SOCIAL BANKING AND FINANCIAL SECTOR REFORM IN INDIA: 1991-92 TO 2011-12

Thesis submitted to Jawaharlal Nehru University in fulfillment of the requirements for the award of the degree of

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DECLARATION

I, Akhilesh Mishra, hereby declare that the thesis titled "**SOCIAL BANKING AND FINANCIAL SECTOR REFORM IN INDIA: 1991-92 TO 2011-12**" submitted by me in partial fulfillment for the award of the degree of Doctor of Philosophy of Jawaharlal Nehru University is my original work. The thesis has not been previously submitted in part or full for the award of any other degree of this university or any other university.

(Akhilesh Mishra)

CERTIFICATE

We recommend that this thesis be placed before the examiners for evaluation.

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DEDICATED TO

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LATE SRI KRISHNA MOHAN MISHRA

MY MOTHER -

SMT. KRISHNAVTI DEVI MISHRA

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Akhilesh Mishra

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Acronyms/ Abbreviations

AAGR	Average Annual Growth Rates
ABEP	Annual Branch Expansion Plan
ACD	Agriculture Credit Division
ADs	Agriculturally Developed State
ADWDRS	Agriculture Debt Waiver and Debt Relief Scheme
AEPS	Aadhaar Enabled Payment System
AGCDR	Agriculture Credit Depth Ratio
AIDIS	All India Debt and Investment Survey
AIRCRW	All India Rural Credit Review Committee
ANBC	Adjusted Net Bank Credit
APSBO	Average Population Served Per Bank Office
ARC	Agricultural Refinance Corporation
ARDC	Agriculture Refinance and Development Corporation
ATMs	Automated Teller Machines
BC	Business Correspondent
BCA	Business Correspondent Agents
BLCP	Block Level Credit Plan
BPI	Banking Penetration Index
BSR	Basis Statistical Returns
CA_PC	Credit Account Per Capita
CAGR	Compound Annual Growth Rates
CAS	Credit Authorization Scheme
CFS	Committee on Financial Sector Reforms
CMP	Common Minimum Programme
CRAFICARD	Committee to Review Arrangements of Institutional Credit for Agriculture and Rural Development
CRR	Cash Reserve Ratio
CSO	Central Statistical Organizations
CV	Coefficient of variations
DAPC	Deposit Account Per Capita
DCP	District Credit Plan
DEA	Data Envelopment Analysis
DFF	Direct Finance to Farmers
DFIs	Developmental Financial Institutions
EPWRF	Economic and Political Weekly Research Foundation
FAO	Food and Agriculture Organisation

FAS	Financial Access Survey
GAC_ACC	Gross Agriculture Credit Accounts
GBC_ACC	Gross Bank Credit Account
GBCAMNT	Gross Bank Credit Amount
GCC	General Credit Cards
GDP	Gross Domestic Product
GE	General Entropy
GOI	Government of India
GOI	Government of India
HBSIE	Handbook of Statistics on Indian Economy
HHI	Hirschman Herfindahl Index
ICAP	Intensive Cropping Agriculture Programme
ICT	Information and Communication Technology
IDBI	Industrial Development Bank of India Ltd
IFI	Index of Financial Inclusion
ILO	International Labour Organisation
IMF	International Monetary Fund
INDFA	Indirect Finance to Farmers Accounts
IQR	Inter Quartile Range
IRDB	Integrated Rural Development Programme
IS	Industrialised States
JLG	Joint Liability Group
KCC	Kissan Credit Card
KYC	Know Your Customers
LABS	Local Area Bank Scheme
LERMS	Liberalised Exchange Rate Management System
LMB	Land Mortgage Banks
MD	Mean Deviations
MFI	Microfinance institutions
MoA	Ministry of Agriculture
MoF	Ministry of Finance
MPC	Marginal Propensity to Consume
MUDRA	Micro Unit Development and Refinance Agency
NABARD	National Bank for Agriculture and Rural Development
NAS	National Account Statistics
NBFCs	Non-banking Finance Corporations
NCO	National classification of Occupations
NDA	National Democratic Alliance

NEFT	National Electronic Fund Transfers
NEP	New Economic Policy
NPA	Non-Performing Assets
NRLM	National Rural Livelihood Mission
NSDP	Net State Domestic Product
NSSO	National Sample Survey Organisation
PAIS	Personal Accident Insurance Scheme
PF	Provident Fund
PMJDY	Prime Minister Jan Dhan Yojna
PMMY	Pradhan Mantri MUDRA Yojana
PoS	Point of Sales
PSL	Priority Sector Lending
PSL	Priority Sector Lending
RACH	Ratio of Accounts to Holdings
RAMA	Ratio of Amount to Area Operated
RAR	Relative Access Ratio
RIDF	Rural Infrastructure Development Fund
RLTNSA	Ratio of Loan amount to Net Shown Area
RoI	Rate of Interest
RoR	Rate of Return
ROSCA	Rotating Savings and Credit Associations
RRBs	Regional Rural Banks
RTGS	Real Time Gross Settlement
SAA	Service Area Approach
SACP	Special Agricultural Credit Plans
SAP	Structural Adjustment Programme
SBA	Small Borrowal Account
SBI	State Bank of India
SCB	Scheduled Commercial Banks
SD	Standard Deviations
SF	Small Farmer
SFB	Small Finance Banks
SFIs	Specialized Financial Institutions
SHG	Self Help Group
SJGSY	Swarn Jayanti Gram Swarajya Yojna
SLBC	State Level Bankers Committee
SLR	Statutory Liquidity Ratio
SSA	Sub Service Area

UIDAI	Unique Identification Authority of India
UNDP	United Nation Development Programme
UPA	United Progressive Alliance
USB	Ultra Small Branches
USSD	Unstructured Supplementary Service Data
WDF	Watershed Development Fund
WPI	Wholesale Price Index

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Chapter 1

Introduction

This thesis aims at analysing the growth and distribution of banking sector and its linkages with the development process in India under various regulatory regimes, specifically focusing on social banking.

After the colonial rule was over, the largest challenge before stripped off nations was to bring about radical reform in every sphere of life. The developing nations took many initiatives in order to ensure growth and justice to their citizens. It was not an easy task as established institutions during the colonial rule were designed so as to benefit the rulers and to enable them to extract and transfer maximum surplus from the ruled nation (Kumar and Desai, 2008). In this process, common masses were denied their due share and were kept under abject poverty for centuries. Countries in the post-colonial phase were in urgent need of new institutions which could pave the way for achieving higher growth and minimizing existing inequalities. But governments found it hard to go for radical changes mainly because of the domestic political economy of these countries and also because they neither had time for building new institutions nor enough resources at their disposal. The feasible option left with several newly elected governments in these countries was to reorient the institutions inherited from the colonial rulers by enacting legislation that could fit into broader development strategy of the country. India was no exception to this.

The Indian government soon after independence chose a mixed economy[1] when the five year plans were initiated in 1951. The daunting task before the policy makers was to establish a balance between the profitability of private firms and aspiration of people at margins, using the same set of institutions and rules woven after independence. The broader goals and agenda of the economic policies were already set by the Constitution

[1] 'Mixed Economy is defined as an economic system that features characteristics of both capitalism and socialism. This system allows a level of private economic freedom in the use of capital, but also allows governments to interfere in economic activities in order to achieve social aims. This is based on the apprehension that total reliance on the market mechanism would result in excessive consumption by upper-income groups, along with relative under-investment in sectors essential to the development of the economy (Chakravarty, 1979).

adopted in 1950, and it was expected that the planners would design and execute policies to achieve those goals within the framework of the Constitution. Nonetheless, the choice of planning that led to the growth strategy was not inadvertent; instead it was the outcome of the discussion and deliberations that predate at least by two decades, the initiation of development planning in the country (Mishra, 2009; Lekhi, 2007). The balance of planning-led growth strategy was tilted in favour of the state because central responsibility was given to the elected governments functioning at diverse levels to execute policies in the spirit of the Constitution. Obviously, the Indian planning experiment was different from the centralized planning that was opted for in most of the socialist countries. It was also quite distinct from a completely capitalist economy. Indeed, the Planning Commission was given the task of formulating and reviewing plans so as to attain a balance between growth and equity. Chakravarty (1987) noted that "there was tolerance towards income inequality, provided it was not excessive and could be seen to result in a higher rate of growth than would be possible otherwise". Obviously, the task was difficult because resources needed for development were unequally distributed across diverse geographical locations, and there were huge demand-supply gaps across sectors, regions and people, which were both cause and outcome of multiple problems (Bhaduri, 2005). Attempting to resolve these issues through a balanced growth strategy had limited utility in the context of Indian economy (Chakravarty, 1987; Basu, 1979). Hence, the obvious choice was to rely on an "unbalanced growth" strategy, which effectively required that some equity considerations had to be compromised in order to achieve growth (Brahmananda, 1980; Chakravarty, 1987). Another challenge before Indian policymakers in the beginning was to choose the sectors and locations that had larger positive externalities. Obviously, creation of gainful employment across diverse regions and laying strong foundations for future development within the limits of available resources were the need of the hour.

While there were many alternative strategies for growth and development discussed in the literature, given the extent of dualism[2] in the economy with abundant labour and

[2] Dualism refers to the situation, when diverse economic and social structures, being different in structure, level of development, exists simultaneously J.H. Boeke (1953).

scarce capital, Lewisian[3] approaches were preferred over others at the start of the development planning process. Lewisian thought revolves around the development of an advanced industrial sector (modern sector). Such an analysis gave hope to developing nations, which could move from perceiving excess labour as a burden for the economy to viewing it as a potential source of capital formation and industrialization (under strict assumptions). However, the Lewisian growth strategy not only undermined the role of agriculture in the modernization of the economy but effectively gave inferior treatment to agriculture, as a 'residual sector' that essentially fed industrialization without expecting much from the advanced sector in the short run (Thornbeck, 1967). It was expected that inequality would rise in the short run but tend to decline in the long run (Kuznets, 1971).

Dualistic theory advised policy makers of developing countries to choose labour intensive industrial sectors having greater linkages with the local economy and advocated a role for state-owned intermediaries (Lewis, 1955; Cramb 2007). Unfortunately, the industrial sector chosen in this regard in India, aimed at creating growth centres across the backward locations in the country, could not succeed in creating growth inter-linkages with the local economy (Bhaduri, 2005). Excessive emphasis on the modern sector and negation of agriculture in the development process turned out to be counterproductive leading to widening of inequalities across the rural-urban, regional, sectoral, intra and inter size class (Basu, 1979). Obviously, financial institutions[4] developed on the lines of dualistic models also suffered from the same outcomes, despite allowing market based regulation for the financial sector that was dominated by banks. The conventional literature on development, however, put little emphasis on this.

[3] W.A. Lewis (1954) posited an "unlimited" supply of labour from the traditional sector willing to take up employment in the modern sector at low wage rates, just sufficient to cover foregone agricultural income and the costs of labour migration. This process of incorporation in the modern sector would continue until the two sectors were fully integrated, by which time the economy would be well on the way to developed status.

[4] Financial institutions are the establishment that focuses on dealing with financial transactions; such as investments, loans and deposits. Traditionally it comprises of organizations such as banks, trust companies, insurance companies and investment dealers. Source: http://www.investopedia.com/terms/financialinstitution.asp

1.1 Banking Sector and economic development: The theoretical debate

There seems to be hardly any dispute regarding the role of a strong financial sector in determining economic development and poverty reduction in countries across the world. Schumpeter (1911) noted that "financial intermediation through the banking system plays a pivotal role in economic development by affecting the allocation of savings, improving productivity, and allowing technical change in the economy". Later many economists empirically tested the contribution of banking to economic development and concluded that 'financial sector is one of the primary engines of economic growth' (Arestis, 2005). Banking, a key constituent of the financial system, is categorized under 'service sector of the economy'. Banks unambiguously play an important role in the provisioning of financial intermediation[5] services, thereby help in determining the level of capital formation, savings, and growth. The growth of output and employment in developing countries requires expanding capital stock; and the quantity and quality of capital stock is determined by channelizing savings into investment (Harrod, 1934). Low investment levels in developing countries are caused by low income, poor savings and also due to weak mechanism of the channelization of savings. Besides a host of other factors[6], the level and growth of savings are predominantly determined by both the level and growth of income, consumption, interest rates on deposits, and also the availability of banking infrastructure in the country. At the macro level, the relationship between investment and growth depends on the structure of financial system and the environment in which it operates (Fry, 1987; Pandit, 1991; Arestis, 2005; Patnaik, 2008).

The availability of credit is an important factor in determining consumption and production in the economy. There is plethora of literature which finds that the availability of credit both in appropriate quantity and of the right quality (at affordable and business friendly terms) has far reaching implications for the determination and sustainability of

[5] The 'intermediation functions' of the bank are performed through four transformation mechanisms: a) Liability asset transformation involves accepting deposits as a liability and converting them into assets such as loans; b) Size transformation, i.e., providing large loans on the basis of numerous small deposits; c) Maturity transformation i.e., offering savers alternative forms of deposits according to their liability preferences while providing borrowers with loans of desired maturities; and 4) Risk transformation, i.e., distributing risk through diversification which substantially reduces the risk for savers that would prevail while lending directly in the absence of financial intermediation (Rangarajan C 1996)

[6] Such as monetary policy, level of education, pattern in distribution of economic resources across the stakeholders, fiscal policy and tax structure etc.,

growth of an economy (Arestis, 2005). Sharp differences exist amongst researchers on the delivery mechanism of credit and other financial services to the market which is imperfect. Society is fragmented not only on the basis of possessions of assets and income but also segregated on the basis of social, cultural and political characteristics and geographical locations. Some argue in favour of strong state intervention while others argue for the liberation of financial institutions from state control for better inclusion and growth. This debate is summarized in Chapter 2.

The rural financial markets across developing countries are remarkably different from one another, and also from the structure of financial markets of developed nations. There is unanimity that despite differences in degree, rural money markets are largely characterized as segmented, fragmented and dualistic. Segmentation refers to subdividing a market along some commonality, similarity, or kinship; fragmentation entails lack of integration; and dualism points towards the existence and operation of parallel systems of modern and traditional, or organized and unorganized markets (Ho, 2007; Rangarajan, 1996; Banerjee, 2001; Ray, 2004). While financial dualism[7] is a global reality, its intensity and presence in developing countries is higher than that in developed counterparts owing to numerous reasons. These include vertical and horizontal inequalities in wealth and income distribution, economic stagnation and slow pace of socio-economic transformation, occupational change at slow pace, capital intensive industrialization, uneven distribution of productive resources and institutions, etc. The outcome of this dualism is that two sets of institutions operate for isolated economic territories within the same political boundary in the country (Myint, 1985).

The rural sector accommodates a significantly large proportion of population often with weak linkages with the modern sector of economy (Myint, 1985; Banerjee, 2011). In the absence of alternatives, the majority of the rural labour force has had to derive its livelihood from primitive agrarian and agro-based non-farm activities in unorganized

[7] "Dualism represents to phenomenon of an incomplete state of development in the organizational framework of the economic system, affecting not only the labour market, but, also the markets for goods and credit, administrative, and fiscal machinery of government. An appropriate policy response to dualism is to find out whether the existing underdeveloped economic framework can be improved. These are matter of comparing the cost and benefit of investment in social overhead capital, including the 'invisible' infrastructure of the marketing, credit and information network" (Myint, 1985; 26).

activities. By contrast, the modern sector, which has a largely urbane base and employs only a small share of the labour force. The modern sector also enjoys the facility of formal finance whereas the traditional sector is dependent on informal financial markets. Over the years, the contribution of urban activities in total national value added has increased substantially, but they were unable to absorb the surplus labour of the countryside. This led to significant increase in inequality between rural and non-rural economies (ILO, 2010; Myint, 1985; Cramb, 2007). Such compartmentalization based on location, and diverse growth across sectors within each location led to increases in the rural urban divide, and allowed for parallel systems of production relations to persist. For the rural economy, this led to a vicious cycle of low growth as follows: low income, low living standards, low access to modern institutions, pre-capitalist mode of production, low productivity, low income, and so on. By contrast, in the modern sector there has been a virtuous cycle: access to modern financial institutions, availability of cheap capital on liberal terms, investment, capital formation, technological progress, enhanced productivity, higher factor income and demand for the sophisticated products, and so on. The situation worsens when banks mobilize savings from rural areas and use them to finance activities in the urban areas, which makes rural areas further credit-deficient. There is a plethora of literature and empirical evidence that suggests that unregulated banking has accentuated disparities across regions (Basu, 1979). Further, analysis of poverty reveals that lack of access to capital has been one of the major reasons for its persistence, especially in rural areas of the country (Arestis, 2005, 2007). Timely availability of adequate loans at affordable terms to poor households helps in reducing the high incidence of poverty, and also it contributes to the well-being of people, especially in the lower rugs of rural society (Ghosh, 2004; Chavan, 2005; Bagchi, 2005; Swaminathan and Ramchandran, 2005, 2007).

1.2 An overview of financial structure in India

As in many countries across the world, the Indian financial market operates through two types of institutions: formal or organized, and informal or unorganized. The system of formal finance operates under the rules and regulations laydown by the central bank and other statutory authorities established as per the laws of the country. These include: Government at various levels, Co-operatives, Commercial Banks, Developmental Financial Institutions (DFIs), Non-banking Finance Corporations (NBFCs) and Specialized Financial Institutions (SFIs), Provident Funds and Insurance Companies, etc. As in the majority of developing nations, commercial banks have been the dominant constituent of formal financial institutions in India. Obviously, commercial banks also differ with respect to size (small, medium and large), pattern of ownership (public, private and foreign), area of functioning (all India, regional, and local), and regulations (State, Centre, and RBI).

As per RBI classifications, commercial banks are divided into two broad heads, namely the Scheduled Commercial Banks (SCB) and Non-scheduled Commercial Banks. At present, the Scheduled Commercial Banks (henceforth 'SCBs') dominate in terms of branches, bank business (credit, deposits, assets, reserves etc.,), but the situation was different at the time of independence, when non-scheduled commercial banks dominated in the aforesaid parameters[8]. Furthermore, the SCBs[9] operating in the country are further classified into sub categories. As per ownerships patterns, they are divided into three sub–heads, namely Public Sector Banks, Private Sector Banks (Old and New Private Banks), and Foreign Banks. After the nationalisation of banks in 1969, public sector[10] banks became the dominant constituents of the Indian banking sector. The Indian Public Sector banks can be divided into three categories, namely SBI and its associates,

[8] In 1951, out of total 566 banks in country, the number of schedule and non-schedule commercial banks were 92 and 474 respectively (RBI 1979)

[9] Banks have been grouped as: (i) State Bank of India and its associates; (ii) Nationalised banks; (iii) Foreign banks, (iv)Regional rural banks and (v) Private Sector banks. Since, September 2004, The Industrial Development Bank of India Ltd (IDBI), was incorporated IDBI as a 'scheduled bank' under the RBI Act, 1934. The Indian private sector banks' are classified into groups; Indian old private banks and new private sector banks. Prior to 2008 in BSR they were referred as 'Other Scheduled Commercial Banks'.

[10] China has highest government ownership in banks while India ranks second among the large economies. India is one of economies where financial intermediaries have been used by the government to allocate and direct the financial resources to public and private sectors (Hawkins and Mihaljek 2001; Patel 2004)

nationalized banks, and Regional Rural Banks (Henceforth RRBs). Similarly, the private sector banks are also classified into old and new private banks.

Contrary to formal finance, informal[11] financial institutions consist of heterogeneous groups including rotating savings and credit associations (ROSCA), traders, merchants, contractors, commission agents, local moneylenders, relatives and friends (NSSO 70th Rounds). These institutions operate in autonomous fashion with their own norms, rules and disciplines. However, in principle these two sets of institutions are not entirely connected, but their loose links have never been ruled out in studies, specifically in the countryside (Rawal, 2005; Chavan, 2005; GOI, 2007). Despite being the principal source of finance for large sections of rural[12] societies, these institutions have been struggling for social and political recognition and legal sanctity across countries (Yaron et al., 1997).

The history of moneylending as a 'profession' in India predates the 'Vedic Period'. The players involved in moneylending and financing of agriculture and rural activities later became an essential part of the rural social system. They still survive and have grown because they evolved according to the challenges and dynamics of rural production relations. Over the years, they also adjusted to the caste hierarchy of the Indian social system. But owing to notorious ways of functioning and exploitative mechanisms in debt recovery, especially from the lower social and economic strata, they have been blamed

[11] Yaron et.al., 1997 summarised the major characteristics of rural financial market into five major heads; 1:) loans are often advanced on the basis of oral agreements rather than written contracts with little or no collateral, making default a seemingly attractive option 2:) credit market is usually highly segmented, marked by long-term exclusive relationships and repeat lending. 3:) on an average interest rates are much higher than interest charged by the bank, and significant dispersion were found in the resenting apparent arbitrage opportunities; 4:) frequent inter-linkage with other markets, such as land, labor or crop and 5:) significant credit rationing, whereby borrowers are unable to borrow all they want, or some loan applicants are unable to borrow at all. They did not find much difference in the lending pattern in formal credit institution; however, study reported remarkable differences in lending pattern of informal sources across the nations.

[12] Census data presented for rural and urban areas separately. Obviously, basic unit for rural areas is the revenue village. The revenue village may comprise several hamlets but the entire village is treated as one unit. In rural areas, agriculture is the chief source of livelihood along with fishing, cottage industries, pottery etc. The National Sample Survey Organisation (NSSO) defines 'rural' as ; (i) an area with a population density of up to 400 per square kilometer; (ii) minimum 75% of male working population involved in agriculture and allied activities. On the contrary, urban areas are defined as; (a) all places with a municipal corporation, municipal board, cantonment board or notified town area etc; (b) All other places which satisfy the following criteria: (i) A minimum population of 5,000; (ii) 75% of the male working population engaged in non-agricultural and allied activity; and (iii) A density of population of at least 400 per sq. km. (or 1,000 per sq. mile) (NSSO 1982).

for maintenance and perpetuation of semi-feudal production relations in society (Rawal, 2005).

Many studies report that these players enjoyed monopoly and were successful in creating a firewall in the caste-driven Indian rural societies. Despite unsuccessful experiments, cooperative institutions were assigned a lead role in the formalization of rural financial market and commercial banks were given a supportive role after Independence. Certainly, cooperatives in their early manifestations succeeded in posing some challenge to the moneylender, but they could not create much dent for very long. Over the years, non-institutional players succeeded in capturing the cooperatives and made them non-functional and ineffective (RBI, 1954; Sen, 2005; Bell, 1993). Further, the cooperative institutions in the country suffered from many inadequacies, they could neither pose a challenge to informal players, nor had they the capacity to meet the financing needs of green revolution in the country. Thus, the government was bound to change its strategy. The multiagency approach for rural areas was continued, but in the lead role, cooperative and private sector banks were replaced by public sector banks, especially after bank nationalisation in 1969. The commercial banks were promoted in the rural areas for the purpose of making banking facilities available to the hitherto excluded sections of society, to reduce or eliminate the monopoly power of informal players, and to devise the mechanisms and institutions that could stimulate the process of formalization and modernization of the rural economy in general and supply chains in particular (RBI, 2007; Bagchi, 2005). The period during 1969 to 1991 is popularly known as the Social Banking Period.

The banking sector of the country entered into another distinct phase when the government accepted most of the recommendations of the Committee on Financial Sector Reform (CFS) in 1991. The CFS recommendations were largely influenced by the "efficient market hypothesis" promulgated by neoliberal economists, which contrasted with the practices of social banking. The government and the RBI moderated the on-going practice of banking sector reforms and brought back some features of social banking within the market driven instruments. The banks extensively started using information and communication technology and reduced the human interface between

banks and customers for better outreach and seamless delivery of banking services in a transparent manner at reduced costs (the instruments are discussed in chapter 3).

The success and failure of banking services across various regulatory regimes have been a matter of intense debate. The neoliberals claim that the application of instruments suggested by them led to improvement in productivity and efficiency indicators and created a competitive situation in the country; while others argue that such instruments were not only responsible for financial exclusion but widened the disparities in access to and use of banking services. Certainly, supporters and opponents of financial liberalization both take extreme positions. The success and failure of policy instruments are subjective assessments that depend on the parameters used. The present study analyses the development of commercial banking from the perspective of social banking[13] across various regulatory regimes.

It is evident that informality persists in financial markets in rural India. The recent AIDIS conducted by the NSSO[14] revealed that seven decades after Independence, money lenders (professional and agriculture moneylenders) accounted for about 30% and 35% of the debt of cultivator and non-cultivator households respectively in rural areas[15]. Further, vast inter-state and size class variations were also reported in the NSSO, and corroborated by many micro level field studies (Rawal 2005, and NSSO 2014). Although many states in India have passed laws against usury and the use of physical coercion in recovery of loans, field studies not only report the continuance of illegitimate actions and physical

[13] 'Social Banking' describes the provision of banking and financial services that consequently pursue, as their main objective, a positive contribution to the potential of all human beings to develop, today and in the future. Social Banking precisely focuses on satisfying the needs of the real economy in the society, in order to ensure the social, cultural, ecological and economic sustainability. Dr Roland Benediktar (2011), defines social banking as 'banking with a conscience' that focuses on investing in community, providing opportunities for the disadvantaged, and supporting social, environmental and ethical agenda. Rather than just concentrating on traditional bottom line i.e. profits, bank emphasizes on achieving triple bottom line of profit, people and planet.

[14] As per data of 70th Round of the NSSO, the share of institutional source in outstanding debt amounts of the cultivators and non-cultivator households was 64% and 52.2% in 2011-12. Notably, the contribution of banks has marginally improved for both households but it was lower than the level attained prior to banking sector reforms.

[15] Rural households are generally classified into two types; cultivator and non-cultivator households: The Cultivator households are defined as the, rural households operating at least 0.002 hectare of land during the 365 days preceding the date of survey. The non-cultivator households are those rural households operating no land or land less than 0.002 hectare includes three categories namely agricultural labour, artisan and other households according to the principal household occupation as per the National classification of Occupations (NCO), 1968. (Source: NSSO, 70th Round 2014)

coercion against borrowers at the bottom of the pyramid of rural societies, but also the increase of such practices in areas where people do not have access to commercial banks (Bell 1993; Rawal 2005; Ramchandran and Swaminathan 2004; Ramakumar 2005; Chavan 2005).

1.3 Debates on financial liberalizations

In the early seventies, there was near consensus among economists and policy makers that a vibrant financial system is a precondition for the development of the modern sector (IMF 2012). But there was wide divergence of opinion on issues like the types of regulations best suited for financial markets having very different structures than those assumed by orthodox neoclassical theorists. Another issue of debate, which has not been settled so far, is about the extent of state intervention in the provisioning of financial services to credit-deficient regions and to people who require credit for production as well as consumption smoothing, but lack collateral as per the requirements of commercial banks. Some analysts emphasized the need for greater intervention by states, whereas others proposed the diametrically opposite view. Patrick (1966) added the supply leading vs. demand following dimension to the debate. The supply leading view was supported by Keynes and his followers, while the latter view was supported by neoclassical economists. Opponents of state intervention in the financial market drew their inspiration from neoclassical theory, particularly the "Efficient Markets Hypothesis" and argued for relieving financial markets from the control of the state. Early expressions of this view are to be found in McKinnon (1973) and Shaw (1973), who criticized state intervention in the form of interest rate ceilings, high reserve requirements, quantitative restrictions in credit allocation, directed credit programmes. These instruments were the basic tools of development planning and were motivated to achieve social banking in developing countries. The neoliberals termed these as examples of 'financial repression' and blamed them for poor performance of investment, slow growth and economic exclusion in developing countries. To overcome such repression, they suggested financial liberalization. Financial liberalization in simplest form relies on market-driven dynamic regulations and demand following approach for the financial sector. The premise is that financial firms are not structurally different from the firms producing goods; hence, they

must be given enough autonomy in operations and decision making to ensure higher levels of productivity and efficiency. The argument is also that market driven regulations are time and space neutral and therefore universally applicable, irrespective of the context, structure, and level of development of the economy.

High growth during the sixties and seventies in capitalist economies, and in East Asian economies in the eighties was the outcome of many interrelated factors and coordinated policies related to real and financial sectors. Nevertheless, it was attributed by neoliberal economists to their smart financial management. During this period, the world grossly underestimated the role played by physical capital and policies related to the real sector. Countries across the world experienced massive financial innovations which helped in widening and deepening of the financial sector; however, the benefit of these innovations was confined to certain boundaries, activities and people. Evidence suggests that large proportions of the population were not actively engaged in such activities and remained dependent on centuries' old unorganized money markets (UNDP 2006).

While it was recognised that vast financial exclusion could coexist with financial integration and rapid financial development, the proponents of financial liberalization thesis succeeded in convincing the policymakers across developing countries that this coexistence was a short run phenomenon that happened in the process of restructuring of the financial market but would wither away in the long run. They based their argument on a package popularly known as the Washington Consensus[16] which later became the guiding principle of comprehensive reform programmes across developing countries, including policies for financial markets. It was also a part of the 'structural adjustment programmes' of the Bretton Wood institutions which were intended to put developing countries onto more stable and higher long term growth paths (Ghosh 2008; World Bank, 1989; Bella, 1964; McKinnon, 1973; Shaw, 1973, and Levine and King, 1993). By contrast, a large amount of literature warned policy makers of the false promises of

[16] The term 'Washington Consensus' was coined in 1989 by English economist John Williamson refer to a set of 10 relatively specific economic policy prescriptions that he considered constituted the "standard" reform package promoted for crisis-wracked developing countries by Washington, D.C.–based institutions such as the International Monetary Fund (IMF), World Bank, and the US Treasury Department. The prescriptions encompassed policies in such areas as macroeconomic stabilization, economic opening with respect to both trade and investment, and the expansion of market forces within the domestic economy (Williamson 2004)

financial liberalization and highlighted inadequacies in the argument of the liberals both theoretically as well as empirically. However, policy makers under the influence of the Bretton Woods institutions did not heed the alternative voices seriously before the occurrence of a series of financial crises across the developing world, including the South East Asian Crisis of 1997 (Mehrotra et al., 2009; Patnaik P., 2008, 2005; Chandrasekhar C.P. and Roy S.K., 2005; Ghosh J., 2008, Arestis 2004, 2005; Minsky 2000).

1.4 Research Objective, Questions and Hypotheses

The focus of this study is on social banking. The objectives of the study are:

1. To analyse the structure and growth of the banking sector in India and consider whether it was able to fulfil its social obligations.
2. To study the trends of banking infrastructure and business in India for the period of study.
3. To study the trends in the delivery of SCBs credit for the agriculture sector.
4. To study the trend of agriculture credit by SCBs to different types of farmers.
5. To analyse the disparities within and between states, across sectors and size class over the period in rural areas

In this context, the following questions are explored:

1. Was the banking regulations announced and implemented from time to time growth driven or development driven?
2. Was the spread of the banking infrastructure able to reduce disparity between rural and non-rural areas?
3. Was there a significant change in the delivery of credit to the rural economy by SCBs between the pre and post reform periods?
4. Was the spread of banking infrastructure in rural areas able to replace informal local money lenders?
5. Did disparities between rural and non-rural pertaining to access and use of banking reduce or increase over this period and across different regulatory regimes?

6. Were there significant differences between the states as far as social banking is concerned?
7. What were the changes in agriculture credit during the period studied?
8. What happened to inter and intra farm size class disparities in rural areas in terms of bank credit?

The study will examine and test the following hypotheses:

1. There has been no significant change in the banking infrastructure in country.
2. The banking sector reform had an urban bias.
3. There has been interstate convergence in banking infrastructure in both rural and non-rural areas.
4. The growth of banking infrastructure and business was at a more or less uniform rate over the entire period.
5. The banking sector fulfilled its social obligations in rural areas by focusing equitably on all farmers irrespective of the size class of holding.

1.5 Structure of Chapters

The study has been divided into six chapters including this introductory chapter. The second chapter contains a survey of literature on the theoretical debate on the role of finance and growth, the role of State in financial markets, structure and linkages between formal and informal finance and the role of banks in promoting growth and equality in developing and developed countries. The third chapter provides an overview of money and banking policies in India. This chapter critically analyses the recommendations of various committees and commissions with regard to institutional development, branch policy, allocation of credit and policies related to various aspects of social banking, especially financial inclusion and rural banking.

Chapter 4 includes analysis of trends in banking infrastructure such as availability (in terms of branches and manpower), penetration and use of banking services through various regulatory regimes at national, regional and state levels. This chapter includes an assessment of the trends in vertical and horizontal disparities over the different phases of social banking, intense banking reforms and subsequent periods..

Chapter 5 looks at trends in the contribution of SCBs to the financing of agriculture. The agriculture loan data have been analysed both in absolute terms as well as in relation to agricultural population/households, number of operational holdings, operated area and value added from agriculture.

Chapter 6 includes an analysis of institutional finance to marginal and small farmers at national and state levels. It considers vertical and horizontal disparities in access to bank credit across the size class of farmers in different states and over various regulatory regimes.

The entire discussion is summarized with suggested policy options in Chapter 7.

1.6 Data sources and methodology

Data on banking variables have been taken from the 'Basis Statistical Returns of the Schedule Commercial Banks in India (Also known as 'Banking Statistics')', published by the Reserve Bank of India uninterrupted since 1971-72. This study uses data related to banking infrastructure (bank branches, employees), banking business (number and amount of credit and deposit accounts) by size, population groups, occupation categories, region and states. The study uses three layers of data, namely national, regional and state levels. National trends in variable have been investigated from 1969 to 2011. Regional and interstate variables have been analysed from 1971-72 to 2011-12.

The study covers three layers of data analysis. The first layer is that of trends in rural and non-rural variables at various regulatory regimes at national level for the period 1969 to 2011. The entire period has been divided into two broad regimes of social banking (1969-91) and the regime of banking reforms (1992-11). Further, these regimes have been divided into four sub periods as follows: first the period from nationalisation to 1979-80; second, the period from 1980-81 to 1991-92; the third from 1992-93 to 2004-05; and the fourth from 2004-05 to 2011-12. The second layer of analysis covers the regional data over the same sub periods. The third layer covers the data for major Indian states.

In view of changes in the definitions of variables, appropriate adjustment has been done in order to make them analogous and comparable. For instance, BSR data on various

indicators were reported biannually (twice in a year June and December) from 1972 to 1990, whereas, after 1991 most of the indicators refer to end of the financial year. The data related to branch and business of the SCB according to population groups have been subjected to periodic revisions. The population group includes rural, semi-urban, urban and metropolitan and they are defined as follows:

(a) Rural group – all centres with population of less than ten thousand.
(b) Semi-urban group – centres with population of 10,000 and above but less than 1 lakh.
(c) Urban group – centres with population of 1 lakh and above but less than 10 lakhs.
(d) Metropolitan group – centres of population of 10 lakhs and more.

The BSR data until 1984 are based on Census 1971, from 1985 to 1995 on Census 1981, from 1999 to 2004 on Census 1991, and 2005 onwards on basis of the Census 2001. The Small Borrowal Account[17] (SBA) credit limits have also been revised periodically on the basis of loan size. For instance, SBA includes all those loans accounts having credit limit less than Rs 10,000 from 1972 to 1984; then it was raised to Rs 25,000 between 1985 and 1998; 1998 onwards this limit has further been raised up to Rs 200,000 for all scheduled commercial banks except Regional Rural Banks (RRB). For RRB this limit was revised in year 2000.

Besides banking variables, the study also uses the data on the gross value added by industrial origin both at current and constant prices. For this, the Net State Domestic Product (NSDP) by industrial origin has been taken from the National Account Statistics (NAS) of the Central Statistical Organizations (CSO), and also from the publications of the concerned states government. Since NSDP data of the CSO and other publication belong to different series (1970-71, 1980-81, 1993-94, 1999-00, and 2004-04 series) therefore, the splicing method has been used to make them analogous for the purpose of assessing the trends with respect to time and space. Further, nominal data have been transformed by using the appropriate price deflator (acknowledged at the place where

[17] Having an account with banks enables every household to gain access to banking and credit facilities. This also enable them to come out of the grip of moneylenders, manage to keep away from financial crises caused by emergent needs, and most importantly, benefit from a range of financial products (GOI : 2016).

they have been used) as per the requirements of the study. The data have also been normalized through population and area.

The banking infrastructure indicator includes composition of the offices/branches[18], employees, accounts (credit and deposit) of the SCB across the population centres, region and states. Following the regional classification mentioned in BSR, the country has been divided into six regions,[19] namely Central, Eastern, North-eastern, North, Western and Southern regions. The time line of the data points for the regions and state is different from the national level. Moreover, the population centre-based analysis of the banking infrastructure has been done for the period of banking sector reform only; i.e. it includes trend analysis of the distribution of banking infrastructure and business of 20 major states [20] from 1991-92 to 2011-12. The study also analyzes trends in variables such as the average population served per bank office (APSBO), employee per branch, bank business per branch (credit plus deposit accounts and amount), and business per employee . In order to get a composite picture, the trend in the Index of Financial Inclusion (IFI) has also been analyzed for the aforesaid three regions and layers. The study also uses data from the Currency and Finance Report and the Report on Trend and Progress of Banking in India published by the RBI. The population and area data have been taken from various Census Reports published by Ministry of Home Affairs (GOI), and Office of the Registrar General & Census Commissioner, India.

In Chapter 5, agriculture loan accounts have been normalized by the number of operational holding while loan amounts have been normalized by operated areas and net

[18] As per Branch authorization policy "branch" would include all branches, i.e., full-fledged branches, specialized branches, satellite offices, mobile branches, extension counters, off-site ATMs (Automated Teller Machines), administrative offices, controlling offices, service branches (back office or processing centres), etc. RBI 2013

[19] **NOTHERN REGION** includes; Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Chandigarh, Delhi; **NORTH-EASTERN REGION** includes Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland , Tripura **EASTERN REGION** includes Bihar, Jharkhand, Odisha, Sikkim, West Bengal, Andaman & Nicobar Islands; **CENTRAL REGION** includes Chhattisgarh, Madhya Pradesh, Uttar Pradesh, Uttarakhand, **WESTERN REGION**: includes Goa, Gujarat, Maharashtra, Dadra & Nagar Haveli , Daman & Diu **SOUTHERN REGION** includes Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Lakshadweep, Pondicherry.

[20] Major Indian states includes 20 states such as Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Assam, Bihar, Jharkhand, Odessa, West Bengal, Chhattisgarh, Madhya Pradesh, Uttar Pradesh, Uttarakhand, Gujarat, Maharashtra Andhra Pradesh, Karnataka, Kerala, Tamilnadu . These states cover about 90% of the bank businesses, more than 90% of the banking infrastructures, and 90% of the value added and population of the country.

shown area. Chapter 6 considers the access and use of bank credit across the size class of farmers in states from 1980-81 to 2011-12. While data on agriculture credit by size class of holding[21] are available for the national level from 1980-81 to 2010-11, such data are not reported for the states in the Handbook of Banking Statistics in Indian Economy (HBSIE). Hence, indices of outreach and credit depth have been constructed on the basis of data obtained from input surveys and Agriculture Census. Input surveys and Agriculture Census, both conducted quinquennially by the Ministry of Agriculture. The change in land holding has further been cross verified from sources such as the Situation Assessment of Farmers, Some Aspects of Agriculture Land Holding, All India Debt and Investment Surveys of the National Sample Survey Organisation (NSSO). The data of various inputs surveys, such as number of operational holdings, gross cropped area, net sown area and number of holdings using bank credit for agriculture purpose by different size class of farmers, have been used to assess the change in access (outreach) and use indicators for the period 1986-87 to 2011-12. Since input surveys were not conducted in many states, hence only those states that had continuous series have been included. The attributes of land holding and holdings having access to bank loan also differ owing to divergent methods of data collection, period of the survey, compilations and reporting methods. Thus, rather than using absolute values, the study used ratios. In order to test the robustness of the results, the findings have been validated through other studies and data obtained from alternative sources such as NABARD and publications of the Ministry of Agriculture.

Given the multitude of parameters, a variety of statistical techniques have been used to arrive at any conclusion. For instance, relative change has been measured by the ratio analysis which has been reaffirmed through measures of central tendency and dispersions around the trends in ratio. Besides ratio value, long term trends have been smoothened through the moving average and polynomial trends.

[21] SCB advances according to size class of farmers (outstanding and disbursed accounts and amount) are available at national level in HBSIE of RBI; but such data set is unavailable for the states. Further, banking classifications of size class of holding includes only categories viz., Marginal (holding size less than 1 ha), Small (holding size above one ha but less than 2 ha), and Large (holding size above 2 ha) are different from the standard NSSO classifications which includes five categories.

In order to assess trend breaks in the data, growth differentials and techniques of decompositions have been used. The trends in spatial disparities over the period have been analysed through both traditional measures (standard deviation, coefficient of variation, and coefficient of the percentile and decile) and also advanced methods such as Hirschman Herfindahl Index (HHI), Gini Coefficient and Theil Index (General Entropy 1). The sigma (σ) convergence has also been used as per the needs of the study, especially in the assessment of long terms trends in disparity.

Ratio analysis: Relative change or shift in shares with respect to time and space is generally measured through ratio analysis. For instance, changes in the branch intensity over the regulatory regimes across population groups can be easily measured through ratio analysis. The formula for the ratio is as follows:

$$Sit=\frac{Xit}{\sum_{i=1}^{n} Xt}$$

Where s_{it}= share of i^{th} sub unit in total value and i= 1,2,3…r and t=1,2,3….n. The total number of offices of SCBs has been divided into the aforementioned four population groups, hence i= 1 represents the number of offices of the rural population centres; 2 semi-urban, 3 urban, and 4 metropolitan population; and S_{10} represents the share of rural population groups in the initial period. In this case t represents year and i represents population groups. Further, $0 \leq sit < 1$ and if the value of S_{it} increases over time it indicates a favourable trend for the i^{th} variable, while a declining value represents an unfavourable trend. The measures of central tendency (mean, median and mode), and various measures of dispersion (such as range, mean deviation and standard deviations) have also been used to assess long term trends.

Growth differential: The major limitation of ratio analysis is that it cannot take care of the fluctuations in the time series data. Therefore, growth differentials are suggested, to take note of fluctuations and approximate direction of change. In the economic literature, four types of growth indicators have been discussed, namely simple, compound, exponential and kinked exponential. The exponential and kinked exponentials are popularly known as compound annual growth rates (CAGR) and average annual growth rates (AAGR). The present study uses both indicators in analysis.

The simple average growth rate is calculated using the following formula:

$$\textbf{Growth rate in period } t = \frac{\Delta Y}{Y} = \frac{Yt + 1 - Yt}{Yt}$$

Where Y_{t+1} = value of variable Y in t+1 period

Y_t = value of parameter Y in t period

Long term growth may be easily computed by taking average of the periods as desired in the analysis. Since growth may be volatile and show instability over the defined period hence, the measures of dispersion such as computed Standard Deviation, Range (interquartile and Percentile and docile), have been used in analysis.

Growth in Sub-Periods:

Generally, the estimation of growth rates for several sub periods within a finite time series data is performed by fitting individual exponential trend lines through OLS method for each segment of the time series. The standard formula for exponential equations is;

$y = ab^t$ ----------(1);

where y is dependent variable and t is time period

Suppose there are two sub-periods with a break at the year k. The growth rates for the two sub periods viz; 1,2,3……k, and k, k+1, k+2, k+3, ……n are given by the coefficients of the independent variable (i.e. time) of the following two regression equations;

$\ln y = \alpha_1 a + \beta_1 t$ Where t =1, 2, 3……k and

$\ln y = \alpha_2 a + \beta_2 t$ Where t = k, k+1, k+2, k+3…….n.

β_1 & β_2 represents growth rates for the two sub-periods.

Instead of estimating separate regression equations for different sub periods, growth rate can also be estimated through one regression equation by using dummies for the sub-periods as given below;

$$\ln y_t = \alpha_1 D_1 + \alpha_2 D_2 + (\beta_1 D_1 + \beta_2 D_2)t + \mu_t \quad \text{----------(2)}$$

Where, D_1 is the dummy variable that takes the value 1 during the sub-period 1 and 0 otherwise. Similarly, D2 is the dummy variable which takes the value 1 for the sub-period 2 and 0 otherwise. In more general terms, D_j is the dummy variable which takes the value 1 in the j^{th} sub period, and 0 otherwise.

The estimates of β_1 & β_2 computed through these equations provide growth rates for two sub-periods. However, one major deficiency is that there might be anomalies in the growth rates so obtained. In particular, the sub-period growth rates may all exceed or may be less than the estimated growth rate for the period as a whole, depending upon the base and end year values for each sub-period. In fact, it is possible for the estimated growth rate for each sub-period to be negative while estimated growth rate for the whole period is positive, or vice versa (Mohapatra, 2012). However, such discontinuities can be eliminated via the imposition of linear restrictions (Poirier, 1976) on the log linear model which yields a kinked exponential function (Boyce, 1986).

The Kinked Exponential Model given by Boyce (1986) may be explained by taking the above example and the equation (2) where the series have been considered to be broken at point k. The discontinuity between the two trend lines can be eliminated via a linear restriction such that they intersect at the break point k:

$$\alpha_1 + \beta_1 k = \alpha_2 + \beta_2 k \text{ ----------(3)}$$

Substituting for $\alpha_1 D_1 + \alpha_1 D2 = \alpha_1$ in equation (2) we may get the restricted form:

$$\ln y_t = \alpha_1 + \beta_1 (D_1 t + D_2 k) + \beta_2 (D_2 t - D_2 k) + u_t \text{ ;----------(4)}$$

Similarly in case of Two Kinked Model the log linear equation for the OLS estimation becomes as follows:

$$\ln y_t = \alpha_1 + \beta_1 (D_1 t + D_2 k_1 + D_3 k_1) + \beta_2 (D_2 t - D_2 k_1 - D_3 k_1 + D_3 k_2) + \beta_3 (D_3 t - D_3 k_2) + u_t \text{ ;---(5)}$$

The OLS estimates of β_1, β_2 and β_3 in equation (5) give the exponential growth rates for the three sub-periods. Further, generalised kinked exponential model for 'm' sub-periods and 'm-1' kinks can be obtained from the formulae given in Boyce (1986). The advantage of kinked exponential model over the conventional models is that it makes use of full information, while latter ignore the outside variables in each sub period. In other words, the kinked exponential model is free from the 'discontinuity bias', which may occur in the conventional models. For instance, if large positive deviations occur immediately before the break point between the two sub-periods there is a distinct possibility for upward bias in the traditional method; and if large negative deviations occurred immediately after it, downward bias cannot be ruled out in the conventional methods. But in the kinked exponential model, deviations in the observations can be

reduced because they offset each other. Boyce (1986) concludes that the sensitivity of growth rate estimates to instability can be reduced in kinked exponential models. As a result, as spelt out in the beginning of this section, these models avoid the possibility of sub-period growth rates in a time series being higher or lower than the exponential growth rate estimated for the entire period as a whole. Certainly, the kinked exponential models are better methods for estimating sub-period growth rates in a time series data. Hence, in chapter six growth rates for the various sub-periods under consideration have been estimated with the help of kinked exponential models as suggested by Boyce (1986).

Measures of Inequality

There exists a plethora of literature dealing with issues related to the measurement of income and wealth inequality. Traditionally, the coefficient of variation has been widely used as a measure of inequality in empirical literature (Atkinson, 1970, 1983). The coefficient of variation (CV) is computed by following formula:

$$CV = \frac{\sigma}{\bar{X}}$$

Where σ stands for the standard deviation and $\bar{X}$ represents the mean of data.

The formula of standard deviation is $\sigma = \frac{\sqrt{\sum_{i=1}^{N}(xi-X)2}}{\mathrm{N}}$

And, $\bar{X} = \frac{\sum_{i=1}^{N} Xi}{\mathrm{N}}$ where i=1,2,….N

Graphically, the coefficient of variation depicts the peak of a unimodal frequency distribution and if a dataset is closely bunched around the mean, the peak will be high and the coefficient of variation will be small. Contrarily, the data set that is more dispersed will have a shorter peak and a higher coefficient of variation. Further, ceteris paribus, the smaller the coefficient of variation, the more equitable the distribution and otherwise.

The major limitation of CV as a measure of inequality is that it does not have an upper bound, unlike the Gini coefficient, and hence makes interpretation and comparison somewhat more difficult. Further, both components of CV viz., the mean and the standard deviation may be excessively influenced by anomalously low or high income values. Moreover, it hardly satisfies the Dalton's principle of transfer (1920), which

postulates that measures of inequality should increase when income is transferred from a poor person to a richer person. Champernowne (1974) argues that the coefficient of variation fails in incorporating the inequality of extreme income and has flat response to the transfers.

Lorenz-based inequality measures estimate income inequality without imposing the functional form of the statistical distribution on income. The Gini coefficient has been widely used in economic literature in this regard. The Gini index is defined as

$$G = 1 - \frac{1}{n} - \frac{2}{n} \sum_{i=1}^{n} (n - i) qi$$

where, q_i is share of ith states in total and $1 \leq q1 \leq q2 \leq q3 \ldots \leq qn < 1$.. The value of the Gini coefficient lies between one and zero, where one represents perfect inequality, and zero indicates complete equality.

The Theil Index has also been used to measure inter-state and inter-regional inequality in the banking infrastructure, bank business and access and use of banking services by various states and group of individuals. The Theil index (General Entropy Index) is represented by the following formula:

$$T = \sum_{p=1}^{n} \left\{ \left(\frac{1}{n} \right) * \left(\frac{y_p}{\mu_y} \right) * \ln \left(\frac{y_p}{\mu_y} \right) \right\}$$

where n is the number of individual units in the population, y_p describes the value of individual unit indexed by p, and μ_y is the average. If every individual has exactly the same value, T will be zero; this represents perfect equality and is the minimum value of Theil's T. Contrarily, if one individual unit has all of the value, T will represent utmost inequality and is the maximum value of Theil's T statistic.

Hirschman Herfindahl Index (HHI):

In addition to these measures of inequality, this study also uses Hirschman Herfindahl Index (HHI) of concentration widely used for measuring trends in market shares of industries of homogenous groups. The HHI is defined as

$HI = \sum_{i=0}^{n} \left(\frac{qi}{q}\right)^2$: Where q_i is the share of i^{th} unit in total. The value of HHI lies between 0 and 1($0 \leq HI \leq 1$). One represents complete concentration i.e., monopoly of the i^{th} firm in market, while lower value points towards diversification.

Convergence and Divergence

Following the convergence literature in economic growth, this study also assessed long term convergence in the 'outreach' and use of banking services across the states and over the period. While a variety of measures have been suggested in the growth literature for measuring the convergence and divergence across the units, beta convergence ($^{\beta}$)got prominence over the others, specifically in the context of cross country analysis (Barro and Sala-i-Martin (1992, 1997, 2007; Mankiew et al., 1992; Sala-i-Martin, 1996). β-convergence emerges if the poor economy tends to grow faster than the rich one and over the period the latter catches up with the former. The majority of the studies have stressed β-convergence, but many studies in the recent past have acknowledged that it is not a sufficient condition for σ-convergence. Infact, studies by Quah (1993) and Friedman (1992) suggest that σ-convergence is of greater interest, because it speaks directly whether the distribution of income across economies is becoming more equitable (Andrew T Young, et., al 2008). Hence this study has also used sigma (σ) convergence in order to assess trends in inter-state disparity especially in Chapters five and six. The sigma convergence has been estimated through the methodology of Nadhanael (2012) which regresses the coefficient of variation (CV) with respect to time.

$CV = \alpha_0 + \beta t + u_t$

As per definitions of sigma convergence, if β tends to declines over time, then σ convergence signifies a narrowing interstate gap, and vice-versa. Further, a positive and significant coefficient for time signifies divergence, and by same logic a negative and significant coefficient denotes convergence across states over time.

1.7 Limitation of the study

This study focuses on the development and growth of banking since nationalisation from a social banking perspective. The primary focus of the work is on rural areas and specifically on agriculture and allied activities. The scope of the study is such as to

exclude non-farm activities in rural areas as well as urban residents. Additionally, apart from scheduled commercial banks and cooperatives, many other institutions have emerged as a source of credit in recent decades but the scope of this study is restricted to the role of the SCBs only. The study also excludes the bankers' or lenders' prospective with respect to indicators such as profitability, efficiency, capital structure and fragility and instability of commercial banks during the pre and post reform periods.

2. Review of literature

2.1 Background

The contribution that finance makes to economic growth has incited longstanding interest amongst development economists and practitioners. There are different views with respect to the channels, methods and magnitudes of the relationship between the two. The financial system encompasses all those functions that direct real resources to their ultimate uses. It contains a number of separate though interdependent components. These include: a) Intermediaries (such as banks and insurance companies) which act as principals in assuming liabilities and acquiring claims; b) Markets in which claims are exchanged; c) Products that include equity and fixed interest securities and also exchanges or over-the-counter markets for foreign currencies, commodities and derivative contracts; d) Infrastructure necessary for effective interaction of intermediaries and markets, which includes securities exchanges, and payment and settlement systems; and e) Mechanisms that provide contractual certainty, generate and verify the information on which efficient financial intermediation depends (Crockett, 2011).

As per Montiel (2003), a financial system can contribute to economic growth in three ways: a) creating incentives for accumulation of physical and human capital; b) allocating capital to the most productive activities; and c) decreasing the amount of resources used in the process of intermediation. Levine (1997) outlines five basic functions of financial systems that are as follows: a) facilitation of risk management; b) allocation of resources; c) monitoring of managers and control over corporate governance; d) savings mobilization; and e) easing the exchange of goods and services. Despite ideological and methodological differences, the role of the financial sector in promoting economic growth has been well recognized by economists and policymakers across the world (Arestis, 2005).

Stiglitz (1998) noted that a well-functioning financial system, including banks, enables selecting the most productive recipients for these resources and ensures the use of resources in high return activities. Inadequate functioning of financial systems tends to transfer capital to low productivity investments. The issue that has not been resolved yet

in economic literature is the type of regulation that is best suited for achieving efficiency of the financial system and ensuing distributive justice to competing stakeholders in society (Patnaik, 2008; Bagchi, 2005; Arestis, 2004; Fry, 1997; Patrick, 1996).

The early classical economists stressed the need for capital in driving "progress", an essential condition of which was perceived as development of the material basis of the society. They emphasized the accumulation of physical capital, which includes buildings, machinery, equipment and other tangible assets, for achieving enhanced employment, productivity, growth and welfare of the society (Bhaduri and Harris, 1987). The early literature on development and growth did not emphasize much on the development of financial markets (Sibel et al., 2015). The struggle of 'finance' to be a separate discipline in economics was quite long as this sector was treated as a subservient to the real economy (Arestis, 2004; Patnaik, 2008). Development economists generally adhered to the articulations of Joan Robinson (1952, p. 86) who suggested, "Where enterprise leads, finance follows". The economists following Robinson were by and large skeptical about the potential of finance to stimulate growth as they believed that finance responds to changes in demand from the real sector (Levine, 1997). Despite this, massive growth and innovation in the financial sector has been observed across the world and policymakers started believing that finance has the potential to stimulate growth and diversification of the economy.

2.2 Role of banks in economic development

'Bank', a key component of the financial structure[1] has broadly been categorized under the 'Service or Tertiary sector' of economy. The literature dealing with growth accounting finds that the share of services in GDP increases faster in the tertiary sector than the primary and secondary sectors across countries, however, the pace of change in size and composition vary across time and space (Deb at al., 2016; World Bank, 2015). Empirical findings further suggest a relatively higher growth in financial sector than that

[1] Financial structure is defined in terms of aggregate size of the financial sector, its sectoral composition, and a range of attributes of individual sectors that determine their effectiveness in meeting users' requirements. The evaluation of financial structure covers the roles of key institutional players, including the central bank, commercial and merchant banks, savings institutions, development finance institutions, insurance companies, mortgage entities, pension funds, and financial market institutions (IMF, 2012: Financial Sector Assessment Handbook)

of other components of the tertiary sector in the majority of countries, be they developed or developing (World Bank, 2016). Financial sector development has been subject to faster "innovation" and diversification, especially since the last quarter of the twentieth century (World Bank, 2016). Frequent cross border movements, both in developed and developing countries are also observed in this sector. These have led to increase in opportunities on the one hand and growth in vulnerabilities on the other. Hence, in the era of international financial integration, domestic financial sector developments of the developing economies have been of a mixed nature.

The revolution in information and communication technology (ICT) catalyzed the working and process of delivery of financial products by banks and non-bank financial institution (World Bank, 2014; Arestis, 2004; Deininger et al, 1998; IMF, 2012). Banks act as principals in assuming liabilities and acquiring claims. They perform the 'intermediation function' through four transformation mechanisms: a) Liability-Asset Transformation - accepting deposits as liabilities and converting them into assets such as loans; b) Size transformation - providing large loans on the basis of numerous small deposits; c) Maturity transformation - offering savers alternative forms of deposits according to their liability preferences while providing borrowers with loans of desired maturities; and d) Risk transformation - distributing risk through diversification which reduces risks of the savers associated with direct lending in economy (Rangarajan, 1996). The sophistication of instruments of banking in a country depends on variety of factors such as the level of economic development, the stage of monetization of economic activities, and the degree of integration within and between institutions dealing with money and finance (Allen et al, 2008). The role of banks in economic development also varies according to the purpose, location, ownership, function, size and regulations (Gupta 1982: IMF 2012).

In a narrow sense, banks are *institutions that deal with the business of money*[2] (Gupta 1982). In simple terms, money is an identifiable object which is accepted as payment for goods and services, and also used as an instrument for repayment of debts within a

[2] At present three objects are prominently in use: world of paper money, plastic money and metallic. Value of paper money may fall to zero, whereas the value of other two are normally greater than zero because of their instinct value and alternative use (Patnaik, 2008).

market or in an economy in which it is legal tender (Shapiro, 1982). The classical economists emphasized the narrow function of money i.e., as the *medium of exchange*. Monetarists[3] believed that determining the value of goods and services and the value of money do not differ much in principle. They also believed that the ultimate goal of monetary policy was to maintain *neutrality of money*[4] and hence the level and growth of money supply should be calibrated with the demand for money.

The value of money to its holders lies in its purchasing power[5], which in turn is determined by the forces of demand and supply of money; while in calibration of the supply of money, the monetary authority should take into account the change in level and growth of transactions in the economy (Shapiro, 1992). Money supply consists of many components but currency constitutes a large share in the money supply, be it in a developing or developed economy; however, higher cash intensity is typically observed more in the former than in the latter (World Bank, 2015; IMF, 2015). 'Credit money', an important component of money supply, is created by commercial banks and its level depends on the spread of banking infrastructure and banking habits of the people. Also, the level and growth of credit money depend on the outreach of banks, regulation of the central banks, people's faith in banking sector, level and growth of monetary exchange etc. (Gupta, 1982).

