficit that culminated in a balance of payments crisis in

1990-91. In essence, the multiplicity of regulations and political interference in the management of banks and other financial institutions, diluted the mechanism of credit allocation and managerial accountability, and weakened the banks' financial viability (Ahluwalia, 1999).

Following the recommendations of the Narasimham Committee, India initiated its first phase of financial sector liberalisation in 1991-92. Table1 presents a brief chronology of India's major financial reforms through the 1990s. These liberalisation measures comprised a fairly standard package of reforms which de-controlled interest rates, reduced reserve ratios, allowed for a measure of banking sector competition and slowly reduced government control of banking operations while establishing a market regulatory framework. Accompanying these reforms was a set of fiscal reforms which simplified the tax regime and reduced rates of direct taxation. Interest rate liberalisation, coupled with increased bank competition, has resulted in a narrowing of the interest rate spread as Figure 1 shows.

Fig. 1: India: Lending and Deposit Rates1980-2000

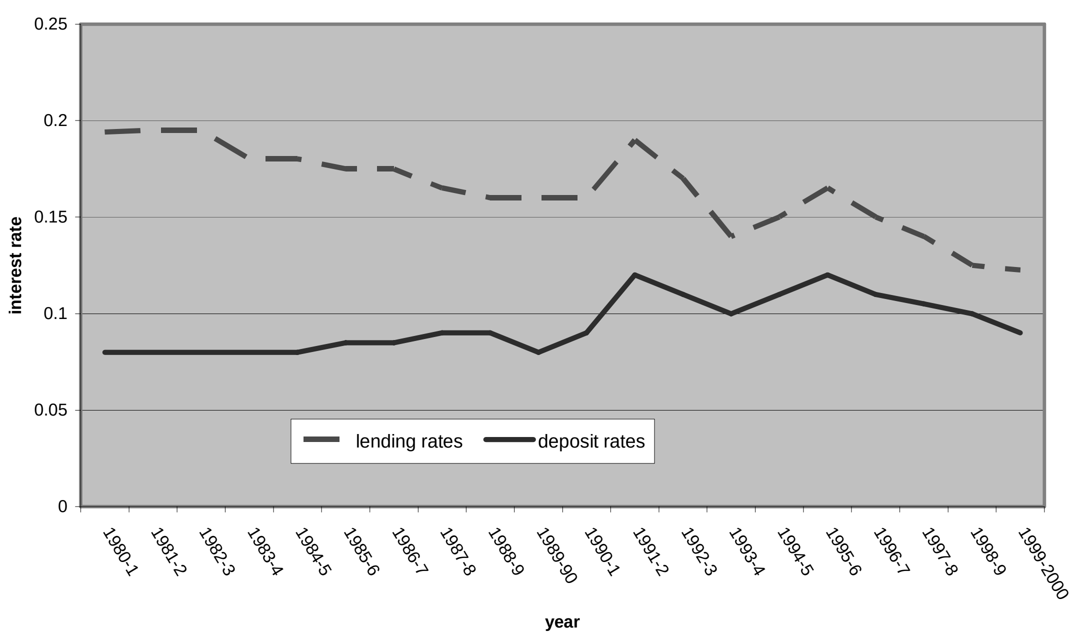


Table 1 Financial and Monetary Policy Reforms 1991-2 to 1999-2000

1991-2	non bank financial institutions interest rates deregulated
1992-3	risk-asset ratio introduced for banks (capital adequacy measure) lending rates structure simplified for 6 to 4 categories reduction in minimum lending rate(MLR) for large loans treasury bill auctions introduced substantial liberalisation of bank branch licensing capital market restrictions removed on pricing and issues of capital
1993-4	reductions in cash reserve ratio (CRR) and statutory liquidity ratio (SLR) lending rates structure simplified from 4 to 3 categories further reduction in MLR for large loans private shareholding in state banks allowed
1994-5	CRR increased; SLR further reduced MLR on large loans abolished line of rural credit increased by 11%; credit priority housing loan limit raised from 3 to 5 lakh. board of financial supervision set up
1995-6	CRR reduced rural housing loans<1 lakh by regional rural banks (RRBS); 4 new private sector banks; more freedom for cooperative banks to set interest rates
1996-7	selective credit controls on essential commodities lifted;
1997-8	banks free to set deposit rates on term deposits greater than one year ceiling on city housing loans raised 3.3 times to 10 lakh; banks determine own margins for loans against deposits; 6 new private banks banks allowed to raise capital up to 49% from the public
1998-9	greater flexibility for banks in lending and deposit rates banks can engage in interest rate swaps for own balance sheet management 35 NBFIS allowed to borrow money through repos on a par with banks greater freedom in trading of government securities state government stock auctions began first-ever price based auction of government securities foreign banks free to repatriate profits without prior approval of reserve ban of india (RBI) banks allowed to enter credit card business without prior approval of RBI banks allowed more freedom to move/close rural branches minimum capital to risk weighted assets ratio increased to 9% stock exchanges allowed to extend trading terminals
1999-2000	182 day treasury bills re- introduced further reductions in CRR cut in bank savings deposit rate liquidity adjustment facility introduced using reverse repo and repo auctions scope of money market instruments widened further liberalisation of bank interest rate setting 17 public sector banks given autonomous status risk management guidelines issued to banks rural infrastructure fund set up to channel bank lending shortfall to priority sectors

As Table 1 suggests, the process of reform has been gradual and the impact on the financial system only noticeable by some measures towards the end of the decade, as we shall see below. One point we can make here however, is that the impact of interest rate liberalisation on overall saving has been hardly noticeable. Financial savings which were around 9% of GDP at the beginning of the decade compared with 6% at th beginning of the 1980s were around 10% at the end of the 1990s, having peaked at over 11% in the middle of the decade, suggesting that the increase in deposit rates had in creased the savings ratio until cheaper and more easily available credit led to a lower savings rate. The picture for gross domestic saving is similar, although the composition of has shown a shift to the private corporate sector as a source of savings. To get a better picture of the effects of the reforms we need to take a more systematic look at the range of financial development indicators and how they compare with other countries.

