FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH: A CASE STUDY OF INDIA

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ABSTRACT

Introduction:

Finance is the lifeblood of all economic activities. Acting as an intermediary between the deficit and the surplus sectors of the economy, the financial sector provides financial services which range from mobilization and transfer of resources, risk pooling, diversification and management, provision of information for asset pricing, and the means to solve the problems arising from asymmetry of information. The Indian Financial System has undergone considerable improvements with prudential practices on part of the institutions with the adoption of BASEL norms by the banking sectors, financial sector reforms, strict regulations of the SEBI, and the integration of information technology with financial transactions. Through reforms aimed at the banking and non-banking financial sector, capital market and insurance sector, the regulatory authorities gradually infused increasing degree of autonomy and competition, allowing private and foreign sector participation in the financial system. These changes are expected to get reflected in increased levels of financial deepening and in the efficiency and stability of the system.

The concept of financial sector development has evolved over time with changing constructs as the system became more and more sophisticated. The World Bank has developed a conceptual framework of *4x2* dimensions of financial development based on which the Global Financial Development Database is prepared. It encompasses four aspects of financial development, namely, access, depth, efficiency and stability across two components of financial sector, viz., financial institutions and financial markets. The present study has drawn from this framework of indicators developed by the World Bank to investigate the extent of development in the Indian financial sector and its impact on economic growth of India.

Objectives of the Study:

The study aimed at two broad objectives. The first objective was to gauge the extent of financial development in India, encompassing all four dimensions, access, depth, efficiency and stability, and establish their intra and inter-linkages, if any. The second objective of the research

work was to undertake an empirical analysis of the finance-growth linkages. The broad objectives were bifurcated into several sub-objectives related to each dimension and their linkages for more focused analysis.

Research Methodology:

The research was undertaken after an extensive review of literature. The review was organized under different sections as per the themes of the studies, as shown below:

- Studies related to Financial Access
    - Country-comparison studies on financial access
    - Studies on financial access with reference to India
    - Studies on Financial Inclusion Index with reference to India
    - Studies related to state-wise comparison of financial inclusion in India
- Studies related to Financial Depth
    - Studies on country-comparisons of financial deepening
    - Single country studies on financial deepening
- Studies related to Financial Efficiency
    - Studies on financial efficiency with reference to foreign countries
    - Studies on financial efficiency with reference to India using DEA
    - Studies on financial Efficiency with reference to India using Financial Ratios
    - Studies on efficiency of financial markets with reference to India
- Studies related to Financial Stability
- Studies on interlinkages between the dimensions of financial development
- Studies on linkages between financial development and economic growth

The study employed data obtained from various publications of the RBI, Reports of IRDA, and World Bank Database. The study used multiple techniques and statistical tools to investigate the research questions. The study made use of simple statistical tools like graphical presentation, ratios, and growth rates to study the trend in the four dimensions. Three alternative indices of financial inclusion were constructed using Euclidean Distance and Inverse Euclidean Distance method. These were composite indices, namely, core inclusion index, intermediate inclusion index and advanced inclusion index to represent progressive indicators of financial access and usage. These composite indices were built on three dimensional indices of penetration, availability and usage.

The intra and interlinkages of the indicators of the four dimensions of financial development were examined by using correlation analyses along with the testing of their statistical significance. The research work also included construction of the index of financial development build on the pyramid structure of dimensional indices at the base and indices of financial institutions and financial markets at the secondary level. The technique of Principal Component Analysis was used to identify the weights to be assigned to the indicators in the construction of the indices. The SPSS was used for correlation and principal component analysis.

Structural equation model technique for confirmatory factor analysis of the latent variables contributing to financial sector development was also employed. The R Studio Statistical Software was used for this purpose. The last part of the analytical work included empirical study of the relationship between financial development and economic growth. All kinds of tests required for data reliability had been carried out where required. The study used the Eviews software to carry out the empirical work.

Major Findings:

Access and Depth

The major findings of the study were that there is remarkable growth in two aspects of financial development in India, financial access and depth. While banking sector, in particular, registered major improvements, insurance sector has also shown rapid growth. The depth of the financial markets has also grown substantially. Interestingly, there is a gradual structural change observed in the Indian financial sector in terms of a shift from bank based sector to market based sector, at least from size-element of deepening point of view. There is still scope for deepening of financial market activity in terms of trading, even as funds managed under mutual funds have doubled in 20 years. Corporate bond issuance and public debt market has grown at a compound annual growth rate of 44 and 21 percent, respectively.

Financial Inclusion Indices

With increased access and depth of the financial sector, there was substantial improvement in financial inclusion over the years. The Core Financial Inclusion Index (FII) based on banking services grew from as low as 16.26 percent to as high as 98.43 percent over the 30 years from 1990 to 2020. An important finding of the study was that even as availability of banking services led to increased number of accounts, the decline in usage to penetration ratio suggested that though bank accounts had been opened, they did not get converted into deposit mobilization or credit.

The 20-year Intermediate FII covering bank and non-bank institutions as well as financial markets showed a five-fold increase in the index value. The Advanced FII based on 10-year period from 2010 to 2020 grew at 24.66 percent on compound annual basis. The major contribution was that of electronic access to financial services with its penetration index growing at the highest CAGR of 30 percent compared to the penetration index of the Core FII and Intermediate FII.