[3] Monetarism, a school of thought in monetary economics, had its root in quantity theory of money. There are four versions of the monetarism: a) the transactions version; b) the income velocity version; c) the cash-balances approach; d) the modern/monetarist approach. The quantity theory of money in different versions has been expressed in terms of different forms of quantity equations uses different variables. The basic monetarist approach posit on believes that real economic growth is determined by the available supply of factors of production such as capital, labor and the rate of productivity growth. Changes in money supply do not have any impact on real economic activity as well as the growth of output. The money supply is exogenous rather than endogenous to the system and should be controlled by the monetary authorities.

[4] The assumptions of the quantity theory of money include constant velocity, constant proportion between currency (M) and credit Money (M'), price as a passive factor and applicable in long run. The phrase "neutrality of money" was first introduced by Austrian economist F.A. Hayek in 1931. He used this term to describe a market rate of interest. In simple terms, neutrality refers to a situation when level of money supply does not affect the output or employment. The early classical economists believed, in short run aggregate supply curve is vertical hence; money supply driven change in price level does not alter aggregate output.

[5] Crowther (2007) describes value of money as what it buys for its holders. Robertson defines value of money "as the amount of things which will be given in exchange for a unit of money".

2.3 An overview of theoretical debates

2.3.1 Early mainstream economists and banking

Smith (1776) was skeptical about banks' ability to create capital for development as he emphasized physical capital. McLeod (1855, page 82) outlined the role of bank credit in economic development, saying that theory of credit was the starting point of 'theory of money' and that money and credit both were essentially of the same nature: "Money is the highest and most general form of Credit". He contested the view of Adam Smith and argued that banks not only create fresh capital for development, but they also add unutilized or underutilized resources into the production process on one hand and have ample potential in extending the market by providing credit facilities to venture capitalists on the other (Gupta 1982; Rangarajan 1996). Later, Bagehot (1873) gave critical importance to the banking system in determining the level of economic growth, and also explained the circumstances in which banks can stimulate innovation and future growth through identifying and funding productive assets (Arestis 2005).

Schumpeter (1911) argued that banks can play a pivotal role in economic development by affecting the allocation of savings, productivity of investment and technical change. Bagehot (1873) and Schumpeter (1911) also discuss the perceived risks associated with oversupply of bank credit. Amongst many problems, mismanagement of money supply, especially bank credit, may lead to economic or business cycles.

Fisher (1933) highlighted the risks associated with over supply of bank credit. While analyzing the collapse of 'Wall Street' in 1929, he concluded by saying that recession and depression are caused by debt shrinking and the 'credit cycle is the cause of economic cycle'. He suggested that central bank's must also recognize the prices exchange rate instability impact of the monetary and credit policies (Minsky 1991; Fisher 1993, King and Levine, 1993).

While the tenets of the monetarists ruled monetary management for a prolonged period, many economists have challenged their universal application both theoretically[6] (on

[6] The common complaint against monetarism includes rationality postulates, rational expectations, market fundamentalism, general equilibrium, atomism and over-mathematizations.

grounds such as the narrow definition of money, unviable assumptions, ignorance of the role of interest, difficulty of determining prices in goods and money markets, the full employment assumption, etc.) and empirically (Patnaik, 2008; Gupta, 1982). Major criticisms came from two schools, namely the Cambridge[7] and Marx-Keynes-Kalecki schools (Patnaik, 2008). Notably, both schools also had major differences in their approach and perspectives (Patnaik, 2008).

The 'Cash Balance Approach' developed by the Cambridge economists included the 'store value function' of money. According to them, the broader objective of monetary policy was to balance between economic growth and stability. They believed that banks helped in maintaining the cash balance for an individual and also for the economy, but they also cautioned the central bank against the risks associated with overemphasis on finance in accelerating growth (Mishkin, 2011).

The Loanable Funds theory[8] using classical market paradigm[9] noted that banks play an important role in the supply of loanable funds which come from the savings mobilized by them from the public and various institutions. The demand of loanable funds originates from the individual or groups willing to invest in economy. A flexible interest rate regime may direct scarce supply of savings into the most efficient uses (Culbertson, 1958). Following the classical paradigm, they were also averse of state intervention in the financial sector and strongly supported the market driven regulations. Further, they perceived the financial sector as a subservient to the real sector (Arestis, 2007; Chandrasekhar and Ray, 2005).

[7] Economists of the Cambridge School comprises Marshall, Pigou, Robertson, and Keynes. In the later stage, Keynes dissociated himself from the Marshallian tradition of Cambridge school and stressed on the store of value function of money in his famous writing 'The General Theory of Employment, Interest and money' (Misra, 1993).

[8] Loanable funds are funds that are available for borrowing, these include the household savings and bank loans. Loanable funds are often used to invest in new capital goods.

[9] The microeconomic foundations of the classical paradigm lie in the Walrasian model. They assumed full-employment, money neutrality, perfect competition and prefect mobility. They did not advise the pursuit of fiscal or monetary policies to improve the already perfect functioning of the economy. According to them, deviations from full employment occur due to errors in price or inflationary expectations in short run and these deviations and the resulting departures from the neutrality of money are transient and self-correcting.

2.3.2 Role of banks in Keynesian and post-Keynesian formulations

Keynes criticized Say's law[10] by citing that output and employment were often demand-constrained, not supply-constrained. Hence calls for state intervention for the maintenance of full employment. He argued that prices and incomes policies should be intended to control inflation and also put his faiths in adoption of purposeful monetary management, especially for economies under severe resource constraints. Keynesian formulation later gave theoretical backing to 'Social Banking' (Shapiro, 1992; Culbertson, 1958). Deviating from his predecessors, Keynes welcomed state intervention and also highlighted the limitations of market based regulations especially for the finance. He explained the channels through which the banking sector can be used to stimulate resources for development (King, 2002). He was in disagreement with the conclusion of the 'Quantity Theory of Money', which stipulated a direct and proportional relationship between money supply and general price level. Instead, Keynes asserted that prior to full employment inflation is a temporary phenomenon (Keynes, 1936). According to him, an expansionary monetary policy based on supply leading approach accompanied by the complementary fiscal policy could be a potential source of investment and growth especially in those economies having large non-monetized and idle productive resources (Patnaik, 2008). Keynesian prescription of monetary management lies in maintenance of under equilibrium interest rate (normal interest rate). The 'socialization of investment' through fiscal policy should be intended to stabilize aggregate demand and also lift the rate of return on private sector investment. He argued that public control of the central bank is necessary to lower the expected normal rate of interest (Colin, 2008).

Many growth models were built around the Keynesian formulations of monetary management. Harrod (1939) in his closed economy model praised the banking sector for savings mobilization. Domar (1957) also appreciated the role of banks in savings mobilization and therefore stimulating the growth rate of gross national product in a closed economy. Both models concluded that a robust banking system helps in the mobilization of savings, evaluation of projects, management of risks, monitoring and

[10] In simple term Say's law stipulates that supply creates its own demand (Sowell, 1973).

facilitating of transactions, and also in the promotion of technological innovation and economic growth (Demetriades and Luintel, 1996; Diaz-Alejandro, 1985; Arestis, 2004; Colin, 2008).

Robinson (1952) was not as convinced about the finance and growth interrelationship. She raised a pertinent question, "*Does economic growth determine the level and growth of financial development or financial development lead to economic growth?*" and concluded by saying, "*where enterprise leads, finance follows*". At a later stage, she agreed that such a one-way causation may change (Gerald and Raunch, 2005). Lewis (1955), one of the pioneers of development economics, suggested a bi-directional relationship between financial development and economic growth. He concluded that the financial market develops as a consequence of economic growth and in subsequent stages, higher growth stimulates growth of finance.

Patrick (1966) argued that the extent and direction of the relationship between finance and growth is not static and can vary over time. At an initial stage, financial development leads to higher economic growth and when real growth occurs in economy, such a link becomes less important, and over time growth induces demand for greater financial services. In his stage-of-development hypothesis, he emphasized both the supply-leading and demand-following phenomena of the provisioning of financial services. The supply-leading thesis postulates that the development of financial system leads to economic growth, while the demand-following hypothesis takes the opposite view and suggests that when real growth takes place in the economy, it sparks demand for financial services. He also found a feedback relationship between financial development and economic growth (Yanique Carby et al., 2012).

Friedman and Schwartz (1963) concluded that a regular measure of financial development has an inverse relationship with the velocity of circulation of broad money stock and showed a positive association between financial development and real gross domestic product (GDP) per capita. Demetriades and Hussein (1996) extended their work and concluded that direction of causation runs from real GDP to financial development. Goldsmith (1969) noted that creation of liquidity is critical to the process of economic development and emphasized the mechanism that transforms short-term financial

instruments into long-term investment. He noted that liquidity could only be generated in the financial system if there were both sufficient surplus savers and deficit borrowers and an institution through which surplus can be transferred to investors through financial instruments (Meier and Raunch, 2005).

The Post-Keynesians[11] were critical of monetarism, highlighted many inadequacies in their theory and opposed their set of policy proposals (King 2003; Davidson 2008, 2011). Minsky (1975) argued that capitalism was inescapably cyclical, fluctuations in investment were crucial, and the availability of finance was central to investment. He noted three distinct phases of financial development namely, *hedge* finance, *speculative* finance and *Ponzi* finance in a capitalist economy. In 'hedge finance', lenders only accommodate those borrowers whose projects are expected to be sufficiently profitable to allow them to make both necessary interest payments and repay the principal. In 'speculative finance', lenders are less cautious and no longer require that the repayment of the principal is guaranteed. At the 'Ponzi finance' stage, lending standards are so lax that some borrowers need to take out further loans in order to meet their interest obligations. He argued that in the absence of a proper regulatory mechanism for the financial sector, finance tends to move through these three phases, posing a threat to its own stability.

Some endogenous growth models[12] treat financial intermediation as an 'endogenous process' with bidirectional causal relationship between financial intermediation and economic growth (Pagano, 1993). This theory postulates that growth process encourages higher participation in the financial markets, thereby facilitating the establishment and

[11]Thirlwall (1993) outlined six core propositions of the Post Keynesian macroeconomics. First, employment and unemployment are determined in the product market, not the labor market. Second, involuntary unemployment exists, and is caused by deficient effective demand and is not the result of labor market imperfections, and it would not be eliminated if such imperfections were removed. Third, the relationship between aggregate investment and aggregate saving is fundamental to macroeconomic theory, and causation runs from investment to saving, and not vice versa. Fourth, a monetary economy is quite different from a barter economy, money is not neutral, finance is important and debt matters. Fifth, the Quantity Theory of Money is seriously misleading. Sixth, capitalist economies are driven by the "animal spirits" of investors, which determine investment (Extracted from King, 2013 p 486).

[12] Endogenous economic theory postulates that economic growth can be generated from within a system as a direct result of internal processes. The enhancement of a nation's human capital will push economic growth by means of the development of new forms of technology and efficient and effective means of production.

promotion of financial intermediaries (Greenwood and Jovanovic, 1990). Furthermore, financial development can affect growth not only by raising the savings rate, but also by raising the amount of savings funneled to investment and/or raising the social marginal productivity of capital (Arestis, 2005). In some of this literature, state intervention for regulation of the financial system is opposed, and progressive taxes on financial intermediaries are seen as equivalent to taxes on innovative activities, such that imposing ceilings on credit reduces incentives to invest in innovative activity (King and Levine, 1993).

Valverde et al. (2007) in their endogenous growth framework concluded that the efficient operation of financial institutions leads to economic growth. Greenwood and Jovanovic (1990) found improved capital allocation to accelerate economic growth, because firms and entrepreneurs avail more capital from banks and other formal institutions. In the process of lending, intermediaries obtain valuable information from firms, and disclosures and monitoring compel firms to operate at the optimum level.

Diamond (1984) argued that efficient monitoring and diversifying the financial portfolios of borrowers by financial intermediaries can ensure the safety of their depositors' funds. He felt that deposit insurance helps in solving the problems of information asymmetries and leads to reduction in transaction costs and hence efficient investments. Lucas (1988) found the debate on the relationship between financial and economic development to be "over-stressed" in the literature. Financial markets facilitate the channelization of funds from people who save to those who invest in the form of consumer credit and mortgage loans. If the loan supply falls short of demand, some households might be liquidity-constrained so that current resources would limit their consumption and savings (Arestis 2004, 2005; Pagano, 1993).

The legal and institutional environment dimension in debate on finance and growth relation was influenced by the '*structural characteristics of finance*'[13] proposed by Modigliani and Miller (1958). In their formulation, the value of a company is independent of its financial structure. They concluded that the relationship between a

[13] All financial systems combine bank-based and market-based intermediation. But financial structure - the particular blend of the two intermediation channels - varies across countries.

firm's financial structure and its value tied to financial performance measures seems to be very weak (Arestis et al., 2004; Honohan, 2004).

2.4 Central Banks and commercial banking

The established practice worldwide is that central banks do not directly deal with the public, but transmit their monetary policy through commercial banks. Thus, the role of banking sector in economic development is subservient to central banks and the broader objectives of monetary policy[14]. Besides balancing conflicting objectives in monetary policy, central banks, especially in developing countries, respond to the dynamic socio-political environment of the country and synchronize their instruments with fiscal policies (McCallum, 2000). Despite the support of leading monetarists for minimal government in capitalist economies, the finance industry in practice has been the most regulated sector during the colonial phase and inter war period (Haber and Perotti, 2008). There are numerous instances when banks and other financial institutions were made to mobilize resources for the financing of social and economic infrastructure in countries, especially during World War I and the inter-war period (Gerschenkron, 1962; Chandrasekhar, 2016). Governments across the globe used banks to tame industrialists by controlling their source of funding through instruments such as capital controls, interest rate ceilings, credit rationing, directed lending programmes and nationalization of the assets of private banks (World Bank, 1997; Prabhakar, 2013).

2.5 Financial Liberalization: An overview of the debate

The debate on the relationship between the development of formal finance and economic development apparently seemed to be settled post World War II, with broad agreement that development required a vibrant and robust financial system (World Bank, 1989). However, the debate continues about the types of regulation that can be best suited for financial markets having very different structures[15] than assumed by orthodox

[14] At present, price stability has been recognized as a necessary precondition to sustainable growth. The relative emphasis on price stability and growth objectives in monetary policy varies from time to time depending on the evolving macroeconomic environment. For instance, the 'Agreement on Monetary Policy Framework' between the Government and the Reserve Bank of India (February 20, 2015) defines the price stability objective explicitly in terms of the target for inflation.

[15] In market driven regulation, amount of loan offered by the banks is directly proportional to the value of collateral presented by borrowers, and also intricate default risks. Poor across the globe possess insufficient

neoclassical economists, as well as the extent of state regulation required for seamless provisioning of financial services to credit-deficient sectors and regions. The third issue relates to supply lending versus demand following approaches to financial services in developing countries. The debate can be summarized under two heads: the Keynesians who stood in favour of regulated finance, and the Neoliberals who advocated deregulation of the financial sector.

Neoliberal economists draw their inspirations from the 'Efficient Markets Hypothesis' and believe that market-based regulations are most efficient in allocating scarce resources in countries. The early arguments in favour of financial liberalization can be traced back to the writing of McKinnon (1973) and Shaw (1973). Both authors criticized state intervention in banking for the purpose of achieving goals of 'social banking'. They disagreed with governments of developing countries that used financial institutions as a tool of financing development planning. In their view, excessive state intervention in the financial market leads to 'financial repression'. The interest rate ceilings, high reserve requirements, quantitative restrictions in disbursement of credit and directed credit programs, which were used as tools of monetary policy in development planning, create a financially repressed regime. They blame it for the poor performance of investment, slow growth and vast exclusion of population from formal financial institutions, especially in developing countries (Patnaik, 2008; Arestis, 2004; Arestis and Demetriades, 1999; Bumann et al., 2013).

Liberalizers posit that an economy that holds interest rate below the market clearing value ends up with generating less than optimal savings on one hand and detracting from the pool of available investment on the other (McKinnon 1973;Minsky, 2011). Further, repressed interest rate discourages savers from saving and motivates society to higher consumption expenditure; hence, less saving is channelized through formal financial

collateral (poor quantity and quality of the assets) and income hence they are credit constrained. As far as perceived risk is concerned, it is completely subjective. In practice, poor across the globe face negative perception regarding the repayment. The bankers' fear might be genuine up to some extent, but more than often this fear is overemphasized due to lack of information regarding credit history and also due to prejudices and elite mindsets (Beck et al., 2007; Rawal, 2005). Further, in backward economies, the poor are so vulnerable that their labour is money for them. In a fragmented labour market, the value of labour is subjectively determined by the employers as the value of collateral. In such situation these households become credit constrained as they are not considered bankable groups.

system (Mehrotra et al., 2009; Arestis, 2005; Patnaik, 2008; Fry, 1997). Furthermore, interest rates below the market clearing rate make low yielding projects profitable and given the degree of randomness in bank lending decisions, many such low-yielding projects are financed by the banks, thereby reducing the average rate of return on investment. To overcome the repressed financial regime, they advise financial liberalization[16]. Since then, many dimensions and channels of influence have been added into the neoliberal formulations of financial liberalization literature (Ghosh, 2009; Patnaik, 2005; Rangarajan, 1996). At present, financial liberalization broadly consists of two sets of liberalization a) domestic financial liberalization; and b) external liberalization. The domestic liberalization further includes two legs viz., liberalization of domestic banking and liberalization of capital markets. Moreover, neoliberals do not believe in separate treatment for price determination of financial firms and firms producing physical goods and services (Mehrotra et al., 2009; Minsky, 2011). As a matter of policy, they favour market-driven dynamic regulations, with a demand following approach for the financial sector (Ghosh, 2008).

As per the financial liberalization thesis, a market-determined real interest equalizes returns for all the sectors and can also solve the problems of inter-sectoral disparities, as well as provide autonomy to the central bank in the matter of designing and executing regulation for the financial sector (Arestis, 2005). This perspective claims that market driven regulations are time and space neutral, hence are universally applicable irrespective of the context, structure, and level of development of the countries. Later, this formulation was summarized as part of the package known as the 'Washington Consensus',[17]which was popularized by the Bretton Woods institutions and became an

[16] Financial liberalization in developing countries within the framework of financial reform policies includes the efforts in focusing on freeing interest rates, reducing or eliminating government control over credit allocation, easing restrictions on entrance of new financial institutions and lifting controls on foreign exchange and capital inflows (Vos, 1995; ,Chandresekhar and Ray, 2005)

[17] The term 'Washington Consensus' was coined in 1989 by English economist John Williamson which refers to a set of 10 relatively specific economic policy prescriptions that he considered constituted the "standard" reform package promoted for crisis-wracked developing countries by Washington, D.C. based institutions such as the International Monetary Fund (IMF), the World Bank, and the US Treasury Department. The prescriptions encompassed policies in such areas as macroeconomic stabilization, economic opening with respect to both trade and investment, and the expansion of market forces within the domestic economy. Source: John Williamson (2004) "A Short History of the Washington Consensus" paper presented at conference entitles "From the Washington Consensus towards a new Global Governance," Barcelona, September 24–25, 2004. www.iie.com/publications/papers/williamson0904-2.pdf

important component of their Structural Adjustment Programmes.[18] Most of the multilateral funding agencies put conditions on the borrowers to base their domestic policies on the lines of this package (World Bank, 1989; Ghosh, 2009).

The dynamic gains of financial liberalization were also seen to come from many interrelated channels. For instance, the growing profitability of the financial sector may attract many domestic and foreign institutions. The financial firms with small size and capacity could explore areas not served by banks or any other formal financial institutions, despite low interest elasticity of demand and supply of savings (Fry, 1997). Competition amongst bankers could lead to product customization as per requirements of customers and institutional innovations. In other words, easing of entry barriers and allowing competition amongst bankers may give rise to new institutions and product diversification, both in loans as well as in saving products. These steps may successfully tap more savings, thereby leading to enhanced supply of credit as per the customized needs of local entrepreneurs on one hand, and also pose a tough challenge to players in informal markets on the other hand. Liberals argue that process of financial inclusion can be catalyzed through the spread effect of advanced financial development (Arestis, 2005).

Complete financial liberalization occurs when the domestic financial market is integrated with international financial markets. It was argued that such integration would not only reduce the financial constraints of the economies but would also create many vibrant institutions within and outside the financial sector. Further, it is felt that financial integration reduces inefficiency in the financial sector and provides an opportunity for more private and public investment on modern infrastructure and innovations. Investment across sectors would catalyze the process of growth through various interrelated channels, including increase in investment and efficient allocation of investments (Arestis, 2005).

However, liberalizers recognized the problem of inequality associated with complete financial liberalization, but they were confident that it would wither away in the long run, in the belief that the proceeds of financial liberalization in the long run are equally shared

[18] This program was offered to those developing economies which were facing acute foreign exchange crisis and asked for loan for their development projects.

because each representative agent optimally spreads her or his economic resources throughout the entire life span. If the total pie grows through financial liberalization, each representative agent is economically better off (Bumann et al., 2013). Liberalizers further argued that financial surplus generated through complete liberalization would percolate to the sectors and people at periphery in a phased manner, even as the spread effect of innovation and competition would bring down the transaction cost of loans. Thus, the poor would avail banking services both at reduced cost and also of their choice (Arestis, 2005). Furthermore, financial integration would also ease the overall constraint of investible resources for the domestic firms, because they would have enlarged options of funds both from banks and also from the capital market. Therefore, neoliberal claimed that financial liberalization would lead to enhanced efficiency in the real sector, decline in poverty and financial inclusion through various channels (McKinnon, 1973; Shaw, 1973; Levine and King, 1993).

'Washington Consensus' was so popularized that it became a conventional wisdom for the policy makers across the globe both in developed and developing countries. It also became the guiding principle for countries heading for domestic liberalization and globalization. Majority of the developing countries began to change their existing policy of 'social banking' in order to stimulate the process of domestic liberalization and also to reap the aforesaid benefit of complete financial liberalization since mid-1980s, (Gibson and Tsakalatos, 1994). Countries like India, South Korea and Brazil which had many successes during the 'social banking' period also initiated their liberalization process, though at diverse paces (IMF, 2012). The pertinent question that arises here is whether or not the world economy has moved towards convergence in availability, access and use of financial services, assets distribution and stability in the era of liberalization, as promised by the liberalizers. Have the benefits of liberalization been distributed symmetrically across social groups and geographical territories? Obviously, the answer cannot be straight forward; instead, it requires a deeper investigation and analysis of the claims of financial liberalizers.

One pertinent question that arises here is that whether financial system after deregulation helped in achieving higher financial inclusion or not. The Oxfam Report (2017) and a

study by Lakner and Milanovic (2013) show that inequalities in assets and income have widened at faster pace during the era of financial liberalization than that of the regime of social banking in both developed and developing worlds. Both studies noted that large gains of growth and diversification of financial market were accrued by rich. These studies noted that the top 1 percentile claimed the lion's share in assets and income growth generated through liberalization. The rapid growth of the middle class in many emerging economies and rise in concentration of income and assets in favour of the top earners highlights the weak link between liberalization and inclusion (ADB, 2013; World Bank, 2014; Atkinson and Morelli, 2011; Bumann and Lensink, 2013). The 'Blue Book' (UNDP, 2006) rejects the claim that financial liberalization leads to higher economic growth and financial inclusion in societies. The report raises serious concerns about increasing inequality in access and use of financial services both in backward and advanced economies in liberalized systems (UNDP 2006). There is plethora of literature that highlights that relationship between finance growth and financial inclusion is not linear; instead, it is complex in nature (Beck et al, 2007; Sarma, 2008, 2011). The recent research concludes that financial development alone cannot ensure financial inclusion unless timely policy interventions are exercised as per circumstances in each country (UNDP, 2006; IMF, 2015).

2.6 An overview of debate challenging financial liberalization

Heterodox economists strongly contested the channels suggested by the liberalizers both on theoretical as well as empirical grounds (Patnaik, 2002, 2008; Chandrasekhar and Ghosh, 2002; Stieglitz and Weiss, 1980, 81). They disagreed with the notion of self-equilibrating premises of market led regulations and showed that they could not hold true even under full employment conditions (Patnaik, 2002). In fact, heterodox schools believe that the perfect financial market assumed by orthodox economists is completely hypothetical and that financial liberalization cannot have sizeable impact on enhancing the saving rate, capital formation, growth rate ,and hence in bringing down poverty and inequality in developing country. According to them, achieving equilibrium interest rates through deregulation is not possible in the financial structure of real world (Patnaik, 2008; Bagchi, 2005; Bagchi, 1982; Demetriades et al., 2005; Michael et al., 1998).

Stiglitz and Weiss (1980) proved that credit rationing can exist without government intervention in perfect competitive loan market. Therefore, freeing the interest rate would not eliminate credit rationing, instead the rise in interest rate would affect the quality of bank loan and credit access of diverse income groups (Ray, 2005). Additionally, free capital movement in an excess liquidity situation would not be efficient (Stieglitz and Weiss, 1982).

Mehrotra et al. (2009) argued that the determination of prices of real goods is structurally different from the market determining prices of financial products owing to differences in players, objectives and instruments. For instance, in commodity markets, the buying and selling is done simultaneously and price of homogenous product remains range bound in similar markets. In contrast to this, significant time gap exists between promises and delivery of the product in money markets (Varian, 2009). No objective way has been evolved till date which can assure that promise will be kept by the players. There is greater likelihood that buyers and sellers of savings and other financial product would not adhere to their promises (Mehrotra, 2009). Therefore, the so called 'equilibrium price' that performs screening functions in the standard market for commodities cannot be used in the same manner in credit markets (Hoff and Stiglitz, 1993). Further, in the commodity market, if demand for a commodity exceeds its supply then, price of that commodity would rise until the demand and supply are equated and new equilibrium is established. In contrast to this, demand often exceeds the supply of credit in banks at market interest rate and many applications are rejected. The rejected applicant may quote a higher interest rate for loan, but bankers would not agree to provide the loan at the higher rate if risk perceptions are high. In credit markets, the interest rate on loans indicates what the individual promises to repay, instead of what she actually pays. Besides the interest rate, non-price components[19] also play a significant role in determining the size and terms of the loan in credit contracts (Ray, 2004). In many countries, information asymmetry between borrowers and lenders owing to imperfect market structure leads to uncertainty concerning the borrower's ability or willingness to make the repayments when they are

[19] Non price components include: costs incurred on seeking and maintaining information, costs incurred on screening and enforcement of the contract, expenditure on tracking movement of the projects and borrowers etc.

due (Stieglitz, 1981). Fringe borrowers often take advantage of this situation. They weed out genuine borrowers from the credit market through their false promises (higher interest or inflated collateral). But, after getting loans, they hardly adhere to promises made at the time of payment of loans and choose to voluntarily default (Stieglitz and Hoff, 1992; Varian, 2009).

How an imperfect market situation leads to adverse selection and moral hazard problems leading to credit rationing was very well articulated by Stieglitz and Weiss (1981), as they show how genuine borrowers despite being willing and ready to pay market the interest rate (even more) are given less credit what they apply for while apparently borrowers of similar or lower eligibility succeed in obtaining higher loans through false promises (Mehrotra et al., 2009; Mishkin, 1999; Gibson and Tsakalotos, 1994).

To overcome information problems there is growing recognition of the need for state intervention in financial markets; however, opinions are divided on the extent and form of state interventions. Stiglitz (1994) calls for 'mild financial repression' for improving the quality of collateral especially for small firms engaged in export. He also shows that firms having access to formal credit had a better record of technological spillover. Patnaik (2008) calls for strong state intervention, arguing that a suppressed interest rate regime provides elbow room to increase public sector spending programmes in areas of poverty reduction, rural infrastructure, bank-linked self-employment programmes etc., which would have not been possible with market interest regimes in India. He also notes that the northward push of real interest rate during the early reform years not only exacerbated government's debt burden but also put restraint on expansionary fiscal policies (Patnaik, 2008; Bagchi, 2005).

Gibson and Sakalotos (1994) argue that flexibility in interest rate may not always equate savings and investment in country, because level and growth of savings is not determined by interest rate alone, but change in income has also significant impact. Following Keynes, they found that the level and growth of investment were more influence by the marginal propensity to consume (MPC) and animal spirits than the interest rate. They argued that total savings may not increase when interest rates are liberalized because with every change in price (if interest rate is the cost of holding/borrowing money) there is a

substitution and income effect. A rise in the interest rate owing to deregulation of policy encourages financial savings due to substitution effects. Deregulated interest rates also increase the relative cost of non-financial savings i.e., cost of holding money or using it for current consumption (Aggarwal, 2000). The income effect of a rise in the interest rate discourages financial saving because it entails reduced levels of financial saving for the same rate of return on deposits. Therefore, the substitution and income effect can work in opposite directions and the net effect may not increase total savings; instead it may result in change in composition of total savings between financial savings and non-financial savings (assets). The rise in saving deposits out of an increase in the interest rate would not automatically translate into higher loans and investment. The supply of credit is endogenous as it does not depend solely upon saving deposits but also upon the ability of the banks to create credit with the backing of a central bank as the lender of last resort (Gupta, 1982). If the central bank acts as a lender of last resort then the supply of loans will be dependent on demand for loans, which in turn will be determined by many other factors such as interest rates and future expectations (Shigeyuki et al., 1977). Many economists criticize neoliberals for ignoring the prevalence of unregulated informal markets in developing countries, which supply funds directly to borrowers (Hallwood and Mac Donald, 2004)

Campbell and Mankiw (1990) argue that the assumption that all relevant households have free access to capital market within the domestic economy, as assumed by the liberalizers, is unreasonable. Instead, they argue that many liquidity-constrained households lack the ability to smooth their consumption over time and their consumption decisions are dependent on the current income. Any relaxation in liquidity constraints will be associated with a consumption boom and hence a decline in aggregate saving. Thus, there seems to be an agreement that virtuous cycle and channels suggested by liberals are not straightforward as they appear to be instead it has been subjected to a range of market failures within the neoclassical framework. These studies call for prudent regulations (legal and institution framework) for the financial sector but are averse to strong state intervention and control. In the absence of prudent regulations, even liberalizers accept that immediate liberalization has more likelihood to create instability,

wreak havoc and reduce scope for investment and development (Patnaik, 2005; Ghosh, 2009; Chandrasekhar and Ghosh, 2002).

2.7 Financial liberalization and rural money market

In the literature, diversity in opinion exists on the magnitude of and causation involved in creating the conditions for a deep and efficient financial system and sustained economic growth. Differences in opinion become even wider when neoliberal policy instruments are used in rural economies of developing countries (Beck et al, 2007; Patrick, 1966; Arestis, 2004; Chavan, 2005). Hoff and Stiglitz (1993) put forwarded three contexts when liberal instruments fail in rural money markets. Owing to the simultaneous presence of the formal and informal money markets in rural areas, liberalization fails in dealing with the problems of financial inclusion across the developing countries. The informal players in rural money market especially moneylenders are usurious monopolists and they function differently from the formal market (Hoff and Stiglitz, 1993). These players often charge exorbitant interest and supply less than optimal amounts of loans to the borrowers. Their strong presence in rural money markets is an outcome of many interrelated factors, such as high transaction costs of switching lenders, interlinked credit markets, social, cultural and occupational immobility and to the persistence of historical production relations. The simultaneous presence of two distinct sets of institutions, the financial structure in most of the developing economies especially, in rural areas is dichotomous[20]. Although formal and informal institutions both have their simultaneous presence in rural and urban areas, the prevalence of latter is relatively greater in rural areas (NSSO, 2015, 2013; Bagchi, 2000; Yaron et al., 1997; Ray 2004).

Nonetheless, notable differences exist within the group of informal players in terms of the catchment areas and style of functioning, as they consist of heterogeneous entities. Despite being small in size and scattered across the locations, as well as deprived of the professional training to run businesses in comparison to formal players, they have not only been running their business successfully, but also succeeded in creating artificial firewalls where formal players found it difficult to enter. Bankers were fearful of entering

[20] Dichotomous financial structure refers to a situation when formal and informal institutions not only coexist but they also operate simultaneously in the same locations.

the domain of informal players for a very long period, despite strong statutory backing (RBI, 1954; Rangrajan, 2006; NSSO, 2015; Yaron et al., 1997).

There is an overabundance of studies that suggest that in presence of a dichotomous structure monetary policy in developing countries often has been less effective in dealing with the problems of rural banking. Reliance on liberal instruments often led to asymmetric distribution of the credit across locations and left open the possibility for excessive lending by banks to some selected groups/sectors while depriving lending to vital sectors of economies (Raval, 2005; NSSO, 2015; Arestis, 2005).

The liberalizers assumed that opening up entry would increase competition in financial market, but empirical studies did not find much merit in this argument. Instead, the banking industry across the world lacks competition and operated in oligopolistic market structures (IMF, 2014; ICRA, 2004). There is plethora of studies that suggest that difficulty in micromanagement of the sectoral finance by the central banks and government during financial liberalisation accentuated the disparities across sectors, regions and various stakeholders of the societies (Bhaduri, 2005; Basu, 1997; Chavan, 2005, 2012; Banerjee et al., 2004).

In market regulatory framework, interest rate (d*r) on loan at any point of time is equivalent to the perceived credit risk (d), multiplied by the nominal rate of interest (r). The supply of bank loan to individual(s), sector (s) or region depends on the value of collateral and risk associated with the recovery of loans. Higher the credit risk, higher the interest rate and vice a versa. They claim that credit risk-adjusted interest rate would remain same for all sectors (Ray, 2004). They presume that relatively higher interest in rural areas has been attributed to the gap between demand and supply of credit, and also to the perceived default risks. Moreover, interest paid on deposit is equivalent to the risk-adjusted interest rate minus small charges for operating costs of the banks. (Banerjee et al., 2013; Ray, 2004). Thus liberalizers believe that market driven regulation would allocate bank loan as per marginal productivity of capital. The supply of bank loan across the regions/sector would converge in long run. Further, competition amongst bankers

may reduce difference between the deposit and lending rates (spread) as well as induce product and instructional innovation thereby enhanced financial inclusions. But, Patnaik (2008) disagreeing with neoliberals argues that high demand for credit in rural area arises for both consumption and investment purpose. Banks generally offer loans for short terms investment purpose and a large part of loan demand of the poor households remained unmet despite their willingness to pay higher interest rate to the banks. Since, distressed and initially deficit households cannot postpone consumption demand for very long therefore, they continue with their loan contracts of diverse informal players[21] in rural economy (Raval, 2005; Mohan and Ray, 2017; Swaminathan, 2005; NSSO, 2014).

Neoliberals' presumption that diluting entry barriers would result many new institution and enhanced competition were not true all the times. The studies noted that when entry barriers were diluted in developing countries, branch density increased in urban areas while it sharply declined in rural areas (FAS, 2015; Shetty 2005; EPWRF, 2012). In addition to this, high risks loan at lower interest rate was given from the urban branches while loan demand of the rural and backward regions was not taken seriously despite, borrowers in latter regions were ready to offer low risk collaterals and were willing to pay high interest rates (Mehrotra, 2009). The studies reported sizeable gap between lending and deposit rate and remarkable volatility within the same sub-economy in majority of the developing countries (Holden and Prokopenko, 2001; Shetty, 2005; Ramkumar and Chavan, 2014; Banerjee, 2005; Floro et al., 1997; Patnaik, 2005).

Many study noticed that impacts of liberalisation measures were not only erratic, but rural and urban centers responded in partisan manner during reform. It happened because liberalizers could hardly perceive the realities of money market of countryside which is segmented, fragmented and dichotomous. Segmentation infers specialization, fragmentation implies lack of integration, and dichotomous or dualism points toward the

[21] Informal money market is defined as market outside of the formal system; they are also known as non-institutional agencies. The specific forms of non-institutional agencies in India is explained in All India Debt and Investment Survey (AIDIS) include: (i) Landlords: loans given by land owner to their own tenants; (ii) Agriculturist money lender: lender whose major profession is agriculture but has part time business of moneylending; (iii)Professional money lender: a person who earned a major part of his income from money lending; (iv)Traders: a person or entity whose principal occupation is trading but has contract with farmers; (v) Relatives & friends : interest free loans received from relatives or friends; (vi) Others : Any non-institutional credit agency not covered above was considered under this category. (Source : AIDIS: NSSO Report No. 500)

existence of parallel systems of organized and unorganized money market (Husain et al., 1998; Ray, 2004). However, financial dualism is not limited to developing countries alone instead it exists in various forms across the globe. Moreover, strong presence of informal players has been recorded in those regions/area/sector that had greater presence of feudal production relations and pre-capitalist economic exchanges (UNDP, 2006; Rawal, 2005). Many factor contributed in existence and sustenance of dualism and information asymmetry in rural credit market, but prominent amongst them are; skewed distribution of population between rural and urban centers, primitive production relations especially in country side, disproportionate dependency of the workforce on agriculture, diversified and stratified society, regressive customs, poor human resource and weak institutional linkages. These factors are interrelated and reinforce one on others (Banerjee 2003; Ray 2004; Yaron et al., 1997; NSSO, 2015 Aryeetey et al., 1997). In such situations, market driven regulation would not be efficient and it will be less effective in solving the problems of moral hazard, adverse selection and credit rationing (Stieglitz, 1981). In context of rural financial structure, heterodox economists propose regulations having a mix of non-market institutions/agents and liberal instruments to overcome from inequalities and low inclusion (Bell, 1990; Myrada, 2002; Myint, 1985; Lewis, 1954; Dev, 2012; RBI, 2004). The field studies noted that hybrid regulation in banking were more effective in solving information problems than banks operated under market driven regulations (Llambi and Lindemann, 2001; Rouse & Pischke, 1997).

2.8 Economics of the directed credit programme

Underlying assumption behind government intervention in the credit market was that governments can pursue different (collective) objectives and have deep pockets than the private suppliers of credit. The latter have inadequate capacity that can detect and punish undesirable behavior of the borrowers. If private sector credit is scarce because of high fixed cost of establishing intermediaries, government intervention can defray these costs and could be beneficial if it improves allocation of the capital (Stiglitz and Weiss 1981; Calomiris and Himmelberg, 1994).

The government programmes of directed credit since beginning were well intended to benefit vital sector of economy and also provide loans to credit constrain households by

the way of relaxing the restrictions on finance (Calomiris and Himmelberg, 1994). As discussed earlier, the good projects may not receive adequate funding from the banks while bad investment received disproportion financing on account of information problems. Effort is not supplied optimally and loans are generally mispriced and sometimes rationed in such a situation (Stiglitz and Weiss, 1981; Gertler, 1987; Calomiris and Hubbard 1994). Poor household across the world need external finance for variety of purposes viz., consumption smoothing, investment to overcome from low level equilibrium trap etc., but they cannot afford market rates of interest or so called equilibrium interest (Fry, 1997, Swaminathan and Ramchandran, 2005; Mehrotra et al, 2009). The central bank across globe in their early development planning kept on instructing financial institutions they should keep deposit rates under ceilings for the supply of cheaper bank loans to selected target groups. While doing so, the cost of capital often exceeded return on capital and losses arouse of it were borne by government through budgetary support (Japan Development Bank, 1993). Many programmes[22] in different names were initiated by the different governments: be it developed or developing countries (Horinuchi, and Masayuki, 1987; World Bank, 1993).

Central banks on behalf of the government use direct and indirect instruments to control and influence the pattern in distribution of loans. The direct interventions were seen in form of: statutory control over the bank by nationalization of existing private banks, establishing new institutions under the control of the states, intervening in management and control on private institutions, directing commercial banks to deliver certain proportion of credit to sector as desired by the government. The indirect intervention exercised through policy actions, facilitation and support to the non-state institutions (Chandrasekhar, 2016; Rangarajan, 1996). The studies show that despite opposition from the liberalizers, banking industry remained to be most controlled industry across the world pertinently during war and interwar periods (Deng et al., 2010; Denizer et al., 1998; Gerschenkron, 1962; World bank, 1993, Japan Development Bank, 1993). “Social banking” an instrument for financing projects that have high social returns was a preferred instrument of the banking, but it has been criticized on the ground that shallow

[22] In Japan ‘Credit Guidance Programme’, in India it is called ‘Credit Authorization Scheme’, in Thailand it is called ‘Credit-Planning Scheme’.

financial system and institutions do not enough capacity to allocate resources efficiently. Thus, risk-return characteristics amounts to transfers through highly subsidized interest rates and such subsidies weaken the performance of financial institutions in the long run (Hannig and Jansen, 2010; McKinnon, 1973; Arestis, 2005).

State intervention in finance was not advised by heterodox only but there are numerous instances when orthodox also realized the need state interventions in the name of overseeing strikingly unprofitable politically-driven lending of the private sector (La Porta et al., 2002; Sapienza, 2004; Dinc, 2005;).

The directed lending programmes in Korea, Japan, Singapore, Indonesia and many other countries in decolonized world preferred social banking for development of social and economic infrastructure in their early development planning. In these economies, commercial banks were used a tool of development finance and policy makers withered form treating bank as purely financial intermediary firm. Despite different variants of the directed lending programmes, the objectives of these programmes were to:- mobilize resources for the development financing through monetization, employment generation; creation of additional resources for financing social and economic infrastructure, financing of mass good production and financial inclusion (RBI, 1968, Werner, 2000b; Eastwood and Kohli, 1997; Jain et al 2014).

"Window guidance" of Japan that was implemented in September 1954 is cited as the most successful example of the directed lending programme. This programme was intended to dictate the maximum allowable expansion in bank lending to vital sectors of economy and also to supplement the conventional monetary policy of the Bank of Japan in post war period (Suzuki, 1987). Under this program, regular meetings between the central bank of Japan and private sector banks were arranged in which, former used to instruct the latter regarding the quantitative lending targets for sectors of importance at quarterly basis. The overshooting and undershooting of lending target were punished and for stricter monitoring, a proper mechanism was in place. Besides reviewing periodic lending plan, the targets of the banks were set by involving local authorities (Werner 2003). The instruments of "window guidance" immensely contributed to the development

of economic and social infrastructure in Japan which was followed by many South East Asian Economies and China (Jain et al., 2015).

Like window guidance of Japan, the priority sector lending programme of India is also cited as successful example that contributed in growth, economic and social transformation and lowering of inequalities. The details of directed lending programme and policies related to social banking experiment in India has been discussed in Chapter 3.

Social banking experiment in India: overview of the studies

Although a separate Chapter has been devoted to present and discuss the chronology of banking policies and development of institutions since the advent of modern banking in India. But, for the acquaintance of topic and issues, a brief overview of important studies dealing with the social banking experience has been presented in this section.

Gunnar Myrdal three decades ago said, "It is in the agricultural sector that the battle for long-term economic development will be won or lost". This statement is relevant even today despite, massive structural and occupational transformations in economies. Like many developing countries, agriculture sector remained to be a prominent source of income and livelihood of the large section of population (World Bank, 2014; FAO, 2009; GOI, 2015). This sector although offer livelihood for more than half of the population of the world, but has grossly been underrepresented in loans extended by the formal financial institutions (EPWRF 2012; FAO, 2014). Unfortunately, financing of agricultural activities through formal institution has been grossly annulled in economic discussion and deliberations of the policy makers. Even in countries that discussed and debated the issues no sincere efforts were made to ensure justice to this sector (World bank 1993; EPWRF, 2008).

Dualistic theory developed by Lewis (1954) criticized and perceived as culprit behind negation of agriculture sector in bank loans. This theory undermines role of agriculture in development planning as it indirectly suggest an inferior treatment to agriculture sector (“residual” sector) that needed to feed and catalyze the industrialization process of the country. Indian planning strategy was not very different from the strategy suggested by

Lewis. Indian planning preferred unbalanced over the balance growth model and there seems to agreement amongst the policymakers that some inequality had to be borne for rapid industrialization, modernization and for attainment of future high growth (Chakravarty, 1978; Alagh, 2005; Brahmananda, 1980). Obviously, burden was shifted on agriculturists and agriculture sector by institutional design hence agriculture and rural activitieswas given inferior treatment in bank loan which continued till bank nationalisation (RBI, 1969; Chakravarty, 1978; Planning Commission, 1956; Brahmananda, 1978; Basu, 1977).

India is amongst a few economies that had a long history of state intervention[23] in finance; however, form and extent of interference varied over time (RBI, 1995; Mohan, 2005). The cooperative institutions were established by the colonial rulers for dealing problem of the rising indebtedness peasants and artisans to moneylenders and landlords. These institutions were assigned responsibility to providing loans and other services to the farmers and artisan households, while commercial banks were given subsidiary role. Despite, vertical and horizontal expansions of cooperative institutions, majority of households at bottom of social and economic pyramid in rural areas remained at the clutches of moneylenders and landlords (RBI 1954; Sen, 2005; Planning commission, 1956; GOI, 2009). Many writers noted that number of institutions (banking and development financial institution) with enough statutory power were established for financing of industrial activities in country, but despite catering the livelihood for large population agriculture financing did not feature much in agenda of policy makers especially during 1950s and 1960s (EPWRF, 2008; Chandrasekhar and Ghosh, 2002). The negation of the agriculture financing for long and skewed banking access not only made differences in agriculture inputs use across diverse stakeholders; but, it also contributed in accentuation of power asymmetry and inequalities of various kinds in rural

[23] The history of public provisioning of rural credit may be traced back to 'Taccavi loans' introduced by Muhammad-bin-Tughluq during 14th century AD. This loan was given to the villagers for rehabilitation following a disastrous famine. Britishers grossly undermined the need of formal finance for agriculture and rural sector till it started pinching their own treasury. In early nineties, however colonial rulers started taking serious efforts especially through cooperative institutions. Prominent amongst then were: All India Co-operative Societies Act (1904), Cooperative Societies Act (1912), Government of India Act (1919), Royal Commission on Agriculture (1927), RBI Act (1935), Cooperative Planning Committee (1945) and many more , Besides other objectives, these steps were also intended to provide safeguard to people against the exploitation (RBI History Volume 1;1977)

areas (Deere and Doss, 2006). It is true that banking services started percolating to the lower social and economic strata after bank nationalisation in country, but situation did not change much for the people at margins or/and the slave economy. Study notices that bank liberalisation further worsened the situation of slave economy as people who came out from clutches of moneylenders during social banking regime were pushed back to the trap of semi feudal power which had been exploitation them for generations (Shetty, 2005; Bhaduri, 2006; Basu, 1979; Rawal, 2005; NSSO, 2005).

Chandrasekhar and Ray (2005) noted bankers' apathy towards small firms, poor peasants and people at periphery despite, decline in statutory requirements to commercial banks during reform. Study noted 'phenomenon of fear banking" during early reforms across the ownership of banks in which they preferred parking of their surpluses in risk free investment over lending to needy borrowers. The "fear banking" was an outcome of various interconnected factors viz., misinformed choices, inadequate knowledge of the dynamics of rural money markets, return of the high street banking and excessive focus on the profit orientations (Ramkumar, 2014; EPWRF, 2008).

Studies report that rural and urban financial markets responded in a partitioned manner during reforms. An aggressive lending was noted in the urban and peri urban branches, but such spirit seems to absent in rural branches. The phenomenon of "fear banking", "lazy banking" and "inaction" was confirmed in many studies. During this period not only genuine borrowers were denied their due credit in banks but this behavior helped in regaining the ground of the moneylenders which they lost during the social banking regime (Shetty, 2005; EPWRF, 2008; Chandrasekhar and Ray 2005; Ghosh and Chandrasekhar 2002). Initially organic growth of intermediaries of informal markets was largely attributed to institutional vacuum created by the formal finance but in later stage they strengthen their power in rural credit market through controlling the supply chain and interlinked markets[24](Swaminathan and Ramchandran, 2005; Gill, 2003). Studies also noted exit of poor and downtrodden from banks on account of weak enthusiasm amongst the commercial banks especially banks operating in relatively un-banked region /states (Ray, 2004; Shetty, 2005; Bagchi, 2005; Chavan 2005). In 'fear banking

[24] An interlinked transaction is one in which the parties trade in at least two markets on the condition that the terms of all trade between them are jointly determined. (Bell and Srinivasan, 1989)

environment' many crowding out small borrowed loan accounts (SBA) was also noted as banks hedged their risk by enhancing investment in government bonds during the reforms (Ray and Chandresekhar 2005; Mohan 2004; Banerjee, 2005; Rawal, 2005; FAS, 2013; Gill, 2003). There is plethora of empirical evidences that suggest an aggressive expansion of bank branches, animal spirit amongst bankers during 'social banking regime' that not only helped in widening and deepening of the formal finance in rural and inaccessible areas but were also instrumental in reducing dominance of moneylenders and other semi-feudal powers in-rural areas (Raval, 2005; Ramkumar, 2012; Chavan and Ramkumar, 2012, 2014). Besides financial intermediations, studies across the ideological commitments appreciated the role of rural bank branches in smooth implementation of bank supported self-employment programmes especially IRDP and NREP during the 1980s. These studies recognized the pro-active role of rural branches in smooth implementation of poverty reduction programme. They also give credit to banks for changing perception and faith in commercial banks of the common masses during social banking especially public sector banks for widening and deepening of banking infrastructure in the remotest parts of the country. They did it despite, poor human resource and low quality and quantity of physical infrastructure which has been cited as measure pretext for not opening branches in rural areas during the reform. Studies noticed that nationalization drive helped in raising banking density in rural areas and also contributed in big way in improving the non-banking density in remote and inaccessible part of the country (Pulley, 2004). Burt, decline in bank branch density in rural areas led to increase in transaction cost of small loans that outweighed gains of the institutional finance (Basu, 2004, Pulley, 1989; NSSO, 2005, 2015; Ramchandran and Swaaminathan, 2005).

Many studies noticed that rise in branch density in rural areas not only provided an alternative source of finance to the poor, but, bankers during the social banking use to play a role of communicator and executor of the government programmes and policies. Successes of employment generation programmes, poverty reduction, modernization of agriculture sector, and growth of non-farm sectors were positively and robustly associated with rural bank branch density (Sharma, 1985; Binswanger et al., 1993). Mohan (2004) noticed that filed officers appointed by the RRBs during social banking

acted as conduit between borrower and lenders and they were source of major information of the government programs and policies in catchment areas of the branches. He noted that RRBs do not provide expert guidance to the borrowers nowadays, due to paucity of field officers, agricultural scientists and engineering graduates.

Many studies hail role of bank branches in discouraging, conspicuous expenditure, investment in unproductive physical savings like gold, precious metal and noted that increased bank branch density in rural areas exerted substantial influence on the national saving rate in India during 1961-81 and thereafter (Krishnaswamy et al.,1987; Fry, 1998). Expansion of formal financial institutions especially banks in rural areas, not only reduced liquidity constraints of the farm sector, but lower credit constrain was also noticed in non-farm sectors during social banking regime. Because, bank credit given to agriculturists not only benefited agriculture sector output alone, but non-farm sector also benefitted from such bank loan through input, labor and other supply chain linkages during the social banking (Haggblade and Hazell, 1989; Pandey and Burges, 2004). Chavan (2005) and Shetty (2005) noted that historically underprivileged regions of east, north-east and central India started catching to the advanced region during social banking while trend reversal in noted during reform. Pertinently, regional disparity started converging during the social and development banking phase while divergence is recorded during reform (Swaminathan and Ramchandran, 2005)

However, majority of the studies appreciated the role of social banking in transforming Indian economy, but critics of the social banking are not a few in numbers. Most of critics evaluate performance of public sector banks on parameters developed by believers of Efficient Market Hypothesis (Bhattacharya et al., 1997; Sarkar et al., 1998; RBI, 2014; Rangrajan, 1996; Reddy; 2005; RBI, 2013; Das et al., 2005). RBI (2014) appreciated the market driven regulation for creating a robust financial system that is not only more inclusive in nature, but was able to sustained and face the financial crisis of the world. They give credit to reforms measures for: strengthening of health of financial intermediaries, accelerating pace of the financial deepening, diversification of the institution and product related to banking and non-banking. Several studies noticed discernible improvements in competitiveness, efficiency and productivity of the Indian financial system and rejects probability of instability of the Indian banks (Bhattacharya et al., 1997; Mohan, 2004; Das et al., 2005, RBI, 2016).

Chapter 3: Banking Sector in India: An overview

Like majority of developing countries, the commercial banks have been a dominant component of formal finance in India. The financial market of the country is dichotomous because, unorganized and organized money markets not only coexist; but, they had been operating simultaneously for centuries. This chapter gives an overview of the regulations, policies and programmes related to commercial banks since the advent of modern banking in the country.

3.1 The structure of the financial market in India

In India, the financial system operates through two sets of institutions: (1) formal or organized or modern; and (2) informal or unorganized or indigenous money market. The system of formal finance functions within the ambit of the rules and regulations set the by central bank of the country (Reserve Bank of India) and has statutory backing. The commercial bank has dominant share in business, outreach, and assets amongst the formal financial institutions (NABARD, 2014). The commercial banks also consist of the heterogeneous entities which differ with respect to size, ownership and area of functioning. As per RBI classification, the commercial banks are classified into two groups: the scheduled[1] and non-scheduled[2] commercial banks. Prior to bank nationalisation it were latter that dominated over former in terms of share in branches, businesses, assets and other parameters; nationalisation led to shifting balance in favour of the former.

[1] Scheduled Commercial Banks (henceforth, SCBs) are those commercial banks which are included in the second schedule of the RBI Act, 1934. The RBI act 1934, stipulates a commercial bank to include in the second schedule must satisfy the following conditions: (a) it must have a paid capital and reserve of an aggregate value of not less than Rs. 5 lakhs, (b) it must be a joint stock company (a company as defined in the Section 3 of the Indian Companies act 1956, or a corporation, or a company incorporated by or under any law in force in any place outside India, or an institution notify by the central government on the behalf, or a state cooperative bank) which is required to keep a certain percentage of cash as a reserve with the Reserve Bank of India and submit periodical returns to the latter under the Banking Regulation Act 1949 and (c) they have to satisfy the RBI that their affairs are not being conducted in a way detrimental to the interest of its depositors. In return, SCB`s enjoy facilities of borrowing from RBI, and they are covered under the Deposit Insurance Scheme and Credit Guarantee Schemes.

[2] Non Scheduled commercial banks are those banks which is not included in the Second Schedule of RBI Act 1934. They are classified into four categories; Banks with paid capital and reserves above Rs.5 Lakh, Banks with paid capital and reserves above Rs. 5 Lakh, Banks with paid capital and reserves ranging between Rs. 50,000 to Rs. Lakh and Banks with paid capital and reserves below Rs. 50,000 (RBI 1970).

The scheduled commercial banks (SCBs) on the basis of ownership have further been classified into three categories: public sector banks, Indian private Banks (old and new), and foreign banks. Public sector banks are further divided into three categories: the State Bank of India and its subsidiaries (also known SBI and its associates), nationalised banks, and regional rural banks (henceforth RRBs). The structure of Indian banking industry is summarized in Figure 3C given in appendix.

India was amongst the few nations in the colonial world that had a well-developed network of endogenous bankers dating back to the ancient period, but owing to localized operation, non-uniform regulations, and wide influence of castes and class in access and use of these services, they were classified in the unorganized money market (RBI 1970; Mohan, 2004). These centuries-old, informal financial institutions in the country apparently operate in autonomous fashion, guided by diverse norms, rules and disciplines. Their actions are chiefly influenced by the local factors and environment in which they operate. Their strength of influence depends on the socioeconomic conditions of the diverse social and economic group in society; the level and growth of monetization of the economic activities, social stratification and condition of the social mobility; occupational structure and occupational mobility; presence of competitive and complementary players in catchment area; production relation; and also the outreach of the administration etc. Informal financial players include landlords, moneylenders, input traders, merchants, contractors, commission agents, relatives and friends, rotating savings and credit associations (ROSCA), professionals like doctors lawyers, teachers etc. (NSSO, 2015; Rawal, 2005). In principle, the formal and informal institutions are unconnected as both operate under different principles and norms; however, studies across countries did find a loose links between the two (complementary and competitive) through direct and indirect channels (UNDP, 2006; Rawal, 2005; Swaminathan et al, 2005; Chavan, 2008). Significant differences have been reported between formal and informal finance in regards to; style of functioning, client base, size and terms of loans etc. (Yoren, 1997; RBI, 1970; Bell at el, 1989; Floro at el, 1997; NSSO, 2015).

The coexistence of the formal and informal players makes the Indian financial system a fit case of financial dualism[3]. Besides many other menaces, it is believed that dualism has been blamed for the maintenance and continuation of semi feudal production relations (Bell et al, 1993). The vested interest of players of the informal players wishes to keep the rural economy at the pre-capitalist stage, as it helps them in exploiting maximum surplus value and rent seeking but at the cost of lower growth for economy. It also retards the pace of modernization of the production and exchange (Ray, 2004; Bell, 1993). The huge profit cultivated on the pre capitalist production structure by them is use for dual purpose; a strengthening of their business hence power and blocking the expansion of the formal banks. The Indian experience show that they succeeded on both counts made cooperative non-functional and maintained the feudal production and exchange relation in rural areas till the 1970s (Bhaduri, 1985; Ray, 2004; Rawal, 2005; Sen, 2005; GOI, 2008).

The persistence and thriving of unorganized money market on a vast scale across the country even in areas with significant influence of banking has been both a mystery as well as challenge for the policy makers across the world (Bell, 1993; Bell and Srinivansan, 1989). Indian government after adoption of the Constitution enacted legislations aimed at controlling the illegal activities of players of unorganised money market, but, recent NSSO and many field studies suggest that after an initial decline of their influence during the1970s and 1980s, professional money lenders have returned with more strength during the period of economic reforms[4]. The peculiarity is that informal players generally extend loans to socially and economically deprived sections of the society in countryside, to whom formal players are unwilling to extend loans or other financial services (UNDP, 1997; NSSO, 2015).

Despite statutory restrictions on their various activities, the businesses of these players are thriving because of many inherent qualities: intense outreach, less bureaucratic

[3] Op.cit.

[4] The share of professional and agriculturists moneylenders in the outstanding debt of the agriculture households was 36.1% in 1970-71 which declined to 16.1% in 1980-81and marginally increased to 17.5 % in 1991-92. But, during reform their share 26.1% in 2001-02, and 29.6 % 2012 (NSSO 2015).

functioning, inbuilt flexibility in operation, product customisation as per need of the clients and use of the social power in recovery of loan (Konig and Koch 1990). Besides, being local players these players collect and store information (credible information regarding the economic status, movement and perspective income of the borrowers) at lower cost, and they also use their social and political[5] influence to enforce loan contracts. Additionally, they have been reinvented themselves in changing circumstances, especially by customizing loan products as per the requirements of borrowers. They also take risks by reducing or waiving collateral requirement, and supply loan at the doorstep of the borrowers, at the time of need. They sometime offer loan at flexible repayment terms. There has been demand from many quarters, instead of imposing sanctions on them, governments should devise and frame the regulation in which these players can play an important role in filling the institutional gaps. Through better monitoring, they can play an important role in meeting financial needs of the poor in remote areas of the developing countries (Ghate, 1992). However, there is plethora of literature[6] that find no merit in giving legal status to informal players for inclusion especially for the India. They fear that giving regal status to them in Indian society which is agrarian, dual, fragmented and segmented on the basis of the caste and class, and also characterized by weak regulatory and economic infrastructure in rural areas would strengthen semi feudal production relation and exchange (Rawal, 2005; Swaminathan and Ramchandran, 2005; Bell 1989, Bagchi, 2005).