4 Measures of Financial Sector Development

An interesting exercise is to assess the effects of liberalization on the measures of financial development that in turn are regarded as correlating with economic growth. Development of the financial sector requires a set of indicators which can be used for effective policy formulation, implementation and evaluation. As such, there is no precise definition in the literature of 'financial development'. But as Fry (1978) notes, the key to financial sector development is the reduction, and ultimately unification, of the fragmented financial markets. This involves a complete set of indicators mainly covering credit intermediation, liquidity management and the risk management characteristics of the financial system. Goldsmith (1969) used a set of measures, which he called the 'financial interrelations ratio', in tracing the close relationship between the financial sector and economic development in a cross-country analytical framework of 33 countries over the period of 1860-1963.[2] Iin many other studies, the ratio of the broad money (*M2*) to *GDP* is taken to observe the changes in the size of the financial system relative to the size of the economy.[3] Though this ratio has the advantage that the IMF and the World Bank largely standardize it across countries, it is often conceded that this is a rather restrictive measure as it includes only the monetary liabilities of the banking system and not of the whole financial system. For example, as Lynch (1996) points out, it is difficult to believe that China has a more developed financial sector than Australia despite China having a

[2] 'Financial interrelations ratio' is defined as the ratio of the total financial assets in an economy to the national wealth.
[3] The types of monetary assets that are included in the broad money are different from nation to nation in the strict sense. But the broad money M2 in general includes national currency, transferable deposits, other deposits and securities other than shares.

higher *M2/GDP* ratio than the latter. King and Levine (1993) argue that traditional practices like Goldsmith's (1969) and McKinnon's (1973) of using the size of the formal financial intermediary sector relative to economic activity to measure financial sector development or financial depth may not be closely related to the growth of financial services such as risk management and information processing. King and Levine (1993) take the ratio of deposit money bank domestic assets to deposit money bank domestic assets plus central bank deposit assets as their preferred measure of financial development. The intuition behind this indicator is that banks are more likely to provide risk sharing and information services. However, there are problems with this indicator too, because banks are not the only financial intermediaries that provide risk management, information acquisition, and monitoring services. Further, in countries where banks are controlled by the governments, they are hardly different from the central bank. Therefore we need to look at the overall progress of various aspects of financial development, rather than simply one.

4.1 Four measures of financial sector development

It is hard to find 'an indicator' which can directly measure the development of the financial sector. We therefore analyse the roles of the indicators that are studied in the recent literature and then choose four indicators that encompass all the qualities of a well-developed financial sector.[4] The four measures are explained as follows:

- *Private credit*, denoted as PVCRD, is a primary indicator of financial sector development. This is equal to the value of credits by financial intermediaries to the private sector divided by GDP. This measure includes all the credit issued to the private sector by all the financial institutions in addition to the traditional depository money banks.[5] This measure isolates credit issued to the private sector as opposed to credit issued to governments and public enterprises and concentrates on credit issued by intermediaries other than the central bank. PVCRD basically gives the degree of financial intermediation and measures the financial resources provided to the private sector through for example, loans, purchases of non-equity securities, and trade credits.
- *liquid liabilities*, denoted as LLY, is another traditional measure of financial sector development. LLY is the liquid liabilities of the financial system and is currency

[4] These studies include that of Goldsmith (1969), McKinnon (1973), King and Levine (1993), Levine and others (1997, 1998).

[5] Therefore, from this angle, the variable PVCRD is comprehensively a broader measure of financial intermediary development than that used by Levine and Zervos (1998).

plus demand and interest-bearing liabilities of financial intermediaries and non-bank financial intermediaries as a percentage of GDP. This is the broadest available indicator of financial intermediation, since it includes all three financial sectors (central bank, commercial bank and other financial institutions). LLY is a typical measure of financial "depth" and thus of the overall size of the financial sector without distinguishing between the financial sectors or between the use of liabilities. It indicates the degree of monetisation with respect to the real economy.

- *commercial bank assets vs. central bank assets*, denoted as DMBCB. This measure is the ratio of the assets of commercial banks to the total assets of the banking sector (i.e. commercial banks plus central bank assets) and it measures the degree to which commercial banks or the central bank allocates society's savings. The importance of this variable lies in the role that commercial financial intermediaries are likely to play in identifying profitable investments, monitoring managers, facilitating risk management, and mobilizing savings in relation to central banks. The assets of the banking and non-banking financial institutions are the total claims on 'domestic' non-financial sectors, whereas the private credits of these institutions are the claims on the 'private' non-financial sector. To take care of any double counting and cross claims against the financial institutions, these measures exclude claims on central banks, commercial banks and other financial institutions. DMBCB, the ratio of commercial banks assets to the total asset of the banking sector including that of the central bank assets, measures the importance of commercial banks relatively to central banks.
- the *stock market capitalization to GDP ratio*, denoted by STCAP, which equals the value of listed shares divided by GDP.. This indicator is influenced by findings of various stock market studies indicating that
    - stock market liquidity has a large causal impact on economic growth;
    - stock market liquidity influences growth as agents may have greater incentives to expand resources; and
    - stock markets can influence risk diversification.[6]

[6] See Levine and Zervos, (1998) and Rousseau and Wachtel (2000).

Fig 2 Private Credit by Deposit Money Banks and Other Financial Institutions to GDP