Efficiency and Stability

With reference to financial efficiency, very insightful findings were obtained. While the Indian banking sector has gained moderately in terms of intermediation cost efficiency and operational efficiency, it was found to have performed poorly on the criteria of profit efficiency. In the case of financial market efficiency, it was found to have declined when measured in terms of stock turnover ratio. In relation to financial stability, interestingly, all the indicators had moderate improvement over the study period, except the provision coverage ratio which had a flat long run trend.

Intra and Inter-Dimensional Linkages

All indicators of access and depth had positive correlation among themselves. In the case of efficiency indicators, significant positive correlation was found between measures which were of the common nature of ‘lower the better’. Likewise, statistically significant negative correlation was found between measures whose desirable values were in opposite direction, that is, ‘lower the better’ for some and ‘higher the better’ for others. In the case of stability, not all indicators had the expected correlation.

The analysis of inter-dimensional linkages shows strong reinforcing correlation between access and depth dimensions. Indicators of intermediation cost efficiency and operational efficiency were found to be favourably correlated with all dimensions of access and depth. However, profit efficiency indicators bore negative correlation with access and depth dimensions. Some dimensions of stability associated favourably with access and depth. Only some dimensions of efficiency and stability had desirable associations with each other. These findings enabled a sharp understanding of the issues and challenges of the overall financial sector development.

With reference to financial market interlinkages, the findings suggested that as market capitalization outside of top ten companies increased, implying increased access to financial markets, it was not found to be associated with improved efficiency. But the same access measure was negatively associated with stock price volatility. This meant that more the spread of financial markets in favour of companies excluding top ten, augured well for stability of the market as the stock market became less concentrated. These findings are very important from the point of view of strong development of the financial sector.

Index of Financial Development

The findings related to the pyramid structure clearly showed that in the case of financial institutions, the primary indices of access and depth registered remarkable growth of 44 and 21 percent, respectively, on compound annual basis, followed by those of financial markets which grew at the rate of six to eight percent. However, in the case of both, the index of financial efficiency was found to be poor.

The secondary index of financial institutions was found to grow at a CAGR of nearly 22 percent, even as that of financial markets index increased more than four-fold at a CAGR of eight percent. The final tertiary index of financial development grew at a robust 24.59 CAGR which is commendable for the Indian economy, with the major contribution coming from financial institutions. In other words, banking and non-banking institutions still continued to play a more significant role in the Indian context compared to financial markets.

Model of Financial Sector Development

The Structural Equation Model technique was used for confirmatory factor analysis so as to ascertain what factors contribute more to overall sector development. For this purpose, models were constructed for all four dimensions, access, depth, efficiency and stability. The models of financial access and depth had statistically significant factor loading, and the models satisfied all goodness of fit criteria. However, the models of efficiency and stability had only a few statistically significant factor loading and their models were not found to satisfy goodness of fit criteria.

The SEM technique was used only for preliminary findings. Therefore, as the models of financial efficiency and stability were not found significant, am attempt was made to construct the model of financial sector development only based on the models of access and depth. The factor loading value of financial access was 5.15, which represents its contribution to financial sector development. The factor loading value of financial depth was 3.58, showing the contribution to financial sector development. In other words, access had higher contribution than depth towards financial sector development. Both were statistically significant.

Finance-Growth Relationship – Empirical Analysis

Regression analysis was used to explain the relationship between financial development and economic growth. All statistical tests for reliability of the analysis, such as stationarity, normality, homoscedasticity and absence of serial correlation were carried out. Two broad set of models were examined. One, with total factor productivity (TFP) as the dependent variable and two, with GDP at constant prices as the dependent variable.

While financial depth measured in terms of broad money ratio had negative effect on TFP, it was found to positively affect GDP. Both variables responded positively to bank deposits and small savings ratio. In the case of India, higher proportion of credit to the private commercial sector was not found to increase GDP or improve TFP. Stock market deepening had positive and significant effect on both the dependent variables, suggesting that risk diversification because of the financial sector had a positive effect on economic growth. Most of the results matched with those of many similarly studies in cross-country examination as well as country-specific studies.

The major contribution of the research work lies in that it investigated the potency of various indices constructed in the study as explanatory variables. Majority of the indices used had significant positive effect on economic growth. These include the FII, the IFID, IFMA, IFMD, IFM and then IFD. However, the magnitude of their beta coefficients are quite small given the way the indices are constructed.

Conclusion

The overall findings of the study suggested that there is substantial improvement in the financial sector of India. The major progress has been in the widening and deepening of the sector. A lot of progress can be attributed to increase in the use of internet based banking services which has got further boost due to increased stress on digitalization. Several indicators of the efficiency dimension also show mild improvement. However, much of the widening, deepening and efficiency gains have come about at the cost of profit efficiency. Likewise, all indicators used for stability dimension also show moderate level of improvement. In fact, it may be said that the growth of the Indian financial sector has come about along with maintaining stability of the system. However, much efforts are required to strengthen the stability indicators.

Notwithstanding the progress made so far, the Indian financial sector is still found to be wanting when compared with peer countries like China, Brazil, Russia and South Africa. Developed countries like Germany, Spain and Italy, who have a bank-based financial sector also provide a high benchmark for India to achieve.

As the findings reveal, much of the financial development in India is concentrated in financial institutions. There is huge scope for improvement with reference to financial markets, where deepening of activity aspect of the market is still very poor. Thus it may be concluded that while in the long run sense, lot of financial development has taken place in India, there is still a long way to go before the large majority of the population becomes part of more sophisticated services of the financial sector.