As discussed in Chapter 2, the applications of the initial deficit and low income households (who require adequate loans at affordable terms for their consumption and production financing) are rejected by the banks on the ground that they are poor and cannot deposit the matching marketable collateral whereas, rich and surplus household

[5] The author's own observation is that more that often, with active connivance of the executives and law implementing authorities, they misuse legal authority for their illegal actions.

[6] Pischke et.al.,(1983) found that informal credit markets add nothing to raising the ability of the borrower in producing goods and services instead they were pushed into deep debt trap. Madhur and Nayar, 1987) concluded that these players provided money for consumption or non-productive purposes, which cannot be appreciated in economy which is facing capital scarcity. Premchand (1925) in his novel has mentioned many instances, where Zamindar and moneylenders seems to using their physical and other coercion methods against the borrowers/dependents of the socially and economically backward groups in the rural areas (Gill, 2003; Yaron, 1992, 1997; NSSO,2015; Swaminathan M, 2005; Chavan,2005; NCRB, 2014)

not only avail disproportionate benefits from the formal sources by offering inflated value of collateral but, they use borrowed money for lending to the borrowers who are denied loans from the same formal source (Mehrotra et al, 2009, Chavan 2005). In this way, large borrowers act as intermediaries between banks and initial deficit household borrowers. Since such acts also help in strengthening the political and economic influence of banks, they suit both bank officials as well as moneylenders, at huge cost to the poor in catchment areas. There are many dimensions of the linkages of the formal and informal players in the country but, the scope of the present study is limited to reviewing the regulation and development of formal banking institutions in country.

3.2 Banking in the early British period (1776-1935)

The East India Company was founded in year 1600 in Britain. Its foothold in country can be traced to year 1612[7] when it acquired a trade licence from Mughal emperor. After winning the 'Battle of Plassey' in 1757, the East India Company acquired significant political and military power, and also formulated a long term strategy for rule in India. Modern banks in India were started by the 'Agency Houses' of the United Kingdom. Many agency houses had their presence during the East India rule. These agency houses were carrying out the banking business for their clients and amongst them, the Bank of Hindustan (first joint-stock[8]) was started by a famous English Agency House M/s Alexander and Company. Banks established by them were a major step towards the expansion of the modern banking in country, but many banks started by them could not survive for the long period due to debacle of the promoting firm and Bank of Hindustan also had same fate as it was closed down in 1832 (Bagchi, 2002; RBI, 1970,1985).

Subsequently, the General Bank in Bengal and Bihar', the first step towards an establishment of the central bank of country came into existence in 1774[9]; however, it

[7] License was given by the Mughal Emperor 'Jahangir'.

[8] In joint stock shareholders can be held liable for the company's debt. i.e., a joint stock bank combines features of a general partnership in which owners of a company split profits and liabilities, and also publicly-traded company which issues stock that shareholders are able to buy and sell on an exchange. The joint-stock bank was not owned by a government.

[9] The Warren Hastings the governor and later Governor-General of Bengal placed a plan before the 'Board of Revenue' for the establishment of the `General Bank in Bengal and Bihar' and he got approval from the `Board of Revenue` in 1973 and Bank was established in 1774 (RBI, 1970).

could not discharge it duty as central[10] banking as it was also closed. A decade later, 'The Bengal Bank' and 'The General Bank of India' established by an agency house in 1785 was assigned a dual role; as a central baking (limited power of issuing currency) and also to discharge the duty of commercial banks. Both banks were functioning on the principle of unlimited liability. In the meantime many new banks were also established by different agency houses exclusively owned by Europeans. Amongst them, only a few of them could survive (RBI, 1970). The high birth and mortality rates of the banks at that time were attributed to many structural and technical reasons including limited customer base, unprofessional functioning, promoters' involved in speculation activities etc.(RBI 1985).

The Limited Liability Act for India was passed by the British Parliament in 1860 which fixed limited liability on promoter of the firms and gave an impetus to establishment of banking companies (Roychaudhri, 2008; Kumar and Desai; 2008). The American Civil War (1861 to 1865) created a remarkable boom of cotton and silver traders from Asia. Thus many joint stocks banks were opened across the port towns in country in order to exploit the trade financing opportunities. Unfortunately, trade momentum did not last long and majority of banks open during this period went into bankruptcy (RBI 1985). Despite, presence of the many banks at that time, traders at large had little faith in them because, of the frequent failure. The frequent failure not only tarnished the image of banking promoted by agency houses; but also the image of the East India Company. Thus, 'East India Company' decided to open three presidency banks.

'The Bank of Calcutta' was established in 1806[11]. Subsequently, 'The Bank of Bombay', and 'Bank of Madras' and was established in 1840 and 1843 respectively. The initial capital of these two banks was Rs. 52 lakhs and Rs. 30 lakhs. However, these banks were promoted by the 'East India Company' but, they had maximum autonomy of functioning in their territories (RBI 1970). Besides, banking business, presidency banks

[10] In economic literature two oldest functions of central banks is mentioned; those of 'note issue' and 'banker to Government'. For these functions, either an existing bank or new banks were set up. The banks which carried these functions were called 'Banks of issue', and were entrusted with general banking business also. (RBI History Volume 1, 1935-51, Page -3, Reserve Bank of India Mumbai, 1970)

[11] This bank was renamed as `Bank of Bengal` in 1809. This bank was started with initial capital of sicca 50 lakhs out of which 20% was contributed by the government, and remaining 80% were shared by the promoters (RBI 1985).

also helped company in matter of 'note issue' and arranging finance at the time of war (RBI 1970). These three banks kept working even when power of administration of India was transferred from the 'East India Company' to the British crown. In 1920, these 'Presidency Banks' were amalgamated into a single entity called 'Imperial Bank of India'[12].

In continuance of the normal banking business, the 'Imperial Bank' was also assigned a role of discharging the duties such as ; monopoly of note issue, sole right to act as bankers of government, holding cash reserves of the commercial banks, rediscounting bills and managing clearing houses till the promulgation of the Reserve Bank of India Act 1934. The management of currency during this period was remained with government (RBI 1970).

In late eighteen centaury, many private banks such as 'Allahabad Bank (1865)', 'The Alliance Bank of Shimla'(1875), 'The Oudh Commercial Banks (1881) were established but major shareholding of these banks were with the Europeans (Mohan, 2004; RBI, 1970). The 'Punjab National Bank Ltd' established in 1894, was the first bank exclusively owned, operated and managed by Indian nationals. Subsequently, 'Swadeshi Movement' in country gave a major fillip to the domestic banking industry hence, many banks with majority stake by Indian were established. The prominent names amongst them are 'Bank of India Ltd', the 'Canara Bank Ltd', the 'Indian Bank Ltd', the 'Bank of Baroda Ltd', and the 'Central Bank of India Ltd'. The birth and mortality rates of the banks established by both Indian and foreigners remained very high till 1935, due to reasons such as absence of effective regulations, opaque functioning, unprofessional decision making, weak capital base, limited and fragile customer base, banking sector's excessive exposers to speculative commodity trade etc. (RBI, 1970; Mohan, 2004).

[12] The Imperial Bank of India Bill, providing for the amalgamation of the three Presidency Banks was introduced in the Indian Legislative Council on March 1, 1920, and was passed in September 1920; the amalgamation came into effect in January 1921. The 'Imperial Bank' was primarily a commercial bank, transacting all the business formerly carried on by the Presidency Banks. (RBI History Vol., I, pp-25; RBI 1970).

3.3 The Reserve Bank of India

The history of 'central banking' can be traced to year 1401, when 'Barcelona the Taula de Canvi (Municipal Bank of Deposit) was established for the safekeeping of city and private deposits and also assigned the role to manage finance, and expenses of the government. Subsequently, many such banks were established across the Europe and Mediterranean for the purpose of issuing and using fiat money, government bonds and managing the tax revenues on the behalf of the respective states (Galbraith, 1975). The 'Bank of England' was founded in 1694 with stated purpose of funding British government's war against France and regarded as first modern central banks (Elgie and Thompson, 1998; Galbraith, 1975).

British regarded India as an important colony because of its strategic location. After establishment of the Bank of England as a central bank, the 'Warren Hastings' then governor general convinced the board member of the 'East India Company' for establishing of a separate 'Central Bank' for India. 'General Bank in Bengal and Bihar' with its two chief offices at 'Calcutta' and 'Murshidabad' along with fourteen branches and sub branches were established in 1773 but , owing to differences amongst the officers of the 'East India Company', they were closed (Roychaudhri, 2008; RBI, 1970).

The next attempt of establishing a 'Central Bank' was made by Mr. Robert Rickards in 1807-08. He proposed for establishment of 'General Bank' jointly owned by the public and government but his proposal was turned down by the directors of the 'East India Company'. Subsequently, a body of merchants in England having trade relations with India also submitted a proposal for establishment of 'Great Banking Establishment for British' but and this proposal made some headway as it went through the scrutiny of 'Court of Director of the 'East India Company'; but, could not pass through the established parliamentary procedure of that time (RBI 1985).

Despite of many failed attempts under the company rule discussion on establishing a separate 'Central Bank' for the India was started after British Crown[13] took over the control of the Indian Administration in 1858. James Wilson, an expert on financial matter of the Viceroy's governing council, proposed 'National Banking Establishment' akin to the banking department of 'Bank of England'; but this proposal also remained on paper due to his untimely death in August 1860 (RBI 1970). Keynes (1913) a member the 'Chamberlain Commission' proposed for the establishment of State/Central Bank' for India; but, due to sharp differences amongst the members of the committee on the issues such as ownership, capital structure and jurisdictions, his proposal also remained at idea only (Kumar and Desai 2008).

In 1925, the 'Royal Commission on Indian Currency and Finance' also known as the 'Hilton-Young Commission[14]' recommended for the setting of the Reserve Bank of India (RBI) an institution entrusted with pure 'central banking' functions[15]. Commission outlined administrative and other blueprint[16] for the proposed RBI. 'Gold Standard and Reserve Bank of India Bill' was introduced and discussed in Legislative Assembly on January 25, 1927; but, both bills was referred to joint committee for further discussion. Owing to differences amongst the members of joint committee on aspects such as

[13] British Crown in 1958 appointed a fifteen member council for aid and advice of the Viceroy for smooth running of the administrative affairs of the India. Amongst them Mr. James Wilson was as an expert on financial matter for looking the problems to currency and finance.

[14] The Hilton Young Commission was appointed in August 1925 ' to examine and report on the Indian exchange and currency system and practice ; to consider whether any modifications are desirable in the interests of India ; and to make recommendations The question of the need for a central or State bank was thus not referred to it. The commission, however, examined this matter and in its Report, submitted in July 1926, strongly recommended the establishment of a central bank. Extracted from the Chapter 'Genesis of Central Banking In India', RBI History Volume 1, pp 27; Mumbai (1970) .

[15] The central banking function includes: overseeing monetary policy, issuing and maintaining currency, managing foreign exchange, working as a banker of the government, bankers the banks, etc (Gupta 1982).

[16] RBI will be a shareholders' bank with a paid-up capital of Rs. 50 million. `Imperial Bank` would be given preference in subscribing the share in allotment. It will have a Local Head Offices in the chief business centers, which were to be managed by Local Boards, elected by shareholders on the respective registers". As regards the administration of the Central Board, nine members were to be elected by the shareholders, while the Governor-General in Council will nominate five, comprising a Managing Governor, a Deputy Managing Governor and a maximum of three other members. Additionally, an official member was to attend the meetings and advise, but without the right to vote. For eliminating the danger of political pressure, it was recommended that Members of the Governor-Generals` Council and Members of the Legislature should be debarred from being nominated as members of the Central Board or appointed as President or Vice-President of a Local Board (From RBI Volume II, Mohan 2004, Gupta 1982).

constitution, structure, and management of the institution this bill could not sail through mandatory legislative process (Kumar and Desai 2008; RBI,1985).

'Central bank' as an independent entity came into the fore of discussion when, 'Indian Central Banking Enquiry Committee' (1931[17]) submitted its report. This committee recommended for the establishment of "Reserve Bank" an entity free from all political influences. Subsequently, under the chairmanship of "R.A.Mant", a Departmental Committee[18] was instituted in London by the India office to advice upon the Reserve Bank legislation. The London Committee, in its Report (March 14, 1933) recommended RBI as a shareholders' bank. The bill drafted by the London Committee was introduced in the Legislative Assembly by the Finance Member 'Sir George Schuster' on September 8, 1933; but this bill was referred to a 'Joint Select Committee' on September 13, 1933. After scrutiny of the 'Joint Select Committee' this bill was passed in Assembly on December 22, 1933 and it also got nod of 'Council of State' on February 16, 1934. The Bill received 'Governor-General's assent of the on March 6, 1934. Thereafter, the RBI commenced its operations from April 1st, 1935, as per the provisions of the Reserve Bank of India Act, 1934.

3.4 Steps towards financing agriculture and rural through banks - pre nationalisation period

In RBI Act 1934, a separate 'Agriculture Credit Division' (ACD) was established in 1935 to look into the matter related to agriculture and rural finance with close coordination of the four decade old cooperatives in country. Despite, phenomenon growth in assets and business during the World War II, the banking outreach was limited to few pockets and people in country (RBI, 1985). The rural population in general and farmer household particular were aloof to the banking development as they were largely dependent on the

[17] The Indian Central Banking Enquiry Committee was constituted under the chairmanship of Sir Bhupendra Nath Mitra in 1931.

[18] The Committee comprised: R. A. Mant, Deputy Chairman, N. N. Anklesaria, E. C. Benthall, C. C. Biswas, Ram Saran Das, H. Denning, A. Hydari, Mirza M. Ismail, Cowasjee Jehangir (jun.), L. J. Kershaw,C. Kisch, V. T. Krishnamachari, H. P. Mody, A. Ramaswami Mudaliar (who signed the Report on behalf of Iyengar), Campbell Rhodes, GeorgeSchuster, Firoze Sethna, H. Strakosch, Purshotamdas Thakurdas, S.D. Waley, Mohd. Yamin Khan and Zafrulla Khan.(RBI History Vol.I 1970)

players of rural informal money market for their variety of credit needs (RBI, 1954). The situation of the artisan households, craftsman and small traders residing in small towns was not very different from the rural peasants (RBI, 1970).

After independence, the RBI appointed 'All India Rural Credit Survey Committee' under the chairmanship of A.D Gorwala in 1951 to study and prepare a long terms roadmap of rural financial intermediations. In order to assess the ground situation, the Committee undertook a comprehensive survey (75 districts of the country with 8 villages and 15 households from each village) and submitted its report in August 1954. In report committee noted dominance of the informal players in debt of the rural households as it found that in 1951-52, out of total Rs 7500 million debt of the rural households, the contribution of the commercial bank was abysmally low (about 0.9 per cent); whereas, more than 70 per cent in debt was contributed by the moneylenders (RBI, 1954). The committee recommended for building of a strong institutional credit infrastructure in rural areas for dual purpose; to displace moneylenders, and also to provide alternative source of finance to agriculturists and poor living in rural areas (RBI, 1954).

However, committee highlighted many structural inadequacies in functioning of the cooperatives but, did not recommend the curtailment of the role of cooperative in agriculture financing. In the opinion of committee, existing banking infrastructure in the rural areas are inadequate hence an integrated scheme of rural credit led by co-operatives and supported by banks must be encouraged (RBI, 1954). In spite of many structural inadequacies, the Committee appreciated the cooperatives for providing credit at the doorstep of the farmers at affordable terms and was not keen about the commercial banks' participation in direct lending to the farmers. But it outlined well-defined role of commercial banks in providing credit to specialized areas such as; marketing, processing, storage, warehousing and in other supply chains of agriculture (Rangarajan, 1996). In view of poor banking intensity in rural areas and small towns committee recommended for the creation of a large commercial bank under the control of state which not only stimulate the banking expansions in small towns but to smooth functioning of the government business (RBI, 1970). The government of the day accepted most of the

recommendations of this committee and created 'State Bank of India (SBI)' through statutory amalgamation of the 'Imperial Bank of India' in 1955 (RBI 1970; RBI 1954; Mohan 2004). In February 1955, the 'National Agricultural Credit (Long-term operations) Fund' was created by the Reserve Bank for the purposes of medium and long term funding of the project related to agriculture.

Nationwide 'Green Revolution' was launched under the name of 'Intensive Cropping Agriculture Programme (ICAP)' in 1966-67. This scheme metamorphosed and revolutionized Indian agriculture, as it exposed the centuries old farming system into more capital intensive and modern technology (Yalagh, 2013). The new system not only involved more capital in direct production but, also revolutionised the entire supply chain of agriculture produce especially in green revolution belt. Subsequently, area and crops under green revolution increased as many pockets of the country were brought into this drive which exerted pressure of the farmer groups (especially the big landlord 'Kulaks') on the government to make adequate provision of bank loan at affordable terms in real time. The green revolution led to push the demand for bank loans for agriculturists, and people engaged in farm and off-farm businesses as well as in the supply chain of the agriculture (Rangarjan, 1996; Mohan, 2004).

Government also realised that formal financial institutions operating in rural areas (cooperatives, small sized non schedule commercial banks, and commercial banks having weak capital structure) banks in small towns neither had capacity nor expertise to meet demand for agriculture loans at astonishing rate out of green revolution (Basu, 1979; Alagh, 2013). Eventually, government was left with little option, but to expand the banking network in the rural areas. The other option with government was to motivate the existing commercial banks owned by the private to take responsibility of agriculture financing by expanding their business in rural areas (RBI, 1985).

It is worth noting, majority of the commercial banks operating in existing and potential green revolution areas were private stockholding, non-scheduled and small sized banks (RBI 1985). These banks were not willing to compete with local

moneylenders in rural areas (Basu, 1979). In addition to this, these banks were carried with colonial legacy of 'high street banking'. The personals in these banks were preoccupied with the mind-sets that rural money market is too small, and agriculture financing is not a profitable and viable venture (Basu, 1979). It' true that entire supply chain of agriculture was almost controlled by local moneylenders, traders and rural elites (Alagh, 2013; Rena, 2004). RBI appointed 'All India Rural Credit Review Committee' (AIRCRW) under the chairmanship of 'Venkatappiah' in July 1966. As per terms of reference, committee was assigned the responsibility to review progress made in the supply of credit from the all institutional sources including commercial banks for intensive agricultural production and marketing; review the working of the crop loans system; review the progress of rural branches of commercial banks; and also to suggest methods of coordination between different agencies involved in rural credit. The Committee submitted its report in July 1969 and recommended for the adoption of the multi-agency approach as the most feasible and appropriate response to the credit requirements of agriculture and allied activities (Basu, 1979). As per recommendation of the committee "the requirement of the agriculture sector was so large and diverse that commercial banks and cooperative banks can both play a mutually complementary role without getting into conflict with each other"(Rangarajan, 1996).

'National Credit Council' in its meeting stressed on aggressive role of the commercial banks in agriculture financing in December 1967. Nonetheless, the SBI and its associates made efforts towards helping and strengthening the co-operative institutions in rural areas. Cooperative lent aggressively to the agriculturists in early green revolution but, it could not reach to the lower strata of farmers and other disadvantaged households (NSSO, 1982). Instead, asymmetry in lending further intensified disparity within the farmers and agriculture households. In non-green revolution belt (rain fed area), disproportionate access to banking loan were used as seed money for the rendering the loans to lower assets class households (Basu, 1979; NSSO 1982). Later, new class of the agriculturist and traders also captured the management of the cooperatives. The failed cooperative experiments in rural areas not only impacted the morale of cooperative institution, but it also sent wrong signals to the bankers which were already feared in

entering rural markets (Sen, 2005). The provision of merger and amalgamation in RBI Act 1949 although was intended to encourage the consolidation of commercial banking and replace the small-sized non-scheduled commercial banks, but instead of creating strong network of the scheduled commercial banks in rural areas, many small sized banks were closed. The consolidation of the banking gave ample opportunities in strengthening of monopoly power of moneylenders especially in the areas of the significant influence of the green revolution (Basu, 1979)

3.5 Bank Nationalization-A beginning of new chapter in 'Social Banking'

As discussed, many compelling reasons were present for the expansions of rural banking during the 1960s; but, nationwide launching of the 'green revolution' intensified the demand for credit in rural areas. As discussed, financing 'green revolution' through existing weak cooperative institutions or relying on informal organisations was neither feasible nor socially desirable option. 'Green revolution' was national priority of the government of the day, hence, government was left with little option but to devise a new mechanism for agriculture and rural financing (Alagh, 2013).

However, people at large were in support of mass banking, but, it was difficult for the government to bring consensus[19] amongst political parties. Conflicting pulls across the sectoral allocation of bank advances were operating in the economy. The policy of 'Social Control' over the assets of the commercial banks was amongst many options which were suggested by the advisors of then Prime Minister Indira Gandhi to overcome from the political crisis created by the old gards of the congress. She preferred it, because gave her an opportunity to become a mass leader in a dwindling political situation[20] on

[19] Developing all party consensuses was difficult because ruling Congress Party was undergoing in the process of churning and transition after the sudden demise two prime minister in a span of less than two years (Pt. Jawaharlal Nehru died on May 28, 1964 and Sri Lal Bahadur Shastri on January 11, 1966). Besides, poor performance of Congress Party in 1967 general election, non-congress coalition governments in various states and vested interest of the members of parliament across the political parties.

[20] Indira Gandhi after 1967 general election faced challenges at many fronts. She desperately needed independence from the Syndicate (a group of powerful and influential leaders from within the Congress which helped her in installation as the Prime Minister); and also wanted to work towards the regaining the ground that the Congress had lost in the 1967 elections. To overcome from these problems, she converted a

one hand, and also a befitting reply to her opponents within and outside the party. She was also well-versed that many political leaders across party lines had very close relations with the industrial houses controlling banking business (Ghosh 2008).

Thus, government accepted a non-official resolution 'Nationalization of Commercial Bank' in the Rajya Sabha[21] for discussions, although bill could not sail through parliament proceedings. But, during the discussion members of Upper House agreed in principle that 'a conscious and effective intervention of the government' is needed in functioning of the commercial banks in country. In reply to the discussion, the government assured member of the upper house that an intensive examination of the policies and practices would be undertaken for the formulation of the policy of social control (Rajya Sabha, 1967).

The policy of 'social control over banking' was announced on 19th July 1969 by then Prime Minister Mrs. Indira Gandhi through an ordinance. She announced the nationalization[22] of 14 major commercial banks. In her broadcast address she stated: "nationalization was meant for an early realization of social control which was spelt out as removal of control by a few, provision of adequate credit for agriculture and small industry and export, giving a professional bent to management, encouragement of a new class of entrepreneurship and the provision of adequate training as well as terms of services for bank staff" (RBI, 2003).

After nationalization in 1969, a multi–agency system was introduced within the formal component of the rural financial system. In which public sector schedule commercial

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simple power struggle into an ideological struggle and launched a series of initiatives to give the government policy a left orientation and proposed a Ten Point Programme in May 1967. This programme included 'social control of banks', nationalization of General Insurance, and ceiling on urban property and income (From 'Politics in India since Independence: NCERT Delhi) also available at , http://www.ncert.nic.in/ncerts/l/leps205.pdf) .

[21] Rajya Sabha Debates dated 26,5.1967, New Delhi Vol. 16, P,894, reprinted in "Banking Policy in India : an Evaluation" by Ghosh, D.N. Aliied Publishers Private Limited, 1979, p. 216.

[22] The fourteen banks which were nationalized on 14th July 1969 were; Bank of India, Central Bank of India, Bank of Baroda, Punjab National 'Bank, United Bank of India, Canara Bank, United Commercial Bank, Union Bank of India, Indian Overseas Bank, Indian Bank, Dena Bank, Bank of Maharashtra, Syndicate Bank and Allahabad Bank.

banks were given leading role in planning, development and expansion of the banks in rural areas of the country. The 'Lead Bank[23]' scheme was launched by the Reserve Bank of India in December 1969 with stated objective of a proper coordination between banks in expansion of branches, credit planning and avoid overlapping. The ordinance of nationalisation; allowed remaining domestic private, and foreign banks to co-exist with public sector banks; But, their activities were subjected to strict controls and monitored (Ghosh, 1969). It was decided that entry would not be motivated by profit or loss. There was no question of exit of any public sector banks even in the face of losses as government ensured sufficient budgetary support for non-urban branches (Rangarajan, 1996; Bagchi 2005). The Second tranche of bank nationalization was carried on April 15, 1980, when government took over the assets and business of the six [24] big private banks. The second wave of nationalisation brought about 80% of the commercial banking business in India under the government ownership. Between two nationalisation drive, many institution and sector specific programmes and policy were announced in order to strengthen the drives of the social banking and details are given in proceeding section and summarised in Appendix Table 3.1.

3.6 Regional Rural Banks (RRB)

The branch authorization policy of 1967 although forced the commercial banks to expand their operation in backward and inaccessible regions especially in rural areas. Under the obligations many branches of the commercial banks were opened in unbanked and under-banked regions; but later policymakers realised that it was difficult to change the attitudes and urbane demeanour of personnel working in those branches (Rangarajan 1996). They were not only less passionate while working in rural branches but were also uncomfortable with dealing with borrowers having so called poor literacy and

[23] `Lead Bank Scheme was suggested by study group on "Organizational Framework for Implementation of Social Objectives" (better known as Gadgil Study Group). This group was constituted in meeting of `National Credit Council` on October 1968. The Study Group identified serious gaps (both spatial and functional) in banking development and recommended for adoption of area approach to banking in bridging gaps. It also suggested, a system should be evolved wherein commercial banks particularly those in the public sector should be entrusted with the responsibility of leading the process of extending banking facilities in specified areas, say districts (RBI History, Volume III 2005)

[24] The six banks which were nationalized in 1980 were; the Punjab and Sind Bank; New Bank of Commerce, Andhra Bank, Corporation Bank, Vijaya Bank, Oriental Bank of Commerce.

communication skills. Banks were eager in deposit mobilization, but displayed reluctance in advancing loans to agriculturist specifically farmers at bottom of the social and economic pyramid (Basu, 1979). Thus, there was immense pressure on the RBI and government to either change the attitude of bankers or bring a new set of the banks which would have a combination of the local sensitivity of the co-operative institutions, and also efficiency and business acumen of the commercial banks (RBI , 985).

On the recommendations of M. Narasimham Working Group (1975) government proposed for a new set of banks which "combine the local feel and the familiarity with rural problems which the cooperatives possess, and the degree of business organization, ability to mobilize deposits, access to central money markets and modernized outlook which the commercial banks have[25]". In this series five Regional Rural Banks (henceforth "RRB") were established in 1975 in four states[26]. The RRBs were hybrid banks established under joint shareholding of the central government, respective state governments and promoter banks with proportion of 35:15:50 shareholding respectively. As per RRBs Act, 1976, "RRBs were established with a view to developing the rural economy by providing, for the purpose of development of agriculture, trade, commerce, industry and other productive activities in the rural areas, credit and other facilities, particularly to small and marginal farmers, agricultural labourers, artisans and small entrepreneurs, and for matters connected therewith and incidental thereto[27]". These new institutions were expected to supplement other institutions in the field rather to supplant them. It was further expected from them to mobilize resources from the region and deploy them within the same region (Rangarajan, 1999).

[25] Extracted from Sukanya Bose (2005); "Regional Rural Banks: The Past and the Present Debate" available at www.macroscan.org/fet/jul05/pdf/RRB_Debate.pd

[26] The first five banks set up on 2 October 1975 were; Prathma Bank (Moradabad, Uttar Pradesh sponsored by Syndicate Bank); Haryana Kshetriya Gramin Bank (Bhiwani, Haryana, sponsored by Punjab National Bank); Gorakhpur Kshetriya Bank (Gorakhpur , Uttar Pradesh, sponsored by State Bank of India); Jaipur Nagaur Anchalik Gramin Bank (Jaipur, Rajasthan, sponsored by United Commercial Bank); and Gaur Gramin Bank at Malda (West Bengal, sponsored by United Bank of India).

[27] Ibid

3.7 National Bank for Agriculture and Rural Development (NABARD)

In 1977, the RBI appointed a committee under the chairmanship of Mr. B. Sivaraman to look into the arrangement of the rural credit also as Committee to Review Arrangements of Institutional Credit for Agriculture and Rural Development (**CRAFICARD)**. The G.V.K. Rao, a prominent member of this committee advocated for an 'Agricultural Development Bank' having a combination of credit policy and institutional support. He was in view that RBI was unable to carry out aforesaid functions in smooth manner. The committee submitted its report in January 1981, and recommended the setting up of the National Bank for Agriculture and Rural Development (henceforth 'NABARD'). The 'NABARD[28]' finally came into existence on July 12, 1982, by replacing 'Agriculture Credit Department (ACD) of the RBI, and existing 'Agriculture Refinance and Development Corporation' (ARDC).The NABARD took responsibility for the planning and execution of rural and agricultural credit with close coordination between respective state governments, banks and cooperative institutions. Service Area Approach (SAA) introduced in April, 1989 was started aiming at decentralized credit planning at the lowest administrative units. Under this approach, commercial were directed to prepare a detailed credit plan in which banking services can reach to village level.. The branches of the public sector were advised to adopt villages in their catchment areas. The village-wise credit plans was aggregated into the branch level which would be further aggregated into Block Level Credit Plans (BLCPs) and further to the District Credit Plan (DCP). Under this approach, proper coordination was expected among different agencies: government, 'Panchayati Raj Institution' and concerned local bodies (RBI 2009[29]).

3.8 Financial liberalisation and Banking Sector Reform-

Indian economy has undergone into sea change in its orientation, focus and strategy after 1991. The debate in regards to autonomy of the RBI dates backs to Second five year

[28] National Bank for Agriculture and Rural Development (NABARD) established on the basis of the National Bank for Agriculture and Rural Development Act, 1981 with stated objectives of "..providing credit for the promotion of agriculture, small scale industries, cottage and village industries, handicrafts, and other rural crafts for promoting integrated rural development and securing rural prosperity…' RBI History Vol III .

[29] Report of the High Level Committee to review Lead Bank Scheme; Reserve Bank of India (2009)

plan but, majority prevailed that RBI will work in the close coordination between macro objectives set by the government. Hence, many institution were developed in order to strengthen the effort of the social banking (the chronology of development of institutions and regulation is discussed above). Although, Chakravarty[30] recommendation questioned the efficacy of the instrument of the social banking and advocated review of the objective relationship between government and the RBI, but it was within the framework of the social banking. The issues such as; rising inter-sectoral and spatial disparities, corruption, nepotism, increasing Non-Performing Assets (NPA), cony financing were in the centre of the discussion amongst the policy makers; but, solution were sought within the social banking framework. Economist though in minority were in opinion that government should think over reviewing of the strategy of the social banking, majority were in view that aforesaid problems are administrative in nature and can be solved within social banking and adoption of the neoliberal economic reforms especially in the banking sector was undesirable. The direction for the adoption of the Service Area for the bank branches by the in 1989 not only continuation of the efforts of the social banking but it was intended to strengthening of the banking infrastructure in rural and unbanked locations. Bank branches during the social banking were not perceived as pure financial firms but they had been observed as a tool of the development planning and a centre of the social change and liberation of the poor from the clutches of the semi feudal powers (Shetty, 2005; Patnaik 2005; 2008; Ghosh, 2005).

Notably, liberalisation in many sectors especially industries having high capital intensity and advanced technology started from mid-eighties in country (Nayyar 2008). The New Economic Policy (NEP) which was a component of the structural adjustment programme and stabilization policy of the 1990 shifted the policy orientation and development strategy from the Nehruvian (Fabien Socialism) to the market regulated neoliberal regimes. In order to synchronise the fiscal and monetary instruments in new policy

[30] The Chakravarty Committee was instituted in 1984 in order to review the working of the monetary system of the country and it recommended that …… there does appear to be a strong case for greater reliance on the interest rate instrument with a view to promoting the effective use of credit, and in short-term monetary management. Over the years quantitative controls on credit have increasingly borne the major burden of adjustment required under anti-inflationary policies and have in the process given rise to distortions in credit allocations at the micro level (pp. 161-2) RBI (1984)

regime, the government appointed a Committee on Financial Sector Reforms (hereafter, 'CFS') under the chairmanship of M. Narasimham (Popularly known 'Narasimham Committee') on 14 August 1991. This committee was assigned to: study the detail aspects relating to structure, organisation, functions and procedures of the financial systems of the country; recommend mechanisms for improving efficiency, productivity and profitability of the financial sector including the commercial banks. The committee submitted its report in November 1991 which was tabled in Parliament on 17 December 1991 and it got approval from the both houses of parliament in same winter session.

From the terms of reference, it was evident that government was no longer willing to continue with the strategy of the social banking instead recommendations of the committee suggests a clear shift towards neoliberal formulation for the banking regulations(Chandrasekhar and Ghosh 2002; Chandrasekhar 2005). The banking reform measures suggested by the 'CFS' as it was expected was a component of comprehensive economic reform shifting the role of the RBI from micro-management to macro governance. The reforms measures were chiefly guided by a neoliberal agenda which drew its inspiration from the financial liberalization thesis[31] emerged from 'Washington Consensus (Kaminsky and Schmukler 2003; Ghosh 2008; Patnaik 2005, Bagchi 2005, Reddy 2005). Outlining the long strategy for vibrant banking system CFS recommended for two-pronged approach; introduction of international best practices in prudential regulation; and strengthen the supervision mechanism in early reform cycle to increase competition among the financial firms in phased manner (Ghosh 2005; Patnaik 2008; Rangrajan 1996). The instruments used in this regards were; entry deregulation, branch rationalization, deregulation of interest rates, allowing public sector banks to raise equity from capital market as a strategy of the diversification of capital base and reserves, gradual reduction Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) to ease capital at disposal of the banks, and adoption of prudential norms for capital adequacy and imposition of stringent income recognition[32] and provisioning norms and coupling of the domestic financial market with the international financial institutions (Rangarajan

[31] Op.cit

[32] Income recognition and asset classification norms were introduced in April 1992. In which provisioning and Capital adequacy standards specified for Indian Banks were required to fulfill these norms by 1994 and 1996.

1996; Chandrasekhar and Ghosh 2000, Chandrasekhar and Ray 2005; Patnaik 2005 and 2007 Arestis P 2004). Some important instruments of the social banking have been discussed in details in forthcoming section.

3.8.1 Interest rate policy and reform

As per CFS recommendations, "banks were allowed to fix their own interest rates on deposits of different maturities subject to minimum floor rates and maximum ceiling rates" (GOI 1991). In follow up of the recommendation, RBI announced the deregulation of interest rates on deposits above two lakhs in April, 1992. With the introduction of the base rate system in 2010, the ceiling on SBAs was removed giving complete freedom to banks to determine the rates on their loan portfolios (RBI 2010). The deregulation of the rates of interest was expected to infuse greater competition and, in the long run, improve the flow of credit to small borrowers at reasonable rates of interest. In view of recommendations of the CFS, interest rates on domestic term deposits above two years and rupee deposits for non-resident accounts (non-repatriable) were fully decontrolled in since 1992. Interest rates on advances to different sectors and with diverse maturities were also freed except those of the priority sector lending. At present, banks pay diverse interest rates on deposits of similar maturities and also charge different interest rates on advances, linked to the Benchmark Lending Rate (Mohan, 2004).

3.8.2 Branch policy during banking reform

The license for opening of new offices of commercial banks in a particular location is given by the Reserve Bank of India by the virtue of the authority it commands through Section 23 of the Banking Companies Act, 1949 (renamed as the Banking Regulation Act 1949). As per the provisions of this act RBI should adhere the following criteria while granting permission for opening branches to new places of business: (a) the financial condition and the history of the applicant bank; (b) the general character of management; (c) the adequacy of its capital structure; (d) the earning prospects; and (e) the serving of public interest by opening of a new office (RBI 1998). In early day of planning, RBI was conservative while granting licenses to the banks. The applications were scrutinized on the basis of the financial position of the bank, whereas other criteria were not given

enough weight (RBI 1998). In May 1962, RBI brought new guidelines for branch license and stressed on the opening of offices in 'unbanked' and 'undeveloped' areas of the country. The parameter like average population served by per bank offices, and 2:1 formula [33] were added while granting licenses. In addition to this banks having all India operation had to abide by some more condition[34] while SBI was given some exemptions. On January 1st 1977, an order was passed in which banked unbanked ratio was revised to 1:4 formulae[35]. Besides, opening of the minimum numbers of bank branches at unbanked or under banked region within the stipulated time in rural areas was made mandatory. This order had far reaching implication in the spread of banking in rural and unbanked location (Chavan 2014).

The effort of social banking especially contribution of the branch licensing policy in spreading the bank branches at every nook and corners of the country were hailed by studies across the world. However CFS[36] in its report expressed their displeasures over the branch policy pursued during social banking. In view of committee, inclusion of geographical criteria, imposition of the population coverage targets, and area approach in opening of the branches resorted to unnecessary, overlapping, and unsustainable branches in country (GOI 1991). Such branches were also responsible for rising NPA, cross subsidization and decline in profitability and efficiency of the banking sector. It also put excessive burden on government because of statutory bound binding for budgetary support of loss making branches. Although committee did not directly advise the closers

[33] This formula stipulates that banks are required to observe a 2:1 ratio between banked and unbanked areas for opening offices within their geographical spheres of operation. In other words, for every branch they opened in a banked area, they had to open two branches in an unbanked area. The information regarding the 'unbanked' locations will be supplied by the RBI. All-India banks were not allowed to open offices in predominantly residential/suburban localities within a distance of 400 meters from an existing office of another bank. Such condition was not imposed on State Bank of India (SBI) and its subsidiaries. (RBI 2005)

[34] All-India banks were those banks which had deposits of Rs 50 crore and above, and presence of branches in at least ten states; while for Regional Banks deposits limit was over Rs 5 crore and minimum of ten offices.

[35] According to this order commercial bank can open one branch in an already banked location only if she opens at least four branches in un-banked locations which will periodically published by the RBI. This order created positive impact on the spread of the banking operations, thus tried to bridge the existing gap is distribution of the branches across the regions, states and population groups.

[36] From CFS Report "there is no need of continuing the existing branch policy with targets like population coverage or bank office instead the future growth of bank offices shall depend on well-established needs, business potential and financial viability of the proposed offices" (GOI 1991)

of loss making branches in rural areas; but it emphasized on the rationalization of the branches (GOI 1991). As per recommendations of the committee, RBI brought Branch rationalization policy in 1992 which stipulates that ".. public sector banks must adhere with the capital adequacy norms, prudential accounting standard, and business viability in opening of branches in urban centres" . Breach from the past practices, economic viability was forward as a major criterion in opening of the branches in the urban centres.. CFS also suggested that government should refrain themselves from the nationalization of Indian banks in future. Though provision of exit is made, but, exit of unprofitable branches only and not of banks (GOI, 1992; RBI, 2013).

In view of the RBI guidelines of 1992, commercial banks began to shift their existing branches within the same locality, converted existing non-viable rural branches into satellite offices, closed loss making rural branch served by two commercial banks by mutual consents. Though, RBI proposed various incentives to the commercial banks for opening branches in unbanked regions/areas on voluntary basis but it did not work (Reddy, 1997; Chavan, 2005).

The decline of the commercial bank branches in rural areas led to massive geographical and demographic exclusion countryside on one hand and disproportionate branch intensity in non-rural centre (EPWRF, 2012). Thus, RBI modified several provisions branch policy of 1991and brought a new 'branch authorization policy' in 2005. Realizing the demographic and geographical coverage, the Branch Authorization Policy 2005 mandated that "at least 25 per cent of new branches under the Annual Branch Expansion Plan (ABEP) of banks must be located in under-banked rural locations". Further, for each additional branch opened in Tiers 2 to 6 (i.e., urban, semi-urban or rural locations), additional incentive were offered to the banks. Furthermore, banks were allowed to open one branch in any metropolitan Centre (Tier 1 centers) if total number of branches thus opened in Tier 1 centers does not exceed the total number of branches proposed to be opened in Tiers 2 to 6 centers (Ramkumar & Chavan 2014)[37]. Under the Prime Minister

[37] Ramkumar & Chavan P(2014) : "Bank Credit to Agriculture in India in the 2000s: Dissecting the Revival" Review of Agrarian Studies. Vol 4 No.1.

Jan Dhan Yojna (PMJDY) banking services banking outlets to be provided within 5 KM distance of every village (GOI 2017).

3.8.3 Lead Bank Scheme

'Lead Bank Scheme' was introduced in 1969. The scheme was mooted by the Gadgil Study Group[38], which submitted its report in October 1969. Group advised for the 'Area Approach' in formulation of plans and programmes for the development of an appropriate banking and credit structure in the rural areas. The Group also observed that the central idea was to assign, depending upon their area of operations and locations to commercial banks, particular districts where they should act as pace-setters providing integrated banking facilities and thus all the districts in the country needed to be covered (RBI 2009). In order to devise the modalities of the implementation of the 'Lead Bank' schemes RBI also appointed 'Nariman Committee' in 1969 and committee endorsed the area approach of the Gadgil committee. In view of the Nariman committee "in order to enable the public sector banks to discharge their social responsibilities, each bank should concentrate on under banked districts where it should function as a 'Lead Bank', as well as open bank branches to fulfil the target of providing every place designated as a town with a bank branch by the end of 1970" (RBI 2009, p27)

3.8.4 Priority Sector Lending (PSL)

Until the mid- sixties, bank credit was not only skewly distributed across the sector and stakeholder of the society but major beneficiaries of bank credit were those people who had direct linkage with the management of the banks (RBI 1985). As discussed, under the green revolution extensive farming was gradually replaced by capital intensive controlled farming since mid-sixties. Thus, agriculture became a new hot spot in the policy. It was general belief amongst the policy makers that success of green revolution will largely depend how government provides adequate loans at affordable terms to the credit

[38] The Group was of the view that banking was not developed in India judging by the criterion of population served per bank office. The average population served by a commercial bank office in India was as high as 73,000 as against 4,000 in United Kingdom and 7,000 in USA. In the rural areas, it was found that only one per cent of the total number of villages (564000) was served by commercial banks as at the end of June 1967. Besides this, committee found that bank offices and banking business were unevenly spread between States and population groups.

constrained farmer households in current and potential green revolution belts. Thus, in order to correct the size class and sector imbalances in bank loans, Credit Authorization Scheme (CAS[39]) was introduced in 1965. The term 'Priority Sector' first appeared in the statement made by Shri Morarji Desai then Deputy Prime Minister and Minister of Finance in Lok Sabha on December 14, 1967. As per statement "there has been a public concern that several 'priority sectors' such as agriculture, small-scale industries and exports are not receiving their due share of bank credit". In 1967-68 credit policy of the RBI, commercial banks were advised to increase their involvement in sectors like agriculture, exports, and small-scale industries as a matter of urgency. The description of the Priority Sector Lending (PSL) was latter finalized by the RBI appointed working group known as ***'Informal Study Group on Statistics' relating to advances to priority sector'.*** *This group* submitted its report in 1972 and on the basis of the report RBI gave detailed guidelines for reporting of the bank loans and prescribed a modified return for reporting priority sector advances. Initially it was applicable for the public sector banks but later it made mandatory for the private sector banks also. In November 1974, RBI further directed commercial banks to devote at least 33.3% of their advances to the priority sector by end of March 1979. Subsequently in a meeting of the union finance minister with heads of the banks, this target was raised to 40% and should be met by 1985 in phased manner[40].

'The Working Group on the 'Role of Banks in Implementation of New Twenty-Point Programme' chaired by Shri A. Ghosh, in its report (1982) gave break up of target for the agriculture sector within the priority sector lending. As per the report, bank must adhere to achieve direct agriculture lending of 15 per cent of total bank credit by March 1985, thereafter 16 per cent by March 1987, 17 per cent by March 1989 and finally 18 per cent by March 1990. In report, the formulae for the calculation of total agriculture lending were also given. Breach from the past practices, Gross advance of the bank was replaced

[39] The Credit Authorization Scheme (CAS) was introduced by the Reserve Bank of India in 1965 in which all scheduled commercial banks have to obtain a prior authorization of the Reserve Bank before granting any fresh credit limit of Rs. 1 crore or more to any single borrower. Through this scheme RBI got direct power in scrutinizing to banks loans and could redirect the flow across the vital sector of economy.

[40] 40 percent of Adjusted Net Bank Credit (ANBC) or credit equivalent amount of 32 percent of ANBC or Credit Equivalent of Off Balance-sheet Exposure (CEOBE) whichever is higher. For the foreign banks this target was fixed to 32 percent of ANBC or CEOBE, whichever is higher

by the Adjusted Net Bank Credit (ANBC) or Credit Equivalent of Off-Balance Sheet Exposure (CEOBE) in whichever is higher. Within agriculture sector, the share of indirect finance to agriculture was also limited to 4.5 per cent only. Failing to meet such limit, working group advised that equivalent amount must be deposit with NABARD. In 1980, the Working Group on 'Priority Sector Lending and 20-Point Economic Programme' chaired by Dr.K.S. Krishnaswamy introduced "weaker sections" target within the priority sector.

The CFS was not pleased with PSL target and recommended for the phasing out directed lending in commercial bank. It suggested that 'bank should focus on small and marginal farmer, tiny industry, small businesses, transport operators, village and cottage industries, rural artisans and other weaker sections in priority sector only. It also advised that existing cap of 40% under PSL is too much hence capped to the 10% (GOI, 1991). However, government did not accept the CFS recommendation of 10% capping, but over the years they brought many activities in the jurisdictions of the priority sector (Chandrasekhar & Ray 2005). The High Level Committee on 'Agricultural Credit through Commercial Banks' headed by R.V.Gupta submitted its report in 1996. In report committee noted that…'18 per cent target for agriculture was fixed at the time, when reserve requirement for the commercial bank was in tune of 36%. Since, statutory reserve requirements have progressively declined over the years, therefore, priority sector target need upward revision". As per the estimates of committee, 18 percent target for agriculture is inadequate, hence shall be doubled for maintaining the same share in changed scenario. Committee further suggested, banks must prepare 'Special Agricultural Credit Plans (SACP)' and shall set their own agriculture sector lending targets on annual basis (RBI 1996).

Subsequently, C.S. Murthy Committee (2005) advised for the redefining of the priority sector and recommended for the inclusion of the sectors that "affect large sections of society, benefit small borrowers and involve small loans, and lead to substantial employment generation" (GOI). RBI (2013) modifying the priority sector lending guidelines, imposed a separate sub-target of 8 per cent for small and marginal farmers as part of the overall target of 18 percent for agricultural credit in phased manner[41]. From its initiations in 1967-68, priority sector lending was subjected to several changes, not only

[41] Target is to be achieved by domestic banks by 2017in a phased manner and foreign banks (with 20 branches or more) after 2018. For detail visit 'Priority Sector Lending-Targets and Classification', April 23, 2015, available at: www.rbi.org.in

many new activities were added but under the directed lending programme diversified interest rates were also charged on the those activities. The detail list of the priority sector is given in Appendix 2.3.

3.8.5 Rural Infrastructure Development Fund (RIDF)

The 'Rural Infrastructure Development Fund' (RIDF) was instituted in NABARD through an announcement in Union Budget 1995-96. The fund was created for the purpose of providing low cost fund support to the states and state-owned corporations for quick completion of on-going projects relating to; medium and minor irrigation, soil conservation, watershed management, and other forms of rural infrastructure. Allocation to the RIDF is made from the shortfall in meeting PSL targets by the banks. The annual allocation of funds under the RIDF corpus has increased from Rs. 2,000 crore in 1995-6 (RIDF I), to Rs 25,000 crore in 2016-17 (RIDF XXI). Till 2013-14, total 462,229 projects have been sanctioned with a cumulative amount of Rs. 143,230 crore. The sector wise allocation of the cumulative RIDF loans sanctioned to state governments were as follows ; 42 per cent agriculture and allied sector, including irrigation and power; 15 per cent to health, education, and rural drinking water supply; while the share of rural roads and bridges was in tune of 31 per cent and 12 per cent respectively (Economic Survey 2013) .

3.8.6 Micro-Finance: Self Help Group-Bank Linkage Programme

This scheme was launched by NABARD in 1992. It is being implemented by commercial banks, Regional Rural Banks (RRBs), and Cooperative banks across the country. It is considered as the largest community based microfinance programme in terms of outreach in the world (IMF 2015). This is also recognized as a part of priority sector lending and normal banking business by the Reserve Bank of India. Under the SHG-Bank Linkage Programme, as on 31 March 2012, 79.60 lakh SHG-held savings bank accounts with total savings of Rs. 6,551 crore were in operation. On the other hand 43.54 lakh SHGs had outstanding bank loans of Rs. 36,340 Crore (Economic Survey 2012-13)

3.8.7 Swabhimaan Scheme

This scheme was part of financial security programme launched by central government in February, 2011 with its focus on bringing the deprived sections of the society in the banking network to ensure that the benefits of economic growth reach everyone at all

level. This scheme aimed at providing banking facilities in habitation with a population in excess of 2000 by March 2012. Later this scheme was merged with PMJDY in 2014.

3.8.8 Ultra Small Branches (USB)

In order to ensure close supervision and mentoring of the business correspondent agents (BCAs) by the respective banks and facilitating wide range of banking services to the residents of such villages, ultra small branches was introduced. These USBs will comprise a small area of 100-200 sq. feet where the officer designated by the bank will be available with a laptop on pre-determined days. However, cash services will be offered by the BCAs, the bank officer will offer other services, undertake field verification, and follow up banking transactions. The periodicity and duration of visits can be progressively enhanced depending upon business potential in the area. A total of over 40,000 USBs have so far been set up in the country.

3.8.9 The Local Area Bank Scheme (LABS)

The Local Area Bank Scheme, initiated in August 1996, aimed at creating new local, private banks with jurisdiction over three contiguous districts that would mobilize rural savings and make them available for investments in the local areas. Initially only six were approved initially, and four are currently in operation. The LABS was never given a serious try and this is unfortunate because every proposal for small banks meets the rejoinder "the LABS did not work". This largely inaccurate conclusion stems from over-interpreting a 2002 RBI internal review group, which examined the operations of the four existing LABS. While admitting that it was too early to make strong judgments, and despite the banks being profitable, meeting priority sector targets, and maintaining high credit-deposit ratios, the Review Group recommended that until existing LABS achieved a measure of financial soundness, no more LAB licenses were to be issued. The Review Group also recommended, on the basis of a priori reasoning, and the RBI accepted, that size was important in banking, and therefore the capital base of the existing LABs be increased from the initial Rs. 5 crore to Rs. 25 crore over seven years, and that LABs should maintain a minimum capital adequacy ratio of 15% given the higher level of risks they face. The Khan Committee, which examined issues relating to rural credit and microfinance (2005) and the Rangarajan Committee on Financial Inclusion (2008) have supported the revival of the LAB scheme. The latest figures show LABs have profits to assets of about 1.2%, which is about the same as other banks.

3.8.10 Small Finance Banks (SFB) and Payment Banks

In 2014, the RBI introduced a new variant of banks focused primarily on meeting small credit needs of the population and termed them as small finance banks. The NBFCs operating as MFIs figured prominently in the list of entities receiving approval from the RBI to set up small finance banks. In this series, the RBI granted licenses for 11 payments banks in August 2015 and 10 small finance banks in September 2015. These specialized banks are expected to become operational during 2016–17. These banks will provide further push in terms of accessibility to formal finance channels and in turn contribute to inclusive growth.

3.8.11 Pradhan Mantri Jan-Dhan Yojana (PMJDY)

Pradhan Mantri Jan-Dhan Yojana (PMJDY) was announced by Prime Minister Sh. Narendra Modi on 15 August, 2014. Popularly known as National Mission on Financial Inclusion (NMFI) is an ambitious programme aiming at providing bank account to every household in the country for making available the basic banking services facilities such as (i) Opening of Bank Account with RuPay Debit Card & Mobile Banking facility, (ii) Cash Withdrawal & Deposits, (iii) Transfer, (iv) Balance Enquiry and (v) Mini Statement to all households in the country. It was formally launched on 28 August 2014 across the nation. Besides, this scheme would have other services in due course in a time bound manner apart from financial literacy which is to be disseminated side by side to make citizens capable to use optimum utilization of available financial services. To provide these banking services banking outlets to be provided within 5 KM distance of every village. Necessary infrastructure also needs to be placed to enable e-KYC for account opening and Aadhaar Enabled Payment System (AEPS) for withdrawal of cash based biometric authentication from Unique Identification Authority of India UIDAI data base. As discussed, 'Swabhimaan' scheme was started by the UPA government in 2011, but being in priority of this government, PMJDY scheme has many new features over the old Schemes. (Comparative chart of both schemes in detail is given in Appendix Table 2).

As per promises of the scheme, most of the districts in country either have achieved household universal coverage or they are in process of achieving it. As per latest available data (as on 22 February 2017), out of total 670 districts in country, 100% household coverage of the banks was reported in 638 districts. Out of remaining 32 districts, 27 districts had household coverage over 99%. Only five districts that had coverage less than 99% were, Malkangiri (87.74%), Pulwama (93.92%), Reasi (97.16%), Churachandpur (97.43%) as on 27th February 2017.

Appendix Table 3A: Chronology of events

Period	Event
1920	The first cooperative land mortgage banks (LMB) was set up in Punjab and followed by two more in the Madras Presidency in1925
1926	Royal Commission on Indian Currency (Hilton Young Commission) recommended for establishment of 'Reserve Bank of India' as a central bank however, it couldn't realised at that time
1931	Indian Central Banking Enquiry Committee revived the issue of the establishment of the Reserve Bank of India
March , 5, 1934	Reserve Bank of India Act, 1934, (II of 1934) was constituted which gave statutory basis for operationalisation of RBI. Under this Act, Reserve Bank was assigned responsibility to develop an institutional credit system for the agricultural sector country. Agricultural Credit Department of the Bank was constituted along with the establishment of the Reserve Bank in April 1935, whose main task was to develop co-operative credit movement in agricultural finance.
April,1, 1935	Reserve Bank of India commences its operation. **Sir Osborne Smith** became the first Governor of the RBI. The RBI was constituted as a shareholders' bank.
July,5, 1935	Guidelines were issued for the eligibility of the Scheduled banks. Under this guideline, Schedule banks had to maintain the Cash Reserve Ratio, hold cash balances with the RBI equivalent to 5% of their Demand Liabilities and 2% of their Time Liabilities.
October, 1935	London Office of the Reserve Bank was set up which continued till September 30, 1963.
January 1938	First note was issued by RBI.
21-Jun-38	The largest bank in the Travancore region 'Travancore National and Quilon Bank' failed. Failure pushed the need for a comprehensive banking reform, introduction of new legislation to deal with the menace of frequent bank failure in country.
11-Mar-40	Accounting Year of the RBI changed from January-December to July-June.
1940	The silver rupee replaced by the quaternary alloy rupee. One Rupee note was reintroduced. This note had the status of a rupee coin and represented the introduction of official fiat money in India.
1944	The security thread on notes introduced for the first time in India as a security feature.
1944	Laws relating to Government securities and to the management of Public Debt by the Reserve Bank of India consolidated on the basis of the **Public Debt Act, 1944.**
26-May-45	**Defence of India Rule** invoked to authorize the Reserve Bank to collect information from banks in respect of advances. This was to check advances against bullion for speculation.
12-Jan-46	High Denomination Bank Notes of Rs 500, Rs 1000 and Rs 10,000 demonetized to curb unaccounted money.
1946	Interim arrangements for Bank Supervision were put in place by ordinances which were later replaced by the Banking Companies Act, 1949. These Ordinances empowered the Reserve Bank to inspect banks, as well as authorize the licensing of bank branches.
30-Jun-48	RBI ceased to function as the Central Bank of Pakistan. State Bank of Pakistan commenced operations w.e.f. July 1, 1949.
1-Jan-49	Reserve Bank of India nationalized.

16-Mar-49	**Banking Companies Act, 1949** came into force. This act became the statutory basis of bank supervision and regulation in India. The Statutory Liquidity Ratio (SLR) was introduced for the first time. This act was later renamed the Banking Regulation Act.
1951	Reserve Bank of India (Amendment) Act, 1951 enabled the Bank to become Banker to Part B states after executing agreements with them. First Five Year Plan launched.
1951	All-India Rural Credit Survey Committee was constituted under the chairmanship of A.D Gorwala.
1-Aug-52	State Financial Corporations Act, 1951 came into effect. It enabled state governments to establish Financial corporations for meeting the credit needs of medium and small scale industries. Bank's Holdings of the capital of SFCs taken over by the IDBI in 1976.
Aug-54	**All-India Rural Credit Survey Committee Report (Gorwala Committee)** submitted its report. The recommendations of the committee brought the problems of rural credit onto the Centre stage of central bank activism. This committee also gave basis for the formation of the State Bank of India.
1-Jul-55	Imperial Bank of India converted to a state owned institution, State Bank of India on July 1, 1955. One of the immediate objectives was to establish additional branches particularly at district headquarters. It was also expected to provide remittance and other facilities to co-operative and other banks and attempt to mobilise rural savings. Second Five Year Plan commences.
17-May-56	Selective Credit Controls were deployed for first time by expanding section 42 of the RBI Act. In fact it strengthen the RBI's control over 'cash reserves' of the bank.
May-60	The failure of Laxmi Bank and the subsequent failure of the Palai Central Bank catalyzed the introduction of deposit insurance in India.
1960	Policy of reconstruction / compulsory amalgamation of banks introduced to consolidate the Banking sector by RBI Act. Between 1960 to 1982 over 200 banks were merged or liquidated
7-Dec-61	Deposit Insurance introduced in India as a depositor protection measure. It was intended to increase the confidence of the depositors in the banking system, to facilitate the mobilisiation of deposits and promote greater stability and growth of the banking system.
May-62	New Bank Branch Licensing policy laid stress on opening of offices in 'unbanked' and 'underdeveloped' areas.
16-Sep-62	Cash Reserve Ratio of banks was fixed uniformly at 3 % of their Demand and Time Liabilities with the flexibility to vary it between 3 and 15%.
1962	Chapter IIIA incorporated in RBI Act empowered the bank to collect information in regard to credit facilities granted by individual banks and notified financial institutions to their constituents. In 1974, the scope of the term credit information was enlarged to cover the means antecedents, history of financial transactions and the creditworthiness of any borrower or class of borrowers.
1962	The Banking Regulation Act amended and SLR for the SCB was fixed at 25% of the Demand and Time Liabilities.
1-Jul-62	Agricultural Refinance Corporation (ARC) was set up to provide refinance to central land mortgage banks, state cooperative banks and SCB who were shareholders.
20-Nov-65	Credit Regulation introduced to align the growth of bank credit with Plan requirements. Later evolved into the Credit Authorisation Scheme (CAS).
1-Mar-66	Operations of Co-operative banking system brought under the regulatory ambit of the RBI.
Mar-66	A new Department of Non-banking Companies established at RBI Calcutta.