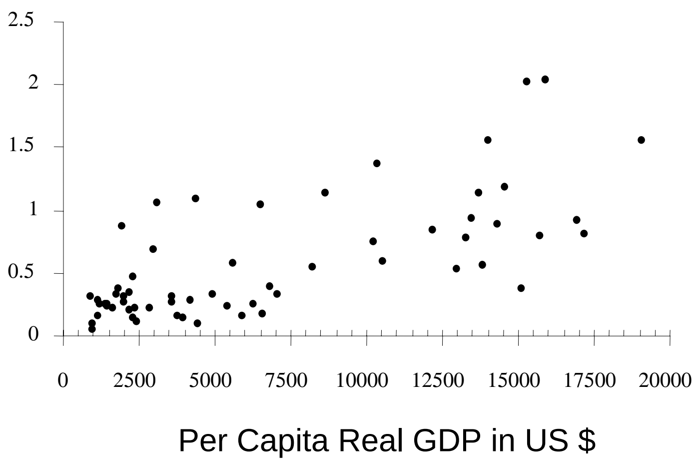


Fig 3 Liquid Liabilities to GDP

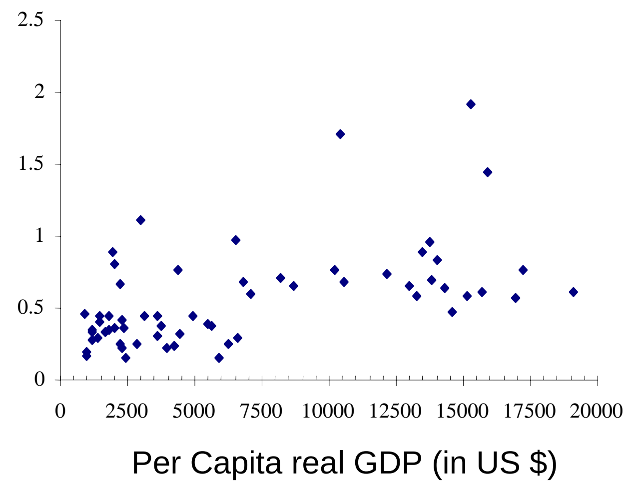


Fig 4 Deposit Money vs Central Bank Assets

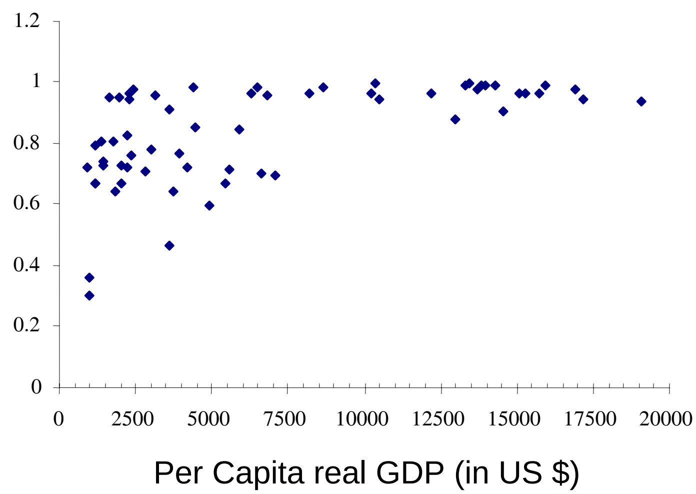
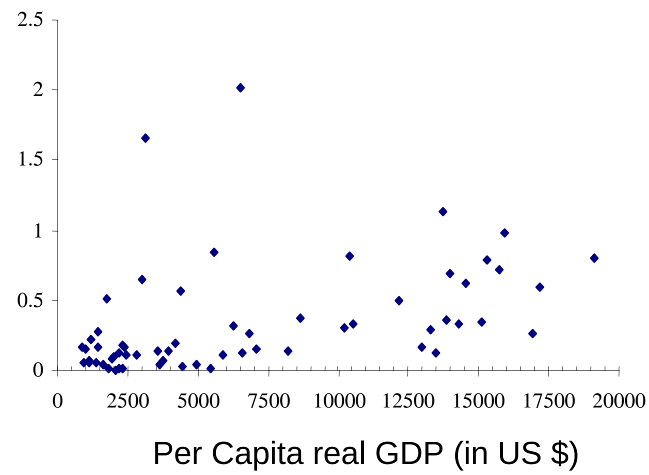


Fig 5 Stock Market Capitalisation to GDP



4.2 Cross-country evidence

We now illustrate how the financial sector measures differ across countries. This helps to give a feel for first, the comparative performance of rich and poor countries and secondly, that of the fast-growing countries. We display scatter-plots of the four measures with respect to the per capita real GDP and growth rate of per capita real GDP. The main data sources are the World Development Indicators, IMF's International Financial Statistics (IFS), IFC's Emerging Market Database and Global Development Finance.[7] The plots in the Figures 2 to 5 are made using the mean performances of the indicators against the per capita real GDP in US Dollar (constant international price – 1985 base year) during the period 1990-99 when India undertook various measures of financial reforms.

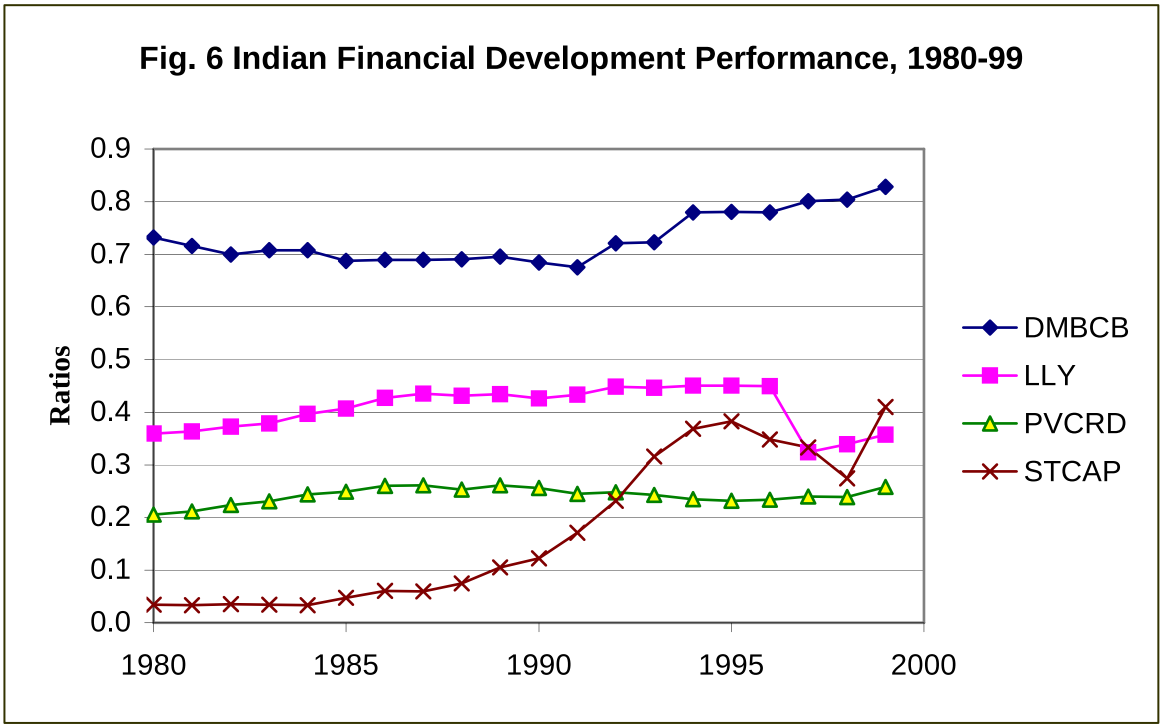
As the figures show, many countries with low per capita GDP tend to perform relatively poorly in these financial indicators. We try to show that there is a positive relationship between per capita income and the financial development as measured by these indicators though we do not claim any causal link between them.

4.3 Indian evidence

Though India is a low-income country with a low level of financial sector development with respect to these indicators, there is a wide network of institutions, instruments and markets indicating widening and deepening of the Indian financial system. Therefore, it is useful to assess the performances of the Indian economy since 1980. Figure 6 shows the trend of India's performances on these indicators to 1998-99. It is interesting to see that the domestic banks assets as a share of the total banking sector including the central banks has been showing an upward trend during the period 1990-99 after a stagnating phase during the previous decade. This reflects the positive response of domestic banks during the period where there have been various policy reforms in the banking sector, which constitutes two third of the organised financial sector. On the other hand, the ratio of market capitalisation to GDP has been showing phenomenal growth in the 1990s

---

[7] The deflation of the variables where in a ratio, the financial balance sheet which is a stock in the numerator and the *GDP* a flow in denominator is well taken care off. Since stock variables are measured at the end of a period, the deflation is corrected by the end of the year *CPI* indices. And since flow variables are defined relative to a period, the annual *CPI* does deflation. Then, the average of the real financial balance sheet item in year *t* and *t-1* is divided by real *GDP* measured in year *t* i.e. $0.5\left(\frac{X_t}{CPI_{e,t}}+\frac{X_{t-1}}{CPI_{e,t-1}}\right)\Big/\frac{GDP_t}{CPI_{a,t}}$ where *e* indicates end-of-period and *a* average for the period and *X* is DMCB, LLY, PVCRD or STCAP.



DMCB - the ratio of commercial banks assets to the total asset of the banking sector including that of the central bank assets, LLY – ratio of currency plus demand and interest-bearing liabilities of banks and other financial intermediaries to GDP, PVCRD – ratio of claims on the private sector by the banking and other financial institutions to GDP, STCAP – ratio of stock market capitalization to GDP

With the exception of the end of the period when many of the countries, in particular Asian countries, were hit by the financial sector crisis. But private credit by the banks and other financial institutions, and liquid liabilities, have both increased very slowly since the 1980s, though there are indications that there may have been some significant movement at the end of the decade.

5 Construction of an Index for Financial Sector Development

How good is this performance compare internationally? A comparison of the functioning of the financial sector with the best and worst performing countries should shed some light on the level of the financial sector development that India has achieved.

5.1 Methodology

A comparative analysis using four separate indicators is cumbersome as compared with a single valued index that represents the four indicators set out above. Therefore in this section, we propose an index for the financial sector development (henceforth IFD), which measures the performance of the financial sector and is basically a conglomerate of the four financial indicators.

5.1.1 Measures of financial sector development on the scale of 0 - 100

The steps involved in the construction of such an index are as follows. First, we select only those countries which have a population in the age group 16-65 of more than two million. This is because we believe that this is the age group which is actively involved in the financial sector. Secondly, we find the largest and smallest values for each indicator during the entire sample period. This means that we select the best and worst performing economies for relative comparison with respect to these benchmarks.[8]

Thus for a variable *x*, if *Max* and *Min* are the largest and least values in the matrix of all values of countries against each year, then the relative performance of i^{th} country at in year *t* is given by the following formula.

$$K_{it}^{*} = \frac{K_{it} - Min}{Max - Kit}, \tag{6.1}$$

where K_{it} is the absolute performance of the i^{th} country in the year *t*.

Once this is done, the relative performance of each country in each year is put in the scale of 0 – 100 with 0 being the least and 100 being the largest. For example, on this common scale, the performances of India as shown in Fig. 6 can be seen relative to the best and worst performing countries in Fig 7.

5.1.2 Putting together a representative index

Having found all the scores of all the countries over the years, we would like to find an index, which is a conglomerate of the four indicators. Some researchers such as Gupta (1987) find this by simple average while others such as Beck, Levine, and Loayza (2000) find the index by principal component analysis. While principal component analysis gives

[8] This procedure is the same as the one exercised in the construction of the Human Development Index (UNDP, 1989).

the vector with maximum variances, we would like to see the same aggregate in the score of same scale. For this we need to find appropriate weights for the variables.

Since it has been argued that the financial indicators are correlated with per capita income, it makes sense to have weights equal to the coefficients in the simple linear regression of the variables against per capita income growth. Following this argument, we find the coefficients for the high-income developed countries (OECD) countries and use them as weights in the construction of the representative index. For each variable, we run the regression against per capita income growth in two ways: first, the mean variable across countries in each year and secondly, the mean variable over time for each OECD country. In the first case, per capita GDP growth is the year-to-year growth rate while for the second case, it is the coefficient of time in the linear time trend regression of semi-log GDP. In the first case, we have 40 data points (40 annual points), each data point being the mean across OECD countries. Analogously, in the second case, we have 28 data points (28 OECD countries), each data point being the mean over time. Table 2 gives the coefficients of the regression. The third column gives the relative weights of the variables in their relationship with GDP.

Table 2 Coefficients of linear regression of the variables against GDP, OECD countries.

Variables	Coefficients	Relative Weights
DMBCB	0.00000533	0.1245
LLY	0.00001314	0.3069
PVCRD	0.00001492	0.3485
STCAP	0.00000942	0.2200

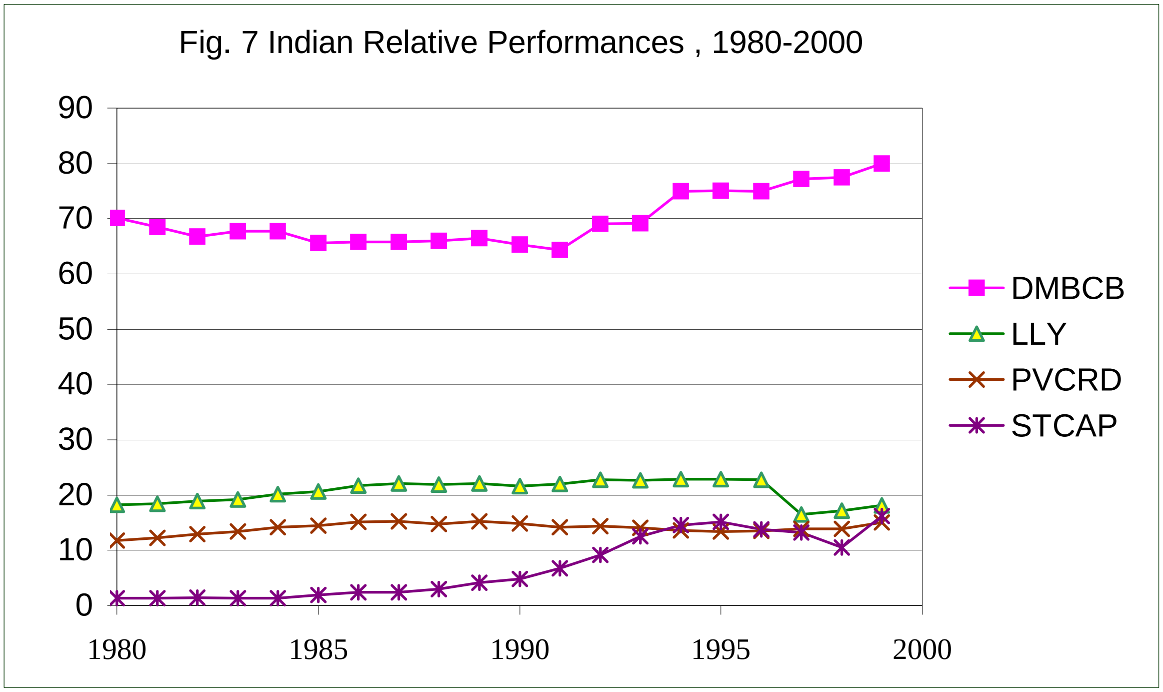
Note: DMCB - the ratio of commercial banks assets to the total assets of the banking sector. LLY - currency plus demand and interest-bearing liabilities, PVCRD - claims on the private sector by the banking and other financial institutions and STCAP - stock market capitalization, all as a percentage of GDP.

We use these relative weights for finding the overall aggregator, the index for the financial sector development (IFD). Thus,

$$IFD = 0.124\ DMBCB + 0.307\ LLY + 0.348\ PVCRD + 0.22\ STCAP \qquad (6.2)$$

6 What the index tells us about India

In this section, we examine how India performs in the index that we have just constructed. The following Figure 7 gives us India's relative performances in the four financial measures and the representative index of financial sector development (IFD). The one indicator that has shown outstanding growth in the performance is the stock



market capitalisation as a percentage of GDP. The measure of assets of the commercial banks as a relative share of the total assets of the banking sector including the central bank has shown steady growth over the period. Though the ratio of liquid liabilities to GDP has shown signs of growth, it remains comparatively low by international standards. However, there has been some increase in the measures of financial sector development during the period where India has undertaken financial policy reforms. Table 3 presents India's performance during this period. There has been a significant positive change in the assets of the domestic banks in the total assets of the banking sector even as the stock market shows rapid upward moment. While the liquid liabilities hovers around 44 on the scale and gradual falling during the end of the decade, the credit to the private sector by the banks and other financial institutions remains stagnant.