2-Jul-66	12 State Cooperative Banks included in Second Schedule of RBI Act.
Dec-67	Introduction of Social Controls over banks with a view to securing a better alignment of the banking system to the needs of economic policy.
22-Dec-67	National Credit Council set up to provide a forum to discuss and assess credit priorities on an all India basis. Council was to assist RBI and government to allocate credit.
29-Jan-69	Banking Commission was set up by the Government of India under the chairmanship of R.G. Saraiya. The commission was assigned to prepare a report on (i) Banking costs;(ii) legislations affecting banking; (iii) indigenous banking; (iv) bank procedures; (v) non-banking financial intermediaries.
19-Jul-69	14 major Indian Scheduled Commercial Banks with deposits of over Rs 50 crores were nationalised with stated objective to serve better the needs of development of the economy in conformity with national policy objectives. On February 10, 1970 the Supreme Court held the Act void on the grounds that it was discriminatory against the 14 banks and compensation proposed to be paid by Government was not fair compensation. A fresh Ordinance was issued on February 14 which was later replaced by the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970.
Dec-69	Lead Bank Scheme introduced which envisaged an area approach to banking to meet the credit gaps in the economy.
Jan-70	RBI prescribed for the first time the minimum interest rate to be charged by banks on advances against sensitive commodities.
Feb-70	**The Agricultural Credit Board** set up with Governor as Chairman to formulate and review policies in the sphere of rural credit.
14-Jan-71	**Credit Guarantee Corporation of India Ltd** was established to facilitate bank lending to the priority sectors. Later guaranteed credit by the SCB extended to small borrowers and for 'other areas of the priority sector.
12-Apr-71	Industrial Reconstruction Corporation of India Ltd was established in order to deal with the concerned related to Industrial sickness
1-Jul-71	Deposit Insurance cover extended to cooperative banks.
Oct-71	State Level Bankers' Committees set up to consider problems requiring inter-bank coordination.
25-Mar-72	Differential Interest Rate Scheme Introduced which envisaged concessional interest rates on advances made by Public Sector Banks to selected low income groups.
8-Sep-73	Quantitative credit ceiling on non-food bank credit prescribed for the first time for the busy season of 1973-74.
Nov-73	Restrictions on SBI and its subsidiaries removed to bring them on par with other commercial banks.
13-Dec-74	Reserve Bank of India (Amendment) Act, 1974 widened the powers of the Bank.
1975	Tandon Committee Report emphasized need to correlate bank credit to the business/ production plans and own resources of borrowers. This entailed a shift from 'security based' to 'need based' approach to bank credit.
26-Sep-75	Regional Rural Banks were set up as alternative agencies to provide credit to rural people in the context of the 20 Point Programme. The RRB were expected to have combine the rural touch and local feel,with the modern business organization.
16-Nov-75	Agricultural Refinance Corporation (ARC) renamed Agricultural Refinance and Development Corporation (ARDC) and its activities widened.
1976	Village Adoption Scheme for banks was introduced
1977	Integrated Rural Development Programme (IRDP) initiated as a poverty

	alleviation measure
1978	Annual Appraisal of Banks was introduced in order to begin the management audit. The emphasis of the audit was to examine the organizational set-up, manpower planning, machinery for supervision and control over branches, systems & procedures in key areas of the fund management as well as management of credit.
30-Mar-79	Penalty was introduced to non-compliance of CRR & SLR. It gave RBI teeth to implement Monetary Policy measures more effectively.
1979	Rural Planning and Credit Cell was set up in RBI in order to ensure the proper implementation of the multi-agency approach to credit in rural areas.
Aug-79	Credit Information Review started being published every month. It was meant to disseminate credit and banking policy decisions in simple language without delay.
15-Apr-80	Six private sector banks were nationalised with a stated objectives to control the heights of the economy, to meet progressively, and serve better, the needs of the development of the economy and to promote the welfare of the people in conformity with the policy of the State
1981	In view of building up of inflationary pressures, adverse movement in foreign trade owing to hike in oil prices the Bank rate was raised to 10%, CRR raised to 7.5%, SLR to 35%.
11 Juy 1981	Ordinance prohibiting companies (including Banking Companies) cooperative societies, firms, to repay any person any deposit otherwise than by an account payee cheque / bank draft when such repayment amounted to Rs. 10,000 or more.
1-Jan-82	Export Import Bank of India was established with the objective of providing comprehensive package of financial and allied services to exporters and importers.
1-Jan-82	New 20 point programme announced by the PM.
12-Jul-82	National Bank for Agriculture and Rural Development (NABARD) established on the basis of the National Bank for Agriculture and Rural Development Act, 1981. The objective of this institution was to providing credit for the promotion of agriculture, small scale industries, cottage and village industries, handicrafts, and other rural crafts for promoting integrated rural development and securing rural prosperity
December 1982	Dr. Manmohan Singh, then Governor of the RBI, appointed a Committee under the Chairmanship of Sukhamoy Chakravarty to review the functioning of the monetary system in India. The Committee was following terms of reference: critically review the structure and operation of the monetary system in the context of the basic objectives of planned development: assess the interaction between monetary policy and public debt management in the context of the bearing on the effectiveness of monetary policy: evaluate the various instruments of monetary and credit policy in terms of their impact on the credit system and on the economy precisely, links among the banking sector, the non-banking financial institutions and the unorganised sector could : recommend measures for improvement in the formulation and operation of monetary and credit policies and to suggest specific areas where the various policy instruments need strengthening.
1-Feb-84	Urban Banks Department was instituted to supervise the affairs of Urban Cooperative Banks.
1-May-84	Authorised capital of the Deposit Insurance and Credit Guarantee Corporation raised to Rs 50 crores

10-Apr-85	The Committee submitted its report in 1985. Committee was in view that there should be no mismatch between the responsibility of the RBI to supervise and control the monetary system and its authority.
1985	By mid-1985, the statutory preemption on banks' resources in the form of the Statutory Liquidity Ratio (SLR) and the Cash Reserve Ratio (CRR) exceeded 45%.
Oct-88	Maximum lending rate was abolished. Banks were given freedom to charge customers according to their credit record.
Apr-89	Service Area Approach for rural lending became operational.
1-Jul-89	CRR raised to 15 per cent taking statutory preemptions of banks' resources in the form of the Statutory Liquidity Ratio (SLR) and the Cash Reserve Ratio (CRR) to over 53%.
15-May-90	Agriculture and Rural Debt Relief Scheme, 1990 providing debt relief upto Rs 10,000 to small borrowers from Public Sector Banks and Regional Rural Banks announced.
Nov-91	Committee on financial sector reform (CFS) headed by N. Narsimahan Committee was constituted. This committee submitted its Report in 1991. CFS suggested far reaching reforms in the Indian Banking sector. These included a phased reduction in the SLR and CRR, introduction of prudential accounting standards, income recognition and capital adequacy norms.
Mar-92	A dual exchange rate system called Liberalised Exchange Rate Management System (LERMS) was introduced. This was the initial step to enable a transition to a market determined exchange rate system.
1993	Guidelines for the establishment of private sector banks issued aimed at fostering greater competition amongst the banks.
15-Jul-94	Nationalised Banks allowed to tap the capital market to strengthen their capital base.
Jun-95	The Office of the Banking Ombudsman established for expeditious & inexpensive resolution of customer complaints related to Banking services.
Oct-95	Banks are allowed to fix their own interest rates on domestic term deposits with maturity of two years.
1-Apr-97	RBI & Government of India agree to replace the system of ad hoc Treasury Bills with Ways and Means Advances ending automatic monetisation of fiscal deficits.
Apr-98	Recommendations on the harmonisation of the Role and Operations of Development Financial Institutions and Banks paved the way for universal banking in India.
1998	Committee on Banking Sector Reforms,Chairman: Shri M. Narasimham placed its recommendation for greater emphasis on structural measures and improvement in standards of disclosure and levels of transparency in order to align the Indian standards with international best practices
19-Apr-01	Effective week commencing August 11, inter-bank term liabilities greater than 15 days maturity exempt from CRR. Banks allowed to formulate special Fixed Deposit Schemes for senior citizen offering higher rates of interest.
30-Apr-01	Clearing Corporation of India established to address the need for an integrated clearing and settlement system across different markets, viz., government securities, forex and money markets. Commenced operations wef February 2002.
1-Jun-01	RBI issues guidelines for internet banking heralding in a new era in banking.
April,1, 2003	Risk based supervision of Banks introduced.
Institutional Arrangements in for the flow of credit to agriculture since 2004	
Fixation of farm credit target	Government of India in its Farm Credit Package announced in June 2004, advised banks to double credit to agriculture sector in three years, i.e., by

(V.S. Vyas Committee 2004)	2006-07 which was implemented in the subsequent annual budgets to ensure adequate credit flow to the agriculture sector. The flow of agriculture credit since 2003-04 has consistently exceeded the target. Agriculture credit flow has increased from Rs.86981 crore in 2003-04 to Rs. 468291 crore in 2010-11.
Interest Subvention Scheme (2006)	In 2006, the central government introduced the interest subvention scheme to provide subsidised (direct) agricultural credit to farmers with relatively small credit needs (of up to ‘300,000)
Report of The Expert Group on Agricultural Indebtedness R. Radhakrishna (2007)	This report highlighted the pity situation of the farmers the farmers and suggested many measure to strengthen the credit delivery mechanism for the farm community. Besides this, report took cognizance of the imperatives of addressing the credit absorption and demand-side issues. Report also suggested policy interventions and institutional reforms essential for resolving the farm crisis, going beyond the credit delivery system. In view of expert group, long-term interest of the financial system must be safeguarded through positive repayment culture for bank loans and a sound system of incentives for prompt repayment. The Expert Group advised that the implementation and monitoring of relief measures for distressed farmers envisaged in the Prime Minister’s package needs to be addressed carefully and recommended that the needs of individual households should be taken into account with necessary flexibility and further that follow-up steps should be taken to relieve the families from distress. It also recommends continuation of ‘Non-Credit Component’ of the package for two more years.
Rehabilitation package 2008	In view of growing farmers suicides cabinet announced rehabilitation package for 31 identified districts in the State of Andhra Pradesh, Karnataka, Kerala and Maharashtra involving total amount of Rs.16978.69 crores, consisting of Rs.10579.43 crores as subsidy/grants and Rs.6399.26 crores as loan. This package was aimed at establishing a sustainable and viable farming and livelihood support system through debt relief to farmers, complete institutional credit coverage, crop-centric approach to agriculture, assured irrigation facilities, effective watershed management, better extension and farming support services and subsidiary income opportunities through horticulture, livestock, dairying, fisheries and other subsidiary activities. For alleviating the hardship faced by the debt stressed families of farmers, ex-gratia assistance from Prime Ministers National relief Fund @ Rs.50.00 lakh per district has also been provided. The package covers the following : a) Complete credit cover through institutional credit sources; b) Debt relief to farmers by restructuring overdue loans and interest waiver; c) Provision of assured irrigation facilities; d) Watershed management; e) Seed replacement programme: f) Diversification of activities into horticulture, livestock, dairying and fisheries etc. for generation of additional employment and income opportunities; and g) Extension support services. Subsequently rehabilitation package was extended till 2011 with following modifications: (i) Extension of the period for implementation of the non-credit component of the package by two more years i.e. up to 30th September 2011.(ii) In-principle approval for provision of need based additional financial support to the concerned Ministries/Departments of the Government of India for implementation of the programmes/ interventions included in the package.(iii) Increase in per farmer area limit under Seed Replacement Programme from 1 ha. To 2 ha. (iv) Adoption of Cafeteria Approach for participatory Watershed Development Programmes, where State Governments with prior permission of the Ministry of Agriculture have the flexibility to adopt either the models circulated by NABARD or Sujala

	Model of Watershed Development Programme being implemented in Karnataka under Word Bank assistance or the models in accordance with the common guidelines for Watershed Development Projects approved by NRAA subject to the condition that financial assistance will be as per the approved norms of Watershed Development Fund (WDF).(v) Inclusion of Women Farmers Empowerment Programme under extension services.(vi) Construction of an Empowered Committee headed by Secretary, Department of Animal Husbandry, Dairying & Fisheries and consisting of representatives from Department of Agriculture & Cooperation, Planning Commission and Ministry of Finance as members for taking decision regarding medication or inclusion of new components under subsidiary income activities subject to the total financial implication remaining within the existing approved outlay for the concerned State. The improvements in the package would give it a sharper edge and further improve the effectiveness. Source: ANI GOI (2011)
Interest subvention to farmers (2006)	This scheme was announced by the government of India in 2006-07 in order to enable the banks to provide short term credit to agriculture (crop loan) up to Rs.3 lakh at 7% annual interest to farmers. Further, to incentivize prompt repayment, in the Union Budget 2009-10, an additional interest subvention of 1% was given to those farmers who repay their short term crop loans promptly and on or before due date. Subsequently, this limit was raised to 2% in 2010- 11 and 3% in 2011-12 and 2012-13. Further, in order to discourage distress sale by farmers and to encourage them to store their produce in warehousing against warehouse receipts, the benefit of interest subvention scheme has been extended to small and marginal farmers having Kisan Credit Card for a further period of up to six month post-harvest on the same rate as available to crop loan against negotiable warehouse receipt for keeping their produce in warehouses. Later, a similar scheme was introduced in 2013 to provide subsidised credit to women borrowers organised in SHGs up to Rs, 300,000 under the National Rural Livelihood Mission (NRLM) a restructured form of the earlier Swarn Jayanti Gram Swarajya Yojna (SJGSY)
Kisan Credit Card Scheme	Kisan Credit Card Scheme for farmers was introduced in 1998-99 aimed at ensuring hassle free and timely credit for agricultural operation to all eligible farmers to purchase agricultural inputs such as seeds, fertilisers, pesticides, etc. The Kisan Credit Card Scheme is in operation throughout the country and is implemented by Commercial Banks, Cooperative Banks and RRBs. The scope of the KCC has been broad-based to include term credit and consumption needs. All farmers including Small farmers, Marginal farmers, Share croppers, oral lessee and tenant farmers are eligible to be covered under the Scheme. The card holders are covered under Personal Accident Insurance Scheme (PAIS) against accidental death/permanent disability.
Bhasin Working Group (2012)	Government of India has recently accepted suggestions made by a Working Group (Bhasin Working Group) on Kisan Credit Card Scheme to convert it into a Smart Card cum Debit Card and revised guidelines have been issued by NABARD. Some of the major features are • Assessment of crop loan component based on the scale of finance for the crop plus insurance premium x Extent of area cultivated + 10% of the limit towards postharvest / household/consumption requirements + 20% of limit towards maintenance expenses of farm assets. • Flexi KCC with simple assessment prescribed for marginal farmers having validity of KCC for 5 years.

	• For crop loans, no separate margin need to be insisted as the margin is in-built in scale of finance. • No withdrawal in the account to remain outstanding for more than 12 months; no need to bring the debit balance in the account to zero at any point of time. • Interest subvention /incentive for prompt repayment to be available as per the Government of India and / or State Government norms. • No processing fee up to a limit of Rs. 3.00 lakh. • One time documentation at the time of first availment and thereafter simple declaration (about crops raised/ proposed) by farmer. • KCC cum Saving Bank account instead of farmers having two separate accounts • The credit balance in KCC cum Savings Bank account to be allowed to fetch interest at saving bank rate. • Disbursement through various delivery channels, including ICT driven channels like ATM/ PoS/ Mobile handsets. Source : https://rbidocs.rbi.org.in/rdocs/content/pdfs/CRB5100512AN.pdf
Agriculture Debt Waiver and Debt Relief Scheme, (ADWDRS) 2008	To mitigate the distress of farming community in general and small and marginal farmers in particular and to declog the institutional credit channels and make farmers eligible for fresh credit, the Debt Waiver and Debt Relief Scheme, 2008 was announced in the Union Budget for 2008-09. The scheme covered direct agricultural loans disbursed (i) between 31 March 1997 and 31 March 2007 (ii) overdue as on 31 December 2007 and (iii) remaining unpaid until 29 February 2008. In the case of small and marginal farmers, short term production loans (subject to a ceiling in respect of plantation and horticulture) and installments of investment loans overdue were covered, while in the case of the other farmers, one time settlement was extended under which a rebate of 25% of the eligible amount was given on the condition that the farmer repays the balance 75% in three installments. The debt waiver exercise was completed by 30th June 2008, whereas the debt relief exercise was closed in June 2010 after granting a few extensions. The Government of India has so far sanctioned Rs.52, 516.86 crore in 5 instalments as reimbursement to the banks under the scheme. Out of this Rs.29,275.81 crore was passed on to NABARD for reimbursement to RRBs and Co-operative banks and an amount of Rs.23,159.76 crore has been reimbursed to scheduled commercial banks, Local Area banks and Urban Co-operative banks. Source : http://agricoop.nic.in/imagedefault/credit/agriculture-credit-overview.pdf
Bringing Green Revolution in Eastern India (BGREI) :	BGREI is an initiatives aimed at accelerating investments in agriculture to enhance production and productivity of crops in the Eastern region (Assam, Bihar, Jharkhand, Chhattisgarh, Odisha, West Bengal and Eastern Uttar Pradesh. NABARD is nodal agency which provides concessional 100% refinance to banks at a concessional rate of 7.5% p.a. from year 2011-12. The operative period of scheme is for financial years, 2011-12 and 2012-13 for the four activities viz, Water Resources development, Land development, Farm Equipment (including tractor financing on group mode basis) and Seed Production. Concessional refinance is provided subject to condition of minimum 70% lending against credit potential for the identified activities assessed on the basis of projections made in the Potential

	Linked Plans. The commercial banks are required to achieve the minimum lending level of 70% while the RRBs and Co-operative Banks are required to achieve the minimum lending level of 50% of the Overall lending Target / Potential assessed. The norms were revised during 2011-12 being the first year of the scheme, to 50% in case of Commercial Banks and 25% in case of RRBs and Cooperative Banks. Support to the banks for (a) Forming and linking of Joint Liability Groups (JLGs) (b) Awareness programmes for promoting the scheme (c) Organizing sensitization meets for the branch officials of implementing banks and (d) Training and capacity building of identified entrepreneurs is also offered under the scheme. In partial modification of the Scheme, Tractor Financing under group mode to Self Help Groups (SHGs) / Joint Liability Groups (JLGs) were also considered for concessional refinance by the banks, provided tractors are financed to; a) An existing Self Help Group (SHG) which is at least two years old b) A new Joint Liability Group (JLG), provided the number of land owning farmers in the group is not less than five and every member is a Small Farmer (SF) or a Marginal Farmer (MF) http://agricoop.nic.in/imagedefault/credit/agriculture-credit-overview.pdf
Swabhimaan'(2011)	In order to ensure banking facilities in habitation with a population in excess of 2000 by March 2012 central government launched a financial security programme in February, 2011 known as 'Swabhimaan. This programme precisely focuses on bringing the deprived sections of the society in the banking network to ensure that the benefits of economic growth reach everyone at all levels. Under this scheme, the focus is on providing movement facilitates opening of banks accounts, need-based credit and remittance facilities and helping in promoting financial literacy in rural India aimed at increasing the demand for credit among the millions of small and marginal farmers and rural artisans who will benefit by having access to banking facilities. This financial inclusion campaign aims at providing branchless banking services through the use of technology and providing basic services like deposits, withdrawals and remittances by using the services of Business Correspondents (BCs) also known as Bank Saathi. The initiative also enables Government subsidies and social security benefits to now be directly credited to the accounts of the beneficiaries so that they could draw the money from the Business Correspondents (BCs) in their village itself. The Government hopes that the benefits of micro insurance and micro pension products reach the masses through this banking linkage. The major benefit of this programme is that it makes possible for the large number of migrant workers in urban areas to remit money to their relatives in distant villages quickly and safely. Banking facilities like Savings Bank, recurring Deposits, Fixed deposits, Remittances, Overdraft facility, Kisan Credit Card (KCCs), General Credit Cards (GCC) and collection of cheques will be provided. The Banks are also working together with the Unique Identification Authority of India (UIDAI) for enrolment, opening bank accounts and also to facilitate transfer of government subsidies and other payments. Source : http://pib.nic.in/newsite/efeatures.aspx?relid=84236
Banking Laws (Amendment) Bill 2012	Banking Laws (Amendment) Bill is passed by Indian Parliament in 2012. This bill empowers RBI to frame guideline and award new licenses to the commercial banks in country in order to fill institutional finance gap in country.

Micro Unit Development and Refinance Agency (MUDRA)	Micro Unit Development and Refinance Agency (MUDRA) and Pradhan Mantri MUDRA Yojana (PMMY) was launched on 08 April 2015 to fund and promote microfinance institutions (MFI), which will, in turn, provide loans to small businesses/micro enterprises engaged in manufacturing, processing, trading and service sector activities,for a loan up to Rs. 10 lakh . The MUDRA scheme refinances collateral-free loans of up to Rs. One million given by lending institutions to small, non-corporate borrowers, for income-generating activities in the non-farm segment. As against the target of Rs. 122188 crore, the Banks and MFIs together have disbursed Rs. 132954.73 crore in FY 2015-16 .

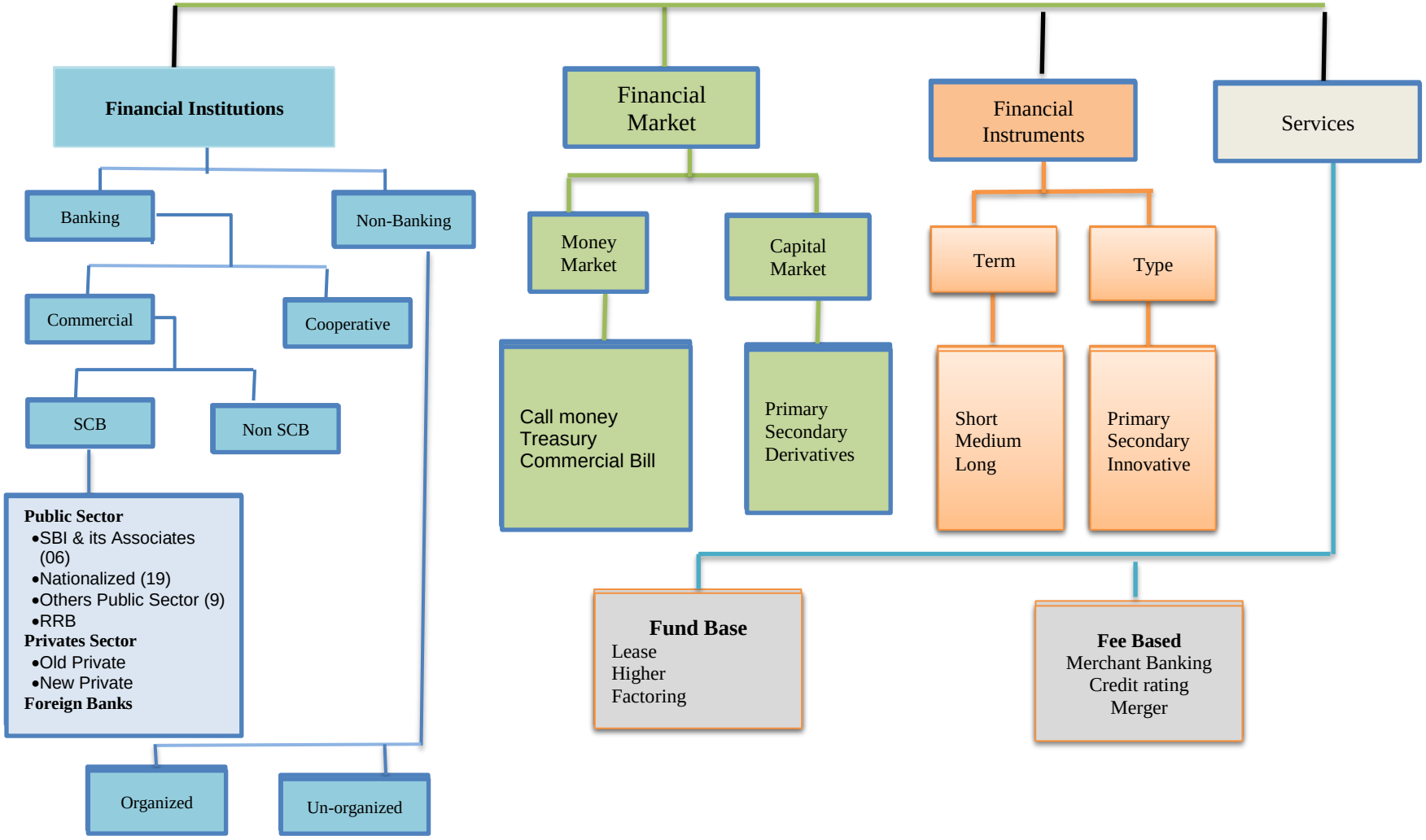
Source: compiled from the reports from the RBI and NABARD

Appendix 3B
Differences in present and past approach of the financial inclusion

Sl. No.	Earlier Approach (Swabhimaan)	New Approach (PMJDY)
1.	Villages with population greater than 2000 covered; thus limited geographical coverage	Focus on household; Sub Service Area (SSA) for coverage of the whole country
2.	Only rural	Both rural and urban
3.	Bank Mitr (Business Correspondent) was visiting on fixed days only	Fixed point Bank Mitr (Business Correspondent) in each SSA comprising of 1000-1500 households (3 to 4 villages on an average) to visit other villages in the SSA on fixed days
4.	Offline accounts opening - technology lock-in with the vendor	Only online accounts in CBS of the Bank
5.	Focus on account opening and large number of accounts remained dormant	Account opening to be integrated with DBT, credit, insurance and pension
6.	Inter-operability of accounts was not there	Inter-operability through RuPay Debit Card, AEPS etc.
7.	Cumbersome KYC formalities	Simplified KYC/e-KYC in place as per RBI guidelines
8	No use of Mobile Banking	Mobile wallet and USSD based mobile banking to be utilized
9	No guidelines on the remuneration of the Bank Mitr (Business Correspondent). Banks went generally with Corporate BCs who used to be least expensive to them	Minimum remuneration of the Bank Mitr (Business correspondent) to be Rs. 5000/-(Fixed + Variable)
10	A recent RBI survey finds that 47% of Bank Mitra are untraceable	Viability and sustainability of 'Bank Mitr' Business correspondent) is identified as a critical component
11	Monitoring left to banks	Financial Inclusion campaign in Mission Mode with structured monitoring mechanism at Centre, State and District level
12	Financial literacy had no focus	The rural branches of banks to have a dedicated Financial Literacy Cell
13	No active involvement of states / districts	State level & District level monitoring committees to be set up
14	No brand visibility of the Programme & Bank Mitr (Business Correspondent)	Brand visibility for the programme & Bank Mitr (Business Correspondent) proposed
15	Providing credit facilities was not encouraged	OD limit after satisfactory operations / credit history of 6 months
16	No grievance redressal mechanism	Grievance redressal at SLBC level in respective states

Source: Department of Financial Services (Ministry of Finance; Government of India) available at www.financialservices.gov.in

Appendix Figure 3C: Components of Indian Financial System



Chapter 4:
Financial liberalization and banking infrastructure in India

4.1 Background

In the branch banking arrangement, business is largely carried through branches[1] on the behalf of a bank which obtains a license from the apex regulator. Trends in banking infrastructure in this chapter have been approximated through the change in bank branches in absolute number as well as in proportion of the population, area and business. The bank branches vary with respect to size, scale of business and intensity (in terms of population and area serviced). As mentioned, branches play a key role in stimulating the process and growth of financial intermediation which in turn contributes to social and economic transformation in their catchment areas through backward and forward linkages with other institutions.

Commercial banks branches help in smoothening of financial transactions of on-going projects, channelizing local resources for financing of new projects, bringing resources from other regions in their catchment areas and also motivating local entrepreneurs for taking up projects having greater local sourcing. Besides, they have been used as a tool to balance and bridge the access and use gaps of banking services across people, groups, states, sectors and regions (Shetty, 2005). Additionally, increased branch density in unbanked and under banked areas poses tough competition to the monopoly of the unorganized credit markets (Pully, 2004). Branch density encourage saving habits by offering customized products to local savers in their catchment areas (Singh, 2005). The expansion of branches leads to a double dividend: while on the one hand it led to greater financial inclusion of deprived sections and on the other hand it manage to dilute the power of exploitative moneylenders (Chavan, 2005; Shetty 2005; Dev, 1988).

In summary, the branches contribute in economy through variety of channels: they fulfil the financial intermediation need of the people in the catchment area, help in channelizing savings and other idle resources into productive purposes, discourage

[1] Rao B Ramachandra (1984); 'Current Trends in Indian Banking' Deep and Deep Publication, New Delhi p.9

conspicuous consumption and create demand for real goods, identify genuine credit needs of the areas and make provision of adequate and timely credit, facilitate the government to reach to the neglected sectors, areas and people through its credit financing programmes,[2] etc. Additionally, a region blessed with strong branch network can be successful in attracting other progressive developmental institutions in the catchment areas (Burgees, 2002; Swaminathan, 2005; Chavan, 2005; Pande, 2004; Basu, 2006; Fry,1997).

In practice, demand following and supply leading approaches are followed for provisioning of the branches in the country. The former suggests that bank branches should be more in those regions that have high growth of economic activities, while latter emphasizes that expansion of branches stimulates the process of economic growth. A minimum level of business is required for survival of branches in the long run, however, governments often provide budgetary support in case branches incur losses in the short run.

Provisions of the budgetary support and cross subsidization under supply leading approach sometimes create branch overlapping, excess branches, and disproportionate size of the branches in relation to the potential business in poorly endowed areas. This leads to increase in unit costs of transactions, lower profitability and unnecessary burden on the state exchequer. Further, motivated and sufficient staff equipped with appropriate technology in branches plays an important role in the success of the bank business, especially in the urban and peri-urban areas. In spite of huge demand for banks in rural area and small towns, the RBI Act 1949 advises the commercial banks to open new branches at places which are commercially and industrially viable, and suggested the promotion and building up of "good business practices"[3].

4.2 Objectives, methodology and data used in this chapter

The objective of the present chapter is to evaluate the progress of banking infrastructure in India since bank nationalisation. The following questions are examined:

1. Was the spread of banking infrastructure able to reduce the disparity between rural and non-rural areas?

[2] Chawala A.S. (1987);'Nationalization and Growth of Indian Banking', Deep and Deep Publication, New Delhi, 1987, pp.65-66.

[3] Singh Kripa Shankar (2007); 'Development of commercial banking in India', Konark Publication, New Delhi pp 75.

2. Has there been any trend break in the expansion of the banking infrastructure in the pre and post reforms period?
3. Does the pattern of regional and interstate disparity reveal any trends in the period of banking reform?
4. Did rural areas experience any significant changes in availability, penetration and use of the banking services in pre and post reform periods?
5. Did banking infrastructure played any specific role in the revival of bank credit?

The study uses methods such as ratio analysis, growth differentials and inequality indices such as Standard deviation, Coefficient of Variations, Theil Index, Gini Coefficients and Hirschman Herfindahl Index (HHI) for assessing the change in parameters. Besides, Sigma convergence is also used in order to assess the long term trends in regional and interstate disparity.

Moreover, three layers of data pertaining to banking infrastructure viz., national, regional and states have been used to assess the change across the time and space. At national level, various indicators have been analysed for the period between 1969 and 2012. This period is further broken into two regimes viz., the regime of social banking (1969-91), and regime of banking sector reforms (1992-12). These two have further been divided into two sub periods in each regime. The first sub period/phase incorporates data between 1969-70 to 1979-80 while second sub period includes parameters between 1980-81 and 1991-92. Similarly, third sub period includes indices between 1992-93 and 2003-04 while fourth sub period tracks development during 2004-05 and 2011-12. The study uses following indicators;

1. Change in number and the share of different population groups (Rural, Semi urban, Urban and Metropolitan) in total branches of Schedule Commercial Banks (henceforth 'SCBs');
2. Growth differential in number of branches;
3. Pattern in Average Population Served by per Bank Branch (APSB) has been used as a proxy for the availability of the banking services;
4. Banking Penetration Index (the ratio of credit and deposit account per capita),
5. Use of banking services (Credit and deposit amount per capita terms)
6. Share and growth of bank employees with respect to branch and bank business;
7. Index of Financial Inclusion (IFI)

4.3 Pattern in distribution of bank branches: national scenario

As discussed, one of the stated objectives of 'social control over commercial banks' was to narrow the disparity in banking infrastructure and also to ensure more

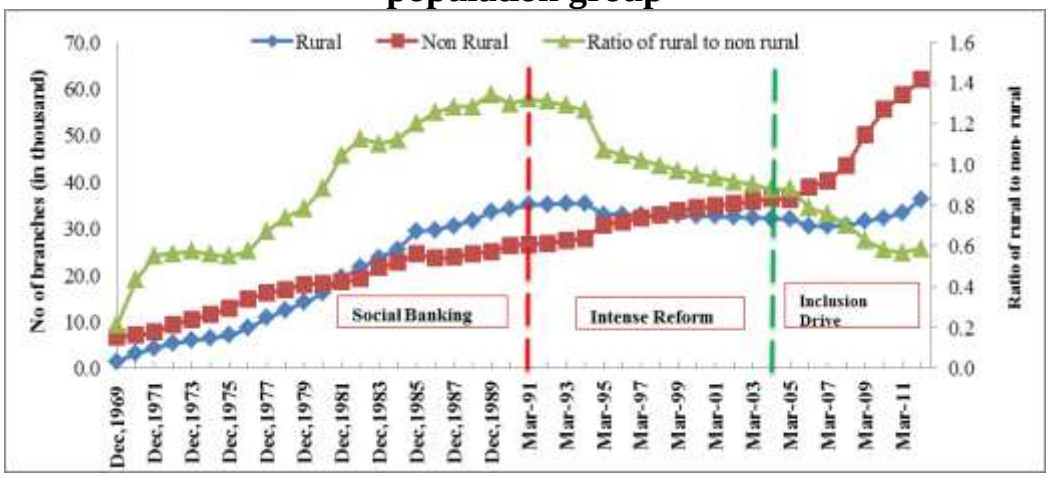
banking facilities in unbanked and under banked centres (GOI 1982; RBI 1985). At the time of bank nationalisation in 1969, country not only had thin branch intensity but branches were also asymmetrically distributed across population centres. For example, there were 8262 bank branches (SCBs) in the country, out of which only 22.2% (1832) were located in rural[4] areas, while the shares of non-rural population viz., the semi-urban, urban and metropolitan were 40.2%, 17.5%, and 20.1% respectively in June 1969. The All India Debt and Investment Survey conducted in 1970-71 (26th Round of NSSO) noted that only one percent of semi urban areas were served by commercial banks branches at the time of nationalisation (RBI 1985). Change in scale of expansions and compositional of the branches of the SCBs across different population groups at the national level from December 1969 to March 2012 has been shown in Figure 4.1. The figure shows more than 11.9 fold increase in the number of branches from 8162 in December 1969 to 98330 in March 2012. The figure also shows that change in number and share of rural and non- rural population in branches were asymmetric. Figure further indicates varying trends in the share of rural population centres across the regime: a remarkable increase during the social banking regime (1969-1992), then a steep decline during intense reform (1992-04) and no trend reversal during the revival period of financial inclusion drive (2005-12). At the onset of the banking sector reform (as on March 31st 1992), out of 61724 branches in the country, 56.9% were located in rural areas which was more than the combined share of semi-urban (18.7%) urban (14.3%) and metropolitan centres (10%). In other words, the rural to non-rural ratio branch which was 0.30 in 1969 significantly improved to 1.32 in 1991.

Branch rationalization policy of 1991 made significant and notable impact on the growth and composition of branch network in the country. During intense reform, particularly between 1992 and 2004 there was decline not only in the relative share of the rural areas but also in the absolute number of bank branches in rural areas. For

[4] The branches of the commercial banks as per locations have been subjected to reclassification on the basis of the census data. The population criteria remained unchanged for the years but owing to growth of population over the period, many rural branches have been reclassified as semi urban. Similarity, the semi-urban centers has been upgraded into the urban. The credit, deposit, branch, employee data of the various population centers between period of 1996 to 2005 are based on the basis of 1991 census while 2006 onward observations are based on the 2001 census. In order to have a comparative perspectives and analogous series, present study computes separate CAGR of real credit and deposit amounts per capita for the both sub periods i.e., from 1996 to 2005 and 2006 to 2011.

example, the share of rural centres in total branches of SCB declined to 51.7% in March 1995, then to 46.8% in 2001 and it further dipped to 38.5% in 2004[5]. In other words, rural urban ratio collapsed from 1.32 in 1991 to 0.62 in 2004. However, absolute decline in rural and semi urban bank branches was continued and country witnessed a net addition in branches across the population centres but bias continued between 2005 and 2012. Figure 4.1 shows that claims of rural in total branches further dipped to 32.4%, while non-rural centres claimed more than two third of the total branches . Within non-rural population groups, the largest increase is recorded for the metropolitan centres (4.5%) followed by urban (3.6%) centre during the revival period (2005-12). The decline in rural to non-rural ratio in 2012 confirms bias against rural (Figure 4.1).

Figure 4.1: Trends in distribution of branches of SCBs broad population group



Source: Author's own calculation from BSR (RBI)-various issues

Table 4.1 shows trend in share of various population groups in incremental bank branches of SCBs across the broad regimes and sub periods as mentioned above. Immediately after bank nationalization (1969-70), 1944 branches were added into the existing network of the SCBs, out of which about 83% were opened in rural areas while only 17% were opened in non-rural centres. During the entire first sub period of the social banking regime (1969-1980), a total of 26123 branches were added to the stock of the branch network of the SCBs of which 54.7% were opened in rural areas and another 20.5% were added in the semi urban areas of the country. The lowest contribution came from metropolitan centres (9.5%) followed by the urban centres

[5] The branches according to population groups were revised in 2005 on the basis of 2001 Census. Between 1996 and 2004 locations of the branches of the SCB were based on 1991 census.

(15.4%) during this phase. On account of the strong rural orientation of the branches, country witnessed lower urban disparities and convergence amongst the population centres.

Table 4.1 confirms continuance and further intensification of the rural orientation in second sub period of the social banking regime (1981-91). For instance, out of the total 27736 incremental branches, rural centres claimed about 69% which was not only the highest in comparison to other population groups but it was also higher in comparison to first sub period of the social banking regime. The table further shows continuance of rural orientation during second sub period. Moreover, during the entire social banking regime, it was rural areas which got the lion's share in the incremental branches of SCBs. For example, a total of 53859 branches were added in the branch network of the SCBs during the entire period of social banking regime (1969-92); Out of this, the shares of rural, semi-urban, urban and metropolitan were 62.1%, 15.4%, 14.1% and 8.5% respectively (Table 4.1)

Table 4.1: Share of various population group in incremental branches of SCBs, 1969-2012

	Population Centre				
Duration	**Rural**	**Semi Urban**	**Urban**	**METRO**	**TOTAL**
1969-80	14279	5356	4015	2473	26123
	(54.7)	(20.5)	(15.4)	(9.5)	(100.0)
1981-91	19143	2928	3561	2104	27736
	(69.0)	(10.6)	(12.8)	(7.6)	(100.0)
1992-00	-2581	2974	1828	2719	4940
	(-52.2)	(60.2)	(37.0)	(55.0)	(100.0)
2001-12	694	8145	8146	8071	25056
	(2.8)	(32.5)	(32.5)	(32.2)	(100.0)
Social Banking	33422	8284	7576	4577	53859
	(62.1)	(15.4)	(14.1)	(8.5)	(100.0)
Reform (Overall)	-1887	11119	9974	10790	29996
	(-6.3)	(37.1)	(33.3)	(36.0)	(100.0)

Note- Figures in bracket represent shares in total branches in %).
Source: Author's own calculation from BSR (RBI: various issues)

As already mentioned, the geographical, demographic and developmental criteria in obtaining branch licence were diluted in branch rationalization policy of 1991. The new branch policy also provided autonomy to the commercial banks for relocation of exiting branches according to business viability. Such autonomy obviously impacted

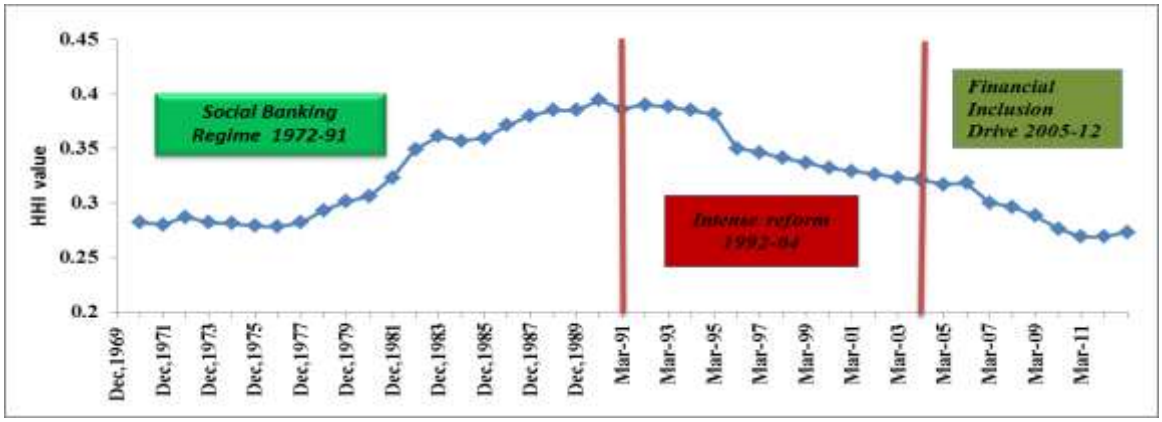
the growth and distribution of branches across the population centres specifically during the third sub period (1992-04). The table points towards a complete trend reversal during intense reforms (1992-04) during which the country not only witnessed rise in the shares of non-rural population centres in incremental stocks of the branches but such rise was also accompanied by net decline in rural areas. For instance, between 1992-93 and 2000-01, country witnessed a net addition of 4940 branches into the stock of branches in which rural centres experienced a net decline of 2581 branches while non-rural centres observed a net addition of 6981 branches. Amongst the non-rural centres, the largest increase was observed for semi urban areas followed by metropolitan and urban areas (table 4.1). This trend clearly suggests a shift from rural to non-rural centres. The phenomenal rise in the number of branches in semi urban areas may be partially attributed to branch rationalization policy adopted in 1992 and partially to reclassification of branches in 1995. But year to year analysis confirms decline in branches before and after reclassification. The rise in the share of branches in urban and metropolitan centres confirms pro-urban bias of the banking sector reform.

It was expected that rural areas would be adequately compensated during the revival period under the financial inclusion drive but evidence suggests otherwise. During this period, country witnessed further intensification of urban bias. For instance, between April 1st 2001, and March 31st 2012 a total of 25056 branches were added to the stock, in which only 2.8% were opened in rural areas while 97.2% were opened into non-rural population groups. As far as the entire reform period is concerned, there was a net increase of 29996 branches in the country, in which rural areas witnessed 1887 fewer branches in comparison to the social banking period. On the contrary, non-rural centres experienced an increase of 31883 branches (1.5 times higher than during social banking period) (Table 4.1)

On the basis of these trends, some rough conclusions may be drawn. The branch rationalization policy of 1992 not only slackened the pace of bank branch expansion in the country but also gave a major jolt to rural banking. Obviously, the decline in the number of branches in rural areas may have been an outcome of many factors, but dilution of norms like population and geographical criteria in obtaining branch licenses during the reforms were the main reasons in this regard. Besides, allowing

SCBs to shift their existing branches from rural to non-rural centres on the basis of mutual consent resulted in massive erosion of rural branches during the intense period of reform. The new branch authorization policy of 2006 however reintroduced the demographic and geographical criteria in obtaining branch licenses and succeeded in arresting the negative growth of branches in rural areas, but data suggest that it could not generate the momentum that ousted social banking regime (Table 4.1)

Figure 4.2: Hirschman Herfindahl Index–rural vs. non-rural

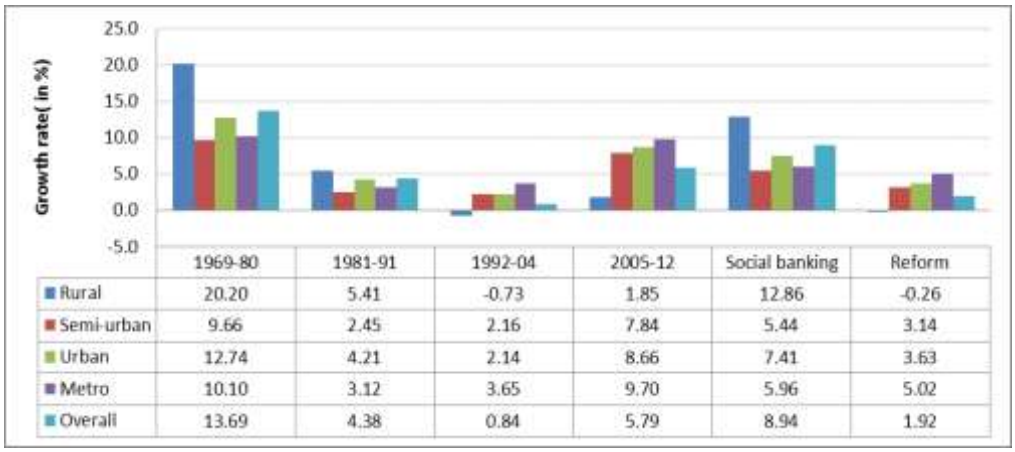


Source: Author's own calculation from BSR (RBI; various issues)

Hirschman Herfindahl Index (HHI) shown in Figure 4.2 confirms increased concentration in favour of rural during the social banking and diversification during reform and inclusion drive. In order to capture variations in long term time series data, the growth (Compound Average Growth Rate-CAGR) differentials of the branches across population centres over the four sub periods have been computed and summarized in figure 4.3. The figure indicates double digit growth in branches at national level during first sub-period. This was largely driven by the massive expansion in rural centres followed by urban, metropolitan and semi-urban centres. However, the figure also points towards moderation of branch growth for all population groups during the second sub period, but in this period too growth of the rural branches was not only above the national average, but it remained higher than all the three other population groups . During the third sub period, there was trend break as the country witnessed a negative growth in branches in the rural areas while it was positive for the non-rural population groups (Figure 4.3). Amongst the non-rural population, the highest growth was recorded for metropolitan followed by urban and semi urban areas. Notably, the average growth of the branches at national level

remained less than 1% per annum in third sub period which confirms lazy banking. (Figure 4.3)

Figure 4.3: Branch growth across the population centres



	1969-80	1981-91	1992-04	2005-12	Social banking	Reform
Rural	20.20	5.41	-0.73	1.85	12.86	-0.26
Semi-urban	9.66	2.45	2.16	7.84	5.44	3.14
Urban	12.74	4.21	2.14	8.66	7.41	3.63
Metro	10.10	3.12	3.65	9.70	5.96	5.02
Overall	13.69	4.38	0.84	5.79	8.94	1.92

Source: Calculated by author from Basic Statistical Returns (Various Issues)-RBI

Eventually, the highest (double digit) growth in metropolitan bank branch followed by higher growth in the urban centres indicates greater intensification of urban bias during the revival phase. It is worth noting that this is the period when country witnessed a massive flow of farm loan from the scheduled commercial banks. But, a pertinent question which arises here is that how banks achieved and maintained such high growth of agriculture loan without increasing the bank infrastructure in rural areas. This had motivated me to scrutinize the trends in branches across the states and regime. Conclusively, above analysis rejects the null hypothesis of uniform growth of branches across the population group and also over the sub periods. The analysis noted that growth of the branches not only varied across population groups, but significant growth differences have been observed for the same population groups over the sub periods. The next section analyses trends in branches across the six regions[6] over the regimes mentioned earlier.

[6] Basic statistical returns Vol. II (RBI) classifies the whole country into six broad regions consisting of the following states: **NORTHERN REGION** includes Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Chandigarh, Delhi; **NORTH-EASTERN REGION** includes Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura **EASTERN REGION** includes Bihar, Jharkhand, Orissa, Sikkim, West Bengal, Andaman & Nicobar Islands; **CENTRAL REGION** includes Chhattisgarh, Madhya Pradesh, Uttar Pradesh, Uttarakhand; **WESTERN REGION** includes Goa, Gujarat, Maharashtra, Dadra & Nagar Haveli, Daman & Diu; **SOUTHERN REGION** includes Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Lakshadweep, Pondicherry.

4.1.1 Distribution of bank branches: region-wise scenario

As discussed earlier, one of the stated objectives behind the bank nationalization in 1969 was to reduce the disparity in availability of the banking infrastructure across the regions in the country. Table 4.2 shows trends in number of branches and change in the shares of different regions in total branch network of the SCBs between December 1972 and March 2012. The table confirms strong regional concentration as most of the branches were located in advanced regions while poor, backward and populated regions were deprived of their due share in 1972.

Table 4.2: Trends in distribution of branches across the region

REGION		Dec-72	Dec-80	Mar-92	Mar-04	Mar-12
CENTRAL	Number	2239	7456	12948	13777	19948
	Share	15.1	20.6	21.2	20.2	20.3
EASTERN	Number	1705	6677	11295	11957	16345
	Share	11.5	18.5	18.5	17.5	16.6
NORTH-EASTERN	Number	202	703	1867	1900	2556
	Share	1.4	1.9	3.1	2.8	2.6
NORTHERN	Number	2396	5409	9339	11248	17,905
	Share	16.2	15.0	15.3	16.5	18.2
SOUTHERN	Number	5033	10144	16332	18794	28,300
	Share	34.0	28.0	26.7	27.5	28.8
WESTERN	Number	3223	5790	9359	10549	15751
	Share	21.8	16.0	15.3	15.5	16.0
BACKWARD REGION	Number	4146	14836	26110	27634	38849
	Share	28.0	41.0	42.7	40.5	38.5
ADVANCED REGION	Number	10652	21343	35030	40591	61956
	Share	72.0	59.0	57.3	59.5	61.5
ALL-INDIA	Number	14798	36179	61140	68225	100,805
	HHI	0.226	0.203	0.198	0.199	0.211

Source: Author's own calculation from BSR (RBI; various Issues)

Precisely, in June 1972, out of a total of 14798 branches in the country, 72% were located in three advanced regions namely Southern, Western and Northern regions. The high HHI value confirms a strong regional concentration in 1972. The table however noted an increase in the bank branches in all six regions in last four decades, but trend in share of the regions also varied across regulatory regimes i.e., increase for backward regions during the social banking regime and decline thereafter.

Table 4.3 summarizes trends in the shares of regions in incremental stock of branches over the sub periods during 1972 to 2012.

Table 4.3: Region-wise share in the incremental branches of SCBs

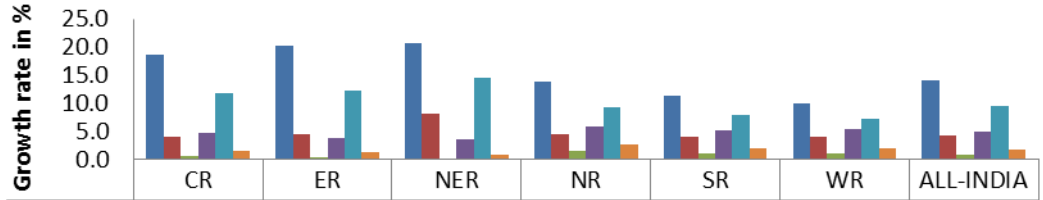
REGION		Duration				Social Banking	Reform
		1972-80	1981-91	1992-04	2005-12	1972-91	1992-12
CENTRAL	Number	6366	5161	973	3609	**11527**	**4582**
	Share	22.8	22	13	18.3	**22.4**	**16.9**
EASTERN	Number	5799	4051	1118	2487	**9850**	**3605**
	Share	20.8	17.3	14.9	12.6	**19.2**	**13.3**
NORTH-EASTERN	Number	613	865	306	368	**1478**	**674**
	Share	2.2	3.7	4.1	1.9	**2.9**	**2.5**
NORTHERN	Number	4156	3758	1815	4077	**7914**	**5892**
	Share	14.9	16	24.2	20.7	**15.4**	**21.7**
SOUTHERN	Number	7148	5913	2368	5850	**13061**	**8218**
	Share	25.6	25.2	31.6	29.7	**25.4**	**30.2**
WESTERN	Number	3835	3275	1347	3297	**7110**	**4644**
	Share	13.7	14	18	16.7	**13.8**	**17.1**
BACKWARD REGION	Number	12778	10077	2397	6464	**22855**	**8861**
	Share	45.8	43.8	30.2	32.8	**44.9**	**32.1**
ADVANCED REGION	Number	15139	12946	5530	13224	**28085**	**18754**
	Share	54.2	56.2	69.8	67.2	**55.1**	**67.9**
ALL-INDIA	Number	27917	23023	7927	19688	**50940**	**27615**
	HHI	0.202	0.195	0.207	0.209	**0.199**	**0.208**
	Theil	0.139	0.105	0.133	0.159	**0.122**	**0.147**

Source: Author's own calculation from BSR (Various Issue; RBI)

The table shows decline in regional disparity during the social banking regime. It happened because disadvantaged regions viz. Central, Eastern and North-eastern succeeded in pushing their share in incremental branches during this period. In contrast to this, the claims of the advanced regions witnessed a decline during 1972-92. For instance, out of total 50201 incremental branches of the SCB, 44.5% were opened in the less developed regions (Central, Eastern and North-eastern regions) during social banking period while it declined to 32.7% during entire period of reform. The Theil index and HHI shown in table confirm rise in concentration of branches in favour of backward region during social banking regime and diversification (deviation from the trends of the social banking regime) during reform. In other words, regional disparity declined during the social banking regime while it remarkably widened during reforms. It was expected that inclusion drive would correct the imbalances of the intense reform, but we did not come across any moderation in enduring concentration in favour of the advanced regions. In contrast further accentuation of regional disparity was noted in this period (Table 4.3)

Figure 4.4 shows trend in annual growth (CAGR) of bank branches across the six regions and over sub periods and regimes. The figure rejects the null hypothesis of uniform growth in regions and also over the period because remarkable variation in growth was noted.

Figure 4.4: Region-wise CAGR of branches, 1969-2011



	CR	ER	NER	NR	SR	WR	ALL-INDIA
1969-80	18.6	20.3	20.6	13.7	11.4	9.9	14.0
1981-91	4.1	4.4	8.1	4.6	3.9	4.1	4.3
1992-04	0.5	0.4	0.0	1.5	1.1	1.0	0.8
2005-11	4.7	3.8	3.6	5.8	5.2	5.3	5.0
1969-91	11.7	12.2	14.4	9.2	7.9	7.1	9.4
1992-11	1.6	1.2	0.9	2.6	2.0	1.9	1.8

Source: Author's own calculation from BSR (Various Issue; RBI

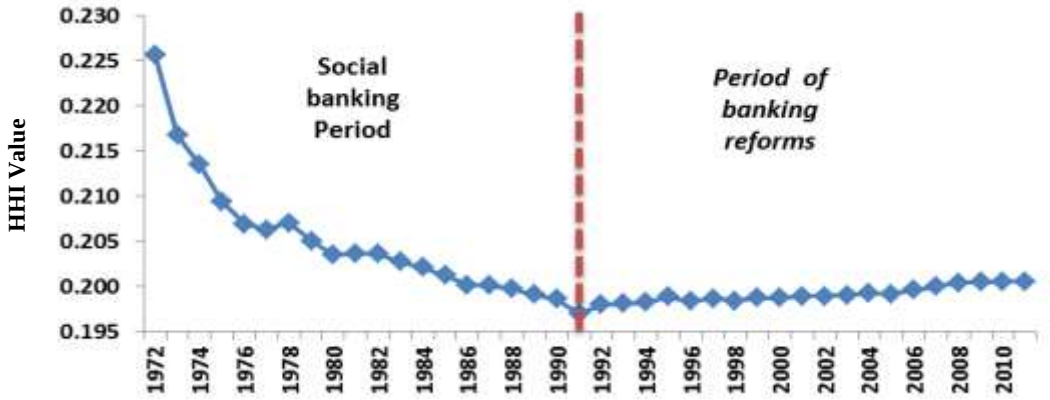
For instance, Northeastern region witnessed highest growth, while growth was recorded lowest for the Western region during 1972-80. This shows that inclusion of backwardness and population criteria in branch licence yielded positive results, because all three backward regions experienced remarkably higher growth than that of the already banked regions in first sub period. This also explains the reason behind a strong convergence in regional disparity during this time frame (Figure 4.4). Notably, the relatively higher growth of branches in disadvantaged regions during the social banking was not achieved at the cost of the better-off regions; instead, all regions experienced a positive growth. As discussed in earlier section, the spree of expansion of the branches was moderated during the second sub period at national level. But the figure show that in moderation phase relatively higher growth was recorded in favour of the developing and deprived regions. For instance, CAGR of the branches of the SCBs at the national level was about 4.3%, which is distinctly lower than the growth achieved in first sub period. During this period, growth rate for the Northeastern region was the highest (8.1%), followed by the Northern (4.6%) and Eastern regions (4.4%). The Central and Western regions witnessed similar growth (4.1%) but below the national average. It was Southern region that experienced the slowest growth (3.8%) in the second sub period (Figure 4.4).

As described earlier, the inclusion of the business viability and profitability criteria of the branches accompanied by the dilution of the population coverage and social desirability aspects in branch licensing resulted in a slowdown in pace of expansion of

banking infrastructure in third sub period (1992-04). The figure shows that regional convergence achieved during the social banking period was altered in this phase as balance shifted in favour of the developed regions. The CAGR of branches in Northern (1.5%), Southern (1.1%) and Western regions (1%) were not only higher than the national average, but they were far ahead of the developing regions. In this period, North Eastern region witnessed almost zero growth (Figure 4.4).

In the wake of the growing banking exclusion in developing regions RBI reintroduced the demographic and backwardness criteria into her branch policy in 2006. The new branch policy gave an impetus to branch expansion in unbanked locations, but it could not succeed in altering the trend in regional disparity as in the later years also, relatively higher growth of the branches was observed in developed regions as compare *to* the developing regions (Figure 4.4).

Figure 4.5- Hirschman Herfindahl Index- regional concentration of branches (1972-2011)



Source: Author's own calculation from BSR (Various Issue; RBI

Trend in HHI shown in Figure 4.5 confirms decline in regional disparity i.e., diversification during the social banking and trend reversal thereafter. The sigma (σ) convergence shown in Table 4.4 endorses the conclusion drawn from figure 4.5. Table 4.5 show a strong regional convergence or decline in the regional disparity during sub period I and II (negative and significant coefficient), while divergence or rise in disparities in subsequent two sub periods of reform (Table 4.4).

Table 4.4: Sigma (σ) convergence of branches across the Regions in India

Regime	Sub period	intercept	slope	SE	t	P>t
Social Banking	Sub period I (1972-80)	0.73	-0.020	0.002	-10.15	0.0
	Sub period II (1981-91)	0.56	-0.004	0.000	-8.17	0.0
Reform	Sub period III (1992-04)	0.46	0.001	0.000	6.26	0.0
	Sub period IV(2005-12)	0.43	0.002	0.000	5.42	0.0

Source: Author's own calculation from BSR (Various Issue; RBI)

Conclusively, during the social banking regime, banks branches were opened in such a manner that poorer regions started catching up with the already banked regions. During banking reform, outcome of branch rationalisation and demand following approach not only shifted focus from poorer to advanced and developed regions but led to divergence in interstate disparity during intense reform. The study further found that branch rationalisation of 2006 in which bankers emphasised on product and institutional innovations based on Information and Communication Technology (ICT) could not overturn the trends in rising inter-regional disparity. Instead, greater regional disparities were noted during inclusion drive (2005-12).

4.1.2 Distribution of bank branches- Interstates Scenario

Modern banking originated in port towns of the country characterised by high street character, limited geographical presence and asymmetric concentration of their branches across the states (RBI, 1978). At the time of independence, country was cursed with stark interstate inequality in banking infrastructure and situation did not change much till the nationalisation of banks in 1969 (RBI, 2009). There were many factors that contributed to asymmetric distribution of bank branches during the pre-nationalisation period. Private ownership, dominance of non-schedule commercial banks, and persuasion of demand following strategy had been major factors amongst them. These banks were by and large run and operated by people which had colonial mind set and prejudices especially in regards to bankability of the common masses living in backwards states (Bagchi, 2002).

Table 4.4 shows trends in share of states in total branches of SCBs from 1969 to 2012. From the table, Maharashtra claimed the highest share (13.5%) whereas lowest share was noted for Jammu & Kashmir (0.4%) in 1969. The combined share of the eight states, namely, Andhra Pradesh, Gujarat, Haryana, Karnataka, Kerala, Maharashtra Punjab and Tamil Nadu was about 62%, whereas the share of the nine developing and backward states, namely Assam, Bihar, Madhya Pradesh, Rajasthan, Orissa, Himachal Pradesh, Jammu & Kashmir, West Bengal and Uttar Pradesh was less than one third in 1969. The combined share of the major Indian states in total branches of the SCBs which have been included in the analysis was about 93% (Table 4.4).

The table shows notable shift in states' contribution in branches in aforementioned three distinct regimes. The better banked states (states having higher

share in banks branches in 1969) gradually started losing their strength during social banking, while share of the developing states (that had per capita income below the national average) in bank branches increased significantly between 1969 and 1980. Country also witnessed narrowing of the gap between the shares of the two groups of states. Precisely, country witnessed 12.6% increase in shares of less developed states and commensurate decline in developed states between 1981 and 1992. Eventually, at the time of introduction of banking reform in 1991, the combined share of developing states was higher than that of the developed states. But, there was a reversal of this trend during the period of intense reform. There was further intensification of the disparity in the revival period (Table 4.5).

Table 4.5: Trend in distribution of the branches across the states

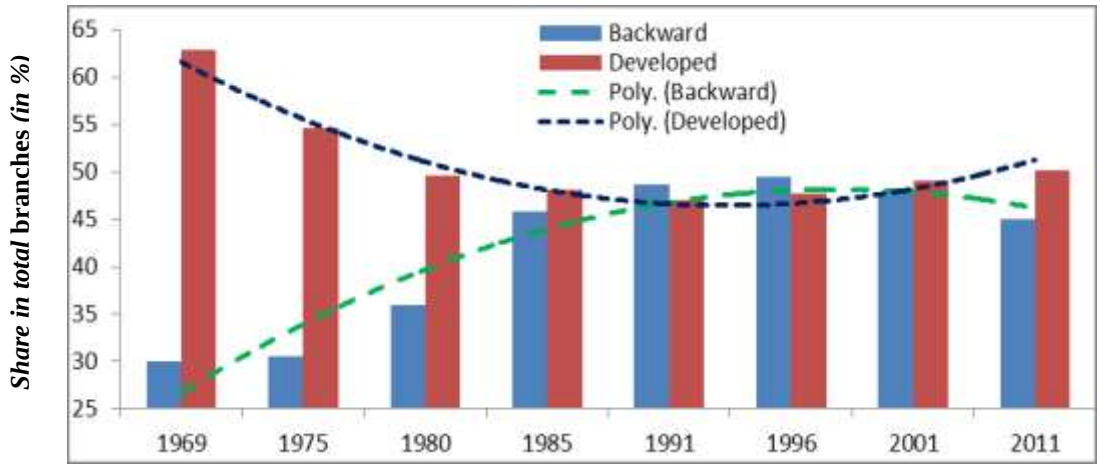
State	State's share in overall branches (in %)					Change in Share (in %)			
	1969	1980	1991	2001	2012	1969-80	1980-91	1991-01	2001-12
Andhra Pradesh	6.9	6.9	7.6	7.9	8.2	0	0.7	0.3	0.3
Assam	0.9	1.3	2	1.9	1.7	0.4	0.7	-0.1	-0.2
Bihar*	3.3	5.2	7.9	7.7	6.8	1.9	2.7	-0.2	-0.9
Gujarat	6.9	6.2	5.6	5.6	5.5	-0.7	-0.6	0	-0.1
Haryana	2.1	2.1	2.1	2.4	2.9	0	0	0.3	0.5
Himachal Pradesh	0.5	0.9	1.2	1.2	1.2	0.4	0.3	0	0
Jammu & Kashmir	0.4	1.1	1.3	1.3	1.1	0.7	0.2	0	-0.2
Karnataka	9.2	7.3	7.1	7.3	7.1	-1.9	-0.2	0.2	-0.2
Kerala	7.3	5.9	4.7	5.1	5.1	-1.4	-1.2	0.4	0
Madhya Pradesh*	4.2	5.1	7.1	6.8	6.4	0.9	2	-0.3	-0.4
Maharashtra	13.5	9.1	9.3	9.6	9.6	-4.4	0.2	0.3	0
Orissa	1.2	2.3	3.4	3.4	3.3	1.1	1.1	0	-0.1
Punjab	4.2	4.3	3.5	3.9	4.2	0.1	-0.8	0.4	0.3
Rajasthan	4.4	4.1	5	5.1	4.9	-0.3	0.9	0.1	-0.2
Tamil Nadu	12.8	7.8	7.1	7.3	7.5	-5	-0.7	0.2	0.2
Uttar Pradesh*	9	10.3	13.8	13.5	13.4	1.3	3.5	-0.3	-0.1
West Bengal	6.1	5.7	6.9	6.8	6.2	-0.4	1.2	-0.1	-0.6
ALL-INDIA	8262	36179	62114	65512	92117	27917	25935	3398	26605
Share _Major Indian states	92.9	85.6	95.6	96.8	95.1	-7.3	10	1.2	-1.7
Share_ Developed States #	62.9	49.6	47	49.1	50.1	-13.3	-2.6	2.1	1
Share-Backward States @	30	36	48.6	47.7	45	6	12.6	-0.9	-2.7

*Note - * denotes the undivided states, # as defined above.*
Source: Author's own calculation from BSR (Various Issue; RBI)

Figure 4.6 show movement in shares of backward and advanced states in total branches since nationalization. It is noted that during social banking regime the combined share of backward states increased as much as 18.6% (from 30% in 1969 to 48.6 % in 1991), whereas, the combined share of the developed states declined by 15.% (from 62.9% in 1969 to 47.0 % in 1991). As on March 31st 1991, the gap between the two groups was as low as 1.9 %. But 1996 onwards developing

(backward) states not only lost their numerical superiority to the advanced states; but the gap between the two widened continuously and did not show any convergence in revival phase. Instead, the gap between the two sets of states became wider during revival phase.

Figure 4.6: Disparity in distribution of branches between better banked and poorly banked regions

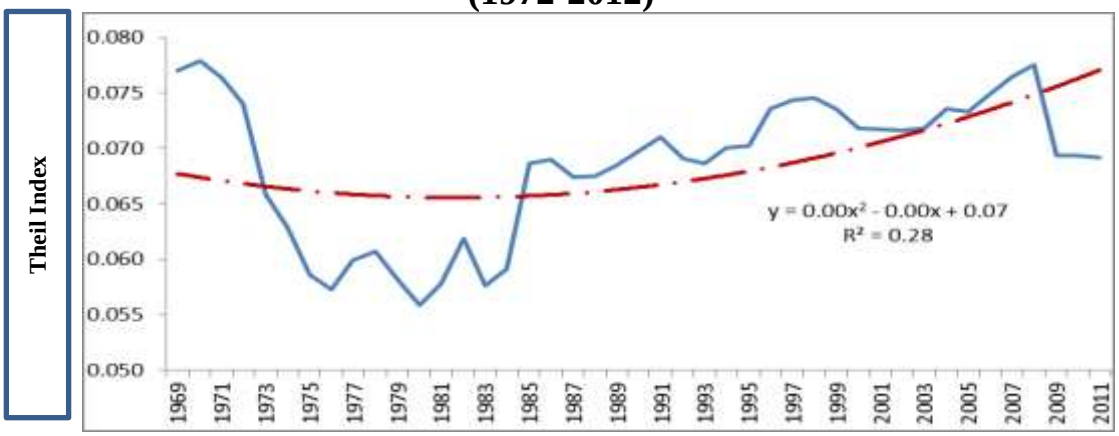


Note: As mentioned in the table 5.3

Source: Calculated by author

Figure 4.7 displays trend in HHI (computed from the shares of Indian states) over the period 1969 to 2012. The dotted line in the figure displays polynomial trends in value of the HHI. The trend line clearly points towards a definite pattern: decline in interstate disparity during the social banking period (diversification), and increase thereafter (i.e., concentration during the reform and revival periods).

Figure 4.7: Hirschman Herfindahl Index-statewise branches-(1972-2012)



Source: Authors' own calculation from BSR (RBI various issues)

Table 4.6 displays long term trends in the interstate disparity measure in sigma (σ) convergence across the states and over the sub periods. The table noted a strong

convergence or decline in interstate disparity during sub period I but a weak divergence (insignificant slope coefficient) during the sub period II.

Table 4.6: Sigma (σ) convergence of branches of SCBs across the states

Regime	Period	Intercept	Coefficient	SE	t	p value
Social banking	1969-80	0.734	-0.016	0.001	-16.11	0.00
	1981-91	0.509	0.004	0.001	4.60	0.00
Reform	1992-04	0.613	-0.001	0.000	-3.72	0.00
	2005-12	0.554	0.000#	0.001	0.47	0.66

Source: Authors' own calculation from BSR (RBI various issues)

Surprisingly, a strong convergence during third sub period followed by divergence (weak) during the revival phase in interstate disparity is noted. Additionally, the regression coefficients were significant at 1% level of significance) in sub periods I, II, and III while it was insignificant in sub period IV (Table 4.6).

The impact of branch rationalisation policy on the pattern of growth of branches in rural and non-rural centre across the states in the three distinct periods has been given in Table 4.7. Also in order to neutralised the reclassification of the branches by the RBI, entire period of reform has been broken into these three sub periods.

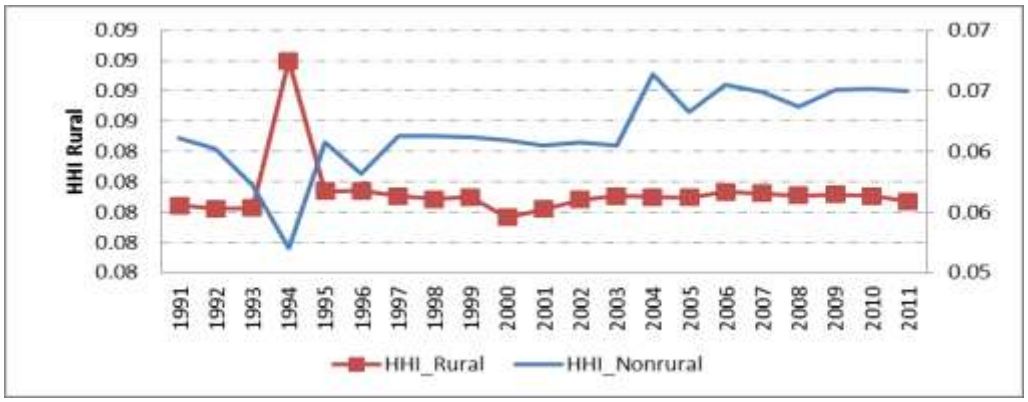
Table 4.7: Growth (CAGR) of bank branches: rural and non-rural

State	1992-04			2005-12			1992-12		
	Rural	Non Rural	Total	Rural	Non Rural	Total	Rural	Non Rural	Total
Andhra Pradesh	-1.0	3.3	1.1	2.2	8.2	5.9	-0.5	4.5	2.2
Assam	-1.1	3.1	0.2	0.4	8.8	3.9	-0.7	3.7	0.9
Bihar*	-0.8	3.4	0.3	0.7	8.6	3.8	-0.5	4.1	1.0
Gujarat	-1.5	2.9	0.8	2.3	7.1	5.4	-0.7	3.3	1.6
Haryana	-0.8	5.4	2.1	3.7	9.6	7.6	-0.1	6.4	3.5
Himachal Pradesh	-0.2	6.2	0.7	2.6	13.5	4.7	0.8	5.5	1.6
Jammu & Kashmir	0.0	1.5	0.4	1.3	6.4	3.5	-0.6	4.8	1.3
Karnataka	-1.1	3.8	1.3	0.8	7.3	4.8	-0.5	4.0	1.9
Kerala	-6.6	3.9	2.3	0.6	5.0	4.7	-1.9	3.3	2.6
Madhya Pradesh*	-2.2	4.1	0.0	0.5	9.1	5.0	-1.4	4.4	1.1
Maharashtra	-1.4	3.5	1.5	1.2	7.5	5.6	-0.9	3.5	2.0
Orissa	-0.2	2.9	0.6	1.3	11.1	4.8	0.1	4.9	1.6
Punjab	-0.8	4.7	2.0	2.7	7.9	6.0	0.0	4.7	2.7
Rajasthan	-1.0	3.3	0.6	1.0	7.9	4.7	-0.8	4.3	1.6
Tamil Nadu	-0.9	3.6	1.7	2.0	7.8	6.1	-0.8	3.7	2.1
Uttar Pradesh*	-1.1	3.5	0.5	1.8	8.6	5.1	-0.3	4.2	1.6
West Bengal	-0.8	2.0	0.5	1.1	6.1	3.8	0.0	2.6	1.3
All India	-1.0	3.1	1.0	1.5	7.5	5.0	-0.5	3.5	1.7
Average (17 state)	-1.3	3.6	1.0	1.5	8.3	5.0	-0.5	4.2	1.8
CV	-1.2	0.3	0.7	0.6	0.2	0.2	-1.2	0.2	0.4
Growth rate (in %) across the broad groups of the states									
Southern States	-1.5	3.9	1.5	1.6	7.1	5.4	-0.7	3.9	2.2
Backward States	-1.0	3.1	0.4	1.0	8.2	4.3	-0.5	3.9	1.2
UP*	-1.1	3.5	0.5	1.8	8.6	5.1	-0.3	4.2	1.6
Guj .&Mah.	-1.4	3.3	1.3	1.7	7.3	5.6	-0.8	3.4	1.8
Punjab &Hary	-0.8	4.9	2.0	3.1	8.6	6.6	-0.1	5.3	3.0

Source: Authors' own calculation (RBI; various Issues)

The CAGR of branches of rural and non-rural has been computed in order to assess the impact of the branch policies of reform on the pattern of growth across the states. Table 4.7 shows contrasting trends in growth of the rural and non-rural centres erosion of branches in rural areas and gearing up in non-rural centres in all states particularly between 1992-95 and 1996-05. Between 1996 and 2005, none of the states reported positive growth in rural branches. Highest erosion in rural branches were recorded for Kerala (-6.64%), Madhya Pradesh (-2.15%), Gujarat (-1.52%), Maharashtra (-1.37 %) and Karnataka (-1.13%). The states which witnessed least erosion in rural branches were Haryana, West Bengal, Orissa, Himachal Pradesh and Jammu & Kashmir. Besides, dispersion (CV) was also higher for rural than that of the non-rural centres (Table 4.7).

Figure 4.7A: Hirschman Herfindahl Index of branches-statewise rural urban



Source: Authors own calculation from the BSR Vol., II and Currency & Finance Report (RBI)

Figure 4.7A shows trend in interstate disparity separately for the rural and non-rural centres during the reform. The figure noted lower but stable interstates disparity for the rural centres during reform. The year 1994 was an exception when interstates disparity was higher than former. Thus above analysis shows that impact of the branch policies pursed during the reform were not only asymmetric across the states and regimes, but reactions were also different in rural and non-rural centres within and between the regulatory regimes in states.

4.2 Average Population Served by per Bank Branch (APSBO)

The change in relative availability of banking infrastructure has been measured through Average Population Served by per Bank Branch **(**henceforth "APSBO"[7]). Increase in APSBO[8] has also been used as a proxy for stress on the branch. Eventually, decline in the APSBO points towards better banking or relatively less stress on the branches, while higher and rising APSBO indicates poor availability and greater stress. In spite of availability, stress on branch could also be affected by the quantity, composition and quality of bank staff location, availability of quality and quantity of physical infrastructure in branches, levels of economic activities, human and social indicators in the catchment area of the branches. This section analyses trend in APSBO across the regimes, at national and sub national level.

Figure 4.8 and Table 4.8 show progress made by the SCBs in APSBO for the rural and non-rural areas at national level from 1969 to 2011. A stark disparity in APSBO is noted across the population group in 1969 as one branch was serving about an average population of 64000, in which coverage for the rural centres was about 240,000 while that for the non-rural branches was 16,000 i.e., stress on formers was about 14 times higher than that of the latter. The table also points towards decline in APSBO for both rural and non-rural centres; however larger decline was reported in former than that in the latter. Pertinently, decline in stress on the rural, non-rural and all-India was 62%, 18.7% and 35% three years after the bank nationalisation. The ratio of rural to non-rural APSBO notably declined from 14.72 in 1969 to 7.72 in 1972 and it further dipped to 2.05 in 1991 (Figure 4.8).

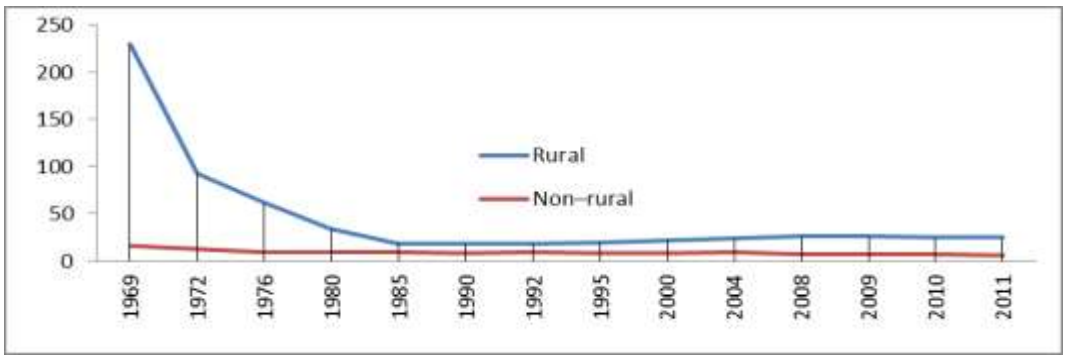
The figure show that despite the gap rural branches were marginally behind the set target[9] of the 15000 at the eve of the banking reform. RBI herself admitted that had the momentum of the rural orientation of the social banking been allowed to continue, the stipulated target would indeed have been realized in the end of the eighth plan (BSR, 1996; Rawal, 2005). But, persuasion of the branch rationalization policy led to an alteration the situation (Figure 4.8).

[7] Average Population Served by per Bank Branch (APSBO) is computed through dividing Total population with no of Branch of the SCB. Declining APSBO indicates better banking intensity and relatively less stress of banks and lower truncation cost for the borrowers and other wise.

[8] Given wide variations in age composition of the population across the regions and states in India, a better indicator in this regard would be adult population coverage per branch. But due to non-availability of reliable yearly data, this study considers the aggregate population.

[9] The APSBO target for the rural branches at the end of the Seventh five year plans was set 15,000.

Figure-4.8: Population served by per branches (in thousands)



Source: Calculated from BSR RBI and Census

Many believe that relocation of the branches from rural to non-rural centres and closure of the branches in rural areas led to branch rationalisation policy of 1992. This created a double whammy for rural banking. On the other hand, this led to increase in rural APSBO while on the other; there was return of the moneylenders in the rural areas especially first decade of the banking reform. The table shows continuous rise in APSBO in rural centre, while decline is reported for the non-rural centres. It happened because latter attracted disproportionate branches with respect to their contribution in population of the country. As against the expectations, stress on the rural branches further intensified during revival (Table 4.8)

Table-4.8: Population served by per bank branch (in thousands)

Year	Rural (1)	Non–rural (2)	Overall (3)	Rural Urban Differentials (1)-(2)	Ratio of Rural to Urban
1969	*230*	*16*	*64*	*214*	*14.48*
1972	*93*	*13*	*41*	*80*	*7.21*
1980	*34*	*9*	*21*	*25*	*3.84*
1991	*18*	*9*	*14*	*9*	*2.05*
2001	24	9	16	15	2.81
2012	25	7	14	18	3.86

Source: *same as above table*

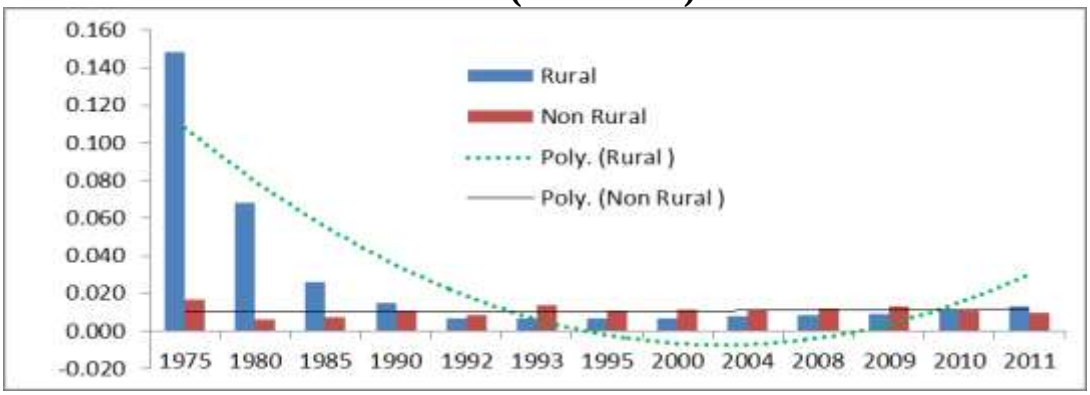
Precisely, on March 31st 2012, a branch in rural area was catering 3.86 times more population than that the urban counterparts. This also indicates how banks achieved so-called "operational efficiency" during the reform. The operational efficiency achieved through withdrawal of branches from the rural areas had great bearings on people at the bottom of the income and social pyramid because they were left with no option but to borrow from the players of unorganized rural money market (NSSO,

2003). Eventually asymmetric distribution of the bank branches in relation to population led to rise in rural-urban inequality in APSBO during the reform and revival period. It might be doubtful whether urban centres are over-banked but it is lucid that rural centres are under banked. The menace such as the returns of moneylenders, rural distress, banking exclusion may be attributed to many factors, but institutional vacuum and rising stress in the rural branches played major role in this regard.

4.2.1 APSBO: Regional Scenario

Besides rural-urban disparity, country experienced variation in APSBO also across the regions in three distinct regimes. In 1975 APSBO for the Southern region was 22,000 while for the North-eastern region it was 75000. The inter-regional disparities become wider if we consider the rural APSBO. For example, as per BSR 1976, a branch in rural area of the northeast region (1.76 Lakh) was covering more than four times higher population than that of the Northern region (41,000) in 1975. The high min-max ratio (4.17) and high Gini coefficients (0.15) for the rural population groups and lower for the non-rural population centres in APSBO not only confirm the disparity across the regions, but also show a notable rural urban disparity within the regions. Regional disparity (measured through Theil Index of APSBO) as shown in Figure 4.9 confirms the findings; decline in regional disparity during the social banking and trend reversal thereafter. The polynomial trend line shown in figure clearly indicates narrowing of interregional disparity for the rural centre during the social banking regime, then widening during reform and inclusion drive (upwards trend line). In contrast to this, regional disparity did not change much for the urban centres as polynomial line of the APSBO was seemingly straight throughout the period (Figure 4.9).

Figure 4.9: Regional disparity (Theil Index) in APSBO by rural and non-rural (1975-2011)



Source: Computed by author from BSR and Census data (Various issue)

Conclusively, branch rationalization policy adversely impacted stress on rural banking across the regions although intensity varies over the regimes. An upsurge in regional disparity in rural areas points asymmetric impact i.e., lesser stress for developed region compared to the backward regions during the reform and revival period.

4.2.2 APSBO: Interstate Scenario

Despite geographical and climatic diversity, Indian states are also characterised by diversity in size and growth of economic activities, linguistic and demographic profile such as, age, gender, social compositions etc., (Census, 2011).

Table 4.9: Interstate disparity in APSBO (in thousand)

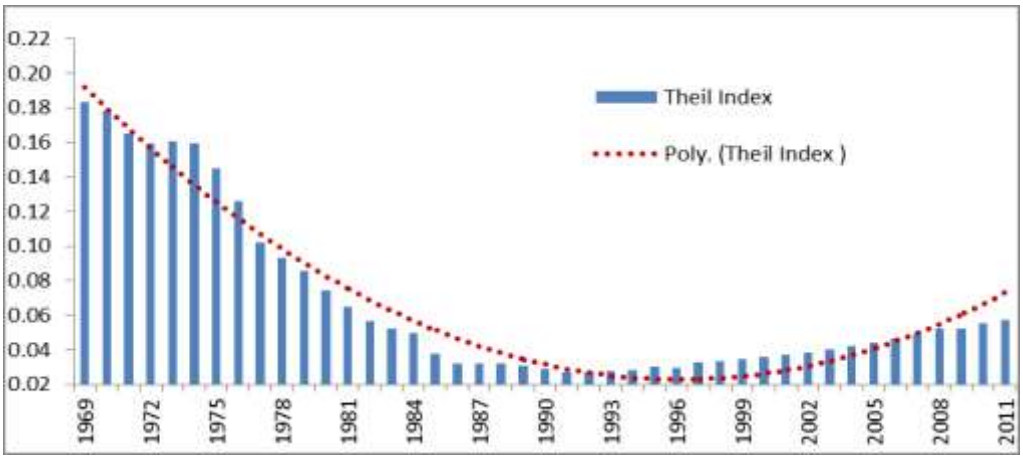
State	APSBO Overall					Rural APSBO		
	1969	1980	1991	2004	2012	1991	2004	2012
Andhra Pradesh	73.9	21.0	14.1	14.5	11.2	18.2	23.3	22.0
Assam	186.1	37.7	18.1	22.6	20.2	22.5	30.8	33.4
Bihar	197.8	36.1	17.6	23.1	21.7	20.3	29.3	33.9
Gujarat	44.3	14.8	11.9	14.4	11.9	16.0	21.9	21.8
Haryana	55.2	16.8	12.9	13.3	9.4	16.8	21.9	20.3
Himachal Pradesh	79.0	12.7	7.0	7.9	6.4	7.2	8.5	7.7
Jammu & Kashmir	125.2	14.6	9.8	15.3	12.1	10.4	13.8	16.9
Karnataka	37.1	13.8	10.2	11.1	9.4	13.0	16.4	17.1
Kerala	33.9	11.6	10.0	9.0	7.1	38.9	62.4	49.4
Madhya Pradesh	115.4	27.4	15.0	19.8	16.7	16.5	26.5	29.5
Maharashtra	42.9	18.6	13.7	15.7	12.7	19.1	26.1	27.6
Orissa	209.7	31.4	15.1	16.8	13.8	16.9	20.3	20.3
Punjab	37.7	10.7	9.3	9.3	7.1	12.2	14.6	13.5
Rajasthan	67.4	22.5	14.2	17.6	15.2	16.7	24.8	28.1
Tamil Nadu	37.3	16.9	12.6	13.4	10.5	19.0	20.7	20.8
Uttar Pradesh	114.1	29.0	16.2	20.1	17.0	19.3	27.1	28.5
West Bengal	83.8	26.1	15.8	18.5	16.1	20.6	26.0	25.5
CV	0.65	0.40	0.24	0.29	0.35	0.38	0.47	0.39
Theil	0.183	0.075	0.027	0.042	0.057	0.06	0.09	0.07

Source : Authors own calculation from BSR and Census (various issues)

As already mentioned, country inherited high street banking from her colonial pasts where banking services were limited to some pockets of the country and this continued till 1968. At the time of bank nationalisation, country witnessed a stark inter-state disparity in APSBO ranging from, 33.9 thousand per branch in Kerala to about 210 thousand for Orissa in 1969 (Table 4.9). Certainly bringing population criterion into branch licenses and preferential treatment to the poorer state in opening of the branches during social banking led to sharper decline in APSBO for the developing and backward states than those of the developed or better banked states. Country also witnessed sustained decline in interstate disparity throughout the social banking regime and trend reversal thereafter (Table 4.9 and figure 4.10). Figure 4.10 report decline in interstate disparity during the social banking regime, but does not

report any correction in trend in rising interstate disparity of the intense reform period. Instead a larger interstate disparity is being noted during the revival period.

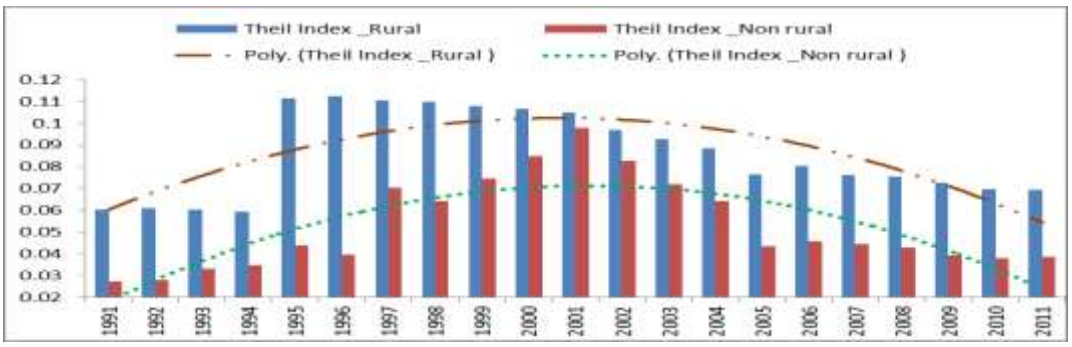
Figure 4.10:Inter-state disparity in APSBO since nationalisation



Source: Computed by author from BSR and Census data (Various issue)

Figure 4.11 which displays trend interstate disparity (Theil index) separately for the rural and non-rural during reforms suggests a rise in interstate disparities for both rural and non-rural areas during 1992-00 and decline thereafter; however greater decline is recorded for non-rural than rural centres

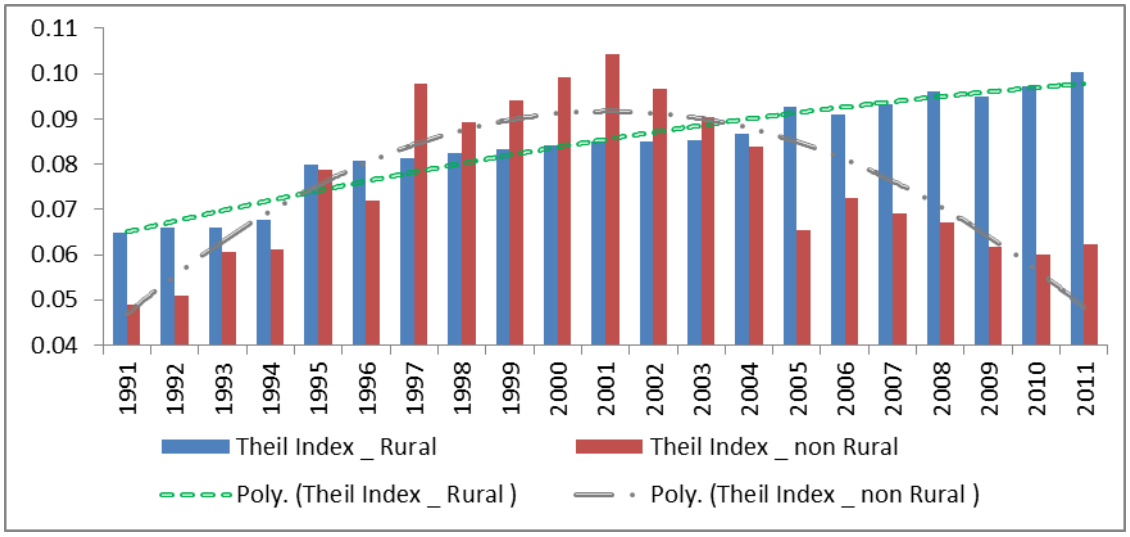
Figure 4.11: Inter-state disparity in APSBO by population centre



Source: same as figure 4.10

The divergence in the interstate disparity in branches and population in revival phase needed careful examination. As a result demographic and development criteria were reintroduced in branch authorisation policy of 2006 for bridging the gap between rural and non-rural centres. Eventually, this policy overturned the negative trend in branch growth in states as no states reported a negative growth in branch during the 2006-12. However, it failed in correcting the urban biasness of the branches (Figure 4.12).

Figure 4.12: Trends in interstate disparity - rural and non-rural (1991-2011)



Source: Computed by author from BSR and Census data (Various issue)

Conclusively, application of the branch authorisation during reform seems to fail in reducing the availability gap in banking infrastructure across the rural vs., nonrural, regions and states. The success of the social banking experiments in dealing with the problems of dualism and reducing the availability gap across the time and space suggests that interstate disparity cannot be reduced unless a well customised approach for rural banking is adopted. It also suggests that motivation to the private players, dilution of the entry barrier norms and experiments such as branchless banking, ultra-small branches, mobile banking, business correspondence and techno may suit the need and preference of the urban customers. When it comes to rural areas it is constrained by many socio factors. Certainly, poor human development indicators accompanied by the low quality of infrastructure in banks are major impediments in adopting the modern age banking. The rural centre still need more brick and mortar branches equipped with modern infrastructure to overcome the low financial inclusion.

4.3 Staffing in banking sector in India

In addition to physical presence of the branches, the appropriate numbers of motivated and dedicated bank staff play an important role in motivating society for use of the banking services. They can encourage people to save their income and keep it in the form of deposits of different maturities on the one hand, and counsel the borrower for the judicious use of bank loans on the other hand. Efficient bank staff enables personalized banking which reduces information asymmetry between lenders

and borrowers and also instils faith of the common people in the banking industry. In modern age banking, although, technology has emerged as a means in smoothing the bank business, but its use has also been restrained by many factors, such as the availability of quality manpower to handle the technology, availability of supporting infrastructure which can make full use of technology, education and other elements of human development of borrowers in catchment areas, cost, reliability and perception about technology, etc. Obviously, some of these factors are beyond the control of the banks. Technology many be used for the storage and process of information in real time, but it cannot acquire the information without the help of the people who control it. Personalized banking cannot be fully replaced by techno banking, instead these two are complementary. The human interface is necessary for operating and controlling the technology on one hand, and interacting with people on the other hand. The banking industry worldwide has witnessed the increasing application of information and communication technology for smooth and transparent transaction in real time though at varying degree. India hasn't been an exception to this. After initial resistance from the staff, Indian banking industry went ahead with the automation of branches both in rural and urban areas and now uses ICT in banking transaction and promotion, but human interface could not undermine especially in those areas cursed with weak infrastructure. No standard principle is being evolved till date for determining the optimum size of staff in branches across the different locations rural vs non rural).

The staff strength in branches depends on variety of factors such as branch intensity in the area, location of the branch, APSBO, literacy and other human development indicators in the catchment areas of the branches, level and growth of economic activities. Availability of physical infrastructure such as connectivity, power, and level and growth of the automation in bank branch also play a key role.

Indian rural areas at large are characterized by poor physical infrastructure, low HDI, people employed in low productivity and risk prone activities. Besides, people at the bottom of economic and social pyramid especially in the rural areas had been accustomed to the banking business with the players of the unorganized money markets for their financial need for generations. These people and bankers both were hesitant to deal with each other; hence to bridge the information gap personalized

banking was promoted especially after the establishment of the Regional Rural Banks (RRBs)

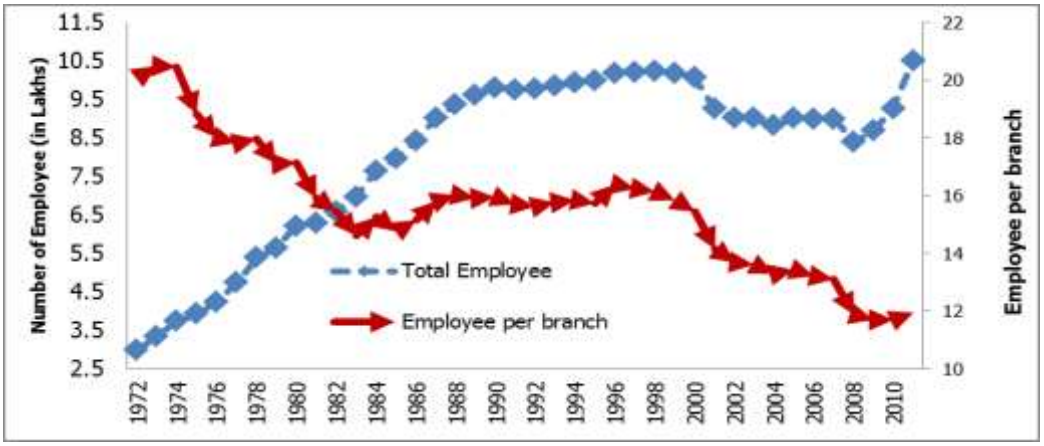
Informal players unlike banks, lend to borrower without much documentation. They also deliver loan at the doorsteps of the borrowers. In view of this, policymakers soon after nationalisation realised that without placing appropriate staff in rural branches, old habits and fear of the people regarding bank would not change (RBI, 1985). Initially, government decided to motivate the existing staffs of the public sector banks for social banking, but later changed old strategy and decided to make maximum use of specialized and local manpower especially in the Regional Rural Banks (EPWRF, 2008).

It is noteworthy that RRBs used to regularly appoint agriculture and other specialised field officers for better coordination and two way communications amongst the various stakeholders of the rural societies. They use to motivate rural people for banking and had been working as conduit between state machinery and banks. Unfortunately, this practice is now discontinued and services are either handed over to external agencies is performed through the ICT. The staffing policies of the banks have been subjected to periodic revision. This section analyses the trends in banking staff of the SCBs from 1971-72 to 2011-12. The study uses annual BSR data on bank employee by categories and population groups. The study precisely aims at analysing the trend in compositional change of the bank staff, employees per branch, business (credit, and deposit account and outstanding amounts) per employee across the region, state in aforementioned regimes and sub periods.

Employee in the bank: National Scenario

Figure 4.13 shows that the country witnessed varying trends in banks staff across the regulatory regimes; steady rise in the number of employees during the social banking regime, then remained almost stable for a decade (1992-2001). Number of banking personals significantly declined between 2002 and 2008 then it started increasing (Figure 4.13). Surprisingly banking sector witnessed a steep decline between 2001 and 2008 at the time of the revival of the branches. The figure also indicates that trends in employee per branch were inconsistent across the regimes. As on 31st March 2012, total 1.17 million personnel were working in SCBs in India (Figure 4.13).

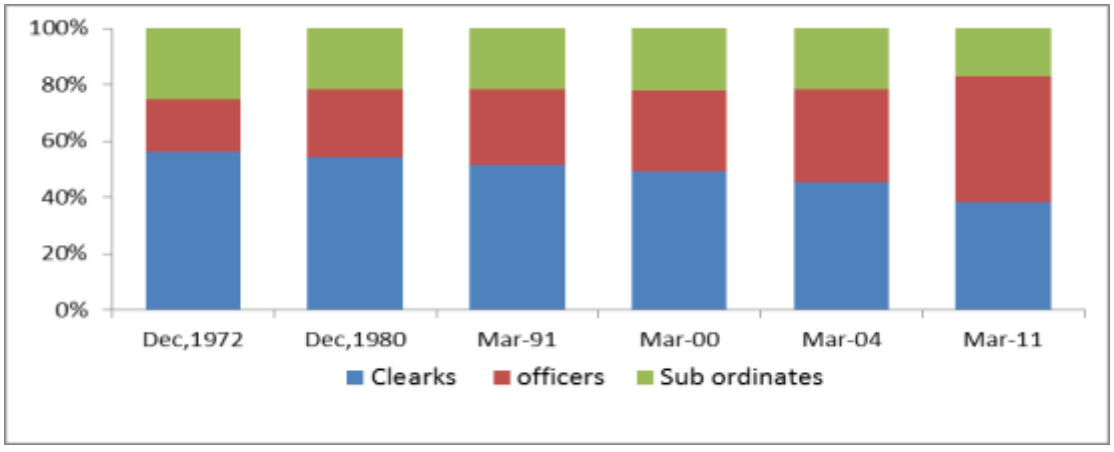
Figure 4.13: Total employees and employees per branch of the SCB



Source: *computed by author from BSR RBI various*

Figure 4.14 shows a notable compositional change in staff of the banks during 1972 - 2011.For instance, banking industry was dominated by the clerical staff (55.9%) followed by the subordinates (25.4%), while share of the officers was low in 1972. But in the subsequent period, the country observed a significant change in composition of employees. As on March 31st 2012, out of total 1.17 million employees in SCBs; 44.7% were categorized as officers, 38.2% as clerical staff and rest 17% as subordinate staff (BSR, 2013). Many factors contributed to this compositional change; prominent amongst those are; growing urban orientation, departmental promotions, new recruitment policy, corporate governance in private banks, increased use of information technology in branches, competitions among the banks in achieving operational efficiency, weakening of the strength of employee unions, casualization and contracting of work and decline in the rural branches, and outsourcing of many bank jobs in recent pasts.

Figure 4.14: Compositional change of the employee in the SCBs



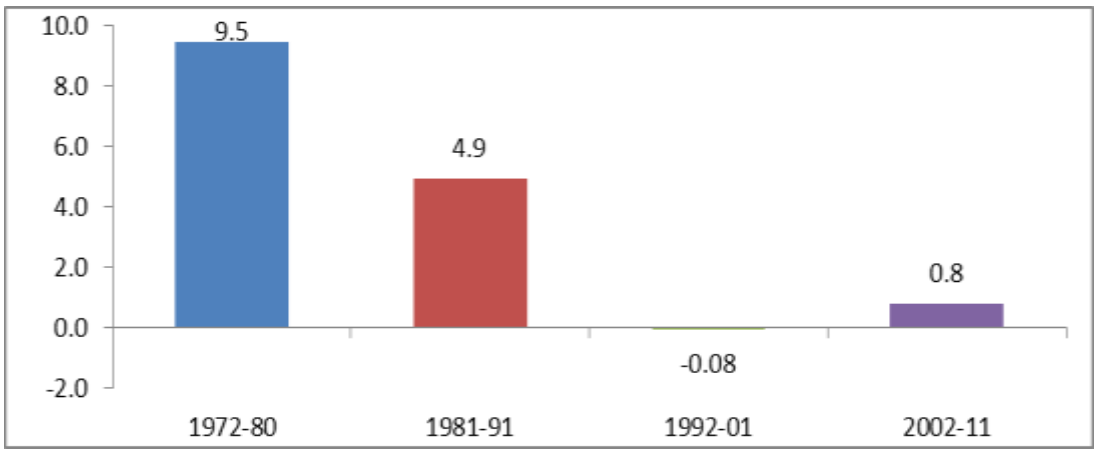
Source: *computed by author from BSR RBI various*

Figure 4.15 shows growth rate of the employees across the aforementioned four sub periods and regulatory regimes. The figure shows that banks branches were not only poorly staffed but clerical and subordinate staff dominated in the first sub period (1972-1981). Policy makers gradually realised the need of the services of professional staff in banks, as arena of the financing of the banks expanded to new areas and activities. The recruitment policy started paying attention on hiring of professional through open exams, departmental exams, periodic training etc. Despite four decades of bank nationalisation, banking sector still struggles in getting motivated and dedicated staff for the new branches in rural area. The employee and branch growth both proceeded in the same direction in second sub period, however higher growth was recoded in branches than that of the employees. The growth differential between the two resulted in a substantial decline in employees per branch.

The figure depicts a slower growth in branches and staff during third sub period as banking sector was undergoing into the consolidation, merger and rationalisation phase. Owing to labour laws, bankers could not lay off the personnel as they desired and hence growth of the employees was marginally ahead than that of the branches. Banks were not selective in opening of the branches but they were also selective in the staffing of the personnel which is reflected in compositional change in banking staff. As discussed, banking reform was accompanied by wide use of ICT in banking business which is reflected in stagnation of the employees per branch for almost thirteen years (1991-2004). Nonetheless, annual employee growth remained at negative (-0.08%) territory between 1992 -2001, but country witnessed a modest revival during 2002-11 (Figure 4.14). Indeed, during the financial inclusion phase, minimization of human interface in banking became a key ingredient and banks emphasized on technology and other ad-hoc arrangements[10].

[10] These includes ultra-small branches for the remote and thinly populated areas, mobile banking, business correspondent, involvement of NGO were aimed at reduction of the transaction costs on monitoring and screening on one hand and outsource. The Measures such as automation and computerizations of branches through inter and intra networks, use of information and communication technology in processing of applications, debit cards and ATM also contributed in thinning of the staff in branches during the reform on one hand and helped in facilitating the techno-savvy consumers on the other hand.

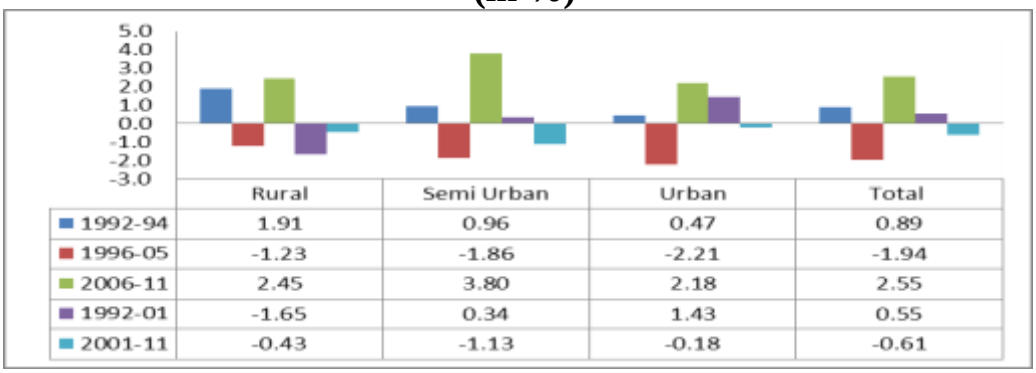
Figure 4.14A: Growth of employees in SCBs (CAGR in %)



Source: *computed by author from BSR (RBI various issues)*

Figure 4.15 displays employee growth in rural and urban centres since the adoption of the branch rationalization policy. The decline in growth rates of employees in non-rural branches during intense reform could have been justified on the ground that it is suited to the urban customer as they prefer branches having ICT and other enabling infrastructure. But diluting strength of the staffs in rural areas in situation of increasing APSBO can just be a cost rationalization measure. The figure noted a negative annual growth in employees during 1996-05, and observed a turnaround (positive growth) during 2005-11. The revival of the employee growth across the population groups during 2006-11 points towards a late realization of the fact that rural branches required personalized banking. In rural areas banks not only carry out financial intermediation services but they also help in implementation of many government schemes and programmes. The revival in growth of the employees in non- rural centre although is a good sign but such high growth points towards misplacement of the priorities (Figure 4.15).

Figure 4.15: Growth of banking staffs across population groups (in %)

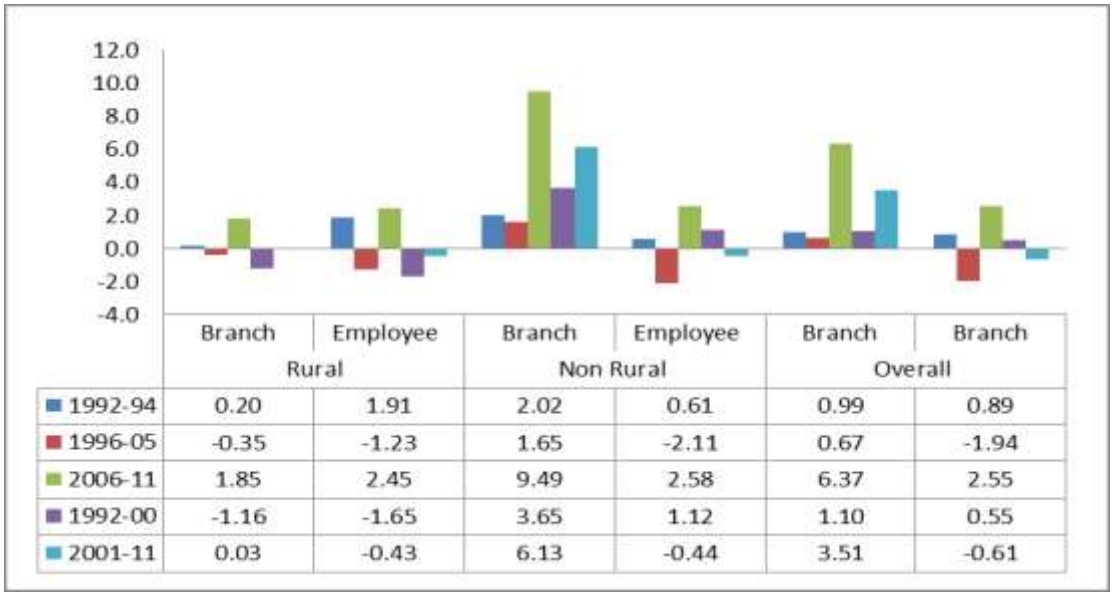


	Rural	Semi Urban	Urban	Total
1992-94	1.91	0.96	0.47	0.89
1996-05	-1.23	-1.86	-2.21	-1.94
2006-11	2.45	3.80	2.18	2.55
1992-01	-1.65	0.34	1.43	0.55
2001-11	-0.43	-1.13	-0.18	-0.61

Source: *computed by author from BSR (RBI various issues)*

Figure 4.16 describes comparative growth of the branches and employees separately for the rural and non-rural centres during reforms. The figure clearly indicates bankers' apathy towards rural areas during 1996-05. The trends in non-rural centres were not different during this period. Moreover, the figure also points towards revival in growth of the branch and employee in countryside and non-rural centres, however employee growth in former was distinctly higher than that of the latter during 2006-11.

Figure 4.16: Growth of branches and employee in rural and non-rural centres



	Rural		Non Rural		Overall	
	Branch	Employee	Branch	Employee	Branch	Branch
1992-94	0.20	1.91	2.02	0.61	0.99	0.89
1996-05	-0.35	-1.23	1.65	-2.11	0.67	-1.94
2006-11	1.85	2.45	9.49	2.58	6.37	2.55
1992-00	-1.16	-1.65	3.65	1.12	1.10	0.55
2001-11	0.03	-0.43	6.13	-0.44	3.51	-0.61

Source: computed by author

The study also measured stress on the rural and non-rural branches through three indicators, namely employees per branch, credit accounts per employee, deposit account per employee and result is presented in Table 4.9A. This table shows poor staffing in rural area in all three indicators than that in the non-rural counterparts. For instance, an employee in rural branch was dealing with 649 accounts whereas similar workload for the non-rural centre was much less (375.5 accounts) during 1992-94. In other words, stress in rural areas was about 1.85 times higher than that of the non-rural branches during 1992-94 and it further increased to 1.90 times during 1996- The table further show a marginal decline in rural non rural ratio (1.87 times) during 2006-11 (Table 4.9A).

Table 4.9A: Stress on branches: rural vs non rural

	Employee per Branch			Deposit accounts per Employee			Credit Account per Employee		
	Rural	Non Rural	Overall	Rural	Non Rural	Overall	Rural	Non Rural	Overall
Mar-91	5.9	28.9	15.8	525	321	364	156	39	63
Mar-92	6.0	28.5	15.7	541	333	378	160	42	67
Mar-93	6.1	28.1	15.7	550	340	385	153	38	63
Mar-94	6.2	27.7	15.7	551	356	399	146	35	60
Mar-96	5.9	26.1	15.8	576	339	385	146	34	56
Mar-97	6.0	25.6	15.7	591	340	388	137	35	54
Mar-98	6.0	25.1	15.6	608	339	391	135	33	52
Mar-99	5.9	24.3	15.3	628	345	399	125	34	51
Mar-00	5.9	23.6	15.0	647	353	410	129	36	54
Mar-01	5.7	21.2	13.7	706	400	462	120	40	57
Mar-02	5.6	20.3	13.3	727	427	488	137	44	63
Mar-03	5.7	20.1	13.2	748	431	495	140	47	66
Mar-04	5.6	19.2	12.8	767	454	518	141	58	75
Mar-05	5.6	19.9	13.2	791	451	518	164	66	86
Mar-06	5.5	18.8	13.0	825	473	539	172	77	95
Mar-07	5.3	18.3	12.7	919	502	577	191	86	105
Mar-08	5.2	15.5	11.3	1044	610	693	208	108	128
Mar-09	5.3	14.0	10.6	1186	660	762	198	109	127
Mar-10	5.3	13.6	10.5	1314	676	794	212	109	128
Mar-11	5.8	14.6	11.4	1296	653	771	203	95	115
Average value									
1991-94	6.0	28.3	15.7	542	337	382	154	38.5	63.5
1996-05	5.8	22.5	14.4	679	388	445	137	42.7	61.4
2006-11	5.4	15.8	11.6	1097	596	689	197	97.6	116.2

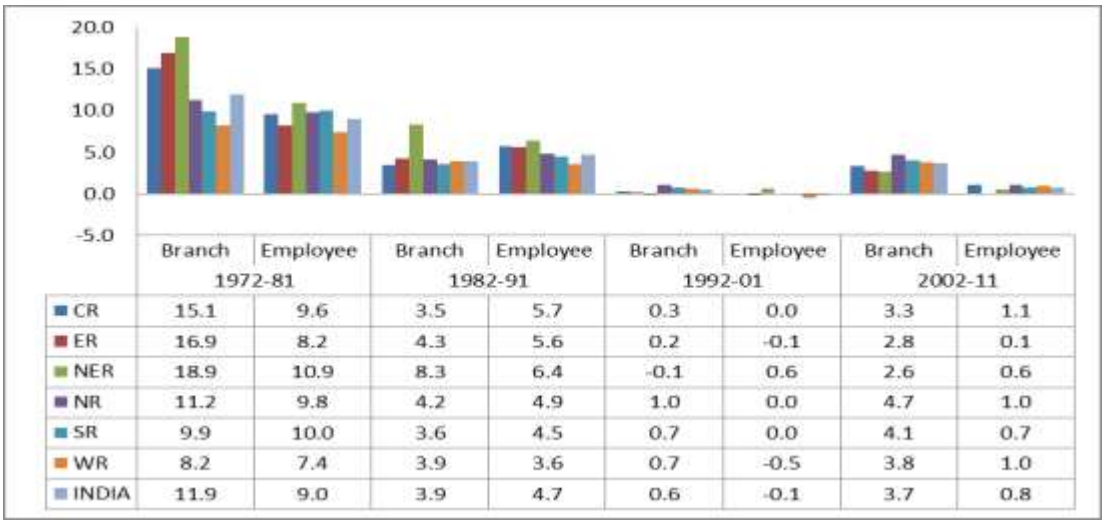
Source: Authors' own calculation

The stress indicator is pertinent in a situation where banks have to deal with rising APSBO in rural areas along with discretionary power with the bank manager in choosing customers and activities. Thinning manpower in branches means poor screening and monitoring, perceived risks of default and exclusion. In addition to this, uniform prudential norm for the rural and urban branches have put managers under immense pressure to maintain clean balance sheets which result in the use of discretionary power in selection borrowers, activities and regions in lending and deposit mobilisations. Sometime braches with fewer staffs and preconceived notion of the bankers about the social groups also resulting long waiting, humiliation, and exclusion from the banking services of the poor and downtrodden. The combined effects of these may often end with high unit transaction costs for small loans and can outweigh the gains of formal loans. In this situation people often voluntarily choose not to participate in the formal loan markets.

4.4.2 Trends in Banking Staffs - regional scenario

Like branches, banking staff was asymmetrically distributed across the six regions in 1972. For instance, of the total 2.19 lakhs personnel employed in SCBs, more than two-thirds were deputed in the regions having high bank intensity in 1972. But, situation began to change during the social banking regime as during 1972-91, the combined share of the developed region in total employees declined by 3 percent whereas the share of the developing and backward regions increased by three percent (BSR 2014).

Figure 4.17: Region wise growth (CAGR) of branches and employees



	Branch	Employee	Branch	Employee	Branch	Employee	Branch	Employee
	1972-81		1982-91		1992-01		2002-11	
CR	15.1	9.6	3.5	5.7	0.3	0.0	3.3	1.1
ER	16.9	8.2	4.3	5.6	0.2	-0.1	2.8	0.1
NER	18.9	10.9	8.3	6.4	-0.1	0.6	2.6	0.6
NR	11.2	9.8	4.2	4.9	1.0	0.0	4.7	1.0
SR	9.9	10.0	3.6	4.5	0.7	0.0	4.1	0.7
WR	8.2	7.4	3.9	3.6	0.7	-0.5	3.8	1.0
INDIA	11.9	9.0	3.9	4.7	0.6	-0.1	3.7	0.8

Source: Authors' own calculation

Figure 4.17 shows the inter-regional disparity in growth of branches and employees of SCBs from 1972 to 2011. The figure suggests the higher growth rate in branches and employees for the Northeastern region followed by the central and eastern regions in first sub period of the social banking. The figure further suggests continuance of the higher growth momentum for these states during the second sub period as well. During the period of intense reform, negative growth in bank staffs were recorded for the western and eastern regions while it remained positive and highest for the Northeastern regions. Further, during the revival phase although a positive growth occurred for both branch and employee, but it was higher for former than the latter (Figure 4.17).