Table 2 India's relative scores in the financial sector during the past decade

Year	DMBCB	LLY	PVCRD	STCAP	IFD
1990	68.43	42.63	25.58	12.25	25.58
1991	67.52	43.34	24.46	17.16	24.46
1992	72.13	44.85	24.77	23.20	24.77
1993	72.26	44.67	24.33	31.64	24.33
1994	77.92	45.08	23.53	36.80	23.53
1995	78.02	45.07	23.23	38.22	23.23
1996	77.95	44.93	23.38	34.85	23.38
1997	80.12	32.43	24.02	33.29	24.02
1998	80.37	33.92	23.87	27.41	23.87
1999	82.78	35.73	25.83	41.02	25.83

6.1 India's Performance Compared

To get a more complete assessment of India financial development, we now examine India's performance as compared with selected countries. We will in particular focus on two main indicators namely liquid liabilities (LLY) and private credit (PVCRD) as they are the indicators for which the Indian financial sector has been showing poor figures even during the financial liberalisation period. This will help us in understanding how other countries perform in the areas where India is not doing well. Therefore in the following subsection, we view India's performance in the financial sector as compared with countries in the high income group, fast growing countries, and countries that have undertaken financial reforms in the recent past.

6.2 Countries in the high-income group

To assess the size and activity of financial intermediaries across countries, we use the World Bank classification of countries according to their income levels and thus have four country groups. In this subsection, we will be examining India's performance against countries that are in the high-income group.[9] The selected countries with per capita GNP

[9] According to World Development Indicators (1998), those countries with a GNP per capita in 1997 higher than \$9,656 belong to the high-income group. The upper middle-income countries are those with a GNP per capita between \$3,126 and \$9,655, lower middle-income countries with a GNP per capita between \$786 and \$3,125 and low-income countries with a GNP per capita of less than \$786.

larger than US $ 10,000, in increasing order, are the following:

Spain (ESP), Taiwan (TWN), Israel (ISR), New Zealand (NZ), Italy (ITA), Finland (FIN), Austria (AUT), United Kingdom (GB), Belgium (BEL), Netherlands (NL), France (FRA), Sweden (SWE), Denmark (DK), Japan (JPN), Australia (AUS), Switzerland (CH), Norway (NOR), Canada (CAN) and United States (USA). If we look at the Figures 8 and 9, we notice that high-income countries have their average IFD above 30 in the scale while India's performance is below 20. Two of the main factors are credit to the private sector and liquid liability of the financial sector. While the performances in private credit of most of the high-income countries have contributed to the performance in IFD, that of India is relatively low. India's performance in the private credit is disappointingly staggering at around 10 in the scale during the period 1960-99. On the other hand the performance of the liquid liabilities of the financial sector is not bad compared to the other variables that make up to the aggregate IFD, it is far down in the scale by international standard. But during the last decade, it has shown significant increase as seen from Fig 9 while private credit remains stagnant and at times declining.

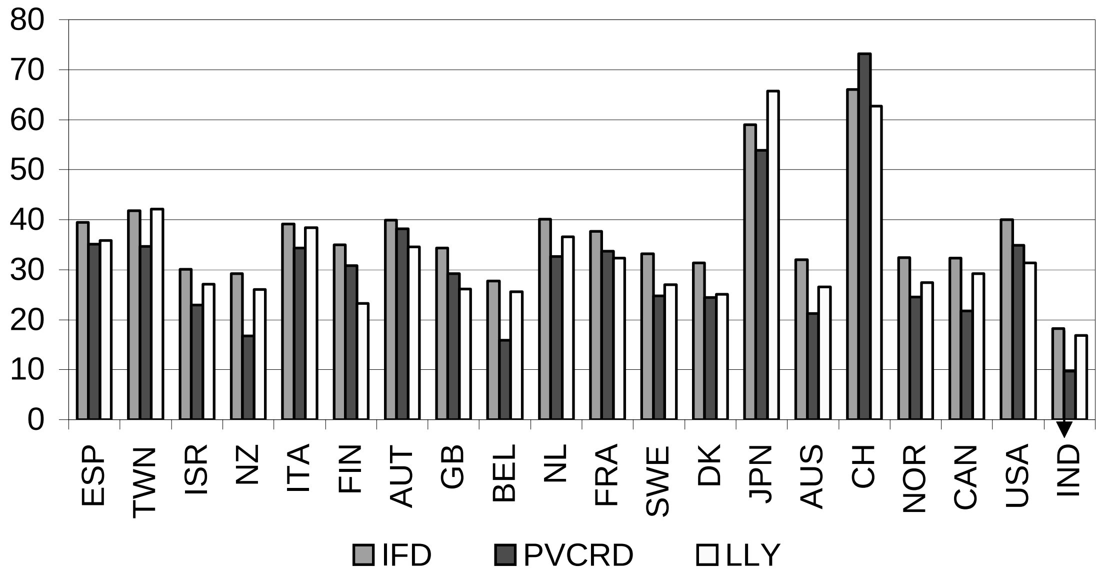


Fig. 8 Average performances of India vis-a-vis high-income countries in the 0 - 100 scale, 1960-99

IFD – index for financial sector development, PVCRD - claims on the private sector by the banking and other financial institutions, LLY - currency plus demand and interest-bearing liabilities

6.3 Fast growing countries

The GDP growth rate has been the chief target of policy makers. In this respect, it is interesting to look at India's position in financial sector development compared to high growth countries given its own reasonably high rate of growth and do this especially during the period where India has undertaken financial reform policy. We first try to identify the fast growing countries based on the per capita growth rate. We sort all the countries in decreasing order by average growth rates of per capita GDP during the period 1990-99. We choose the top 10 countries including India, which are as follows (in alphabetical order): Argentina, Chile, China, India, Indonesia, Israel, Korea, Malaysia, Sri Lanka and Thailand. In Figures 9 and 10, we plot the bar charts of the countries in order of their performance in the aggregate indicator. This is what we call the index for financial sector development, which is a conglomerate of the four financial sector development indicators. We see that DMBCB has a major contribution in the aggregate indicator.

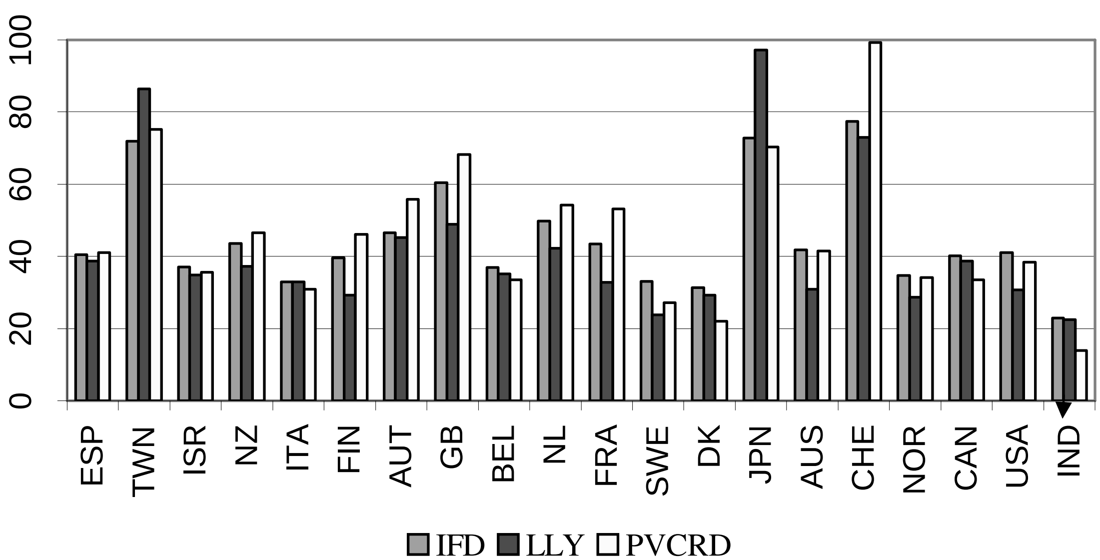


Fig. 9 Average performance of India vis-a-vis high-income countries in the scale of 0 -100, 1990-99