4.3 Banking penetration

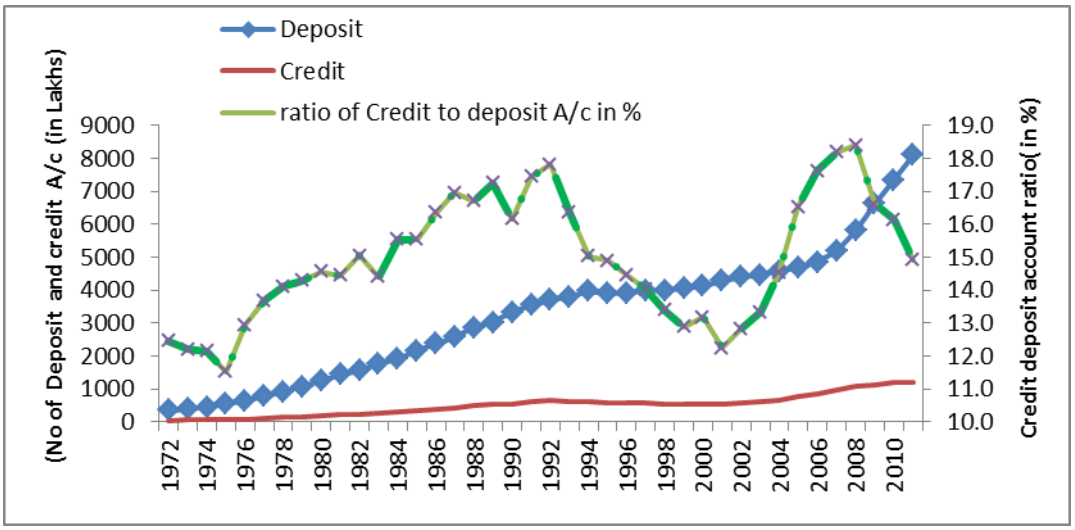
Banking penetration not only approximates diffusion of banking services to its citizen but also shows the status of the banked population in country. It represents the ratio of the total accounts (credit accounts + deposit account) of the SCB, to total population. Indian banking sector historically has been dominated by saving accounts. For banking penetration ideal situation subsists when every adult of the nation has a bank account (Financial Access Survey(FAS) of IMF 2014), but owing to non-availability of the annual time series of adult population and reliable data on migration of the states, present study considers the number of bank accounts per thousand populations. The bank accounts data have been taken from the banking statistics, while the corresponding annual population data has been derived from the census data. The yearly population data has been computed by applying annual growth of population reported in two censuses. The BSR classification of population centres has been used for accounts and amounts.

Banking penetration: National Scenario

Figure 4.18, shows trends in banking services (credit and deposit accounts) at the national level from 1972 to 2012. The table reveals that dominance of deposit in total accounts did not change much in last four decades. For instance, in 1972 country had 39.21 million total accounts in SCBs out of which, share of deposit and credit were 89% and 11.07% respectively. The figure 4.19 also shows inconsistency in composition of accounts of the SCBs in different regimes. The share of loan accounts have shown increasing trend during social banking, while balance started shifting in favour of deposit during the reform period. Precisely, total 19.5 million incremental accounts were added in SCBs during 1972-80, out of this, the share of deposit and credit accounts were 14.3% and 85.6%. Subsequently, during 1981-91, total incremental account increased to 283.2 million in which share of credit marginally increased while country observed a decline in the share of the deposit account. In other words, the ratio of credit to deposit in incremental account improved from 0.167 during 1972-80 to 0.184 during 1981-91. Eventually in third sub period (1992-04), not only fewer accounts were added in SCBs (106.4 million) but they were also asymmetrically distributed between deposit and credit. The ratio of credit and deposit in incremental accounts collapsed to 0.045 during third sub period then started improving between 2001 and 2008 but declined thereafter. The figure shows a

turnaround in both credit and deposit accounts but balance remained tilted in favour of latter (Figure 4.18).

Figure 4.18: Progress of the bank penetration from 1972 to 2011



Source: Computed by Author from Banking Statistics (RBI Various Issues)

Table 4.10 shows pattern in growth rate of deposit and credit accounts in the four sub periods. The table noted significantly high growth in credit (20.3%) than deposit (16.41%) accounts during the first sub period. This may be partially attributed to very low base in credit account at beginning, but it was also attributed to massive growth of the branches in unbanked locations.

Table 4.10: Trends in credit and deposit accounts

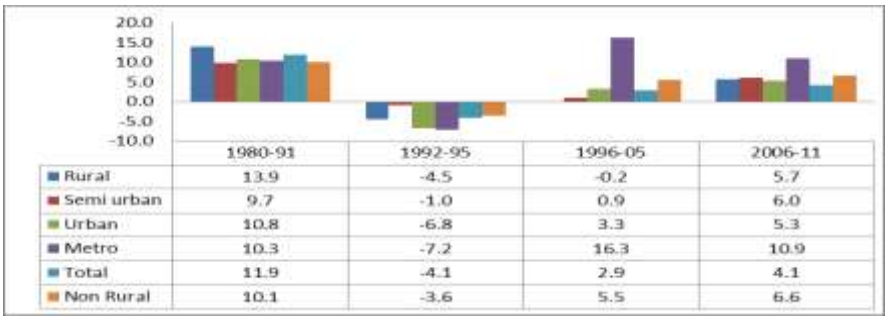
Deposit Accounts						
Period	Constant	Growth rate (β)	Adjusted R Square	P value	F stats	P value
1972-80	5.65	16.41	0.997	0.000	2983.7	0
1981-91	6.43	8.86	0.993	0.000	1172.0	0
1972-91	12.1	9.07	0.996	0.000	2000.5	0
1992-04	12.6	1.5	0.925	0.000	149.20	0
2005-12	10.8	9.74	0.977	0.000	258.79	0
1992-12	12.4	3.44	0.792	0.00	75.68	0
Credit Accounts						
Period	Constant	Growth	Adjusted	P value	F stats	P value
1972-80	3.41	20.3	0.989	0.00	645.1	0
1981-91	4.28	10.88	0.984	0.00	568.1	0
1972-91	10.2	10.1	0.977	0.00	300.2	0
1992-04	11.03	-0.4	0.03	0.45	0.61	0.45
2005-12	9.59	7.6	0.945	0.00	104.1	0
1992-12	10.4	4.0	0.623	0.00	32.42	0.00

Source: Computed by author from Banking Statistics (RBI)

During second sub period, the growth in credit and deposit accounts were lower in comparison to the first period, but table reports relatively higher growth in credit than deposit accounts (Table 4.10). Contrary to trends of the social banking periods, the momentum of growth in banking penetration was slowed in third sub period. Besides, country observed significantly negative growth in credit accounts while it remained positive but slow for the deposit during the third sub-period (1992-04). In the revival phase (during 2005-12), higher growth in banking penetration was recoded but it was largely driven by the deposit rather credit accounts. (Table 4.10)

Figure 4.19 shows trend in growth of credit accounts and deposit account by rural and non-rural branches of SCBs from 1980[11] to 2011. The figure shows significant growth differences between credit accounts in rural and urban centres across the sub periods. In the social banking regime, highest growth was recorded in credit accounts of the rural centres but massive decline was recorded during reform. Although accounts growth were negative for both rural (-4.5%), and non-rural centres (-3.6%) during 1992-95, but larger erosion was recorded in former than latter (Figure 4.20). The figure also noted a positive and high growth of the credit account in non-rural centres while it continued to be negative for the rural centres during 1996-05. Owing to the financial inclusion drive, credit accounts growth in rural areas recovered from the negative trend but it was second lowest amongst the four population groups. The account growth rate in rural centres was 5.71% while growth of credit account of the metropolitan, semi urban and urban centres were 10.9%, 6.04% and 5.31% respectively during 2006-11 (Figure 4.19)

Figure 4.19: Growth of loan account across population groups



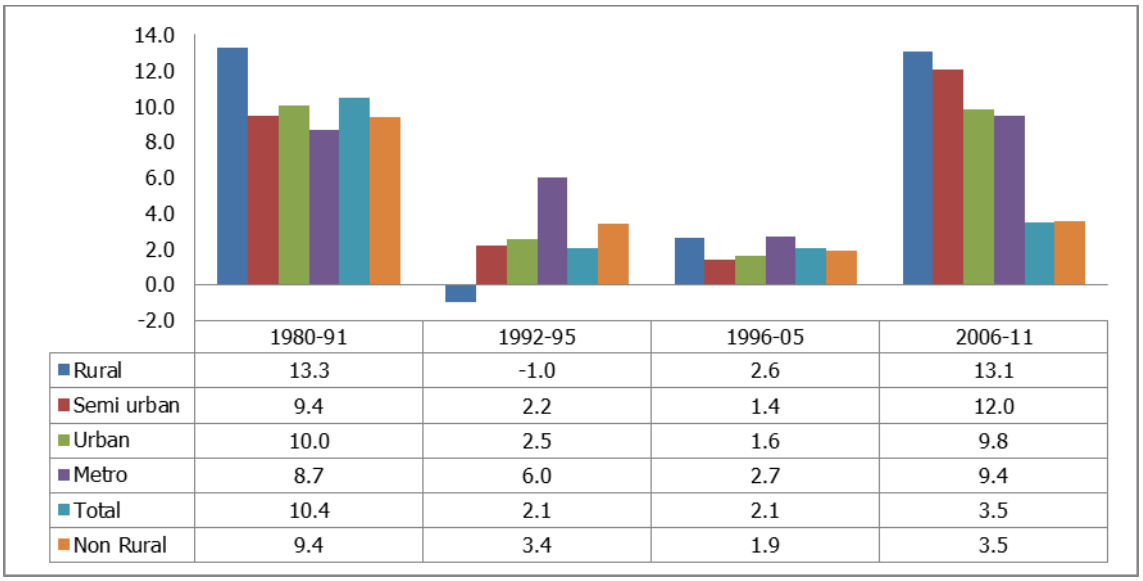
	1980-91	1992-95	1996-05	2006-11
Rural	13.9	-4.5	-0.2	5.7
Semi urban	9.7	-1.0	0.9	6.0
Urban	10.8	-6.8	3.3	5.3
Metro	10.3	-7.2	16.3	10.9
Total	11.9	-4.1	2.9	4.1
Non Rural	10.1	-3.6	5.5	6.6

Source: Computed by authors

[11] Credit and deposit account data according to population group has been considered from 1980-11 under three sub periods. As discussed earlier, population group-wise banking center has been subjected to the periodic review. Prior to 1995 the rural centers were based on 1981 census, from 1996 to 2005 is based on 1991 census and 2005 onwards is based on 2001 census. Therefore, in order to have an analogous series, the reform period (1992-11) has been broken into three sub periods namely; 1992-95, 1996-05, and 2006-11.

Figure 4.20 depicts the CAGR of deposit accounts across the broad population centres. Deposit account growth charted the pattern of credit accounts during social banking. Thereafter, there was a break from the trends of the credit accounts except for rural centres, as the remaining three population groups witnessed positive growth of deposit accounts during 1996-05(Figure 4.20 and Figure 4.19).

Figure 4.20: Growth of the deposit account across population groups



	1980-91	1992-95	1996-05	2006-11
Rural	13.3	-1.0	2.6	13.1
Semi urban	9.4	2.2	1.4	12.0
Urban	10.0	2.5	1.6	9.8
Metro	8.7	6.0	2.7	9.4
Total	10.4	2.1	2.1	3.5
Non Rural	9.4	3.4	1.9	3.5

Source: Computed by authors

Figure 4.20 suggests that financial inclusion drive[12] not only arrested the downtrends in credit and gave an impetus to growth in deposit accounts in the rural branches of the SCBS. The figure also notes an imbalance between deposit and credit account growth in rural branches, higher growth for former (13%) than the latter (5.7%). In contrast, the metropolitan branches witnessed a higher growth of credit accounts (10.9%) than the deposits (Figure 4.19, Figure 4.20). It shows that rise in deposit accounts especially in the rural areas might have given an opportunity to the banks, to mobilize low cost funds from rural centres and use them to finance the urban production and consumption. This also highlights the lopsided approach of the financial inclusion drive which centred on expansion of deposit accounts and did not give much priority to loan accounts in rural areas which was witnessed during the social banking.

[12] Financial inclusive drives were aimed universalization of banking services irrespective of the place of stay of residents in time bound manner. The major schemes in this regards were; promotion of no frill and zero balance accounts amongst poor, women and students; expansion of branches in unbanked rural areas through initiatives such as ultra-small branches, branchless banking, mobile banking, business correspondence etc., AADHAR enabled 'Swabhiman' and collateral free SHG based lending etc (Year wise details of schemes are given in Chapter 3

4.3.1 Banking penetration- regional scenario

Table 4.8 displays trends in banking penetration across the regions from 1972 to 2012. The table shows, akin to branches and employees, the southern region also dominated in credit and deposit accounts of the SCBs. The distribution of credit accounts were highly skewed as 83% credit accounts belonged to only two regions in 1972 i.e., southern region (69.5%) and western regions (13.3%). In contrast, the shares of central and eastern region in total credit accounts were 5.6% and 5.5% despite the fact that these regions accommodated more than 50% population of the country. However, country observed significant change in the contribution of the regions since then but changes were inconsistent over the regimes for both deposit and credit accounts. For instance, during 1972-80, total 13.69 million credit accounts were added in SCBs, out of this the contribution of the southern region and western region decline whiled the share of central and eastern region improved. The table further noted an improvement in claims of central, eastern and north-eastern regions and decline in the shares of the already banked regions during second phase (1981-91)

In the third phase (1992-00), impact of decline in branches and employee especially in the rural areas is clearly evident on spree of expansion of accounts in banks. For example country observed net decline of the 11.49 million loan accounts (from 65.86 million in 1992 to 54.37 million in 2000) during 1992-00. It is true that all regions have witnessed attrition of the credit accounts in SCBs, but largest erosion was noted in the central region (3.45 million) followed by the eastern region. However, an expansion of credit accounts was recorded in all the regions during 2001-12, but, it was accompanied by a clear regional bias. Out of total incremental loan accounts of the SCBs, 40.5% were contributed by southern region and additional 32.4% were added by the Western regions. The contributions of the central and eastern regions were 10% and 7% respectively (Table 4.11).

Table 4.11: Region wise share in incremental accounts of SCBs

(No. of accounts in Million; Share in %)

Period	Items	CR	ER	NER	NR	SR	WR	India
1972-80	No. of Credit Acc.	2.17	2.37	0.21	1.56	5.90	1.48	13.69
	Share in total	15.8	17.3	1.5	11.4	43.1	10.8	100.0
1981-91	No. of Credit Acc.	9.97	10.25	1.39	4.82	14.27	7.13	47.83
	Share in total	20.8	21.4	2.9	10.1	29.8	14.9	100.0
1992-00	No. of Credit Acc.	-3.45	-3.04	-0.32	-0.14	-2.28	-2.25	-11.49
	Share in total	30.0	26.5	2.8	1.2	19.9	19.6	100.0
2001-12	No. of Credit Acc.	6.66	4.64	1.08	5.67	26.84	21.47	66.35
	Share in total	10.0	7.0	1.6	8.5	40.5	32.4	100.0
Social Banking	No. of Credit Acc.	12.14	12.61	1.60	6.38	20.17	8.62	61.52
	Share in total	19.7	20.5	2.6	10.4	32.8	14.0	100.0
Reform	No. of Credit Acc.	3.21	1.60	0.76	5.53	24.56	19.21	54.86
	Share in total	5.8	2.9	1.4	10.1	44.8	35.0	100.0
Period	Items	**CR**	**ER**	**NER**	**NR**	**SR**	**WR**	**India**
1972-80	No. of Deposit Acc.	14.12	12.41	1.55	14.89	29.72	16.37	89.06
	Share in %	15.9	13.9	1.7	16.7	33.4	18.4	100.0
1981-91	No. of Deposit Acc.	54.26	43.30	6.83	43.83	62.30	35.32	245.83
	Share in %	22.1	17.6	2.8	17.8	25.3	14.4	100.0
1992-00	No. of Deposit Acc.	12.72	10.01	1.65	8.39	5.45	4.84	43.06
	Share in %	29.5	23.2	3.8	19.5	12.6	11.2	100.0
2001-12	No. of Deposit Acc.	85.80	58.26	10.12	59.98	116.97	66.19	397.31
	Share in %	21.6	14.7	2.5	15.1	29.4	16.7	100.0
Social Banking	No. of Deposit Acc.	68.38	55.71	8.37	58.72	92.01	51.69	334.89
	Share in %	20.4	16.6	2.5	17.5	27.5	15.4	100.0
Reform	No. of Deposit Acc.	98.52	68.27	11.77	68.37	122.41	71.03	440.37
	Share in %	22.4	15.5	2.7	15.5	27.8	16.1	100.0

Source: Computed by author

Table 4.12 incorporates region-wise CAGR of the per capita credit accounts (CA_PC) and deposit accounts (DA_PC) of the SCBs. The findings of this table reinforce the earlier conclusions; only difference is that during 2001-12 the highest growth in per capita credit accounts (CA_PC) was recorded for the Western region.

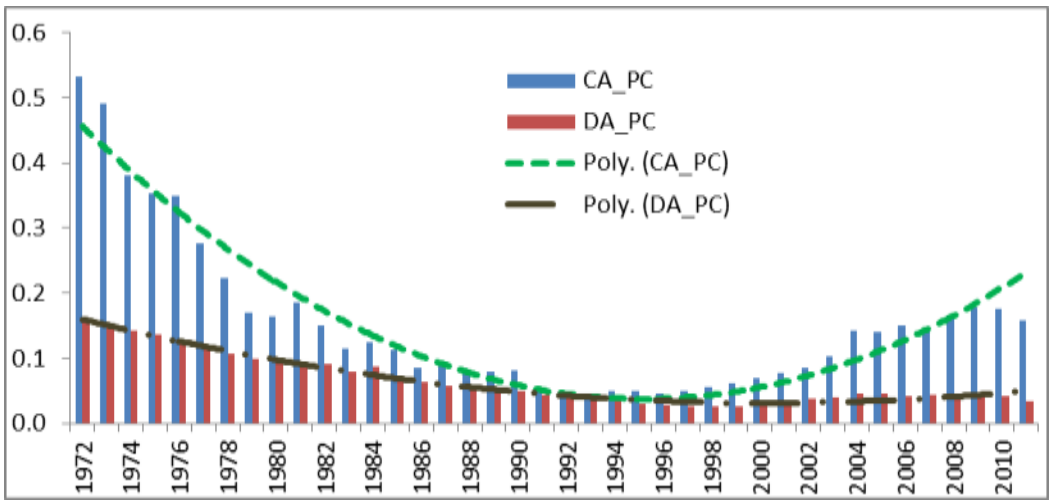
Table 4.12: Credit and deposit account per capita: regionwise trend

Year	CENTRAL REGION	EASTERN REGION	NORTH-EASTERN	NORTHERN REGION	SOUTHERN REGION	WESTERN REGION	ALL-INDIA
	CAGR of Credit Accounts per thousand population (in %)						
1972-80	33.5	33.9	35.2	27.2	13.9	15.2	**18.6**
1981-91	12.2	12.8	16.1	9.1	7.1	8.8	**9.3**
1992-00	-5.8	-5.9	-4.7	-3.4	-2.9	-4.3	**-4.4**
2001-12	4.2	3.3	7.2	4.6	7.8	17.9	**7.9**
1992-12	-0.1	-1.9	-0.4	1.8	3.6	6.8	**2.3**
CAGR of Deposit Accounts per thousand population (in %)							
1972-80	18.54	14.91	22.01	15.44	17.10	11.68	15.49
1981-91	9.83	8.45	11.31	7.37	6.29	5.64	7.34
1992-00	-0.12	-0.26	0.64	-1.10	-1.17	-1.57	-0.83
2001-12	4.77	3.96	5.54	4.27	6.26	4.38	4.87
1992-12	1.57	1.08	1.22	1.22	2.47	1.87	1.69

Source: Computed by author

Figure 4.21 displays trends in regional disparity measured in terms of the Theil Index of the credit account per capita (CA_PC) and deposit accounts per capita (DA_PC) over the period between 1972 and 2011. The figure indicates convergence in both credit and deposit accounts during the social banking regime. Moreover, convergence continued for deposit accounts while divergence was found in credit accounts per capita during the revival period (2000s).

Figure 4.21: Theil index of CA_PC and DA_PC: region



Source : based on Author's own calculation

4.3.2 Banking penetration: Inter-state scenario

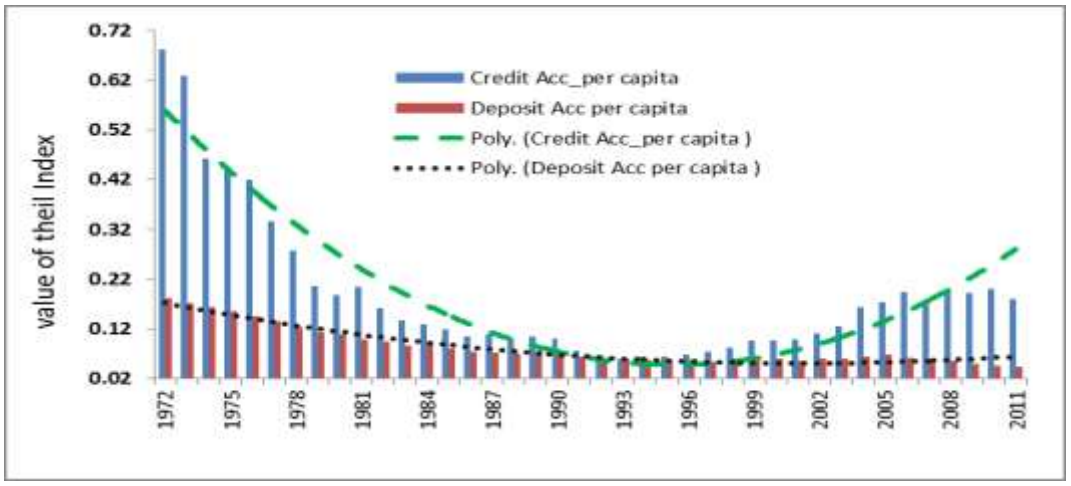
Table 4.13 shows trends in banking penetration across states over the period 1972 - 2011. The table clearly outlines the wide interstate disparity and change at different pace over time. The ranking of the states was dissimilar for the credit and deposit accounts in diverse regimes and sub periods. For instance, in 1972 in credit account penetration, the top slots were acquired by the four southern states while in deposit accounts only Karnataka featured among the top slots while the remaining three positions were occupied by Punjab, Maharashtra and Gujarat (Table 4.13). This table and figure 4.23 reinforce the regional trends in credit and deposit penetration; i.e., decline in interstate disparity during the social banking regime, and increase during the reform regime in case of credit accounts and narrowing of interstate disparity in case of deposit accounts per capita through the regimes and sub periods (Table 4.13 and Figure 4.22).

Table 4.13: State-wise banking penetration in India

	Credit account per capita (per thousand population)						Deposit accounts per capita (per thousand population)					
	1972	**1980**	**1991**	**2001**	**2006**	**2012**	**1972**	**1980**	**1991**	**2001**	**2006**	**2012**
AP	10.7	48.0	113.5	84.1	127.9	172.1	43.0	172	387	414	496	880
ASS	1.1	6.7	38.1	24.5	36.4	53.6	17.7	78	254	297	297	480
BIH*	1.0	12.3	59.3	27.5	34.6	47.3	19.6	71	245	249	240	372
GUJ	6.7	20.6	53.5	42.1	49.7	61.2	110.2	232	431	441	512	715
HAR	3.3	23.9	79.1	52.4	63.3	83.8	58.0	202	511	519	544	863
HP	0.9	27.8	68.5	58.2	68.9	92.7	46.8	190	607	657	672	980
JK	1.7	17.7	37.2	27.0	36.4	47.2	53.3	185	438	374	438	723
KAR	19.1	50.8	120.0	85.4	137.2	150.4	124.4	331	624	521	564	890
KER	45.1	82.7	147.6	117.3	196.7	194.3	73.2	266	612	651	770	1029
MP	2.0	15.1	57.3	32.7	42.5	47.7	23.5	98	294	249	594	478
MAH	7.2	21.0	59.3	45.8	91.9	221.7	112.3	275	524	468	238	771
ORI	1.7	33.6	100.6	55.3	74.0	91.7	11.3	67	219	271	303	538
PUN	4.4	29.0	83.8	68.0	70.6	84.5	114.2	354	840	807	802	1096
RAJ	2.5	15.3	52.3	38.3	47.6	60.1	35.0	111	287	297	317	476
TAMIL	23.1	51.2	113.2	85.8	225.3	248.0	78.3	260	555	532	556	880
UP*	1.7	15.2	56.4	37.6	44.9	53.3	34.6	123	360	403	378	606
WB	3.2	16.8	63.5	43.5	46.2	47.3	83.5	204	451	461	439	626
INDIA	7.7	27.0	74.8	52.0	78.0	101.4	62.2	185	429	425	443	681
Max	45.1	82.7	147.6	117.3	225.3	248.0	124.4	354.3	840.5	807.5	802.5	1096.1
Min	0.9	6.7	37.2	24.5	34.6	47.2	11.3	67.1	218.5	248.9	237.9	371.5
CV	1.45	0.68	0.41	0.48	0.70	0.65	0.61	0.47	0.37	0.35	0.36	0.30
Theil	0.682	0.187	0.063	0.100	0.194	0.179	0.18	0.10	0.06	0.06	0.06	0.04

Source: Computed by author

Figure 4.22: Theil index of credit and deposit accounts

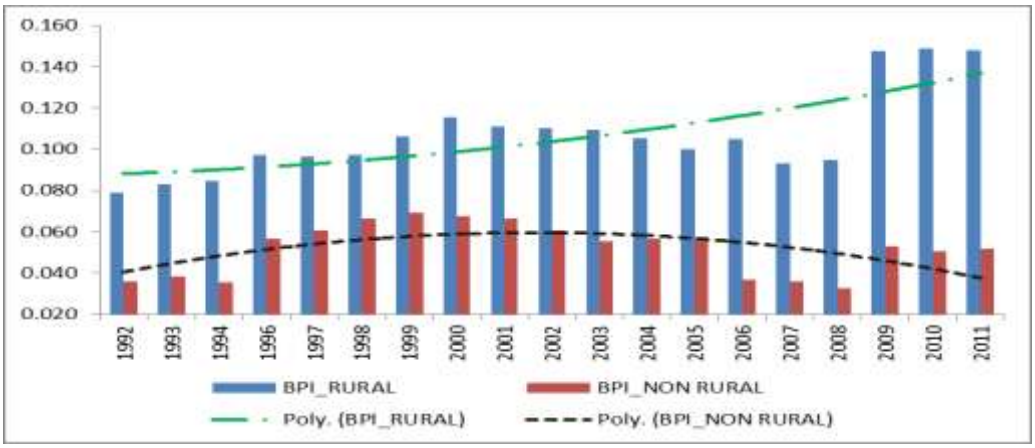


Source: computed by author

Figure 4.23 depicts trends in interstate disparity in the banking penetration index (BPI) separately for rural and nonrural population groups across the major Indian states from 1992 to 2011.The polynomial trend lines exhibits divergence (widening of interstate disparity) in rural BPI. For non-rural centres, trends were inconsistent:

interstate disparity increased between 1991 and 2000, and steady decline thereafter (Figure 4.23)

Figure 4.23: Trends in interstate disparity (Theil Index) in Banking Penetrations Index- rural and non-rural (1992-11)



Source: computed by author

The analysis of trends of the credit penetration is summarised as follows:

The reverberation of the trends in rising per capita credit accounts (CA_PC) and deposit accounts (DA_PC), relatively higher increase in poor and disadvantage regions during the social banking led to decline in interstate disparity, however trends were different during the liberalized regime. Certainly, decline in interstate disparity continued in intense reform but on account of the decline in both deposit and deposit account per capita. During revival phase, opposite trend was recorded in credit account and deposit account per capita. Rise in interstate disparity in credit accounts was an outcome of the lower priority to the poorer states and disproportionate allocation towards better off states. In contrast to this, convergence in interstate disparity is recorded in case of the deposit accounts per capita during reform. The credit account impact was so powerful that it nullified the convergence of deposit and net result was steady rise in interstate disparity in penetration. The trend raises doubt over the demand-following strategy of the inclusion drive in dealing with the problems of the low banking penetration, exclusions and rising interstate disparity especially in the rural areas. The social banking experiences show that lower exclusion with smaller interstate disparity cannot be easily attained, unless banks and government come with aggressive lending programs with enough institutional backup. The banks use rural branches as tool of low cost deposit for financing the non- rural enterprises.

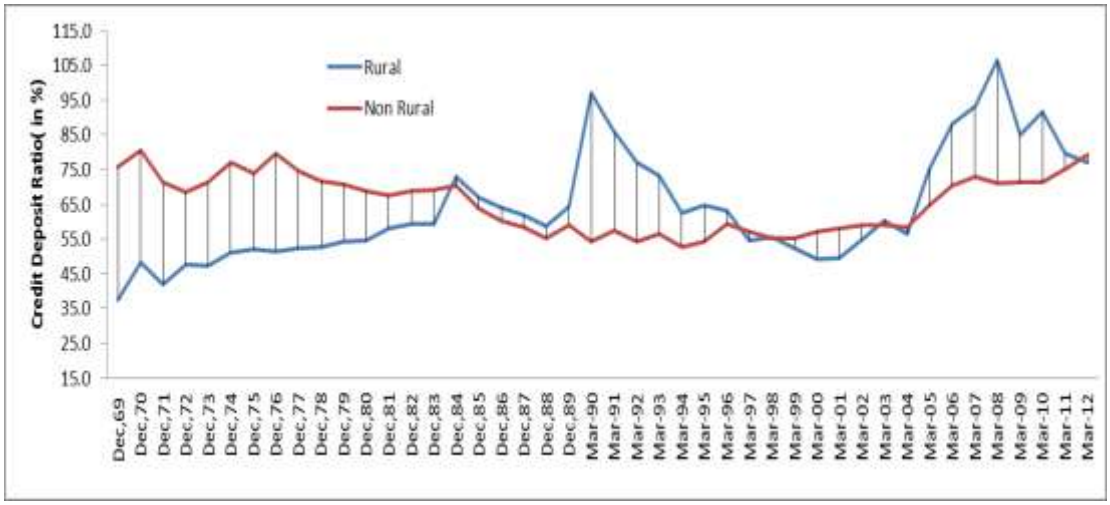
Banking depth or use of the banking service- National Scenario

Banking depth or use of banking services has been approximated through outstanding credit and deposit amounts of the SCBs. In this section, variation in growth of deposit and credit amount (loan) in absolute and in per capita terms (normalised by population) has been estimated for the different regimes, sub periods and layers mentioned earlier. The credit and deposit depth across the broad population centres (rural and non-rural) from 1969 to 2011 is being computed through dividing total outstanding amount of the SCB (both credit and deposit amount at 1993-94 prices) by the total population. The trend is given in appendix Table 4A. The able shows poor credit and deposit intensity in rural areas in comparison to their urban counterparts in 1969. The ratio of non-rural to rural credit amount per capita was 123, whereas same ratio for the deposit per capita was 60.9 in 1969. The table further points towards decline in both ratios during the social banking period, but larger decline was noted in credit (from 123 times in 1969 to 16 times in 1992), than that of the deposit (from 60.9 times in 1969 to 16.1 times in 1992). The table further reveals a trend reversal during the reform and no convergence in revival phase (Appendix Table 4A).

Credit deposit ratio (C/D is widely alternative measure to asses change in credit and deposit intensity. The change in C/D ratio separately for rural and nonrural branches during 1969 and 2011 has been given in figure 4.24. The figure show a remarkable difference between rural (38%) and non-rural (76%) centres in 1969 but in subsequent period changes were inordinate. For instance, during the social banking regime, rural areas not only started to catch up with urban centres, but in year 1984 rural C/D ratio surpassed the level of non-rural branches. Besides, superiority of rural over nonrural in terms of the C/D ratio was maintained until the commencement of the banking reform (Figure 4.24). Increased CD ratio in rural branches during social banking indicates that rural branches not only succeeded in preventing migration of money from the rural to non-rural centre; but also encouraged local use of mobilised deposit. The trend reversal during reform points towards migration of money from rural to non-rural centres which were largely used for the financing of urban activities. The CD ratio of non-rural centres hovered around 60% during 1992-04 which also points towards slow banking or lazy banking. The figure although noted improvement in CD ratios of the rural and non-rural branches between 2000 and 2008. In 2008, C/D ratio

of rural branches crossed 100%, but steady declined is recorded thereafter. In contrast, non-rural centres experienced steady increase in CD ratio after 2008 (Figure 4.24).

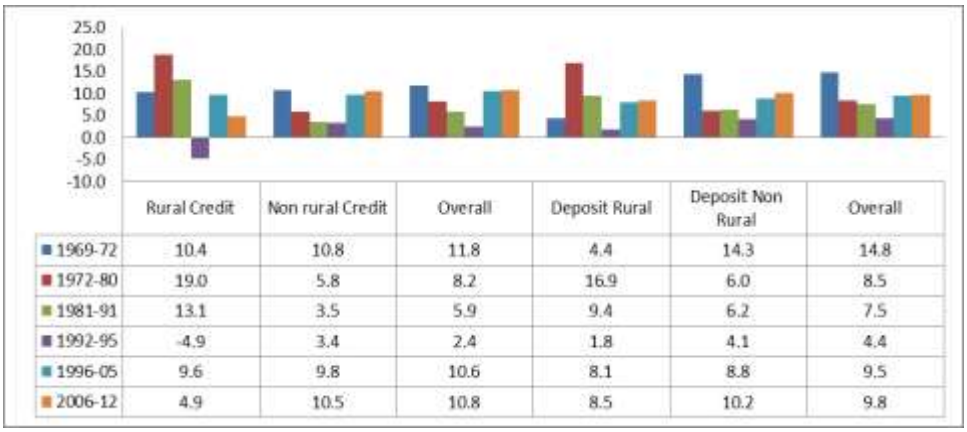
Figure 4.24: Credit deposit ratio across population group: national



Source: Computed by author

Figure 4.25 shows trend in CAGR of the real[13] credit and deposit amounts per capita of the SCBs separately for the rural and non-rural centres from 1969 to 2011. The figure indicates significant growth differential between rural and non-rural centres across the regimes and sub periods. During social banking, rural centres observed significantly higher growth in both credit and deposit amount per capita than that of the non-rural centres.

Figure 4.25: Growth of real credit and deposit per capita: rural vs. nonrural



	Rural Credit	Non rural Credit	Overall	Deposit Rural	Deposit Non Rural	Overall
1969-72	10.4	10.8	11.8	4.4	14.3	14.8
1972-80	19.0	5.8	8.2	16.9	6.0	8.5
1981-91	13.1	3.5	5.9	9.4	6.2	7.5
1992-95	-4.9	3.4	2.4	1.8	4.1	4.4
1996-05	9.6	9.8	10.6	8.1	8.8	9.5
2006-12	4.9	10.5	10.8	8.5	10.2	9.8

Source: Author's own calculation

[13] Deflated by Wholesale Price Index (WPI)at 1993-94 prices

But, three years later to initiation of the banking sector reform i.e., during 1992-95, massive decline in bank loans growth in rural areas was observed (-4.9%), while it remained positive for non-rural centres. However, table noted revival in loan as well as deposit per capita during 1996-05 and 2005-12 for both rural and non-rural but, it were latter that experienced higher growth than the former.

4.5.1 Use of banking services _ regional scenario

Trend in credit migration across the region measure through CD ratio from 1972 to 2011 is presented in Table 4.14. The table noted a wide gap CD ratio between developed and developing regions in 1972. This gap started converging during the social banking as CD ratio started improving in backward and populated regions while the opposite happened during reform. Theil Index. CV, and range coefficient of the CD of the six regions shown in table 4.14 confirms convergence in regional disparity. Moreover, divergence in regional disparity has been recorded during the reform period and also higher disparity during revival period.

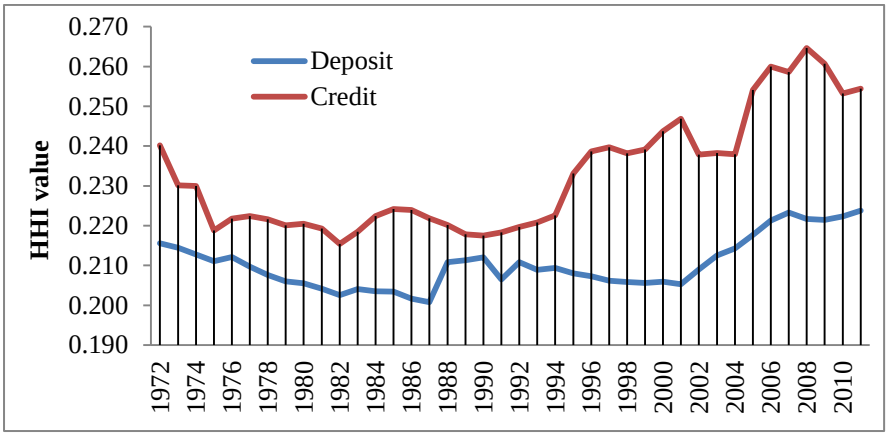
Table 4.14: Credit deposit ratio across the region

Regions	**1972**	**1980**	**1991**	**2001**	**2006**	**2011**
Central	38.7	39.6	48.3	28.1	37.2	46.7
Eastern	58.4	45.3	45.2	31.8	40.5	51.4
North-eastern	63.4	42.2	56.3	23.3	33.5	33.8
Northern	42.3	62.5	47.8	48.0	53.1	82.5
Southern	86.6	65.4	72.3	56.7	68.4	94.5
Western	66.6	56.5	50.1	66.1	70.5	79.5
All India	60.8	55.4	53.0	49.0	58.2	75.6
Range Coefficient	0.38	0.25	0.23	0.48	0.36	0.47
CV	0.29	0.21	0.19	0.41	0.32	0.37
Theil	**0.04**	**0.02**	**0.01**	**0.07**	**0.04**	**0.06**

Source: computed by author

Figure 4.26 displays trends in regional disparity in deposit and credit measured in terms of HHI for the period 1972-2011. The figure clearly indicates diversification during the social banking regime, and concentration thereafter in case of credit. Nonetheless, trends in HHI were almost similar for deposit and credit but level were higher in case of latter than former.

Figure 4.26: Trends in regional disparity (HHI) in deposit and credit amount (1972 to 2011)

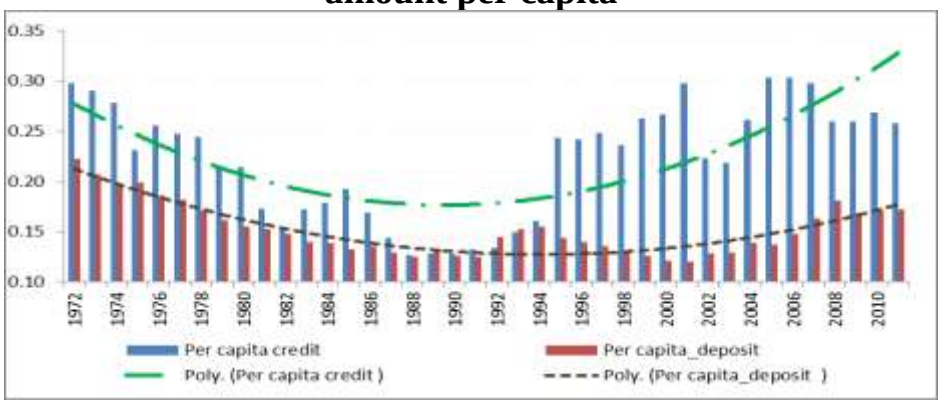


Source: computed by author

Use of banking services _ interstate scenario

Figure 4.28 depicts the trends in interstate disparity (Theil Index) in credit and deposit amounts per capita from 1972 to 2011. This figure clearly shows high inter-state disparity in both parameters and declining trends during the social banking regime; the figure also shows that owing to asymmetric changes in credit and deposits in per capita in states, regional disparity moved upwards for both parameters (Figure 4.27).

Figure 4.27: Trends in interstate disparity in credit and deposit amount per capita



Source: Computed by author from BSR(RBI Various Issues)

The figure suggests higher level of interstate disparity in credit than deposit throughout, but gap between Theil value of deposit and credit tended to converge during the social banking regime, while it inclined to diverge during the reform and inclusion drives (Figure 4.27). Nonetheless, availability, penetration and uses of the banking services indicated a pattern in change but notable variations across the space and time was prevalent in level and direction of the change in variables. Thus, in order to assess the deviations from the social banking, the next section presents, trends in Index of Financial Inclusion (IFI) across the regulatory regimes.

4.8 Index of Financial Inclusions (IFI)

Nonetheless, progress in ranking of the member countries in IFI is available at public domain published in IMF's Financial Access Survey (FAS)[14]. But, progress of the states within a country is available for the recent period only. Despite intense research, sharp differences exist in regards to choice of the methodology and selection of variable for the dimension of the IFI. Views seem to converge on the Human Development Index methodology (UNDP) as an appropriate choice for the computation of the IFI (Kuri, 2011; Sarma, 2008, 2012; IMF, 2016). The present study generated a time series of the IFI and its dimensions for the period between 1972 and 2012 from the methodology discussed in the following section to see the deviation in IFI across the regimes.

Index of Financial Inclusion (henceforth 'IFI'[15]) represents a value free composite index consisting of three dimensions namely, Availability, Penetration, and Usage of the banking services. The value of index varies between 0 and 1, in which zero signifies a complete exclusion i.e., complete inaccessibility of the people in banking network; whereas, one indicates complete inclusion say every eligible citizen of the country has full access to banking services. The dimensions of financial inclusion represent a weighted sum of parameters (D= D_1, D_2 D_3) The index value i^{th} dimension of D is computed by the following formula:

$$di = \frac{\text{Actual Value (Ai)} - \text{Minimum value (Min)}}{\text{Maximum Value (Max)} - \text{Minimum Value(Min)}} \quad , 0 \leq d_i \leq 1; \ldots(1)$$

Higher value represents greater achievements in dimension and vice a versa. This study uses normalized inverse Euclidean[16] distance of three dimensions of the financial inclusion. It also considers Cartesian distance between 1 and 0; also the inverse distance 0 and 1

The IFI is estimated through following equations:

[14] The IMF's Financial Access Survey is based on data collected annually since 2004 by central banks from providers of financial services in 189 countries. The World Bank's triennial Global Findex, constructed from a worldwide survey of individuals' access to and use of financial services since 2011.

[15] Financial inclusion has broader connotations but present study precisely focuses on the inclusion to the banking specifically inclusion to the Schedule Commercial Banks.

[16] This distance measures deviation of a variable from their ideal values. If financial inclusion includes k dimension, then units would be represented by a point on the k-dimensional Cartesian space say D (1,1,1) and D (0,0,0) depending on the weight and distance from where it has been measured (Sarma 2008).

$$X1 = \frac{\sqrt{\sum_{i=0}^{3} di^2}}{\sqrt{3}} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$X2 = 1 - \frac{\sqrt{\sum_{i=0}^{3} (wi - di)^2}}{\sqrt{3}} \ldots\ldots\ldots\ldots\ldots\ldots (3)\ and$$

$$IFI = \frac{X1 + X2}{2} \ldots\ldots (4)$$

Where, i=1,2,3; The dimension d1 represents Availability: d2, Penetration and d3, Use of banking services. However, study assigns equal weight to each dimension while 5% correction factor was used for minimum value of dimension in computing IFI (Sarma, 2008 Kuri 2011).

The previous section presents the progress of states and regions in availability (D1), Penetration (D2), Use of banking services (D3) separately in three regulatory regimes. Thus in order to avoid the repetition, we are giving here the progress of the states in three dimensions of the IFI computed from the formulae above (Appendix Tables 4B, 4C and 4D).

Table 4.15 shows change in value and rank of the states in average IFI across the three regimes. The table reports a notable difference in value and rank of the states in IFI as well as in dimensions of IFI. For instance, Punjab which was at top amongst the ranking of states in the availability (d1), had lower rank in penetration and use dimensions in 1972-75. Similarly, Karnataka which was on top in penetration dimension had lower value and rank in other two dimensions. Eventually, use dimension has been so powerful in states that it outweighed other two dimensions and pushed Maharashtra at top in IFI 1972-74. Subsequently, table 4.15 and Appendix tables (4B, 4C, and 4D) noted not only variations in value of the IFI and its dimension in different regimes but changes were inordinate. We also find that Maharashtra continued to occupy top position in IFI throughout the period (Table 4.15).

Further, study finds that, experiments in monetary policy and banking failed in bringing all round improvement in banking inclusion in country as India remained in the low IFI category despite change in value across the regimes. It is worth noting that only small changes were recorded in overall value of IFI in different regime during 1972-2012. It was also noted that responses of states were asymmetric in each

dimension with respect to change in banking regulations. Not only this, same states also responded differently in each dimension of the IFI over the three regimes (Appendix Table 4B, 4C, 4D and Table 4.15). Besides, only Punjab and Maharashtra could achieve and maintained the IFI value above 0.5. The table also noted interchange in ranking at bottom between Himachal Pradesh and Jammu & Kashmir. The Coefficient of variation, Theil Index shown in the table point towards decline in interstate disparity in IFI during 1972 and 2001and increase thereafter (Table 4.15).

Table 4.15: Trends in *IFI across the states from 1972 to 2012*

State	1972-74		1980-82		1989-91		1999-01		2010-12	
	Average Value	Rank	IFI Value	Rank	IFI Value	Rank	IFI Value	Rank	IFI Value	Rank
Andhra Pradesh	0.26	12	0.37	8	0.39	10	0.37	11	0.46	2
Assam	0.39	9	0.40	7	0.40	8	0.42	8	0.40	5
Bihar *	0.43	6	0.35	11	0.39	9	0.43	7	0.40	6
Gujarat	0.47	4	0.37	9	0.33	12	0.36	12	0.30	15
Haryana	0.25	14	0.31	12	0.38	11	0.37	10	0.30	12
Himachal Pradesh	0.19	16	0.27	15	0.31	14	0.35	14	0.33	11
Jammu &	0.25	13	0.27	14	0.27	17	0.38	9	0.30	16
Karnataka	0.49	3	0.49	3	0.45	6	0.35	13	0.39	7
Kerala	0.40	8	0.46	6	0.47	3	0.46	4	0.43	4
Madhya Pradesh *	0.24	15	0.26	16	0.30	16	0.32	16	0.30	13
Maharashtra	0.61	1	0.63	1	0.66	1	0.63	1	0.68	1
Orissa	0.38	10	0.29	13	0.32	13	0.31	17	0.30	14
Punjab	0.41	7	0.49	4	0.49	2	0.51	2	0.38	9
Rajasthan	0.19	17	0.25	17	0.30	15	0.32	15	0.28	17
Tamil Nadu	0.43	5	0.46	5	0.46	5	0.43	6	0.46	3
Uttar Pradesh*	0.31	11	0.36	10	0.40	7	0.46	5	0.36	10
West Bengal	0.54	2	0.49	2	0.47	4	0.47	3	0.38	8
All India	0.32		0.34		0.37		0.35		0.34	
CV (in %)	**0.338**		**0.275**		**0.242**		**0.198**		**0.254**	
Theil Index	**0.055**		**0.035**		**0.026**		**0.018**		**0.028**	

Source: Authors own calculation based on formulae as mentioned in equation 1 to 4.

The above analysis shows trends in inequality estimated though average value of the CV and Theil Index for specified years. In order to assess the long term trends in inequality in each dimension over the regimes and also for a composite picture sigma convergence has been estimated through the same formula as mentioned above. The σ convergence has been estimated by regressing coefficient of variation (CV) of each dimension of IFI and overall IFI, as dependent variable and time as an independent variable. The equation used in this regard is as follow:

$$Y_i = \alpha_0 + \beta T_i + u_t$$

Where, Y is dependent variable and i=1,2,3,and 4

Y_{1t} = CV of penetration index of aforesaid regimes (t=1,2,3,4)

Y_{2t}= CV of availability index of aforesaid regimes (t=1,2,3,4)

Y_{3t}= CV of the use of banking service index

$Y_{4t=}$ CV of IFI

As per definition, a positive and significant β confirms divergence or an increase in interstate disparity while negative and significant β points towards convergence in variable. The regression result given in Table 4.16 points towards variations in magnitude of the β for the IFI and its three dimensions across the regulatory regimes.

Table 4.16: Trends in interstate disparity in IFI (σ- convergence)

Period	Indicator	Constant	Slope	SE	t	prob	Adj R2	No
1972-80	Penetration	0.77	0.0003	0.002	0.2	0.89	-0.14	9
	Availability	1.08	-0.032	0.003	-10.5	0.00	0.93	9
	Uses	0.87	-0.023	0.002	-10.9	0.00	0.94	9
	IFI	0.36	-0.009	0.001	-8.4	0.00	0.90	9
1981-92	Penetration	0.65	0.007	0.002	3.3	0.01	0.47	12
	Availability	1.20	-0.034	0.001	-25.1	0.00	0.98	12
	Uses	0.87	0.002	0.006	0.3	0.76	-0.09	12
	IFI	0.34	-0.005	0.001	-4.2	0.00	0.60	12
1993-04	Penetration	0.89	-0.003	0.001	-2.5	0.03	0.32	12
	Availability	0.27	0.010	0.001	8.5	0.00	0.86	12
	Uses	0.80	-0.012	0.009	-1.3	0.21	0.07	12
	IFI	0.25	-0.003	0.001	-2.7	0.02	0.36	12
2005-12	Penetration	1.11	-0.0115	0.003	-4.5	0.00	0.68	10
	Availability	0.08**	-0.012	0.003	-4.45	0.002	0.93	10
	Uses	1.87**	0.016	0.001	11.34	0.000	-0.04	10
	IFI	-0.05**	-0.012	0.015	-0.83	0.430	-0.01	10
1972-12	Penetration	0.79	-0.002	0.001	-3.34	0.00	0.19	43
	Availability	0.85	-0.007	0.002	-4.62	0.00	0.33	43
	Uses	0.66	0.014	0.002	5.71	0.00	0.43	43
	IFI	0.30	-0.002	0.001	-2.56	0.01	0.12	43
1972-92	Penetration	0.757	0.000	0.001	0.11	0.91	-0.05	21
	Availability	1.069	-0.026	0.001	-22.92	0.00	0.96	21
	Uses	0.748	0.008	0.003	2.82	0.01	0.26	21
	IFI	0.346	-0.005	0.000	-11.28	0.00	0.86	21
1993-12	Penetration	1.079	-0.010	0.001	-11.18	0.00	0.86	22
	Availability	0.185	0.013	0.001	23.45	0.00	0.96	22
	Uses	-.0892	0.036	0.007	4.91	0.00	0.52	22
	IFI	0.99	0.004	0.002	2.35	0.03	0.18	22

Note -** significant 20% or above.
Source: Authors' own calculation

The above table notes interstate convergence in availability, penetration and overall IFI, while we noted divergence in uses of banking services during 1972-2012. Besides, the table also noted convergence in interstate disparity in availability and IFI, while divergence was recorded in use dimensions. Moreover, trend was inconclusive for the penetration dimension as β was statistically insignificant in case of later while highly significant for the other three during the social banking regime.

The table further shows divergence in interstate disparity in IFI. It happened on account of strong divergence in availability and use of banking service which outweighed the convergence in penetration. The table suggests that financial inclusion drive succeeded in arresting the process of the widening of interstate disparity in IFI especially on account of the availability and penetration dimensions, but it could not create enough dents in the rising interstate disparity in use dimensions. Eventually, the β coefficient for IFI was insignificant despite, significant β of the three dimensions.

For decomposition of the trends of IFI, a regression was also run between CV of IFI as dependent variable and CV of penetration, availability and use dimension as independent variables for the period between 1972 -2012. The results are as follows.

$$IFI = a_0 + \beta_1 Penetration + \beta_2 availability + \beta_3 Uses_3 + u_t$$

IFI=	-.0522	+0.118pen	+247 Avail*	0.064 uses
SE=		(0.150)	(0.42)	(0.178)
t		0.66	5.03	1.52
p>t		0.514	0.000	.137
		F = 12.15*	Adj R^2	0.4433

Note* indicates significance at 1%

The above equation clearly highlights the importance of availability of banking services in determining the variation in IFI across the states. The result shows positive and significant associations between IFI and availability of the banking services. Although, penetration and uses were also positively associated with deviation in IFI; but the regression coefficient of availability was significant at very high level.

The problem of financial exclusion is multidimensional in nature which attributed to various economic, social, political, cultural and historical factors. Thus, to overcome such exclusion multi-pronged, long-term dynamic strategies are required. Banking sector has been subjected to variety of regulations since independence. But, supply leading Indian social banking experience shows that emphasis on raising intensity of banking availability, particularly expansion of public sector branches in rural areas, created enough dent in dominance of the rural moneylender on one hand, and also motivated the people to use banking services. A customised and well-articulated product and institutional innovation as per local need also helped in achieving high penetration level during social banking. But, profit oriented liberalised regulatory regime, not only toppled the process of institutionalisation of the rural money market but also created enough institutional vacuum which was utilized by the informal players. Nonetheless, RBI and policy makers realised the importance of physical

presence of branches for making better inclusive society. Obviously, the inclusion drive arrested the downturn in availability, penetration and uses but hybrid instrument used during this period did not succeed much in dealing with the problems of imbalance inclusion and spatial inequality in the country. Analysis also suggests that expansion of banking network in backward states not only improved the level of financial inclusion but also convergence across the states.

Appendix Table 4A- Distribution of credit and deposit amount (at 1993-94 prices) by population centres since 1969 to 2011

	Credit Amount per capita (in Rs)			Deposit Amount per capita (in Rs)			Credit Deposit Ratio (in %)			Ratio of Urban to Rural per capita	
YEAR	Rural	Non Rural	Total	Rural	Non Rural	Total	Rural	Non Rural	Total	Credit	Deposit
Dec,1969	19.6	2412.1	486.3	52.2	3176.7	661.7	37.6	75.9	73.5	123.0	60.9
Dec,1970	31.3	2708.7	558.9	64.8	3366.6	715.4	48.3	80.5	78.1	86.7	52.0
Dec,1971	23.9	2959.5	608.3	56.8	4153.1	872.2	42.1	71.3	69.7	123.8	73.1
Dec,1972	34.5	2835.2	601.2	72.5	4139.2	895.2	47.7	68.5	67.2	82.1	57.1
Dec,1973	33.9	2571.8	555.7	71.7	3605.2	798.2	47.2	71.3	69.6	76.0	50.3
Dec,1974	36.8	2489.7	549.3	72.0	3233.4	732.5	51.1	77.0	75.0	67.7	44.9
Dec,1975	45.8	2723.3	614.2	88.0	3682.9	851.2	52.0	73.9	72.2	59.5	41.9
Dec,1976	56.2	3320.9	760.5	109.1	4168.2	984.7	51.6	79.7	77.2	59.1	38.2
Dec,1977	68.8	3523.3	825.9	131.5	4729.5	1139.3	52.3	74.5	72.5	51.2	36.0
Dec,1978	91.8	3973.5	956.1	174.3	5542.9	1369.7	52.7	71.7	69.8	43.3	31.8
Dec,1979	105.2	3936.1	971.7	193.4	5554.8	1406.1	54.4	70.9	69.1	37.4	28.7
Dec,1980	114.0	3567.3	907.4	209.2	5178.5	1350.9	54.5	68.9	67.2	31.3	24.7
Dec,1981	144.8	3697.7	973.9	248.9	5462.4	1465.5	58.2	67.7	66.5	25.5	21.9
Dec,1982	166.0	3899.9	1045.9	279.5	5674.0	1550.8	59.4	68.7	67.4	23.5	20.3
Dec,1983	184.0	4182.6	1135.7	310.2	6055.5	1677.5	59.3	69.1	67.7	22.7	19.5
Dec,1984	251.4	4564.7	1288.0	344.7	6491.3	1821.9	72.9	70.3	70.7	18.2	18.8
Dec,1985	255.2	4985.7	1403.2	365.1	7370.8	2065.2	69.9	67.6	67.9	19.5	20.2
Dec,1986	273.4	4903.8	1408.1	416.8	7961.9	2265.7	65.6	61.6	62.1	17.9	19.1
Dec,1987	287.9	4918.4	1433.7	458.6	8341.2	2409.0	62.8	59.0	59.5	17.1	18.2
Dec,1988	306.6	4891.3	1452.0	518.8	8785.8	2584.2	59.1	55.7	56.2	16.0	16.9
Dec,1989	359.0	5470.8	1648.5	543.9	9140.3	2712.4	66.0	59.9	60.8	15.2	16.8
Mar-90	353.0	5673.7	1708.1	576.4	9366.5	2815.1	61.2	60.6	60.7	16.1	16.3
Mar-91	352.8	5787.0	1750.1	588.2	9291.7	2826.1	60.0	62.3	61.9	16.4	15.8
Mar-92	350.7	5620.5	1716.6	606.0	9755.2	2977.3	57.9	57.6	57.7	16.0	16.1
Mar-93	352.4	6071.7	1846.6	637.1	10199.5	3135.3	55.3	59.5	58.9	17.2	16.0
Mar-94	331.5	5685.0	1741.3	662.9	10325.1	3207.3	50.0	55.1	54.3	17.1	15.6
Mar-95	308.1	6292.2	1896.4	634.2	11088.1	3408.8	48.6	56.7	55.6	20.4	17.5
Mar-96	333.8	7110.4	2146.7	705.5	11493.7	3591.5	47.3	61.9	59.8	21.3	16.3
Mar-97	352.6	7395.0	2251.4	799.6	12531.8	3962.9	44.1	59.0	56.8	21.0	15.7
Mar-98	378.3	7883.4	2417.8	872.5	13746.3	4370.8	43.4	57.3	55.3	20.8	15.8
Mar-99	403.3	8647.0	2661.1	984.1	15129.4	4858.1	41.0	57.2	54.8	21.4	15.4
Mar-00	428.8	9489.4	2929.6	1060.2	16169.4	5230.5	40.4	58.7	56.0	22.1	15.3
Mar-01	454.5	10487.3	3245.2	1164.2	17551.1	5722.4	39.0	59.8	56.7	23.1	15.1
Mar-02	532.3	12011.8	3762.7	1272.5	19648.4	6443.6	41.8	61.1	58.4	22.6	15.4
Mar-03	577.3	12763.1	4046.2	1320.7	20676.4	6830.7	43.7	61.7	59.2	22.1	15.7
Mar-04	763.5	13233.0	4354.2	1355.2	22607.8	7475.1	56.3	58.5	58.2	17.3	16.7
Mar-05	1054.6	15861.3	5367.4	1400.4	24523.1	8135.4	75.3	64.7	66.0	15.0	17.5
Mar-06	1215.2	19178.1	6507.2	1377.6	27213.0	8988.9	88.2	70.5	72.4	15.8	19.8
Mar-07	1356.6	23206.9	7867.2	1456.2	31785.6	10493.3	93.2	73.0	75.0	17.1	21.8
Mar-08	1701.3	25559.6	8890.8	1597.5	35967.7	11954.8	106.5	71.1	74.4	15.0	22.5
Mar-09	1042.5	30200.1	9928.1	1824.6	40699.5	13671.4	57.1	74.2	72.6	29.0	22.3
Mar-10	1127.7	32073.2	10664.0	1901.6	42055.0	14275.5	59.3	76.3	74.7	28.4	22.1
Mar-11	1214.2	31164.5	10547.0	2024.7	44398.7	15228.8	60.0	70.2	69.3	25.7	21.9

Source: Computed by authors

Appendix Table 4B: Index of banking penetration

State	1972-74		1980-82		1989-91		1999-01		2004-06		2010-12	
	Value	**Rank**	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**
AP	0.32	9	0.47	7	0.35	8	0.35	9	0.48	6	0.79	5
Assam	0.04	16	0.01	16	0.00	17	0.09	13	0.06	15	0.14	15
Bihar *	0.06	15	0.00	17	0.02	16	0.00	17	0.00	17	0.00	17
Gujarat	0.78	4	0.55	6	0.33	9	0.32	10	0.38	9	0.46	10
Haryana	0.37	8	0.45	8	0.48	7	0.48	6	0.47	8	0.65	8
HP	0.30	11	0.44	10	0.61	4	0.73	3	0.69	3	0.82	4
JK	0.32	10	0.38	11	0.32	10	0.18	12	0.26	11	0.46	9
KAR	1.00	1	1.00	1	0.80	3	0.53	5	0.59	5	0.78	6
Kerala	0.77	5	0.87	3	0.81	2	0.82	2	1.00	1	1.00	1
MP*	0.10	14	0.09	14	0.10	13	0.00	16	0.04	16	0.14	16
Mah	0.81	3	0.68	5	0.49	6	0.38	7	0.48	7	0.72	7
Orissa	0.00	17	0.04	15	0.05	15	0.08	15	0.12	13	0.27	13
Pun	0.81	2	0.98	2	1.00	1	1.00	1	0.89	2	0.95	2
Raj	0.18	13	0.13	13	0.10	14	0.09	14	0.11	14	0.15	14
TN	0.68	6	0.73	4	0.61	5	0.56	4	0.69	4	0.94	3
UP*	0.18	12	0.17	12	0.20	12	0.26	11	0.21	12	0.29	12
WB	0.56	7	0.45	9	0.32	11	0.38	8	0.29	10	0.33	11
CV	0.76		0.76		0.78		0.80		0.76		0.63	

Note: Index of banking penetration (d2) includes both deposit and loan account penetration (Credit plus deposit accounts/population) and value is computed through formula

$$di = \frac{(Ai - Mi)}{Max - Min}$$

Source : Authors' own calculation

Appendix Table 4C: Index of banking availability

State	1972-74		1980-82		1989-91		1999-01		2004-06		2010-12	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank	Value	Rank
AP	0.32	11	0.33	10	0.21	10	0.27	8	0.31	7	0.39	7
Assam	0.01	15	0.01	17	0.00	17	0.00	16	0.02	16	0.03	16
Bihar *	0.00	16	0.04	16	0.03	16	0.00	17	0.00	17	0.00	17
Gujarat	0.84	3	0.62	6	0.36	6	0.32	7	0.31	8	0.34	9
Haryana	0.50	8	0.51	7	0.30	8	0.32	6	0.40	5	0.54	5
HP	0.62	6	0.82	3	1.00	1	1.00	1	1.00	1	1.00	1
JK	0.42	9	0.67	5	0.57	3	0.20	10	0.28	9	0.35	8
KAR	0.86	2	0.70	4	0.52	5	0.53	4	0.55	4	0.56	4
Kerala	0.77	4	0.91	2	0.56	4	0.68	3	0.82	2	0.84	3
MP*	0.16	13	0.16	13	0.16	12	0.08	14	0.09	14	0.13	14
Mah	0.56	7	0.42	9	0.23	9	0.23	9	0.25	10	0.29	10
Orissa	0.00	17	0.09	15	0.13	13	0.18	11	0.20	11	0.24	11
Pun	1.00	1	1.00	1	0.64	2	0.71	2	0.76	3	0.86	2
Raj	0.32	10	0.27	11	0.20	11	0.16	12	0.16	12	0.18	12
TN	0.64	5	0.50	8	0.31	7	0.37	5	0.38	6	0.45	6
UP*	0.14	14	0.12	14	0.09	15	0.06	15	0.08	15	0.12	15
WB	0.20	12	0.19	12	0.10	14	0.11	13	0.14	13	0.14	13
CV	**0.74**		**0.73**		**0.83**		**0.90**		**0.86**		**0.78**	

Note: Index of banking availability (d1) includes the weighted sum of the demographic (APSBO) and geographical availability (Branch availability per thousand $km^{2)}$. The dimension value is computed through formula mentioned in table 4R

Source: Authors' own calculation

Appendix Table 4D: Index of use of banking services (d3)

State	1972-74		1980-82		1989-91		1999-01		2004-06		2010-12	
	Value	**Rank**	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**	**Value**	**Rank**
AP	0.17	12	0.30	9	0.20	10	0.17	11	0.21	5	0.25	2
Assam	0.09	14	0.08	16	0.09	16	0.07	16	0.05	16	0.07	16
Bihar *	0.18	11	0.17	13	0.13	14	0.16	12	0.11	12	0.08	14
Gujarat	0.56	3	0.51	6	0.24	9	0.23	6	0.14	9	0.09	11
Haryana	0.22	9	0.28	10	0.16	12	0.13	13	0.09	13	0.09	13
HP	0.15	13	0.24	11	0.24	8	0.17	9	0.13	11	0.09	9
JK	0.24	8	0.36	8	0.27	7	0.26	4	0.19	7	0.12	8
KAR	0.42	5	0.50	7	0.28	6	0.19	8	0.21	4	0.19	3
Kerala	0.34	7	0.57	4	0.35	2	1.00	1	0.43	2	0.13	6
MP*	0.07	16	0.10	15	0.00	17	0.00	17	0.00	17	0.00	17
Mah	1.00	1	1.00	1	1.00	1	0.71	2	0.97	1	1.00	1
Orissa	0.00	17	0.02	17	0.11	15	0.11	14	0.09	14	0.09	12
Pun	0.37	6	0.55	5	0.29	5	0.28	3	0.20	6	0.14	5
Raj	0.08	15	0.14	14	0.13	13	0.11	15	0.09	15	0.07	15
TN	0.50	4	0.61	3	0.32	3	0.26	5	0.22	3	0.15	4
UP*	0.19	10	0.24	12	0.17	11	0.17	10	0.13	10	0.09	10
WB	0.64	2	0.65	2	0.29	4	0.19	7	0.14	8	0.13	7
CV	0.83		0.70		0.86		0.99		1.10		1.36	

Note: Index of use of banking penetration (d3) includes both deposit and loan amount use (Credit plus deposit amount /NSDP).
Source: Authors' own calculation

Chapter 5: Financial sector reform and agricultural credit in India

5.1 Introduction:

This chapter analyses the trends in pattern and growth of agriculture financing through banks across regulatory regimes. Agriculture was a focus of the bank nationalisation initiative, as it was hugely underserved by the commercial banking network before nationalisation. The All India Rural Credit Survey Report (1954) noted that production finance for agricultural activities accounted for less than 4 per cent of commercial bank advances and credit to cultivators was less than one per cent. Even this meagre proportion was concentrated in a few districts of the country (RBI 1954; Basu, 1977). This pattern was also reflected in the poor spread of banking facilities. Commercial banks were mainly interested in financing the marketing of the agricultural produce rather than direct financing of the production; therefore, their presence was largely confined to major marketing centres or *mandis* (RBI History Volume II p 235).

As described in chapter 4, the period of social banking regime (in the 1970s and 1980s) witnessed a significant increase in the spread and focus of banks, with greater emphasis on expanding accounts and credit access in rural areas and in hitherto underserved regions and states. However, during the period of reform, the banking sector observed many changes, including compositional shifts in banking infrastructure, such as decline in the share of rural centre in branches, accounts, loans, deposits and manpower etc. Contrary to this, urban and metropolitan centres experienced not only disproportionate increase in branches, but also disproportionate increase in employees, accounts, deposits and loans at the national level as well as across states and regions. Rising regional and interstate disparities were also recorded in access to and use of the banking services. These changes occurred because of changes in the priorities of the banks with respect to expansion of branches and distribution of loans. Obviously, equity was compromised in the name of efficiency and growth of the banking industry.

After the implementation of the Narasimham Committee recommendations, state interventions in the distribution of bank credit were gradually diluted which adversely impacted financing of the rural activities including agriculture.

No specific measures were proposed by the Narasimham Committee for the agriculture sector, other than dilution of the priority sector lending target and deregulation of interest rates on deposits and loans above Rs 2 lakhs. But branch rationalisation and rationalisation of the interest subsidy significantly impacted the outreach to and use of banking services by rural households. The attempt to improve the overall health of the banking sector through market based regulations deprioritised rural lending in general and lending to agriculture in particular. In this chapter, these issues are considered in much detail through a comparison of indicators like agriculture sector outreach and credit depth of scheduled commercial banks in the pre-reform and post-reform periods.

5.2 Agriculture sector's outreach of the SCBs: National Scenario

The term 'outreach' has broader connotations (such as with respect to size class, social groups etc.), but in the present context it is defined as the proportion of agriculture credit accounts to the overall bank credit accounts in SCB. The limit of the outreach is defined as $0 \leq \text{Outreach} \leq 1$. Zero implies no exposure to the agriculture sector in banks and one indicates no representation of the non-agriculture sector. Outreach is assessed through credit accounts (loan accounts), whereas credit use or depth variable is assessed through the amounts delivered by the SCBs.

Appendix Table 5A and Figure 5.1 show changes in the share of agriculture vis-à-vis non-agriculture in total outstanding accounts of SCBs from 1972 to 2011 at the national level. This table points towards a poor outreach to agriculturists in SCBs in 1972. Despite, being the largest source of livelihood for more than three quarters of the population and also direct employer of two thirds of the workforce of country, the outreach of the agriculture sector remained less than one third (only 31.6%) in 1972 because only 1.37 million credit accounts, out of the 4.34 total credit accounts in SCBs belonged to agriculture sector. In BSR, agriculture loan accounts are reported under two broad heads: Direct Finance to Farmers and Indirect Finance to Agriculture.

Figure 5.1 depicts that it was direct finance which dominated in total agriculture accounts of the SCBs in 1972. The figure further not only points towards a rise in the share of agriculture in total loan accounts, but also points to the fact that the country witnessed a notable shift within the agriculture in subsequent periods. Nonetheless,

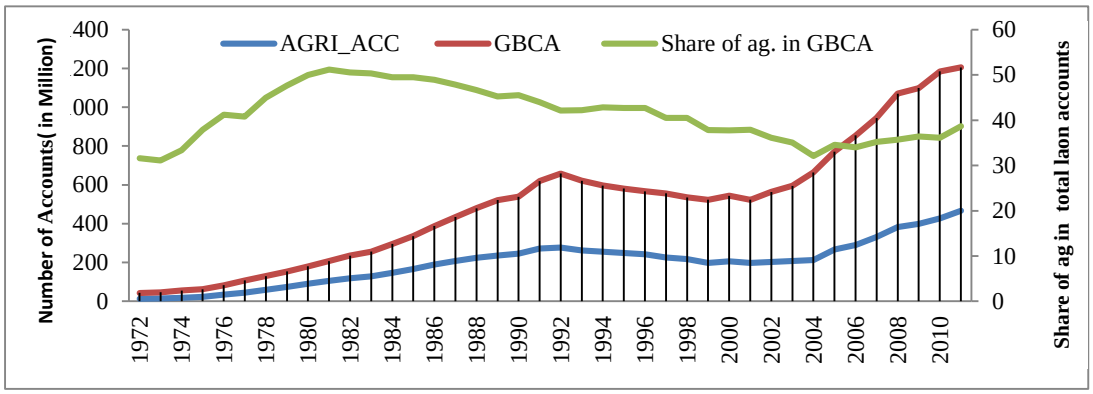
share of the direct finance in total agriculture accounts consistently increased throughout 1970s and 1980s but experienced decline during reform. For instance, between 1971-72 and 1979-80, about 16.4 million additional accounts were added into SCBs, out of this more than half (56.4%) or about 9.2 million were added into agriculture sector. In addition to this, out of 9.2 million agriculture accounts, the respective shares of direct and indirect finance to agriculture[1] were 96.7% and 3.3%. Owing to disproportionate increase in favour of agriculture, the ratio of agriculture to non-agriculture account improved from 0.464 in 1971-72 to 0.601 in 1979-80.

There were many factors which contributed to this change. Some policy initiatives worth noting includes the stricter monitoring of the branch authorisation policy which resulted in the opening of public sector bank branches at previously unbanked or under banked locations, adherence to the agriculture target in priority sector lending and sub targets for the "weaker sections" that forced banks to bring the hitherto deprived backward regions and farmers at the bottom of the pyramid into the banks, these initiatives generated unprecedented expansions of agriculture credit accounts. The rate of diversification of the rural economy although varied across the regions, but agriculture sector benefitted most out of expansion as it was one largest productive activity in the catchment area of the banks. Notably, this was also the period when green revolution expanded beyond Punjab, western Uttar Pradesh and Haryana and it created demand for agriculture credit for meeting the capital as well as current expenditure. Emphasis on the expansion of branches in the countryside under the supply leading approach created a favourable environment for the outreach of the agriculture.

Figure 5.1 displays a moderation of the `agriculture sector's relative outreach in comparison to non-agriculture during the second sub period (1980-91) of the social banking regime. The average outreach of agriculture and non-agriculture sector in second sub-period was 47.6% and 52.4% respectively. In this sub period, the share of agriculture in incremental banks loan accounts was 38.4% which was lower than that of the contribution of non-agriculture whose share was 61.6%.

[1] Indirect finance to agriculture refers to the loans given to institutions that support agricultural production, such as input dealers, irrigation equipment suppliers and Non-Banking Financial Companies (NBFCs) etc.

Figure 5.1: Trends in agriculture account of SCBs (1972- 2011)



Source: Authors' own calculation (BSR-RBI and EPWRF 2008)

Reforms of the banking sector of the 1990s, including rationalisation of bank branches etc., were not explicitly designed to reduce the focus on agriculture. Rather, it was felt that in a competitive environment bankers would not discriminate against the famers and enough branches would move into the rural areas because of huge demand for credit. As already mentioned, banks also carried out innovations such as satellite branches, group lending, use of modern technology in screening and supervisions, etc., with an expectation that these steps would lead to expansion of the agriculture sector`s outreach both vertically as well as horizontally. To what extent was such optimism justifies an important issue. Figure 5.1 shows that the outcomes of the liberalisation measures were negative for the agriculture sector because agriculture accounts in SCBs not only declined in absolute number but it also declined as a proportion of the total accounts in third phase (1992-04). Between 1992 and 2004, only 4.4 million credit accounts were added in SCBs, out of which agriculture credit account witnessed a net decline of 4.9 million accounts (5.1 million decline for the direct finance to farmers while indirect finance to agriculture saw an increase of 0.2 million accounts). In contrast to this, non-agriculture accounts increased by 10.4 million. Hence, outreach of agriculture and non-agriculture sector became 39.0% and 61.0% respectively in 2004. The ratio of agriculture to non-agriculture in total accounts of the SCB`s collapsed to 0.65 in 2004.

As mentioned earlier, in the wake of growing agrarian crisis, increase in farmers' indebtedness to the moneylenders and also to support the new agriculture policy of 2000, government began to intervene in distribution of banking infrastructure and credit under the financial inclusion drive. This drive successfully changed the quantitative and qualitative aspects of the agriculture sector`s outreach.

For instance, between 2004-05 and 2010-11, the country witnessed about 54.2 million[2] incremental credit accounts in SCBs. Out of this, the agriculture sector contributed about 25.3 million (46.9%). The ratio of agriculture to non-agriculture in incremental loan accounts was 87.5% (This ratio was far better than the ratio of the intense reform and even better than the second sub period of the social banking regime). This trend shows that some compensation of the losses was made to the agriculture sector during the phase of financial inclusion which hugely suffered during period of intense reform. But the table also points that the growth of agriculture loan accounts in banks was largely driven by indirect finance to agriculture as it claimed disproportionate share in agriculture accounts opened in SCBs. Certainly, the shift from direct to indirect finance within the agriculture sector has been perceived as good change as it has far reaching impact on inclusion and relative access (Figure 5.1).

The simple plot of the observations of agriculture loan accounts between 1971-72 and 2010-11 as depicted in Figure 5.1 depicts the two trend breaks. The first break is seen in 1992 while second in 2004. In order to detect the exact trend break or structural shift in agriculture accounts, a structural break (Chow test) analysis was conducted for the period 1972-11 and results are presented in Table 5.1. The mean differences and Chow test as presented in Table 5.1 reaffirm the trend breaks in agriculture credit accounts data in 1992 and 2004 as Chow statistics of the break points were statistically significant (at 1% level of significance). The coefficient of the time dummy was positive for the first break (between 1972 and 1992) while it was negative for the second break (between 1992-93 and 2003-04). The significant F statistic reaffirms and corroborates the finding of regime shift in terms of agriculture accounts (Table 5.1).

Table 5.1: Structural break in agriculture accounts _result

The AUTOREG Procedure Ordinary Least Squares Estimates Dependent Variable –Gross Agricultural credit accounts,

SSE	*9.42771498*	*DFE*	*38*
MSE	*0.24810*	*Root MSE*	*0.49809*
SBC	*63.0838135*	*AIC*	*59.7060546*
MAE	*0.41601019*	*AICC*	*60.0303789*
MAPE	*2.57894079*	*Regress R-Square*	*0.7198*
		Total R-Square	*0.7198*

Structural Change Test

Test	*Break Point*	*Num. of DF*	*Den DF*	*F Value*	*Pr> F*
Chow	*1992*	*2*	*36*	*69.56*	*<.0001*
Chow	*2004*	*2*	*36*	*6.97*	*0.0028*

Source: Authors own calculation from the data mentioned in Figure 5.1

[2] Between 1972 and 2004 there were 65.8 million cumulative agriculture accounts in SCB while nearly 54.2 million agriculture loan accounts were added between 2004-05 and 2010-12.

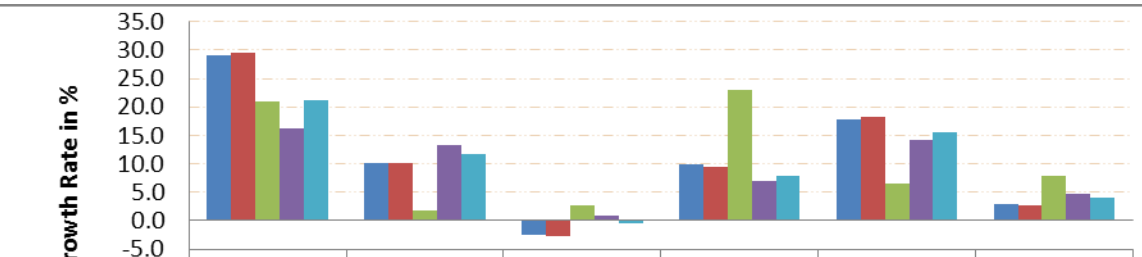
Before jumping to any strong conclusion on the basis of the structural break model and ratio analysis, it is useful to compare the growth differential of the accounts of SCBs in the sub-periods. The growth differential was conducted against the null hypothesis of no significant difference in growth rates of the outstanding agriculture credit accounts and its subcomponents in SCB the across the sub periods at national level. The regressions were run using time as an independent variable and following dependent variables;

DFF_ACC **:** Outstanding loan accounts (direct finance to farmer)
INDFA_ACC **:** Outstanding loan accounts (indirect finance to Agriculture)
GBC_ACC **:** Outstanding loan accounts (overall)
NONAG_ACC **:** Outstanding loan accounts (other than agriculture)

The regression result in details is presented in Appendix Table 5A. The growth rate across the sub periods has been depicted in Figure 5.2. Appendix Table 5A rejects the null hypothesis of the uniform growth rates of the aforesaid variables as well as across the sub periods of the individual variables. Instead, the table finds significant differences in growth rates across the variables and also notable differences for the same variable in sub periods (Appendix Table 5A). For instance, double digit growth rates were recorded in all dependent variables in first sub period. This signifies a massive expansion of the accounts across the board during the first sub period. Amongst the variable, the highest growth rates were recorded for loan accounts pertaining to the direct finance followed by the indirect finance. Further, rate of expansion of agriculture accounts was faster than that of the non-agriculture accounts during the first sub period (Appendix Table 5A1). The high and double digit growth in agriculture and its sub components might be partially attributed to the small base, but it is difficult to negate the contribution of the expansion of branches in the unbanked locations, extension of banking services to the farmers at the bottom of the pyramid, and emphasis on the backward regions in the supply leading approach of the banks. The table 5A1 indicates towards stabilisation of the high growth momentum in expansion of bank accounts during the second sub period (from 1980-81 to 1991-92). The growth rates of the above defined variables were relatively lower than that of the first sub period. But, double digit growth in direct finance, agriculture, and non-agriculture points towards continuation of the momentum of the mass banking. The figure noted a slow and insignificant growth for loan accounts pertaining to indirect

finance. Obviously, continuance of the double digit growth in overall agriculture and direct finance was an outcome of the steps[3] initiated by the RBI and government.

Figure 5.2: CAGR of accounts of SCBs: national



	1972-80	1981-91	1992-04	2005-11	1972-91	1992-11
Agri_acc	29.1	10.0	-2.6	9.9	17.8	2.9
DF_acc	29.6	10.2	-2.7	9.4	18.2	2.8
Indfin_acc	20.9	1.8	2.7	23.0	6.6	7.9
Non agril_acc	16.2	13.2	0.9	6.9	14.2	4.8
GBC	21.2	11.7	-0.5	8.0	15.6	4.1

Source: Calculated from BSR various issues -RBI

Interestingly, high growth in agriculture accounts during the second sub period was largely driven by direct finance. This result has also been validated by many studies which argue that outreach of agriculture sector was qualitatively better in this period, as SCBs emphasised on the decentralised credit planning and micro-management. The studies also report that increase in banking outreach to the bottom pyramid of the farmers in backward areas (Dev, 2012; Burgess and Pande, 2002; EPWRF, 2008; Ramkumar, 2014).

During the third sub period (1992-93 to 2003-04), there was not only loss of momentum in growth of the agriculture accounts created during the social banking, but also negative growth in agriculture accounts particularly in direct finance to the farmers for distinctly longer periods (Figure 5.2). Moreover, decline in growth of loan accounts of the SCBs was recorded across the board, but it was more severe for the agriculture sector than that of the non-agriculture sector (Figure 5.2). Within

[3] In the second phase of social banking the public sector banks shifted their orientations from macro targeting to the micro-management and selective expansions and focussed on the sectors and areas which were left out in the first phase. The major steps in improving the outreach and depth includes; nationalisation of six private banks in 1980, creations of NABARD as an apex institutions for monitoring of agriculture and rural credit in 1982, bank-credit linked self-employment generation programmes like IRDP and NREP, introduction of Service area approach (SAA), strict monitoring of the `weaker sections` and agriculture loan target in the priority sectors, differential interest rates, enhanced provisions for the credit and other subsidies to the deprived sections etc.

agriculture, it was direct finance loan account which suffered most out of banking reform (Appendix 5A). Surprisingly, annual growth of the loan account of indirect finance to agriculture during this period was not only positive and significant, but it was also distinctly higher than the growth of non-agriculture accounts and also the total loan accounts of the SCBs. Besides, noteworthy compositional change in agriculture account is also recorded during intense reform on accounts of asymmetric change in direct and indirect finance. This trend also shows the attitudes and methods of the bankers towards agriculture financing during intense reform. The growth of indirect finance to agriculture loans accounts also coincided with the urban orientation of the branches of the SCBs. This could have been one of the reasons which called for RBI's intervention in the pattern in distribution of bank loans.

In Annual Policy Review in 1995, RBI expressed its concern on declining exposure of the banks in agriculture financing. It also issued advisory to the public sector banks for increase in their participation in agriculture financing but the present analysis suggests that this advice was not seriously taken by the banks. In fact, farmers' outreach in commercial banks kept on declining both in absolute and relative terms between 1995 and 2001 (Figure 5.2). The issue of financing of agriculture through banks which was forgotten all the 10 years of banking reform period came into limelight when government announced National Agriculture Policy (NAP[4]) in 2000. As per policy statement, "emphasis has been laid on progressive institutionalisation for providing timely and adequate credit to farmers for increasing agriculture production and productivity. The flow of institutional credit for agriculture and allied activities has increased from Rs.31956 crore in 1997-98 to about Rs.75000 crore in 2002-03. The total credit flow from all agencies during the 9th Plan is estimated to be Rs.233700 crore marking an increase of Rs.4000 crore over the target. The total credit flow during the 10th Plan has been projected at Rs.736570 crore". To achieve the 4% target of agriculture growth, a State Level Bankers Committee was formed which was empowered to prepare a roadmap for financing of the agriculture and allied sectors through multi-agency approach at disaggregate level. Subsequently, many committees and commissions were appointed to devise the modalities that could make 4% annual

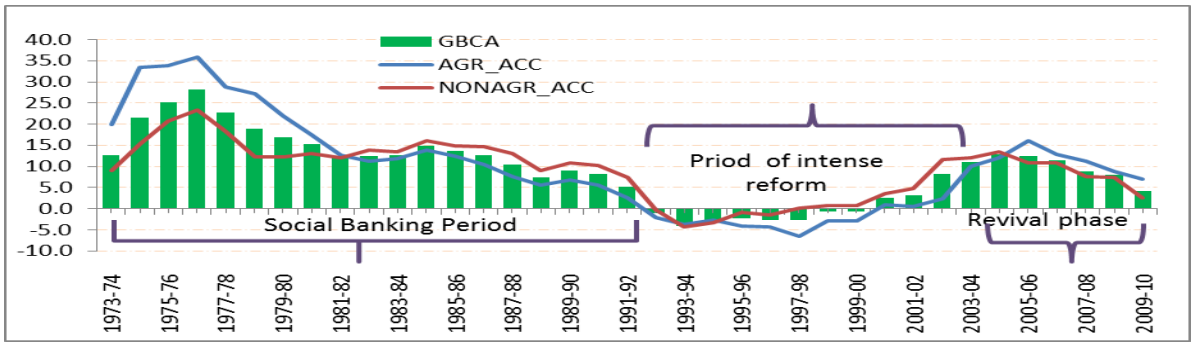
[4] National Agriculture Policy (NAP) was announced on 28th July, 2000 with stated objective of actualise vast untapped growth potential of Indian Agriculture, strengthen rural infrastructure to support faster agricultural development, promote value addition, accelerate the growth of agro-business create employment in rural areas, secure affair standard of living for the farmers and agricultural workers and their families, discourage migration to urban areas and face the challenges arising out of economic liberalization and globalization over the next two decades, The NAP was aimed at achieving more than 4% growth through efficient use of resources through conservation of soil water biodiversity. The policy decided that agriculture growth must widespread across regions and famers and should be sustainable technologically, environmentally and economically (GOI 2000)

growth of agriculture and allied sector target achievable and could also provide a strong foundation for agriculture growth in medium and long run. Besides existing schemes, schemes like Kissan Credit Card (Farmers Credit Card Scheme), National Agriculture Insurance Plan (NAIP), Lead bank were restructured to make them effective.

Certainly, steps during financial inclusion drive succeeded not only in arresting the negative trend growth of agriculture accounts (-2.6% during 1992-04), but also gave an impetus to widening and deepening of the agriculture loans as in fourth sub period (2005-12). The annual growth of overall agriculture, direct finance (9.4%), indirect finance (23.4%) loan accounts were distinctively higher than that of the growth of non-agriculture (6.9%) and overall loan accounts of the SCBs (Figure 5.2).

Figure 5.3 shows trends in variability of the agriculture and non-agriculture accounts of SCBs from 1972 to 2011 (3 year annual average of loan accounts). The figure shows that period of social banking regime was not only characterised by high agriculture and non-agriculture accounts growth, but it was also accompanied by remarkable high variability. A different trend were observed during the intense reform period especially between 1992-93 and 1997-98, when agriculture and non-agriculture both sector witnessed a negative trend growth of loan accounts. But figure points that early recovery was observed in latter than former. The figure also points towards a shifting of balance in favour of agriculture till the 2008 but pace of outreach of agriculture and non-agriculture both have started declining thereafter (Figure 5.3).

Figure 5.3: Annual growth (Y-o-Y) of agriculture account of SCBs



Source: Calculated from BSR various issue (RBI)

Coefficient of variation (CV) has widely been used in research for estimation of the variability in time series data and is also a popular measure of dispersion. This study also measures variability in different variables and the results are presented in Appendix Table 5A. Many studies in the recent past have questioned the efficacy of CV as a measure of dispersion. These studies argue that CV often overestimates the level of instability in long-run (Weber and Sievers, 1985; Singh and Byerlee, 1990; Heiko Hansen, 2007) and suggest use of instability index developed by Cuddy and

Della Valle (1978:82) as an alternative to measures of dispersion in long term time series. Thus present study also estimates Cuddy and Della Valle (1978) instability index for agriculture and non-agriculture accounts across the regimes. This index corrects the CV when observations are scattered around a positive or negative trend line. The Cuddy-Della Valle instability index (I) is estimated through the following formula:

$$I^* = CV * \sqrt{(1 - \overline{R}^2)}$$

Where;

I= Instability Index

CV = Coefficient of Variation (Ratio of standard deviation to its mean),

$\overline{R}^2$ = Coefficient of Determination (Adjusted coefficient of determination of the trend regression which best fits the time series).

Table 5.2: Growth[5] and instability Index of SCB accounts (1972-2011)

		AGRI_AC	DFF_AC	INDF_AC	GBC_AC
Phase I	**Intercept**	15.4	15.3	12.6	15.8
	Growth rate	25.7	26.2	19.0	18.8
1972-80	Instability Index	18.9	19.5	11.6	13.3
Phase II	**Intercept**	15.4	15.3	12.6	15.8
	Growth rate	8.7	9.3	1.5#	10.7
1981-91	Instability Index	2.9	3.1	2.7	3.0
Phase	**Intercept**	17.3	17.3	11.6	17.6
III	Growth rate	-1.26*	-1.48*	4.67*	1.10*
	Instability Index	6.3	5.9	30.2	8.2
Phase IV	**Intercept**	13.7	14.3	6.3	15.9
	Growth rate	10.0	8.2	20.0	6.8
2005-11	Instability Index	2.7	0.8	36.2	3.9
Overall	**Intercept**	15.1	15.1	12.0	15.9
	Growth rate	6.8	6.8	4.1	7.2
1972-11	Instability Index	13.8	14.0	29.5	8.9

Note - # indicates significant coefficient above 10% level of significance while * indicates significant at 5% level.

Source: Authors own Calculation from BSR (RBI)

Table 5.2 provides the summary of the instability index and growth (CAGR) of the variables as defined below. The table indicates significant difference in pattern of growth and instability across variables and also over the sub periods. As evident from the table, higher growth was accompanied by larger instability in agriculture accounts than those of non-agriculture and overall accounts during first sub period while growth rate and instability both were lower in second sub period. The table further

[5] $\ln Y_{t^*} = \alpha + \beta_{t^*} + \mu_t$; where Y^{t*} represents, = number of accounts, and t – represents no of years included in above defined sub-periods.

show negative growth and lower instability for direct finance (DFF_ACC) during third sub period. In fourth sub period high growth in agriculture accounts was noticed but it was mainly driven by indirect finance. Besides higher instability is also experienced during financial inclusion drive (Table 5.2)

5.3 Credit Depth (SCBs) of the agriculture sector: National scenario

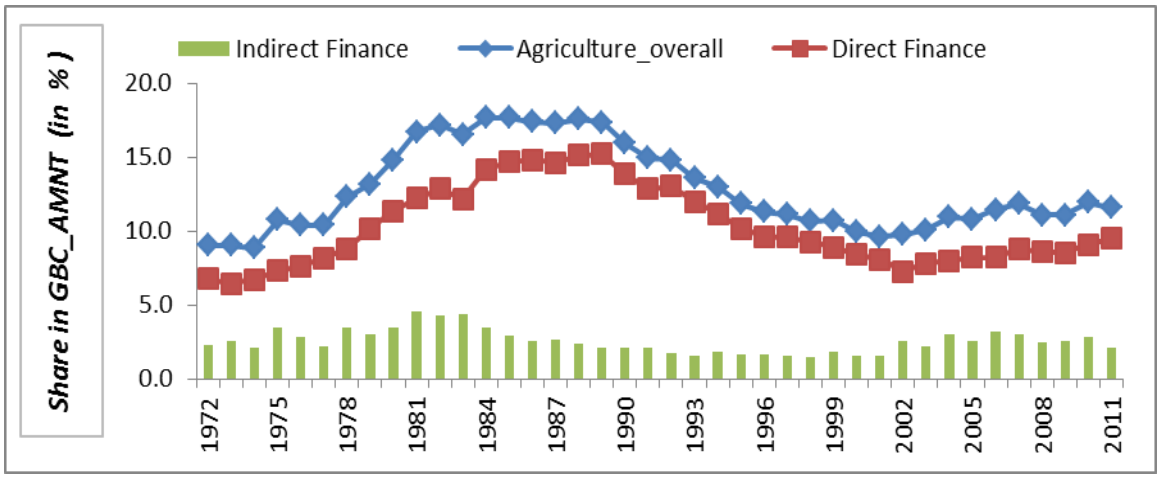
The farmers' enhanced access to bank loan is not perceived as an alternative of source of finance but it is believed that this enhanced access to loan enlarges the choices of the farmers in selecting right mix of inputs use for the crops of their choices (Dev 2012). But mere access to banks will not help farmers much unless they are provided sufficient loan at affordable terms. As already discussed, despite having bank account in banks, agriculture households in many countries did not use them for a variety of reasons (Beck et al, 2007). The resent section, analyses trend in relative flow of bank loan amount to the agriculture sector in aforesaid regimes for the period between 1971-72 and 2010-12.

The sectoral credit depth has been measured in terms of the shares of overall agriculture, direct finance to farmers, indirect finance to agriculture and non-agriculture in total outstanding[6] loans amounts of the SCBs. Figure 5.4 shows a notable variation in agriculture and its sub components as well for non-agriculture across the sub regimes. For instance, the share of agriculture in total advances of the SCB which was less than 3% in year 1969 almost tripled in three years after nationalisation (i.e., 9% in 1972). Within agriculture the respective shares of direct and indirect finance were about 75% and 24% in 1972. In subsequent years contribution of agriculture in outstanding amount increased during the social banking regime but change was inconsistent across the sub regimes. For instance, the share of agriculture hovered around 9% during 1972 -74 then it increased to 10.8% in 1975 and remained almost stable between 1975 and 1977. RBI guidelines of 1977 regarding branches (1:4 formulae was introduced) gave an impetus to rise in share of the agriculture sector at national level and helped in achieving its peak (17.7%) in 1984. Between 1984 and 1989 the share of agriculture did not change much (Figure 5.4).

[6] Outstanding credit amount reported in BSR are cumulative figures. The annual disbursement of the credit would have been a better indicator in this regards. But, due to non-availability of systematic data on disbursement and utilization credit by occupation and duration, the only available choice was to use this as a proxy both for nominal and real amounts (deflated by WPI).

It is worth noting that while banking reforms were technically initiated in 1992, the contribution of agriculture in outstanding loan of the SCBs started declining three years ahead of the reforms (Figure 5.4). Figure further show a steeper decline in the share of agriculture during reform and country witnessed historically lowest share in 2001. Akin to trend in account, this figure shows that decelerating trends in amount was also arrested after 2001. But, unlike trend in account, country did not observe any remarkable turnaround in the share of agriculture in total outstanding loan of the SCBs. The share of agriculture in outstanding loans was 11.7% at the end of March, 2012[7]. This was 2% above the bottom level of 2001, but was about 3% lower than the level at the beginning of the economic reforms (Figure 5.4).

Figure 5.4: Share of agriculture in outstanding amount of SCBs



Source: Authors' own calculation from BSR (Various issue-RBI)

The trend in contribution of agriculture and its sub components in incremental outstanding amounts of the SCB in different regimes from the time period 1972 to 2012 is presented in table 5.3.

[7] At the end of March 2012, total outstanding amount in SCB was Rs 48032669 million, in which agriculture sector's contribution was Rs. 5619348.7 million or say (11.7%). At the same time, the contribution of Direct and Indirect finance in outstanding agriculture amount was Rs 4686777.6 million (83.4%) and Rs 932571.1 million (16.6%) respectively.

Table 5.3: Distribution of incremental outstanding loan across the broad occupation categories

Incremental Outstanding loan amount (in Rs crore)										
Period	**AGRI**		**DFF**		**INDFA**		**NONAGRI**		**OVERALL**	
	Amnt	Share	Amnt	Share	Amnt	Share	Amnt	Share	Amnt	Share
1972-80	6791	18.4	5264	14.3	1527	4.1	30087	81.6	36878	100.0
1981-92	15094	13.2	13917	12.2	1177	1.0	99012	86.8	114106	100.0
1993-01	8033	4.4	6225	3.4	1808	1.0	174830	95.6	182863	100.0
2002-12	166256	11.1	138488	9.2	27768	1.9	1332239	88.9	1498496	100.0
Outstanding incremental loan account (in million)										
	AGRI		DFF		INDFA		NONAGRI		OVERALL	
Period	Acc	Share	Acc	Share	Acc	Share	Acc	Share	Acc	Share
1972-80	7.6	55.8	7.3	53.5	0.3	2.2	6.1	44.2	13.7	100.0
1981-92	18.2	41.6	18.2	41.4	0.1	0.1	25.7	58.4	43.9	100.0
1993-01	-7.4	77.1	-7.2	75.3	-0.2	1.9	-2.2	22.9	-9.6	100.0
2002-12	32.0	40.7	29.8	38.0	2.2	2.8	46.6	59.3	78.5	100.0

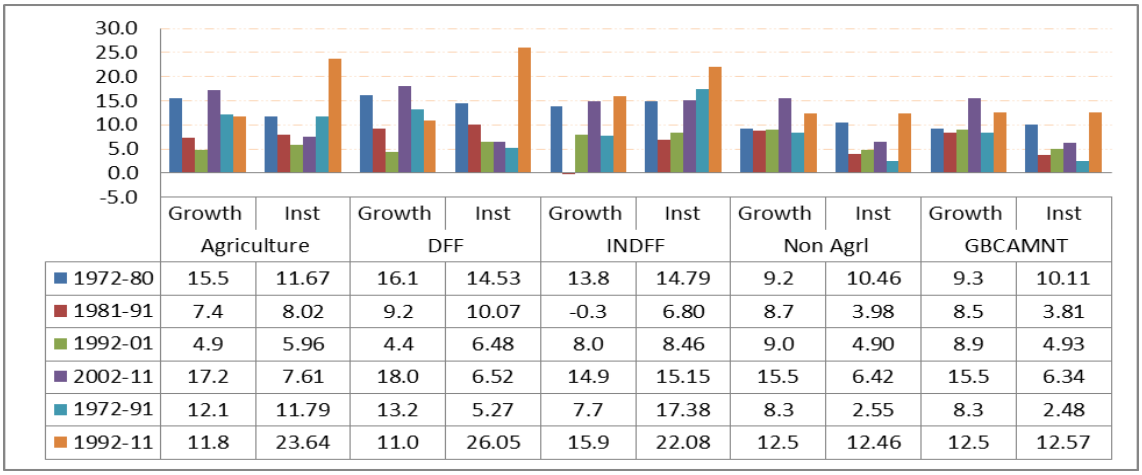
Source: Authors own calculation from BSR

The table indicates a significant increase in the amount delivered to agriculture by the SCBs both as proportion of total outstanding amount as well as in absolute terms. For instance, of the total incremental outstanding loans (` 36878 crore), about 18.4% was claimed by the agriculture sector during 1972-80. Out of total disbursement to agriculture the proportion of the direct and indirect finance in incremental agriculture loans was 3.4:1. It is also observed from the table that real agriculture sector increased by more than 200% during 1981-91 in comparison to the outstanding loans of the first sub period. Due to larger disbursement in favour of direct finance, the ratio between direct and indirect finance became 1.2:1 during second sub period.

In the third sub period, the contribution of agriculture in total incremental loans amount declined to 4.4%. Further, the amount delivered in the form of indirect loan within agriculture loan was about twenty two fold higher than the amount delivered in second sub period, while increase for direct finance was about 1.3 times only. This led to change in the ratio of direct and indirect finance which became 3.4:1 during this phase. During 2005-12 the country witnessed a massive revival in flow of agriculture loans as this sector witnessed more than six fold increase in real outstanding loan amount of the SCBs (about 661% increase) in comparison to the third sub period. Besides, a remarkable compositional change is also being observed when the ratio of direct finance to indirect finance improved to 1: 7.3 in fourth phase.

Figure 5.5 and Appendix Table 5C describe combined trend in growth and instability index[8] of agriculture (direct and indirect), non-agriculture and overall loan of the SCBs across the aforementioned four sub periods. There were remarkable variations in growth rates and there were also diverse patterns in instability across the variables in different regimes (Figure 5.5). In first sub-period, like trends in accounts, a double digit growth was also observed in loan amount (15.7%) for agriculture sector which was driven by remarkably high growth in loans in direct (16.1%) and commensurate increase in indirect finance (13.1%). Moreover, the growth of real outstanding amount of agricultural loan remained higher than non-agriculture loan and overall outstanding advances in first sub period (1972-80). Certainly, during the second sub period, the growth moderated across the sectors, but agriculture sector maintained its numerical superiority over non-agriculture. Surprisingly, growths rate of amounts of indirect finance was not only negative but it was statistically insignificant (-0.5% per annum).

Figure 5.5: Growth & instability in amounts of SCBs



	Growth	Inst	Growth	Inst	Growth	Inst	Growth	Inst	Growth	Inst
	Agriculture		DFF		INDFF		Non Agrl		GBCAMNT	
1972-80	15.5	11.67	16.1	14.53	13.8	14.79	9.2	10.46	9.3	10.11
1981-91	7.4	8.02	9.2	10.07	-0.3	6.80	8.7	3.98	8.5	3.81
1992-01	4.9	5.96	4.4	6.48	8.0	8.46	9.0	4.90	8.9	4.93
2002-11	17.2	7.61	18.0	6.52	14.9	15.15	15.5	6.42	15.5	6.34
1972-91	12.1	11.79	13.2	5.27	7.7	17.38	8.3	2.55	8.3	2.48
1992-11	11.8	23.64	11.0	26.05	15.9	22.08	12.5	12.46	12.5	12.57

Source: Authors own calculation from BSR (RBI; various issues)

Unlike trends in accounts, the growth of real loan amount of the SCBs was positive. The growth momentum in loan amount during the third sub period was largely driven by the non-agriculture sector than that of the agriculture. Besides, bankers preferred indirect finance to meet the stipulated agriculture loan targets because country witnessed a remarkably higher growth for indirect finance and slower growth in direct finance. Noticeably, this was the regime when country observed massive decline in the growth of direct finance accounts and increase in indirect finance accounts. Thus, growth pattern in disbursement of bank loans was not only accompanied by sectoral

[8]The Cuddy-Della Valle Index (I) of the outstanding amounts delivered by SCB`s.

imbalance, but remarkable imbalance was also found within the agricultural loan disbursement. Further, a relatively higher instability in agriculture and its sub components is reported in comparison to the amount disbursed to non-agriculture (Figure 5.5).

In the fourth phase, the country not only witnessed a high growth rate in agriculture loan amount (17.2%), but annual growth in agricultural loan was also higher than the non-agricultural loan. Figure 5.5 further points towards the correction of imbalances of the third phase, as higher advances were extended in the form of direct finance (18%) than that of the indirect finance. This period also recorded greater instability in indirect finance than direct finance. The pattern in distribution of the real amount suggests higher growth and lower instability in pre reform (social banking period) while lower growth and higher instability during reform.

There exists differences in opinions regarding correspondence between growth and extend of instability. Nonetheless, a certain degree of instability with high growth (positive) is regarded as a good measure of development, but in a sliding growth situation, high instability isn't treated well ((Mohapatra, 2012). The table shows a high growth rate and high instability in direct finance in outstanding amount during social banking regime and contrasting trends were recorded during the reform period. The high instability in agriculture and direct finance in loan amount could be partially attributed to enhanced flow and also partially to the smaller base in 1972. The substantial growth in direct finance accounts accompanied by the substantially higher growth in loan amount eventually indicates the widening and deepening of bank loans to agriculturists during social banking regime. But, diverse trend in the rate of growth in account and amount to direct finance points towards deepening of the existing loan accounts without widening during the intense reform. Many economists also term this period of intense reform as the period of 'lazy banking', 'fear banking' and high street banking where poor and disadvantaged were given lower priority for the 'window dressing of the balance sheet' by the banks. However, studies show that credit delivered by SCBs in the form of direct finance were far more effective than that of the loans delivered in the form of indirect finance particularly for the prospective of growth, inclusion and equity. This was prominent reason behind putting cap on indirect lending for agriculture in priority sector during reform period. Higher advances in the form of direct finance was preferred by the policymakers during

social banking regime because it empowers farmers in deciding the right mix of input use and other expenditure on farms. The disbursement in the form of indirect finance is akin to increasing public investment in agriculture which is accessed by all farmers irrespective of the size of holding, income and extent of the deficit of the households. In a situation of weak monitoring, loans obtained from the banks in form of indirect finance have also been subjected to greater (possibility of) leakage and diversion (EPWRF 2008, Rawal 2005; Shetty 2005).

Conclusions: The following facts have emerged from the analysis of the national level data:

- During the first decade of the social banking regime (1972-80), rapid growth in agriculture amount was accompanied by matching account growth which indicates a closer coordination between widening and deepening.
- During second phase, (1981 -1992), although growth rates moderated for both agriculture accounts and amounts as decline in base effect but this period too witnessed sustenance of the widening and deepening of agriculture accounts. In both sub periods, direct finance dominated in outstanding loans to agriculture than indirect finance.
- In the third sub period (1992-04), the pattern of disbursement of agriculture loan was different from that of social banking regime. Pertinently, banker's focus not only shifted from agriculture to non-agriculture, but major shift was also observed from direct to indirect finance within agriculture both in loan accounts and amounts. Besides, owing to higher growth in the number of accounts and outstanding amounts to indirect finance led to compositional change in outstanding agricultural loans. These changes show how commercial banks used their undue discretion in selecting the borrowers while advancing the agriculture loans. This also points how bankers managed agriculture sector loan target under priority sector lending.
- Although the present study recorded a massive improvement in the flow of the agricultural loan during 2005-12, but like previous regimes the balance continued to be tilted in favour of indirect finance especially in terms of accounts. Certainly, enhanced flow of loan by the banks to the agriculture sector is a good signal for the sector because, it not only improves farmers' expenditure on the inputs and other capital, but also improves demand and

supply of the sectors related to agriculture through direct and indirect linkages thereby leading to growth and prosperity in the rural economy. Unfortunately, studies show that such enhanced flow of loan in the country did not catalyse the pace of private investment in agriculture and output (Dev 2012; EPWRF 2008). Thus, pertinent question arises why credit output; or credit and investment relationship remained weak during this period. Whether asymmetric flow in agriculture loans across the states and in favour of indirect finance were responsible for the slower response to the agricultural output. There is plethora of studies which show that disproportionate allocation of loan in the form of indirect finance has been subjected to greater diversion from agriculture to non-agriculture purposes (EPWRF 2008; GOI 1998; Mohan 2004). The disproportionate allocation in the form of indirect finance is neither regarded well for the prospective of the agriculture growth, nor from the point of the equity. Besides, studies have shown that bank loan obtained by the non- farmers in the name of investing in agriculture infrastructure and research and development were largely diverted to the non-agriculture activities outsides the rural centres on the one hand and they also misused it for the purpose of the moneylending to the poor peasants (Rawal 2005).

As discussed in spite of availability the demand for agricultural loan depends on cost of credit, cropping pattern, land tenure system etc., which remarkably vary in states. The next section analyses pattern in supply of agriculture loan across the states, state groups during 1979-80 and 2011-2012 in aforementioned three regimes.

5.4 Agriculture sector's outreach to the SCBs- regional and interstates scenario

This section investigates trend in agricultural loan across the state-group and in major states[9]. Unlike trends in national level, present section divides study period (1979-80 and 2011-12) into three sub period. The sub period I (from 1979-80 to 1991-92) represents social banking regime while period II (1992-93 and 2003-04) embodies intense reform while period III (2004-05 and 2011-12) represents revival phase of agricultural credit or financial inclusion drive. Noticeably, in previous chapter the country witnessed steep decline in rural branches, decline in number personnel working in majority of the states during intense reform period and modest revival during the inclusion drive. Despite, modest revival in banking infrastructure, country witnesses remarkable growth agricultural loans (both in accounts and amount) during 2004-12. In light of the above trends, following pertinent questions have been addressed in this section:

- Has there been any trend break in the distribution of agriculture credit across the sample states?
- Was agricultural credit delivered by the banks uniformly distributed in the sample states?
- Was there any convergence in the interstate disparity in parameters such as operational holdings, operated areas?
- Did urban orientation of banking during reforms have any impact on interstate disparities in agriculture credit?

The following indicators have been employed to study our objective

- State's credit outreach (X_i), defined as the share of i^{th} state in total agriculture outstanding accounts of the SCBs.
- State`s credit depth (Y_i), measured as a share of state i^{th} state in total outstanding agriculture amount of the SCBs.
- Growth differential of agriculture vis-à-vis non agriculture accounts and amounts across the states and over the different sub periods.
- In addition to absolute growth in agriculture account, the data have been normalised in terms of number of operational holdings and agriculture households. Similarly, the amount data have been normalised by the operated holdings.

[9] Major Indian states includes in analysis are; 1-Andhra Pradesh, 2-Assam, 3-Bihar including Jharkhand, 4-Gujrat, 5-Haryana, 6-Himachal Pradesh, 7-Jammu & Kashmir, 8-Karnataka, 9-Kerala, 10-Madhya Pradesh inclusive of Chhattisgarh), 11-Maharastra, 12-Orissa, 13-Punjab, 14 Rajasthan, 15-Tamilnadu, 16-Uttar Pradesh including Uttarakhand , 17-West Bengal. These states constituted about 95% of land holdings and the operated areas; 95% of the agriculture value added, and about 95% of the branches, more than 90% share in agriculture accounts and similar share in outstanding amounts of the SCBs in 1980.)

As already mentioned India inherited a dichotomous banking infrastructure from her colonial past. Despite cooperative experiment and rural orientation of the branches of the SBI and its associates, agriculture sector remained to be a neglected sector in bank loans until the time bank nationalisation in 1969. The banking sector's bias towards agriculture sector (both in account and amount) began to change when supply leading approach accompanied being the largest economic activity in catchment areas of newly opened branch of public sector banks in 'unbanked and under-banked' areas became default beneficiary of the supply leading approach pursued after bank nationalisation

Beside other objectives, reducing sector imbalance in bank loan across the region and state was a major concern in the minds of the policy makers at the time of the bank nationalisations (Rangarajan, 1996). On account of the bank nationalisation, chapter 4 noticed a faster decline in regional and interstate inequality in access and use of the bank credit on account of relatively faster expansion of banking infrastructure in backward region. Despite, efforts of social banking, relative representation of the agriculture sector in banks was not only low but country witnessed remarkable interstate variation even a decade latter to bank nationalisation (Table 5.4).

Pattern in shift of the agriculture sectors' relative exposer in banks under different regulatory regimes has been measured through relative banking outreach and credit depth. The states' outreach has been estimated through the formula as follows:

$$\text{State's relative Outreach} = \frac{\text{Average number of agriculture accounts in ith state/region in period t}}{\text{Average of the outstanding agriculture accounts of the SCB in period t}}$$

$$\text{State's relative credit depth} = \frac{\text{Average agricultureamount in ith state/region in period t}}{\text{Average of the outstanding agriculture amount of the SCB in period t}}$$

Table 5 shows pattern in agriculture sector outreach of the states during 1979-80 and 2011-12. The table noticed favour for southern group and disfavour for backward and poor states. The former group claimed disproportionate share in; agriculture accounts, outstanding amount, branches of the SCBs than the latter. Pertinently, the combined share of four southern states (southern group) in agriculture accounts, outstanding amount, and branches of the SCB were 48.5%, 34.6% and 31.1% respectively; despite , their lower contribution in agriculture population/holdings, operated and geographical area of country in 1980. Table 5.4A shows changes in share of state group in total branches, agriculture account, and outstanding amount during 1979-80 and 2011-12. The five year annual average of non- overlapping years has been

considered to avoid the short term fluctuations and outlier effect. Like previous chapter, states are divided into the five regions[10]. In concurrence of the methodology of the previous chapter, out of the seven states of Northeastern region Assam was considered in group of the backward states. Similarly, West Bengal, Bihar, Orissa as per BSR classification are categorised in eastern region but they are also put in backward groups. Nonetheless, state of Uttar Pradesh although qualify to be the poor and backward states, but owing to it contribution in population and other parameters of agriculture loans and also to avoid outlier impact; it has been considered as a separate group. The groups are as defined as follows

1. Southern- includes Andhra Pradesh, Karnataka, Kerala, and Tamilnadu;
2. Backward- includes Assam, Bihar including Jharkhand, Himachal Pradesh, Jammu & Kashmir Madhya Pradesh inclusive of Chhattisgarh), Orissa, Rajasthan, West Bengal;
3. Agriculturally Developed States (ADS) -includes Punjab and Haryana
4. Industrialized States (IS) -consist of the states like Maharashtra and Gujarat
5. UP includes Uttar Pradesh inclusive of Uttarakhand.

The first two sub-periods depicted in figure 5.7 exhibits changes during the social banking regime while later periods show changes during reform. It is worth noting that is huge diversity across states as well as within the groups. The clubbing has been done on the basis of the geographical location, branch intensity (APSBO), composition of the Net State Domestic Product, status of banking infrastructure and other parameters during 1980-81. The purpose of grouping is to assess the change in the regional[11] biasness in outreach and credit depth across the regimes.

Table 5.3A shows change in group outreach[12] in pre and post reform period. The table noted not only asymmetric distribution but also finds that change in group outreach

[10] States clubbed in group are characteristically different from each-others. Despite, change in share of individual states in agriculture accounts and amount of the SCB, number of operational holding, operated area, and agriculture value added cumulative share of these states in aforesaid parameters did not change much in last three and half decade (summarised from the appendix tables 5.4A, and 5.4)

[11] In June 1980, the contribution of the southern group in total number of operational holdings (OH) was about 24.4% while its share in agriculture loan account was 48.5%. Similarly its share in total operated areas of the country (OA) was about 21.1% while this group claimed about 34.6% in outstanding agriculture credit amount the SCBs. By contrast, the combined share of eleven backward states having about 39.9 % share in OH, and 41.9 in OA claimed much less share in agriculture loan accounts(26.2 %), and outstanding amount (22.0%). The agriculturally developed states (ADS) also claimed disproportionate share in banks loans. The share of ADS in OH and OA were 2.1% and 4.2% while they claimed about 4.3% and 12.1% in account and amount. (See Appendix table 5.4A for state wise contribution in number of Operational Holdings and Operated area)

[12] Defined outreach of the i^{th} group of states at time t = total number of agriculture credit accounts of the i^{th} group/sum of the total agriculture accounts of the groups. Where i=1,2,3,4,5 includes five broad group of states. The higher value signifies better outreach for the group and vice a versa. Similarly, increase value of outreach for a group overtime indicates an improvement and otherwise, impairment for the group.

over the years were asymmetric. For example, outreach gap between southern and backward states during 1980-85 was 18.7 which declined to 12.1% during 1986-91. This decline (6.1%) was an outcome of 4.2% decline in outreach of the southern states and also on account of the 2.1% increase in the backward states. Not only backward groups noted increase in their outreach and higher growth, but improvement was also recorded for the Industrialised States (IS), Uttar Pradesh, and Agriculturally Developed States. Diversification in shares and convergence in intergroup disparity was noted during social banking regime as depicted by lower HHI (Table 5.3A).

Table 5.3A: Trends in 'group outreach' (1980-2011) : agriculture

	1980-85		1986-91		1992-97		1998-04		2005-12	
	Share	**growth**	**Share**	**Growth**	**Share**	**Growth**	**Share**	**Growth**	**Share**	**Growth**
Southern	46.8	11.4	42.5	6.5	39.9	-2.6	43.2	1.2	45.7	12.4
Backward	28.1	15.1	30.2	9.6	31.1	-3.4	25.7	-2.9	24.7	12.2
ADS	5.2	18.6	5.4	8.3	4.6	-5.6	5.0	1.9	4.4	8.3
UP	10.9	13.6	12.0	12.7	13.4	-3.1	14.8	2.4	15.5	9.7
IS	9.1	15.7	9.9	10.5	11.1	-1.4	10.4	-4.1	9.7	16.1
HHI & CV	**0.320**	**86.9***	**0.299**	**78.7***	**0.288**	**74.2***	**0.288**	**76.6***	**0.305**	**81.4***
Overall	100.0	13.1	100.0	8.6	100.0	-3.1	99.1	-0.4	0.3	11.7

Note -* denotes Coefficient of varaition computed from the abolsute accounts of the Groups

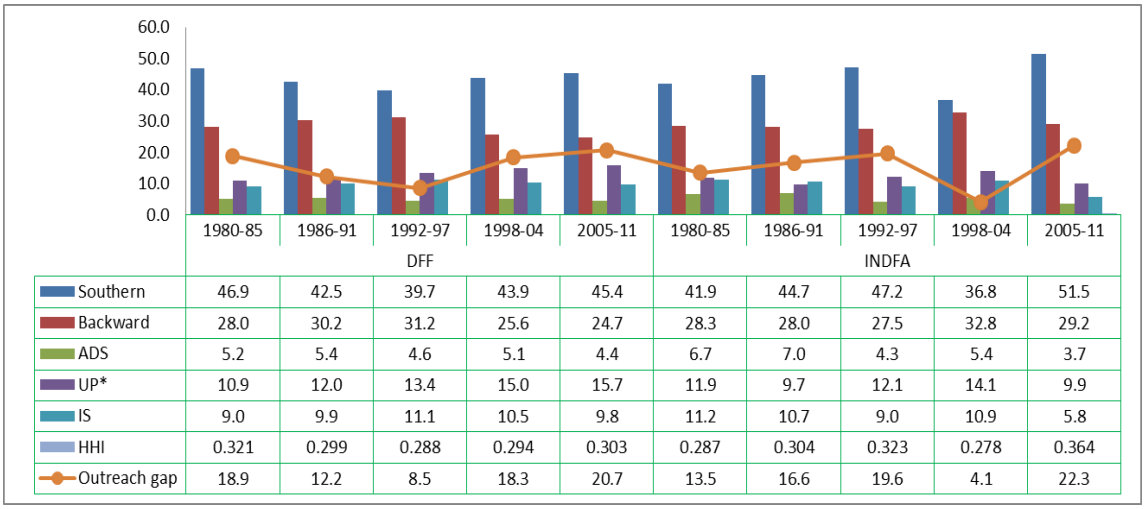
Source: Author's own calculation from BSR (RBI various Issues)

Group inequality converged during 1992-97on account of the negative growth in agricultural accounts (which was highest for ADS followed by backward states). Despite decline in account growth, outreach improved for the states like Uttar Pradesh and industrialised group. During 1998-04, deceleration in share and growth of the agriculture accounts continued in the backward regions and industrialised States, but rest of the groups noted positive growth and better outreach. The uneven growth at different magnitudes led to marked deviations in inter-group disparity in outreach. For example, the outreach gap between southern and backward states which narrowed during 1980-97 zoomed to 17.5% during 1998-04 and further zoomed to 21% during 2005-12. From the social banking regime experience, policy makers learned that selective expansion of the branches and aggressive lending to the agricultural sector not only improves the farmer's outreach to the commercial banks, but also corrects the regional bias. The financial inclusion drive undoubtedly helped in massive expansion of agriculture accounts across the group, but non-intervention of the states in agriculture accounts led to rise in outreach gap and concentration. Uttar Pradesh

was an exception to this which observed rise in outreach in both pre as well as post reform periods (Table 5.3A).