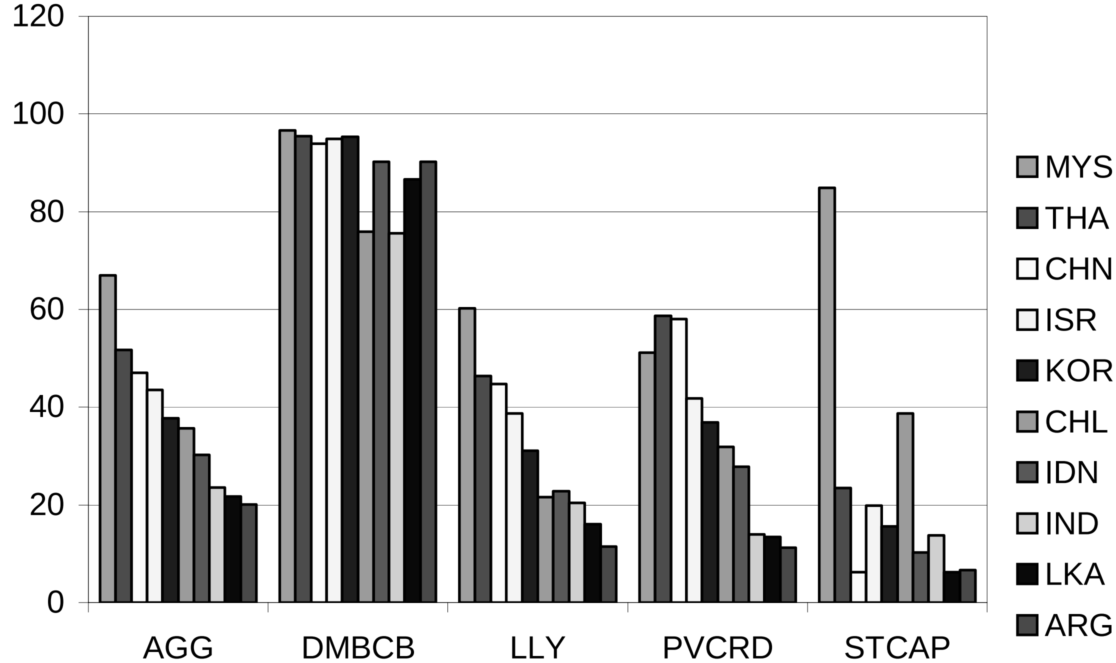


Fig. 10 Average performances India and the fast growing countries, 1992-99

One result that has interested many researchers who have argued for financial liberalization, is that though India (position shown by the arrows) has done fairly well in some of the variables - in particular stock market capitalization as a percentage of GDP- it has a relatively slow growth rate of financial sector development compared to other countries such as Malaysia and China. This shows that though the financial sector, in absolute terms, has grown quite significantly, its growth rate relatively to that of the real economy has been sluggish.

Figure 10 shows that the figures of many of the variables have grown over time. The most noteworthy variable is broad money as a percentage of GDP, which has improved significantly after 1990-91. Part of this improvement comes from the non-currency part as evidenced by the co-movement of the quasi-liquid assets. We have data on market capitalisation only from 1984 onwards. Nevertheless we include this variable, as we believe it to be important to measuring financial development. The numbers of the market capitalisation show that actually there has been a dramatic upsurge in activity after 1990-91 onwards till 1995 after which there is a slight downward movement.

6.4 Countries that have undertaken financial policy reforms

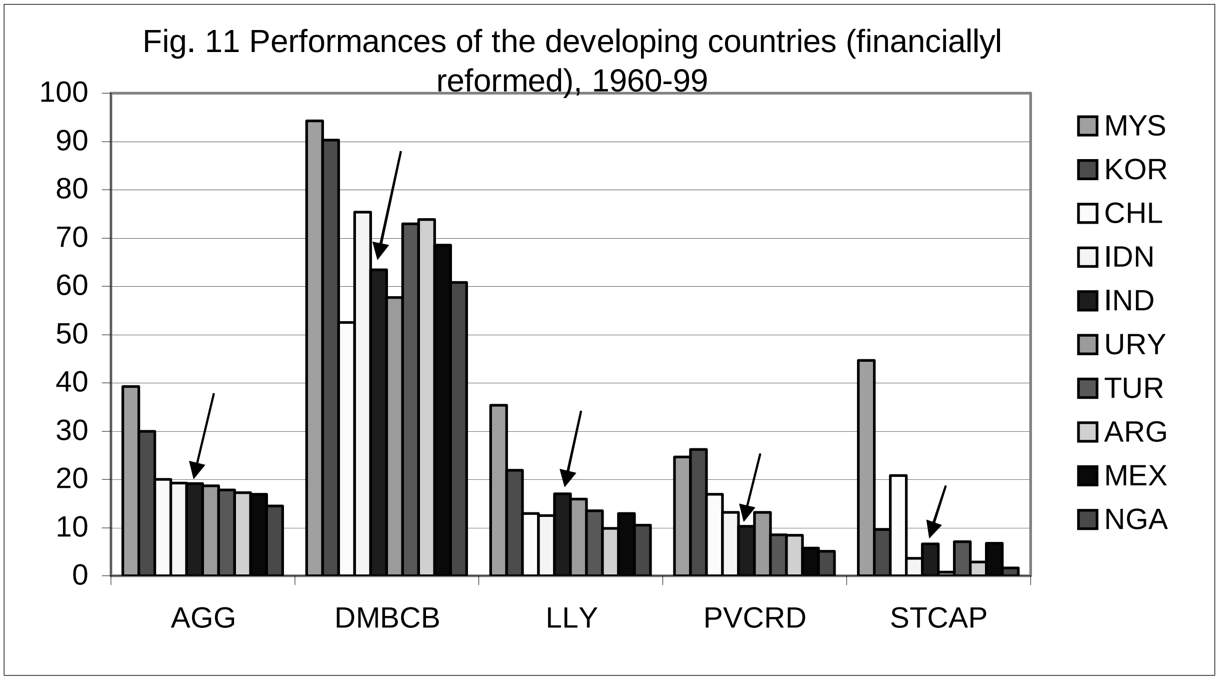
Liberalisation of the financial sector has been at the forefront of development policy as the influence of the groundbreaking studies by McKinnon (1973) and Shaw (1973) has spread. However the results for these countries have been mixed. According to Fanelli and Medhora (1998):

- i) although there is an increase in the credit supply after liberalisation, the result of financial deepening is rather modest;
- ii) there have been open financial crises a few years after financial liberalisation was adopted;
- iii) some interventionist countries like Korea have achieved impressive levels of financial deepening without significant liberalisation.

In view of these points, it is interesting to make a study of the Indian financial sector comparing Indian performance with other developing countries which have adopted financial liberalisation policy. In India, like in many other economies, there is a wide network of institutions, instruments and markets indicating widening and deepening of the Indian financial system and we have already noted some of the major developments in the financial sector.

Our selection of countries is based on studies of liberalisation policy in the available literature.[10] These countries include Malaysia (MYS), Korea (KOR), Chile (CHL), Indonesia (IDN), Uruguay (URY), Turkey (TUR), Argentina (ARG), Mexico (MEX) and Nigeria (NGA).

[10] See Bascom (1994), Nasution (1998), Sen and Vaidya (1997), Fanelli, Rozenwurcel, and Simpson (1998).



In Fig. 11, we compare the performance of these developing countries for the entire period. It is noticeable that Malaysia and Korea have stood out from the rest mainly because Malaysia does exceptionally well in stock market capitalisation while Korea shows good performances in all the variables in general and in private sector credit in particular. While most of the countries have performed well in commercial bank assets as a share of the total banking assets including that of the central bank, they are far below in the performance of stock market capitalisation compared with Malaysia and Chile. Since India is not doing well in LLY and PCVRD, we focus the comparison of these countries in these two measures only (Figures 12 and 13). One interesting result of this study is that over the years, Asian countries show an increase in both LLY and PCVRD while the rest of the South American and African countries show a mix of results. In comparison with these developing countries India's performance has been at a moderate level with better performances in the stock market in the later stage of the sample period and low performances in bank credit in the private sector. In the rest of this section, we will be further examining how these developing countries perform over the years in regard to liquid liabilities and private credit. We emphasize these variables because we feel that these are the variables where India's performance is not very encouraging by international standards.

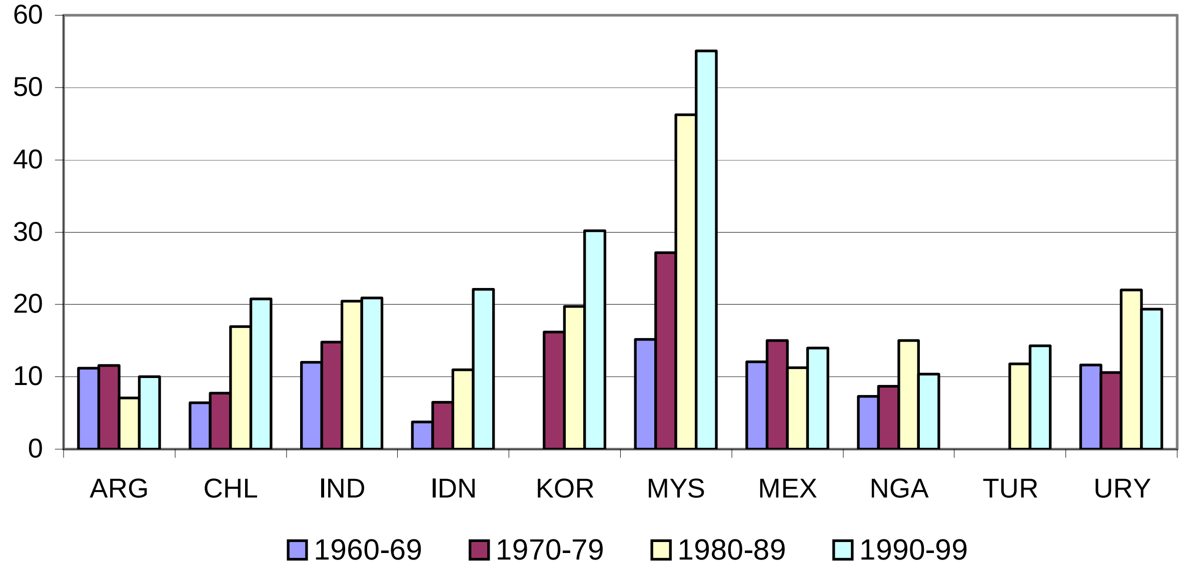


Fig. 12: Performances of the developing countries (financially reformed) in LLY

We compute the means of the scores in the variables for four time durations, (i) 1960-69, (ii) 1970-79, (iii) 1980-89 and (iv) 1990-99 and we see how the mean is growing over these four stages. While countries like Malaysia, Korea, and Indonesia have picked up speed in the financial sector development; countries like Argentina, Uruguay, and Turkey are sluggish and at times go downwards. But we know many of these East Asian countries have a fast growth path. By the same logic, India has also a good tract in the financial sector but not comparable to that of the East Asian countries. From this, we may conclude that among the developing countries, economies, which have done well in their financial sector, have accelerating growths in the real sector. This result is encouraging if we follow Goldsmith (1969) argument that the countries which tend to grow faster in the real sector are likely to perform better than other countries provided that they are in the growing phase.

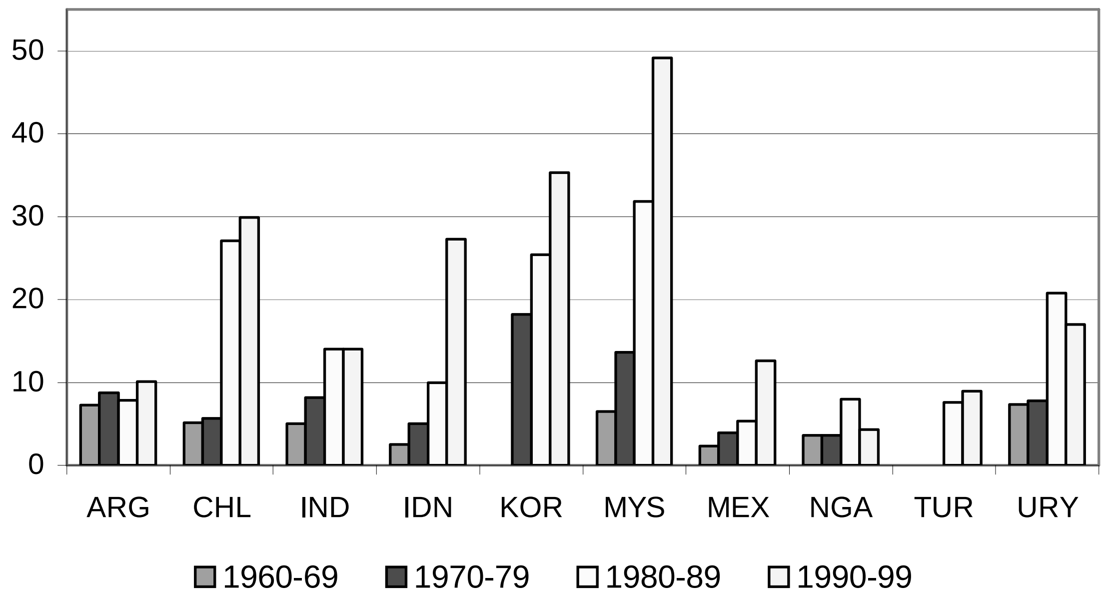


Fig. 6.9.3 Performances of the developing countries (financial reformed) in private credit

6.5 Low financial deepening

With many of the controls being released, credit allocation being liberalised, regulation and supervision improved and more competition being introduced, we would expect higher growth in the trend of the financial indicators. However, we notice that the growth of liquid liabilities is still slow, even slower than in the 1980s. This is also the same concern for bank credit to the private sector. This is possibly because the non-banking financial companies' deposits grew faster (except for the slow-down in the late nineties) than broad money even through the relatively tight monetary policy (RBI, 2003).[11] On the other hand despite the drop in the liquidity requirement, bank’s actual holdings of government debt remain nearly unaffected (at about 40% of bank assets during the period) without being much used by the economy. Commercial bank claims on the Government which only rose from six to eight per cent of GDP in the 1980s, rose to over 14% of GDP by 2000 (Lawrence, 2003). The increase in private credit comes mainly from the non-banking financial companies, the growth of the stock market and the access to

[11] The reduction of the cash reserve requirement was offset by relative reduction of the RBI holdings of the govt. debt. The growth of money base was largely due to an increase in the international reserves.

foreign markets. However the growth of these institutions slowed down by the end of the 1990s with some of them suffering from maturity mismatches and withdrawals. Similarly, stock market growth slowed towards the end of the 1990s. Overall, financial deepening has not been as great as might have been expected after financial liberalisation.

7. Conclusion

An influential school of thought argues for the development of the financial sector as a stimulant for the real growth of an economy. Motivated by this argument, we attempted to find the level of financial sector development of an economy relative to the best and the worst performing economies. In particular, we attempted to find the level of financial sector development of the Indian economy vis-à-vis other countries in the neighbouring region and other developing countries in Asia and Latin America that have undertaken financial liberalisation policies since the early 1970s. After studying the existing literature on proxies/indicators to represent financial sector development, we chose four indicators, which measure the activity and size of the banking sector, financial intermediation to the private sector and financial markets. Performance of a country in an indicator is presented on a scale of 0 - 100 with 0 and 100 being the scores of worst and best performing countries. Finally we find an indicator, called the index for financial sector development, which is a conglomerate of these four indicators based on their relationship with per capita GDP. We find that, in comparison with other developing countries, India's performance has been at a moderate level, with a better performance in the stock market indicator in the last decade. Though there is a sign of upward movement of the index of financial sector development in the 1990s, the period over which financial liberalisation policies were pursued, the performance has been moderate mainly due to the weak performance in bank credit to the private sector and liquid liabilities of the financial sector. Though the cross-country analysis shows that India's performance is consistent across all the measures of financial sector development, the figures are much below those for fast growing East Asian countries and high-income countries. Among the developing countries, economies that have shown good performances in the financial sector have accelerating growth in the real sector. In that sense, our analysis seems to agree with Goldsmith (1969) in that the countries which tend to grow faster in the real sector are likely to perform better than other countries provided that they are in the growing phase. Thus keeping in view the current trend of Indian performance in the financial sector, this paper calls for greater attention to the development of India's banking and financial institutions.

Bibliography

Ahluwalia, M.S.(1999), 'India's Economic Reforms: an Appraisal' in Sachs J.D. and N Bajpa and A Varshney (eds) *India in the Era of Economic Reforms*, New Delhi: Oxford University Press : 26-80.

Ahluwalia, M.S.(2002), 'Economic Reforms in India Since 1991: Has Gradualism Worked?', *Journal of Economic Perspectives*, 16,3: 67-88

Arun, T and JD Turner (2002), 'Financial Sector Reforms in Developing Countries: the India Experience', 428-445

Bascom, W.O. (1994) The Economics of Financial Reform in Developing Countries, London: Macmillan Press.

Beck T., R. Levine and N. Loayza (2000) 'Finance and the sources of growth', *Journal of Financial Economics* 58 (1-2): 261-300.

Fanelli JM and R. Medhora (ed.) (1998), *Financial Reform in Developing Countries*, Basingstoke: Macmillan

Fanelli, JM, G. Rozenwurcel, and L. Simpson (1998), 'Country Case Studies: Argentina', in Fanelli JM and R. Medhora (ed.) (1998), *Financial Reform in Developing Countries*, Basingstoke: Macmillan

Fry, M.J. (1978) 'Money and Capital or Financial Deepening in Economic Development?' *Journal of Money, Credit and Banking*, 10, 4: 464-75.

Goldsmith R. (1969) *Financial Structure and Development*. New Haven: Yale University Press

King, R.G. and R. Levine (1993) 'Finance and growth: Schumpeter might be right', *Quarterly Journal of Economics* 108 (3): 717-737.

Lawrence, P (2003) 'Fifty Years of Finance and Development: Does Causation Matter?' *Keele Economics Research Papers* 2002/07, Keele University Economics Department.

Levine, R. (1997) 'Financial development and economic growth: views and agenda', *Journal of Economic Literature* 35 (2): 688-726

Levine, R. and S. Zervos (1998), 'Stock Markets, Banks and Economic Growth', American Economic Review, 88(3), 537-58.

Levine, R, N Loayza and T Beck, (2000) "Financial Intermediation and Growth: Causality and Causes," *Journal of Monetary Economics,* 46,.

Lynch, D. (1996). "Measuring Financial Sector Development: A Study Of Selected Asia-Pacific Countries", *Developing Economies*, 34(1), 3-33.

McKibbin, WJ and K Singh (2003) ‘Issues in the Choice of Monetary Regime for India’ in Jha, R (ed) *Indian Economic Reforms*, Basingstoke: Palgrave, pp. 15-52

McKinnon, RI (1973) *Money and Capital In Economic Development.* Washington, DC: Brookings Institution.

Nasution , A (1998), Capital Inflows and Policy Responses: The Case of Indonesia in the 1990s in Griffith-Jones, S, M. F. Montes, and A Nasution (eds), *Short-Term Capital Flows and Economic Crises*, Oxford: Oxford University Press

RBI (2003), *Handbook of Statistics on the Indian Economy*, Mumbai: Reserve Bank of India.

Rousseau, P. L. and P. Wachtel, 2000 ‘Equity Markets and Growth: Cross-Country Evidence on Timing and Outcomes: 1980-1995’, *Journal of Banking and Finance*, 24, 1933-1957

Saggar, M (2003), ‘A Perspective on Saving, Investment and Macroeconomic Policies in India in the 1990s’ in Jha, R (ed) *Indian Economic Reforms*, Basingstoke: Palgrave, pp. 94-118

Sen, K and R.R.Vaidya (1997), *The Process of Financial Liberalization in India*, Delhi and Calcutta: Oxford University Press

Shaw, E.S. (1973) *Financial Deepening In Economic Development.* New York: Oxford University Press

UNDP(1989), *Human Development Report*, New York: UNDP

.