Figure 5.6 displays trends in group outreach of direct and indirect finance separately from 1979-80 to 2001-11. The figure reaffirms the dominance of the southern group outreach in both direct and indirect finance; however, there was no uniform

Figure 5.6: Trend in "Group Outreach" of direct and indirect finance

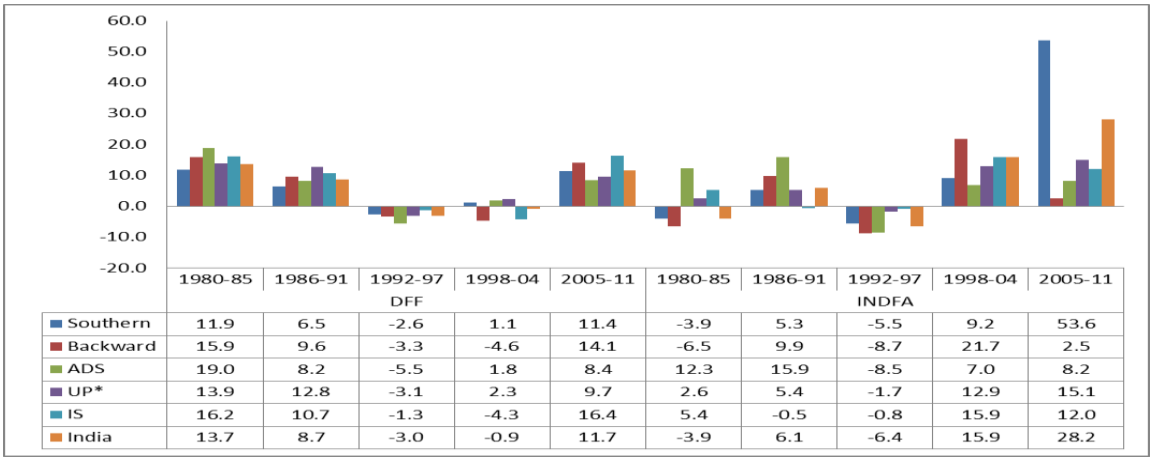


	1980-85	1986-91	1992-97	1998-04	2005-11	1980-85	1986-91	1992-97	1998-04	2005-11
	DFF					INDFA				
Southern	46.9	42.5	39.7	43.9	45.4	41.9	44.7	47.2	36.8	51.5
Backward	28.0	30.2	31.2	25.6	24.7	28.3	28.0	27.5	32.8	29.2
ADS	5.2	5.4	4.6	5.1	4.4	6.7	7.0	4.3	5.4	3.7
UP*	10.9	12.0	13.4	15.0	15.7	11.9	9.7	12.1	14.1	9.9
IS	9.0	9.9	11.1	10.5	9.8	11.2	10.7	9.0	10.9	5.8
HHI	0.321	0.299	0.288	0.294	0.303	0.287	0.304	0.323	0.278	0.364
Outreach gap	18.9	12.2	8.5	18.3	20.7	13.5	16.6	19.6	4.1	22.3

Source: Based on Author`s own calculations

For example, southern region which witnessed sustained decline in outreach in direct finance during 1980-97, observed an improvement in subsequent years. The trend in group outreach of direct and indirect finance also varied across the sub periods. The group outreach of indirect finance increased during 1980-97, and then declined during 1998-04. In the revival phase, improvement was reported in both the cases for the southern group.

Figure 5.7: State-group wise annual growth agriculture accounts



	1980-85	1986-91	1992-97	1998-04	2005-11	1980-85	1986-91	1992-97	1998-04	2005-11
	DFF					INDFA				
Southern	11.9	6.5	-2.6	1.1	11.4	-3.9	5.3	-5.5	9.2	53.6
Backward	15.9	9.6	-3.3	-4.6	14.1	-6.5	9.9	-8.7	21.7	2.5
ADS	19.0	8.2	-5.5	1.8	8.4	12.3	15.9	-8.5	7.0	8.2
UP*	13.9	12.8	-3.1	2.3	9.7	2.6	5.4	-1.7	12.9	15.1
IS	16.2	10.7	-1.3	-4.3	16.4	5.4	-0.5	-0.8	15.9	12.0
India	13.7	8.7	-3.0	-0.9	11.7	-3.9	6.1	-6.4	15.9	28.2

Source: Authors' own calculation

Moreover, the above defined outreach gap (outreach difference between southern and backward) was positive for both the cases, however, magnitude differed across the periods. The Herfindahl Hirschman Index (HHI) depicted in figure 5.6 displays diverse trends in inter-group inequality in both the cases, diversification for the direct finance till 1997 and concentration thereafter, while opposite trend was observed for indirect finance (Figure 5.6).

The annual growth of accounts of direct finance and indirect finance in various regulatory regimes is depicted in Figure 5.7. The findings reject the null hypothesis of uniform growth across the regions and regimes. The figure noted a notable difference in growth rates between the two variables in the same regime and also diverse trends across the regimes. The trend growth indicates the correction in the southern bias in social banking regime, especially in the direct finance, but trends were indefinite in case of indirect finance.

5.4.1 Agriculture Sector's credit depth - regional scenario

Table 5.4 displays trends in the share and growth of outstanding amount of agriculture across the aforementioned groups in both pre and post reform period. The table indicated relatively smaller regional disparity in amount in comparison to account for agriculture, direct finances and indirect finances (Table 5.3 and 5.4).

Table 5.4: Regionwise contribution in outstanding agriculture loan amount of

Region	Overall agriculture loan amount									
	1980-85		1986-91		1992-97		1998-04		2005-12	
	Share	growth	Share	Growth	Share	Growth	Share	Growth	Share	Growth
Southern	34.9	11.2	38.2	7	38.8	0.7	38.4	10.8	38	18.9
Backward	22.7	10.3	25.1	9.1	24.8	-1.4	23.2	12	23.2	17.8
ADS	16.7	36.9	12.4	-7.1	9.7	-1.8	10.5	13.3	10.4	17.9
UP*	10.5	7.5	10	11.2	11.4	-2.7	11.9	13.8	12.1	16.1
IS	15.2	7	14.2	7.1	15.3	1.8	16	12.5	16.3	16.4
HHI & CV*	0.235	49.5*	0.255	59.3*	0.258	60.2*	0.252	57.2*	0.25	56.2*
Overall	100	12.65	100	4.62	100	-0.51	100	12.25	100	17.63
Region	Direct finance to farmer amount									
	1980-85		1986-91		1992-97		1998-04		2005-12	
	Share	growth	Share	Growth	Share	Growth	Share	Growth	Share	Growth
Southern	37.1	12.3	39.2	7	39.5	1	39.4	8.8	38.2	20.2
Backward	22.8	10.7	25	9.6	24.5	-0.8	23.3	9.9	24.1	19.3
ADS	16.3	34.5	12.3	-4.6	10.2	-2.1	10.9	12.7	10.6	17.5
UP*	10.6	10.2	10.4	11.8	12.1	-2.5	13.2	13.8	13.1	15.3
IS	13.1	9.3	13	7.5	13.7	1	13.2	7.5	14	22.9
HHI & CV	0.245	54.5*	0.259	61.6*	0.26	61.3*	0.256	59.3*	0.252	57.1*
Overall	100	14.71	100	5.23	100	-0.48	100	9.58	100	19.2
Indirect Finance to Agriculture										
Region	1980-85		1986-91		1992-97		1998-04		2005-11	
	Share	Growth	Share	Growth	Share	Growth	Share	Growth	Share	Growth

Southern	26	6	32.2	8.3	33.9	-0.6	34	26	37	14.6
Backward	22.5	11	25.8	7.8	26.9	-4.5	22.3	29.2	19.8	14
ADS	18.8	60.1	12.8	-17.9	6.6	3	8.6	22.3	9.7	22.1
UP*	10	0.8	7.3	10.6	6.2	-3.2	5.8	16.5	8.1	32.8
IS	22.8	4.5	22	5.7	26.5	5.7	29.4	25.9	25.4	3.9
HHI & CV	0.215	42.9*	0.24	51.7*	0.265	64.8*	0.262	62.8*	0.257	62.6*
Overall	100	6.64	100	1.69	100	-0.07	100	26.97	100	12.23

Note - denotes coefficient of varaition of accounts of the group*
Source: computed by author from BSR data (RBI various Issues)

Like accounts, southern region dominated in amount throughout. The table shows that credit depth gap between southern and backward region tend to increase during 1980-81 and 2003-04, then moderated during the 2005-12. The table also show remarkable difference in credit depth of the three parameters. HHI index shown in table confirms concentration in amount disbursed to agriculture, direct finance and indirect finance; however prominent differences were also noted in variables across the regions and also over the sub periods (Table 5.4)

5.4.1 Agriculture sector's outreach to bank – interstate scenario

Regional analysis brings out the broad trends in flow of agricultural credit extended by the banks in pre and post reform period. The pattern in agriculture operation is remarkably different across the states, within and between the regions. The current section analyses trends and interstate disparity in agriculture outreach and across the aforementioned regimes. In concurrence with above analysis, ratio analysis, growth differential and the some other measures of inequality has been employed in this section to assess the change in different variables across the regimes. Deviating from the traditional estimation of the CAGR, present section uses the split regression (Kinked growth rates) method for estimation of the growth differential across the states in outreach and credit depth. Split regression was computed by running state-wise data of total agriculture, direct finance to farmers, and indirect finance to agriculture accounts of the SCBs for three sub periods during 1980-12. The result is summarised in Table 5.5.

The table rejects null hypothesis of uniform growth in states for aforesaid three variables in sub periods. Instead, significant growth differential in states was found in aforementioned three regimes. For instance, higher growth in agriculture, direct finance to farmer account was recorded for backward states in the first regime although notable interstate variation was also noted. The growth rate was recoded

highest for Assam at one end while Kerala at the other end. If states are ranked[13] according to growth performance in agriculture accounts, the table 5.5 shows that high performers were mostly backward states during social banking. For instance, the high growth performers in first sub period were; Assam (21.2%), Rajasthan (14.5%), Haryana (13.7%), Bihar* (13.7%), and Madhya Pradesh (13.2%). In contrast to this, slow growth performers in this regard were: Kerala (4.7%), J&K (6.4%), Himachal Pradesh (7.1%), Orissa (7.7%), Tamilnadu (8.5%), and Andhra Pradesh (8.7%). The table also reveals that growth rates were accompanied by the lower variability (Table 5.3).

Table 5.5: Growth of loan account growth- agriculture and sub components

States	1980-81 to 1991-92			1992-93 to 2003-04			2004-05 to 2010-12			1991-92 to 2010-12		
	DFF	*INDFA*	*AGR*	*DFF*	*INDFA*	*AGR*	*DFF*	*INDFA*	*AGR*	*DFF*	*INDFA*	*AGR*
AP	8.8	1.6	8.6	-0.7	-2.1	-0.8	8.9	29.6	9.3	4.3	4.7	4.3
Assam	22.0	-0.3	21.2	-9.5	2.9	-9.3	17.8	8.1	17.6	0.8	6.9	0.9
Bihar*	13.9	3.0	13.7	-8.5	13.8	-6.9	14.9	-9.2	13.9	0.7	9.1	1.0
Gujarat	12.6	4.2	12.5	-1.1	2.6	-1.0	9.1	19.1	9.2	2.8	4.6	2.8
Haryana	14.5	-2.3	13.7	-2.1	4.5	-2.0	8.6	-1.2	8.4	2.7	4.3	2.8
HP	6.9	16.4	7.1	-0.4	1.4	-0.4	10.2	10.5	10.2	4.6	3.4	4.6
J&K	5.0	18.9	6.4	-4.7	-13.6	-5.4	14.9	2.4	14.6	-1.7	-6.9	-2.1
Karnataka	12.7	4.2	12.4	-2.1	-2.6	-2.1	8.6	18.9	8.8	1.7	3.7	1.7
Kerala	4.9	-8.4	4.7	0.6	9.4	0.7	5.3	42.5	6.2	3.9	15.5	4.1
MP*	13.5	-1.1	13.2	-4.2	7.4	-4.0	9.9	3.0	9.8	1.7	5.6	1.8
Maharashtra	12.6	-0.1	12.2	-5.8	6.1	-5.5	16.6	10.4	16.5	1.3	3.2	1.3
Orissa	8.4	-3.6	7.7	-5.4	2.4	-5.2	8.9	7.4	8.8	0.5	8.1	0.6
Punjab	10.1	10.9	10.2	-0.5	4.9	-0.5	7.7	6.7	7.7	2.4	5.9	2.4
Rajasthan	14.6	6.7	14.5	-1.0	10.4	-0.8	9.7	0.5	9.5	4.0	7.6	4.0
Tamilnadu	8.6	1.5	8.5	-2.2	-0.2	-2.1	10.4	40.5	12.6	4.3	12.4	4.7
UP*	12.7	-1.2	12.3	-0.8	5.6	-0.7	7.1	13.3	7.3	4.0	6.1	4.0
West Bengal	11.7	-0.4	11.4	-6.5	1.1	-6.4	6.4	18.0	6.8	-0.9	8.2	-0.7
All India	**10.7**	**1.0**	**10.5**	**-2.7**	**2.7**	**-2.6**	**9.4**	**23.0**	**9.9**	**2.8**	**7.9**	**2.9**
Range Coefficient	0.64	2.60	0.64	-1.13	137.00	-1.16	0.54	1.55	0.48	2.17	2.60	2.62
CV	0.37	2.38	0.35	-0.94	1.93	-0.93	0.35	1.09	0.33	0.87	0.77	0.87
p10	6.14	-2.82	6.82	-7.3	-2.3	-6.6	6.82	-0.18	7.1	-	3.32	0.08
p90	14.54	13.1	14.0	-0.46	9.8	-0.46	15.58	33.96	15.36	4.3	10.42	4.42

Notes:

1. DFF-indicates CAGR of credit accounts of the direct finance to farmers;
2. INDFA indicates CAGR of credit accounts of the indirect finance.
3. AGRI_TOTAL indicates the CAGR of the overall agricultural accounts of SCBs

Source: Author's own calculation

[13] Highest growth (Annual growth above 75th percentile), High growth (Annual growth above median but less than 75th percentile), moderate growth (Annual growth less than median but above 25th percentile) and slow growing states (Annual growth less than 25th percentile)

The table noted a negative trend growth in agriculture and direct finance account in most of the states except Kerala (CAGR 0.7% per annum) in second sub period (1992-04). Amongst the states utmost erosion was recorded for the Assam, Bihar, Maharashtra and Orissa, while impact was less severe for Himachal Pradesh, Punjab, Andhra Pradesh and Uttar Pradesh. It is worth noting that growth rate of loan accounts of indirect finance remained positive in 13 states except for Andhra Pradesh, Jammu Kashmir, Karnataka and Tamilnadu (Table 5.5).

The table also shows a notably high growth in accounts for agriculture, direct finance and indirect finance in all states during revival period. During this period, six out of the seventeen states were able to achieve double digit growth. The better performing states in this regard were Assam (17.59%), Maharashtra (16.54%), J&K (14.60%), Bihar (13.91%) and Tamilnadu (12.58%). Besides, interstate disparity in growth (measured in terms of CV) was also lower during this regime (Table 5.5)

5.5 Bank credit depth of agriculture: State scenario

Table 5.6 shows trend[14] in growth rates of outstanding real loan amount delivered by SCBs to agriculture sector over the aforementioned three sub periods for the period between 1979-80 and 2011-12. The table noted positive difference between agriculture and overall outstanding loans in 11 out of 17 states in sub period. This indicates that growth of the disbursements of agriculture loan was higher than that of the non-agriculture sector during this period in these states (Table 5.6). The states which witnessed lower agriculture loan growth were Andhra Pradesh, Assam, Orissa, HP, J&K and Maharashtra during social banking regime (Table 5.6). In contrast to the trends of the social banking, not only lower growth of agriculture loan than non-agriculture was recorded in many states during 1992-04 but majority of the state also witnessed substantial decline in agriculture growth from the previous period. Besides, states like Bihar, Assam and West Bengal experienced negative growth during the reform. Further, higher variability was also recorded in agriculture sector than the non-agriculture sector during second sub period (Table 5.6). During the third phase (2004-05 to 2010-12), growth of agriculture loan revived for all the states as many of them experienced double digit growth in outstanding loan extended by the SCBs.

[14] Kinked growth rate explained in chapter1.

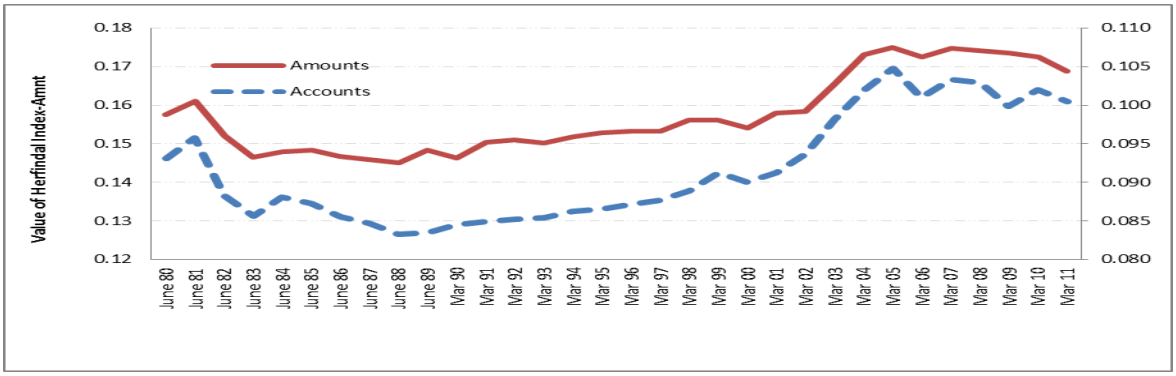
Table 5.6: Statewise growth differential between agriculture and overall amount

	Period I 1979-80 to 1991-92			Period II (1992-93 to 2003-04)			Period III (2004-05 to 2010-11)		
	Growth rate (in %)		Growth Differential	Growth rate (in %)		Growth Differential	Growth rate (In %)		Growth Differential
	Agri.	Overall		Agri.	Overall		Agri.	Overall	
1-Andhra Pradesh	8.8	10.0	-1.2	6.4	9.6	-3.2	19.3	20.3	-0.9
2-Assam	9.0	11.0	-2.0	-7.3	7.5	-14.7	21.0	13.9	7.1
3-Bihar*	9.1	6.7	2.4	-2.8	6.1	-8.9	16.2	13.2	3.0
4-Gujrat	7.7	7.3	0.4	0.4	9.6	-9.2	13.0	16.9	-3.9
5-Haryana	7.6	6.1	1.4	2.1	9.7	-7.5	16.0	20.3	-4.3
6-Himanchal	9.7	9.8	-0.1	1.5	12.5	-11.0	12.7	11.7	1.1
7-J&K	8.4	9.9	-1.4	0.8	13.0	-12.2	18.7	4.8	13.9
8-Karnataka	10.9	8.8	2.1	5.4	12.1	-6.7	11.6	10.2	1.4
9-Kerala	8.1	6.4	1.7	4.8	10.0	-5.1	22.3	11.9	10.4
10-MP*	12.1	11.4	0.7	4.6	8.9	-4.2	18.4	16.5	1.9
11-Maharastra	6.7	6.9	-0.1	5.5	12.8	-7.3	10.2	9.9	0.3
12-Orissa	9.6	11.5	-1.9	1.8	9.9	-8.1	21.2	13.3	7.9
13-Punjab	4.7	4.4	0.2	4.9	9.4	-4.6	15.1	15.6	-0.5
14-Rajsthan	9.7	7.8	1.9	5.4	10.6	-5.2	16.1	17.6	-1.5
15-Tamilnadu	9.6	8.6	0.9	1.8	10.2	-8.5	19.8	15.1	4.7
16-UP*	7.7	7.5	0.1	3.1	7.9	-4.7	14.1	13.5	0.6
17-West Bengal	8.2	5.6	2.6	-2.7	7.5	-10.2	15.0	15.2	-0.2
18- All India	**8.0**	**7.0**	**1.0**	**3.3**	**10.3**	**-7.0**	**15.5**	**15.1**	**0.4**
STDEV	1.7	2.1		3.7	2.0		3.6	3.9	
CV	0.19	0.26		1.7	0.20		0.22	0.27	

Source: Authors' own calculation

In addition to this, 11 out of 17 states reported positive growth differentials between agriculture and overall loans. Amongst the states, Jammu & Kashmir (13.9%), Kerala (10.4%), Assam (7.1%) and Tamilnadu (4.7%) were privy to most differentials. The table points that agriculture loans amount growth is being subjected to lower instability than that of the non –agriculture loan amount because the CV of former was lower than the latter (Table 5.6).

Figure 5.8: Interstate disparity (HHI) in agriculture accounts and amounts



Source: Authors' own calculation

Figure 5.8 displays pattern in interstates disparity in agriculture loan (account and amounts) delivered by SCB between 1980 and 2011. Here interstate disparity has been measured in terms of HHI. The figure shows a higher concentration in accounts than that of the amount throughout the period. Figure also depicts diversification in agriculture account and amount during 1980-90 and concentration between 1990 and 2004. Moreover figure noted decline in interstate disparities for both account and amount during the revival period (2005-11). But, the level of disparity in declining phase is still higher that the period when banking reform was started (Figure 5.8)

In order to assess the precise trends in interstate disparity, the Sigma (σ) convergence is being employed for assessing the `outreach` and 'use of agriculture loan' delivered by the SCBs across the three sub periods. Sigma convergence has been estimated for the agriculture sector and her sub components for the period between 1979-80 and 2010-11 and aforementioned sub period (The detailed methodology is discussed in chapter 3 and chapter1). This section also uses Nadhanael (2012) method for estimation of the sigma (σ) convergence for the agriculture loan accounts and amounts. As mentioned earlier (in chapter 4), a positive and significant regression coefficient points towards divergence in interstate disparity, while negative and significant coefficient implies convergence in the long run. The regressing coefficient is being estimates through Coefficient of variation (CV) of accounts and real amounts of the state as dependent variable and time as independent variable.

The dependent variables are defined as follows:

1. AGRI_ACC and AGRI_AMNT- represents overall agriculture accounts and real amounts outstanding delivered to the states by SCB;
2. DFF_ACC and DFF_AMNT: the accounts and real amounts outstanding delivered to the states by SCB`s in form of the direct finance to farmers.
3. INDFA_ACC and INDFA_AMNT: defined as accounts and real amounts outstanding delivered to the states by SCB`s in form of the indirect finance to agriculture
4. As previously defined, period 1 represents social banking regimes (1979-80 to 1991-92) while subsequent two sub periods say Period 2 (intense reform) and Period 3 (period of revival of agriculture credit) represents the liberalised regimes.

Table5.7: (σ) Sigma (σ) convergence of agricultural account and amount-interstate

Account	Period 1 (1979-80 to 1991-92)				Period 2 (1992-93 to 2003-04)				Period 3 (2004-05 to 2010-11)			
	Coeff.	*SE*	*t*	*P*	*Coeff.*	*SE*	*t*	*P*	*Coeff.*	*SE*	*t*	*P*
AGRI_ACC	-0.89	0.21	-4.34	0	1.2	0.15	8.13	0	-0.2	0.39	-0.52	0.63
DFF_ACC	-0.93	0.21	-4.38	0	1.36	0.18	7.38	0	-0.66	0.32	-2.04	0.1
INDFA_ACC	-0.18	0.54	-0.33	0.75	2.84	2.77	1.02	0.33	16.29	7.76	2.1	0.09
Amount	***Coeff.***	***SE***	***t***	***P***	***Coeff.***	***SE***	***t***	***P***	***Coeff.***	***SE***	***t***	***P***
AGRI_AMNT	-0.25	0.42	-0.59	0.57	-0.03	0.33	-0.1	0.92	-1.42	1.19	-1.19	0.26
DFF_AMNT	0.4	0.19	2.14	0.06	0.45	0.16	2.9	0.02	1.88	0.62	3.02	0.01
INDFA_AMNT	-0.14	0.45	-0.31	0.77	0.08	0.49	0.16	0.88	-5.74	1.5	-3.83	0.01

Source: Author's own calculation

The upper segment of the table 5.7 display trend in sigma convergence of agriculture direct finance and indirect finance accounts, while lower segment summarises trends in interstates disparity in loan amounts of the SCB in three sub regimes. The table shows a stronger interstate convergence for direct finance (-0.93), and overall agriculture accounts (-0.89), whereas convergence was weak (negative but insignificant coefficient) for indirect finance to agriculture during the social banking regime (1979-80 and 1991-92). In contrast to this, conclusive trend of the divergence (rise in interstate disparity) was recorded for direct finance and overall agriculture account, but for indirect finance to agriculture weak divergence was found during intense reform. As mentioned earlier, RBI and government started aggressively intervening in the banking sector for the correction of sectoral imbalances created during intense reform. The present study found that these measures succeeded in arresting the slide and negative growth in agriculture accounts and pushed growth upwards across agriculture and her sub sectors. Nevertheless, the table also points that such intervention could not succeed in bringing down the interstate disparity as weak convergence was found for agriculture and direct finance. In addition to this, divergence continued in case of the accounts belonging to indirect finance within agriculture (Table 5.7).

The lower segment of Table 5.7 incorporates trend in interstates disparity in agriculture loan amount across the three regimes. The table noted diverse trends in interstate disparity in amounts across the sub components of agriculture and also over the regimes. For example, a strong divergence is being recorded in direct finance, while convergence (but weak) is being noted in case of the overall agriculture and indirect finance during the social banking regime. As far intense reform is concerned the table finds a continuation of the strong divergence for the

direct finance; however, trend in indirect finance and overall agriculture amount were inconclusive. The table also describes the different trends in amount during the revival period i.e. strong divergence for the direct finance and convergence for the indirect finance but coefficients were insignificant for overall agriculture.

The above analysis may be summarised as follows:

1. During the social banking regime, the country witnessed increase in farmer's banking outreach in all states, though magnitude of the outreach notably varied. Although variation continued in the level and growth of outreach across the states but, trends were downwards during the period of intense reform. Further, banker also shifted their emphasised from lending directly to the farmers to the indirect finance in majority of the states.
2. Country also witnessed strong convergence in interstate disparity in outreach during 1979-80 and 1992-93 which also indicates that preference was given to the backward and poorer states than the advanced or already banked states in agriculture accounts by the SCBs. But, complete trend reversal was noted during the reform. Nevertheless, widening and deepening both went hand in hand during the social banking regime whereas remarkable deviation in deepening and widening were recorded during reform and revival periods.
3. The decline in agriculture lending during the intense period of reform (between 1991-92 and 2003-04) in states certainly had greater bearings on the rural economy. It is found that direct finance to farmer accounts declined across the states, at the same time it is also true that it were poor states which suffered most.
4. Rise in interstate disparity in agriculture accounts and amounts points that relatively more accounts were opened in the developed states than their underdeveloped counterparts during the revival period which also points towards development bias.
5. Significant coefficient of the σ divergence for indirect finance accounts during the reform signals that banks instead of lending directly to the farmers preferred indirect route to meet the stipulated targets of agriculture lending. The divergence in amounts extended by the banks in indirect finance also indicates mismatch in promises and practice of the banks in regards to inclusion and balanced growth. RBI `s effective intervention in distribution of bank credit enhanced the quantity of the flow of agricultural credit during the revival phase, but failed in reducing interstate disparity.

5.6 Distribution of bank credit in response to land holdings :

India inherited asymmetric distribution of land holdings in states from colonial past and even before that. Besides socio economic factors, different land tenure systems under the British rule, which were aimed at extracting maximum surplus from the Indian farmers without having accountability to the rural peasants, aggravated the situation of inequality further. The fragmented, segmented and imperfect loan markets in rural areas were closely associated with land tenure system of the country. Additionally, traditional and out-dated mode and means of farming, exploitative land tenure system, backward and regressive institutions etc. have been major impediment in development of the formal loan market in India (Basu, 1977).

Also, the Indian economy being agrarian in character, the agro-climatic realities were grossly undermined in demarcation of the boundaries of the states in post - independence India. The political mobilisation for lingual agglomerations became the prime factor behind the creation of states in India and it lacked any sound economic principle and agro-climatic realities. The present section tries to assess the impact of banking sector reform on the level and growth of the bank credit in states with respect to agriculture population. Pertinently, this section analyses trend in interstate disparity in the distribution of agricultural credit with respect to land holding pattern in aforementioned sub periods.

Distribution of agriculture loan accounts and loan amount of the SCBs and holding pattern (number and composition of operational holdings and operated/shown area etc.,) both were subjected to change. Certainly, change has been much faster observed in former than latter. Agriculture being a state subject and placed at lower priority, no sincere efforts were taken in order to reduce the discrepancy in number of operational holding and operated area within the official sources of publication. Nonetheless, RBI provides information on various parameters of the agriculture credit, such as agricultural credit by size of loan, tenure, and also across the ownership of the banks but does not report data on annual loan by size class of holding especially for the states and beyond. Therefore, present study is left with little options but to use the sample data of the Input Surveys of Agriculture Census, Land holding surveys of the NSSO. Since, agriculture loan data as per the land holding are not analogous and strictly comparable because of the diverse methodologies and periodicity in reporting,

therefore, to avoid the estimation error the present study uses relative figures at the pace of absolute values. Further, to avoid short term fluctuation influence, three year annual average data of loan disbursement has been used.

Table 5.8 brings statewise pattern in distribution of operational holding[15] and corresponding agricultural credit account (Direct finance to farmer's accounts) in SCBs together for the period between 1980-81 and 2010-11. Non calibration in distribution of account and holding in states was observed. For example, the southern groups which contributed about 24.35 % share in operational holdings (in number) of the country claimed higher and disproportionate share (51.39%) in the agriculture accounts of the SCBs in 1980-81. Thus, gap between shares in holding and account of the SCBs was positive (27.04%) although it declined to 11.21% in 1990-91. But, during reform, this gap increased to 14% in 2000-01, and further it zoomed to 19% in 2010-11. In contrast to this, backward states while contributing about 40.4 % in holdings had lower claim in agricultural credit account (Table 5.8). Thus, the gap between two was negative (15.3%) in 1980-81, which fortunately shrank to 8.7% in 1990-91. In this regard, backward regions experienced net losses during reform as their deficit increased to 11.8 in 2000-01 which further deteriorated during 14.4% in 2010-11. In other words, the southern states disproportionately benefitted from reform measures at the cost of the backward states in terms of outreach. As for outreaches of other groups are concerned, trends were mixed trend in three sub periods. Uttar Pradesh was an exception because it experienced consistent improvement despite having negative balance between the shares in holding and accounts. The table also points towards slower diversification in land holding and faster concentration in bank accounts during the reform (Table 5.8)

[15] It is worth mentioning here that land holding survey data reported in Agriculture Census is available at interval of the five years and this survey is conducted during the month between July and December whereas, the DFF_ACC data in BSR is reported for the December/June till 1991, and in subsequent year it is available for the end of the March of the corresponding year. Therefore, in order to get analogous series, present study uses three year average data of the bank accounts and amounts of the SCBs.

Table 5.8- Relative Access Ratio (RAR) across the state groups (1980-81 to 2010-11)

Year		State-groups					
	Share in	**Southern**	**Backward**	**ADS**	**IS**	**UP**	**HHI**
1980-81	Holding	24.3	40.4	2.4	11.7	21.1	0.281
	Accounts	51.4	25.1	4.7	8.5	10.3	0.347
	Gap	27	-15.3	2.3	-3.2	-10.8	0.11
	RAR	**2.1**	**0.6**	**2.0**	**0.7**	**0.5**	
1990-91	Holding	27	39.1	2.5	12.3	19	0.278
	Accounts	38.2	30.5	5	13.3	13	0.276
	Gap	11.2	-8.7	2.5	1	-6	0.024
	RAR	**1.4**	**0.8**	**2.0**	**1.1**	**0.7**	
2000-01	Holding	28	37.1	2.1	13.8	19	0.271
	Accounts	42	25.3	6.1	11.1	15.6	0.28
	Gap	14	-11.8	4	-2.8	-3.5	0.037
	RAR	**1.5**	**0.7**	**2.9**	**0.8**	**0.8**	
2010-11	Holding	26.4	40.6	2	13.5	17.5	0.284
	Accounts	45.3	26.2	4.2	9.4	14.7	0.307
	Gap	19	-14.4	2.3	-4.1	-2.8	0.06
	RAR	**1.7**	**0.6**	**2.1**	**0.7**	**0.8**	

Source: Author's own calculation from BSR and Agriculture Census

The relative access ratio (RAR) shown in the table is computed by dividing the share in holding to share in agriculture accounts of the groups. The RAR value greater that one indicates favourable term for the group, while less than one signals unfavourable term. Further rise in RAR value over the period indicates an improvement from the previous level while a decline represents otherwise. The table clearly indicates favourable term for the southern states and agriculturally developed states while unfavourable for the remaining groups. Additionally, table reports an improvement in case of the backward states during social banking, while their situations started worsening during the reform. In contrast to this, southern groups were net gainer in the period of economic reform and inclusion drive.

5.7 Distribution bank loan amount and operated area

Table 5.9 reports progress in Credit depth of the state groups. Relative credit depth of the group represents a ratio of amount to area operated (RAMA[16]). In other words, it presents the contribution of state group in advances to the agriculture sector (amount delivered to direct finance to farmers) by the for the period between 1980-81 and 2010-11.

Table 5.9: Statewise distribution of amount and operated area

Year	Items	State group					
		Southern	Backward*	ADS	IS	UP*	HHI
1980-81	Area	22.10	42.56	4.62	19.54	11.18	0.283
	Amounts	37.23	24.13	13.70	13.82	11.11	0.247
	Gap	15.13	-18.43	9.08	-5.72	-0.07	
	RAMA	1.68	0.57	2.96	0.71	0.99	
1985-86	Area	22.01	42.92	4.82	19.32	10.92	0.284
	Amounts	38.11	21.95	17.67	12.34	9.93	0.250
	Gap	16.10	-20.97	12.85	-6.98	-0.99	
	RAMA	1.73	0.51	3.66	0.64	0.91	
1990-91	Area	22.12	42.95	4.75	19.15	11.03	0.284
	Amounts	37.38	24.80	10.96	14.47	12.39	0.250
	Gap	15.26	-18.14	6.21	-4.68	1.36	
	RAMA	1.69	0.58	2.31	0.76	1.12	
1995-96	Area	22.02	43.12	4.83	18.47	11.55	0.284
	Amounts	41.86	23.23	10.07	13.56	11.28	0.270
	Gap	19.84	-19.89	5.24	-4.92	-0.28	
	RAMA	1.90	0.54	2.09	0.73	0.98	
2000-01	Area	22.46	41.60	4.83	19.11	12.00	0.277
	Amounts	38.96	23.47	10.86	13.08	13.63	0.254
	Gap	16.50	-18.13	6.03	-6.03	1.63	0.00
	RAMA	1.73	0.56	2.25	0.68	1.14	
2005-06	Area	22.64	41.03	4.85	19.44	12.04	0.274
	Amounts	35.50	24.98	11.20	14.29	14.03	0.241
	Gap	12.86	-16.05	6.36	-5.16	1.99	
	RAMA	1.57	0.61	2.31	0.73	1.16	
2010-11	Area	22.00	42.67	4.86	19.04	11.43	0.282
	Amounts	41.10	23.63	10.53	13.23	11.51	0.267
	Gap	19.10	-19.04	5.66	-5.81	0.08	
	RAMA	1.87	0.55	2.17	0.69	1.01	

Note:

1. Area indicate group's share in total operated area (in %)
2. Amount represents group's share in total outstanding agriculture loan extended by SCBs.
3. Gap is defined as difference between Amount and area positive gap indicates surplus and negative divulges deficit .

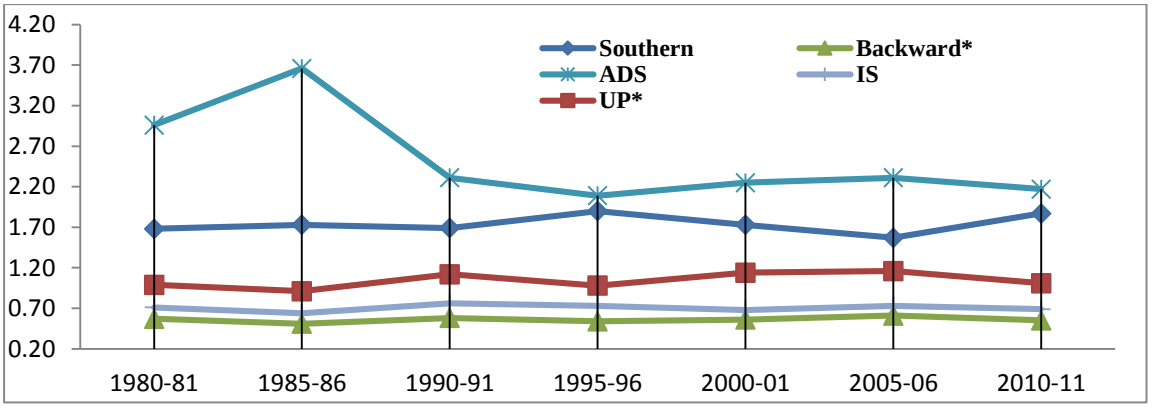
[16] Relative credit depth of Ratio of Amounts to Area operated (RAMA) is computed by dividing the share of i^{th} state in Gross Agriculture Credit Amounts (Amounts delivered to the direct finance to farmers by the SCB`s) to their corresponding share in area operated (AO) in that year. By definition, RAMA value greater than one (RAMA>1) indicates favourable terms for any state, less than one (RAMA<1) indicates unfavourable terms, and one represents the neutral status. Additionally, the rise in value of RAMA for any state across the period signifies improvement from the previous level, and decline depicts worsening for the state.

4. RAMA is Ratio of Amount to area. RAMA> 1 indicates favourable terms while less than one signifies unfavourable term for the groups
5. Area has been taken from the agriculture census (various rounds), whereas outstanding were obtained from the BSR (RBI)

Source: Based on authors own calculations

The table show that southern regions and Agriculturally Developed States (ADS) have been enjoying favourable terms throughout i.e., they grasped larger share in bank loans than their contribution in operated area of the country. Not only this, these two groups enjoyed favourable terms throughout (Credit depth remained greater than one) while it remained unfavourable for the backwards states. Additionally, credit intensity of the groups also varied across the regimes and period shown in table 5.9. Trends in variation in relative credit depth across the state groups depicted in figure 5.8A show near stable trends for backward and Industrialised state but inconsistency in southern and agriculturally developed states in different regimes.

Figure 5.8A: Trends in relative credit depth:groups of states



Source: Based on authors own calculations

5.7.1 Distribution of bank credit in response to land holdings Interstate Scenario

Statewise change in share in holding and agriculture accounts of the banks between 1980-81 and 2010-11 is given in Appendix Table 5C. The table shows a remarkable mismatch in the shares between accounts and holdings in states, although significant both varied in different regimes. Table 5.10 summarises ranks of the state based on the shares mentioned in Appendix table 5C. The table shows that Bihar which was the 2nd largest contributor in holding (13.2%) had much lower ranking in her claims in bank accounts (7th) in 1980-81. In contrast to this, Andhra Pradesh having 3rd rank in holding occupied top position in ranking of the agriculture accounts amongst the

states in 1980-81. The table noted that change in ranking of the states in accounts were much unstable than that of the ranking in holdings (Table 5.10). Additionally, Spearman's pairwise rank correlation coefficient between holding and accounts varied across the region and points that changes were inordinate between the two (Appendix Table D and Table 5.10)

Table 5.10-Ranking of states in share of the holding and bank account

	State's ranks in (holding and agriculture accounts)							
State	1980-81		1990-91		2000-01		2010-11	
	Holding	Acc	Holding	Acc	Holding	Acc	Holding	Acc
Andhra Pradesh	3	1	4	1	4	1	4	1
Assam	13	16	13	15	13	15	13	15
Bihar*	2	7	2	5	3	8	2	4
Gujarat	12	11	12	12	11	10	11	10
Haryana	14	14	14	14	14	14	14	14
Himachal	17	15	17	16	16	16	17	16
Jammu &	14	16	15	17	15	17	15	17
Karnataka	11	5	8	6	7	4	7	5
Kerala	10	3	9	9	9	5	9	7
Madhya	7	10	5	8	5	7	5	9
Maharashtra	4	9	3	4	2	5	3	6
Orissa	9	6	11	10	12	11	11	10
Punjab	14	12	16	13	16	13	16	13
Rajasthan	8	13	10	11	10	9	9	8
Tamil Nadu	5	2	6	3	6	3	6	3
Uttar Pradesh*	1	4	1	2	1	2	1	2
West Bengal	6	8	7	7	8	11	8	12
Spearman`s Rank correlation	0.7130*		0.9240*		0.8570*		0.8815*	

Note: -States have been ranked according to their respective contribution in number of operational holding and number of accounts (direct finance to farmers) in SCBs;

-Number of holding data was taken from the agriculture census (various rounds), whereas number of direct finance to farmers accounts were obtained from the BSR (RBI); *indicates 0.05% level of significant.

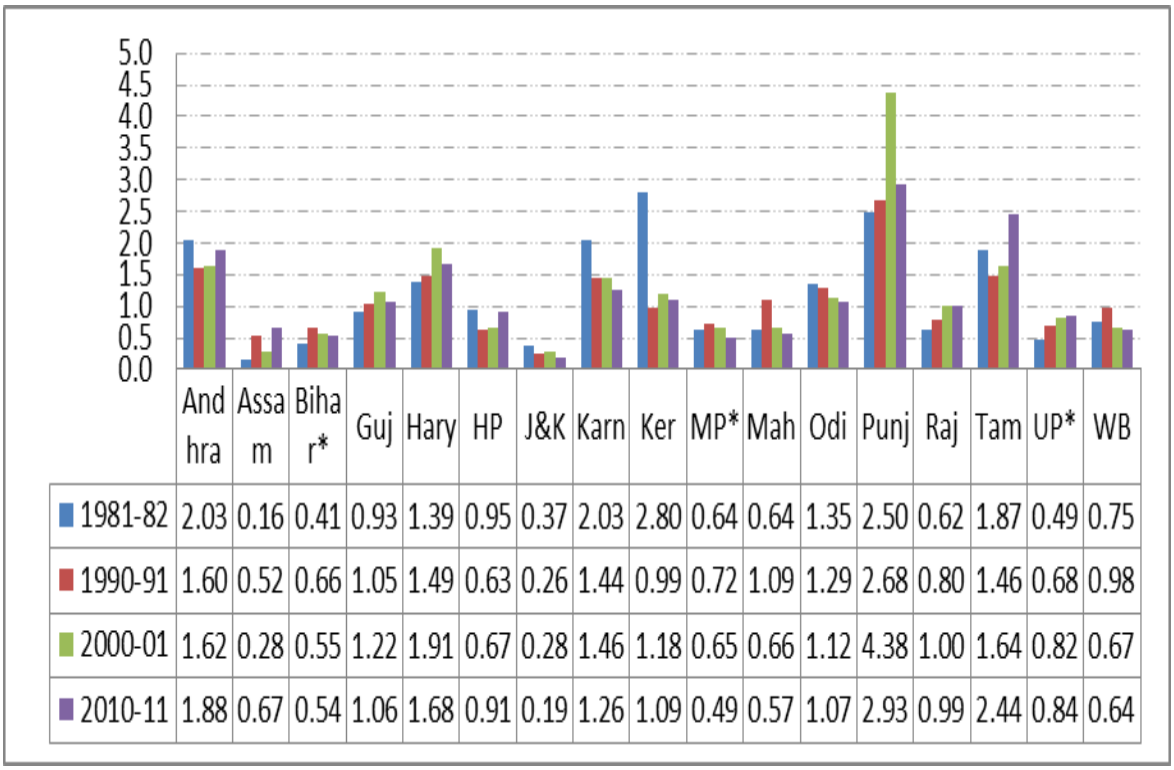
Source: Authors own calculation

The Ratio of Accounts to Holdings (RACH)[17] was used for the measurement of the relative shift in account and holding in states is given in Figure 5.9. As per definition, the RACH value greater than one indicates favourable term for the states and less than

[17] Ratio of Accounts to Holdings (RACH) is computed by dividing the share of i^{th} state in Gross Agriculture Credit Accounts of The SCB`s to their corresponding share in number of operational holdings (OH). By definition, RHA value greater than one (RACH >1) indicates favourable terms for any state, less than one (RACH <1) indicates unfavourable terms and one represents the neutral status. Additionally, the rise in value of RACH for any state across the period signifies improvement from the previous level, and decline depicts worsening for the state.

one signifies unfavourable. The figure reinforces southern bias as three out of four southern states namely Kerala (2.80), Karnataka (2.03) and Andhra Pradesh (2.03) reported favourable terms (RCAH>2) throughout the period. (This implies that southern states disproportionately claimed in bank account than that of their contribution in number of operational holdings in the country). On the contrary, states such as Assam (0.16), J&K (0.37), Bihar (0.41) and Uttar Pradesh (0.49) had RACH less than 0.5 which indicates most unfavourable terms for them in 1980-81. Figure also indicates that except Himachal Pradesh and Orissa, remaining states under backward categories witnessed unfavourable terms, however, statewise trends in subsequent period were inconsistent (Figure 5.9)

Figure 5.9: Ratio of Account to Holding (RACH) of states



	Andhra	Assam	Bihar*	Guj	Hary	HP	J&K	Karn	Ker	MP*	Mah	Odi	Punj	Raj	Tam	UP*	WB
1981-82	2.03	0.16	0.41	0.93	1.39	0.95	0.37	2.03	2.80	0.64	0.64	1.35	2.50	0.62	1.87	0.49	0.75
1990-91	1.60	0.52	0.66	1.05	1.49	0.63	0.26	1.44	0.99	0.72	1.09	1.29	2.68	0.80	1.46	0.68	0.98
2000-01	1.62	0.28	0.55	1.22	1.91	0.67	0.28	1.46	1.18	0.65	0.66	1.12	4.38	1.00	1.64	0.82	0.67
2010-11	1.88	0.67	0.54	1.06	1.68	0.91	0.19	1.26	1.09	0.49	0.57	1.07	2.93	0.99	2.44	0.84	0.64

Source: Computed by author

Table 5.11 summarises change in position of the state based on RACH values between 1980-81 and 2010-11. Table 5.11 and figure 5.10 both show that ranking of the states, especially states at the middle, have interchanged while it was almost stable for the states at the top and bottom.

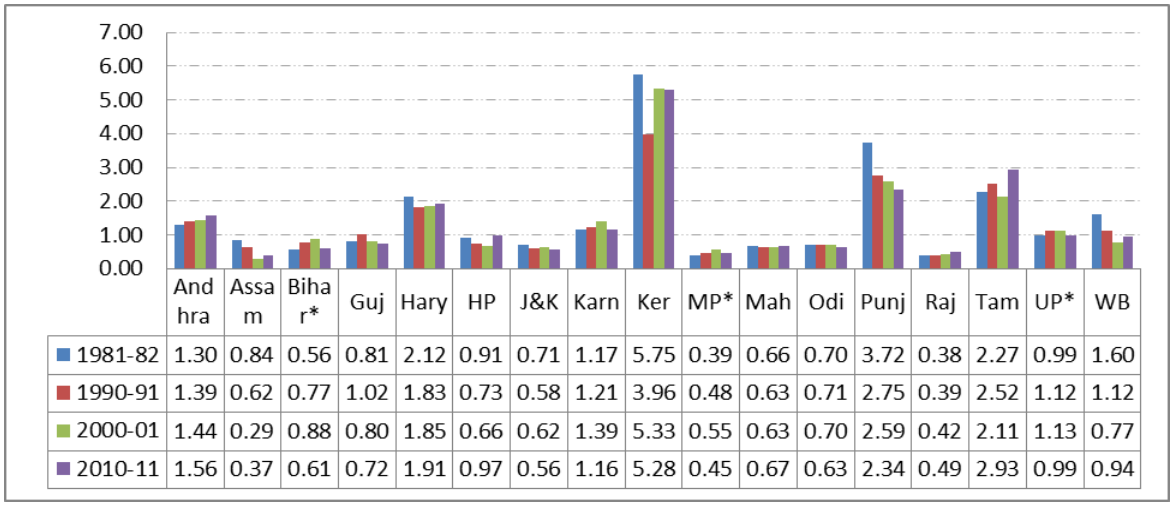
Table 5.11: Ranking of the states according to RACH values

Attributes	Year						
	1981-82	**1986-87**	**1990-91**	**1995-96**	**2000-01**	**2005-06**	**2010-11**
Above 3rd Quartile	Kerala Punjab Andhra Karnataka Tamilnadu	Punjab Karnataka Andhra Haryana Kerala	Punjab Andhra Haryana Tamilnadu Karnataka	Punjab Tamil Andhra Karnataka Orissa	Punjab Hary Tam Andhra Karnataka	Punjab Tamilnadu Andhra Haryana Kerala	Punjab Tamilnadu Andhra Haryana Karnataka
Less than 3rdQuartile but above median	Haryana Orissa Himachal Gujarat	Orissa Tamilnadu Gujarat WB	Orissa Maharashtra Gujarat Kerala	Haryana Gujarat WB Kerala	Gujarat Kerala Orissa Raj	Karnataka Gujarat Orissa Rajasthan	Kerala Orissa Gujarat Rajasthan
Less than median but above 1st quartile	**WB** **MP*** **Maharashtra** **Rajasthan**	**HP** **Raj** **Maharashtra** **MP***	**WB** **Raj** **MP*** **UP***	**Raj** **Bihar*** **Mah** **UP***	**UP*** **HP** **WB** **Mahara**	**UP*** **HP** **WB** **MP***	**HP** **UP*** **Assam** **WB**
Less than1st quartile	UP* Bihar* J&K Assam	UP* Bihar* Assam J&K	Bihar* HP Assam J&K	MP* Assam HP J&K	MP* Bihar* Assam J&K	Mah Assam Bihar* J&K	Maharashtra Bihar* MP* J&K

Source: Computed by author

In addition to this, table also highlights the change in rank of the states in pre and post reforms especially for those at middle were inordinate. Moreover, Tamil Nadu, Andhra Pradesh, Haryana and Karnataka remained favourable throughout, whereas Bihar* J&K and Assam remained most unfavourable. The ranking of Kerala, Maharashtra and Madhya Pradesh was highly inconsistent during reform.

Figure 5.10 Relative credit depth across the states



	Andhra	Assam	Bihar*	Guj	Hary	HP	J&K	Karn	Ker	MP*	Mah	Odi	Punj	Raj	Tam	UP*	WB
1981-82	1.30	0.84	0.56	0.81	2.12	0.91	0.71	1.17	5.75	0.39	0.66	0.70	3.72	0.38	2.27	0.99	1.60
1990-91	1.39	0.62	0.77	1.02	1.83	0.73	0.58	1.21	3.96	0.48	0.63	0.71	2.75	0.39	2.52	1.12	1.12
2000-01	1.44	0.29	0.88	0.80	1.85	0.66	0.62	1.39	5.33	0.55	0.63	0.70	2.59	0.42	2.11	1.13	0.77
2010-11	1.56	0.37	0.61	0.72	1.91	0.97	0.56	1.16	5.28	0.45	0.67	0.63	2.34	0.49	2.93	0.99	0.94

Source: Computed by author

Figure 5.10 describes change in pattern of the relative credit depth (Ratio of Amount to operated Area -RAMA) of the states in last three decades. Like, outreach, the southern states mostly have favourable terms of credit depth. The value of credit depth within and between backward and southern states also varied in different regimes. For instance, the RAMA for Kerala was about four and half times higher than that of the Karnataka and also about four times higher than the Andhra Pradesh. Similar differences were observed in backward groups in terms of the relative credit depth.

Table 5.10 describes change in ranking of the states (based on credit depth) in different phases which suggest continuation of the southern bias in distribution of agriculture amount by the SCBs. It is quite evident that Kerala remained at top while Rajasthan and Assam at bottom throughout the time period under consideration. On this parameter, situation of Bihar and West Bengal worsened while states like Maharashtra and Gujarat observed significant improvement (Figure 5.11).

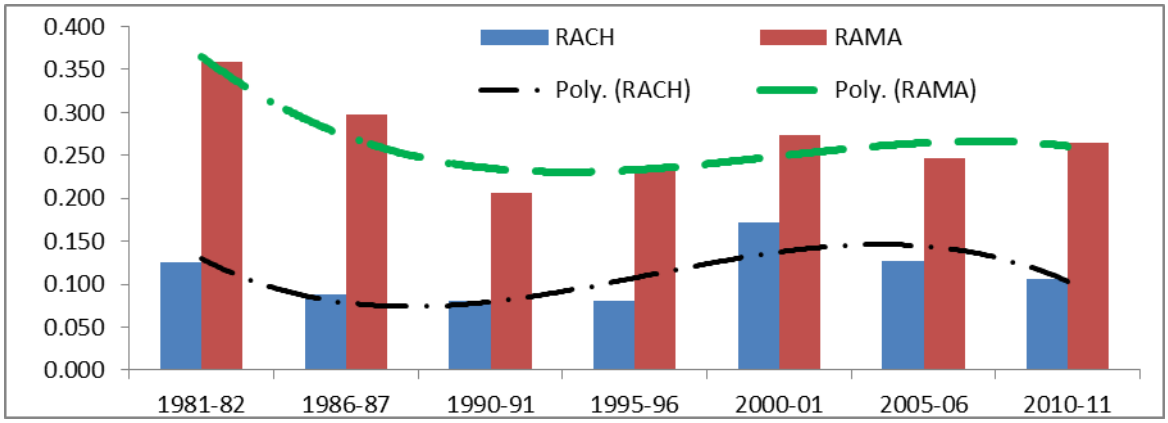
Table 5.12: Change in relative credit depth 1981-82 to 2010-11

	Year						
	1981-82	1986-87	1990-91	1995-96	2000-01	2005-06	2010-11
above 3rd Quartile	Kerala Punjab Tamil Nadu Haryana WB	Kerala Punjab Haryana Tamil Nadu Karnataka	Kerala Punjab Tamil Nadu Haryana Andhra	Kerala Tamil Nadu Punjab Haryana Andhra	Kerala Punjab Tamil Nadu Haryana Andhra	Kerala Punjab Tamil Nadu Haryana Andhra h	Kerala Tamil Nadu Punjab Haryana Andhra
<than 3rd Quartile but above median	Andhra Karnataka UP* HP	Andhra Himachal WB J&K	Karnataka UP* WB Gujarat	Karnataka UP* WB Gujarat	Karnataka UP* Bihar* Gujarat	Karnataka UP* West Benga Bihar*	Karnataka UP* HP WB
< median but above 1st quartile	Assam Gujarat J&K Orissa	UP* Orissa Gujarat Maharashtr	Bihar* HP Orissa Maharashtr	Orissa Bihar* Maharashtra HP	West Benga Orissa HP Maharashtr	HP Gujarat Maharashtr Orissa	Gujarat Maharashtra Orissa Bihar*
Less than1st quartile	Maharashtra Bihar* MP* Rajasthan	Bihar* Assam MP* Rajasthan	Assam J&K MP* Rajasthan	Assam J&K MP* Rajasthan	J&K MP* Rajasthan Assam	MP* J&K Rajasthan Assam	J&K Rajasthan MP* Assam

Source: Computed by author

Figure 5.11displays trends in interstate disparity (Theil coefficient (GE-1)) in relative outreach (RACH) and relative credit depth (RAMA) in last three decades.

Figure 5.11: Inter-state disparity in RACH and RAMA



Source: Computed by Author

Increase in Theil value over time highlights the narrowing of inter-states disparity and rise in value otherwise. The figure suggests higher inter-sate disparity in credit depth than that of the outreach of the agriculture although both have same co-variability. In addition to this, figure indicates the decline in interstate inequality during social banking regime, then increase in interstate disparity in outreach and credit depth during intense reform. Moreover, figure suggests clear decline in interstate disparity in relative outreach while trends were inconsistent for the relative credit depth during revival period.

Appendix Table -5A1:
Distribution of Incremental agriculture loan across the broad occupation

(Outstanding account in million: Share annual average, in %)

Period	Agriculture		Direct		Indirect		Non		Total credit		Ratio of Agri to non agri acc
	Acc.	Share	Acc.	Share	Acc.	Share	Acc.	Share	Acc.	Share	
1972-80	9.2	56.3	9.0	54.8	0.2	1.5	7.2	43.7	16.4	100	0.64
1981-91	16.6	40.4	16.5	40.1	0.1	0.3	24.6	59.6	41.2	100	0.95
1992-04	-6.0	-134.0	-6.1	-136.8	0.1	2.8	10.4	234.0	4.4	100	0.65
2005-12	25.3	46.8	23.6	43.6	1.7	3.2	28.8	53.2	54.2	100	0.56
1992-12	19.4	33.1	17.5	29.9	1.8	3.1	39.2	66.9	58.6	100	0.82
1972-12	25.9	44.9	25.5	44.3	0.4	0.6	31.7	55.1	57.6	100	0.62

Appendix Table -5A2:
Distribution of Incremental agriculture loan amount across the broad occupation

(Outstanding amount in Rs. Crore: growth annual average in %)

Period	Agriculture Total		Direct Finance		Indirect Finance		Non-agriculture		Overall loans	
	AMN	Growth	AMN	Growth	AMN	Growth	AMNT	Growth	AMNT	Growth
1972-80	6791	21.5	5264	16.7	1527	4.8	24823	78.5	31614	3.4
1981-91	14036	14.8	13524	14.3	512	0.5	80715	85.2	94751	26.4
1992-04	20334	7.2	13744	4.8	6589	2.3	263630	92.8	283964	2.1
2005-12	12655	12.1	11133	10.6	15219	1.4	923037	87.9	104959	7.3
1972-91	21885	16.6	19181	14.6	2704	2.1	109919	83.4	131804	7.1
1992-11	15607	11.3	12952	9.4	26554	1.9	122490	88.7	138098	4.9

Note; Growth refers annual average of the percentage change over previous period (in %);
Amount- outstanding loan amounts at 1993-94 prices.

Source: Based on author's own calculation form Basic Statistical Return (RBI, various issues)

Appendix Table 5B: Summary Statistics:

Trend in account and amount of the SCBs-National (1972-2012)

		Outstanding Account						Outstanding Amount (at 1993-94 Prices)					
Period	**Items**	**Growth**	**t**	**P>t**	**CV**	**R^2**	**Inst. I***	**Growth**	**CV**	**t**	**P>t**	**Adj R^2**	Inst. I*
1972-80	Agriculture	25.7	27.6	0	67	0.99	0.067	15.7	29.9	10.86	0	0.94	0.787
	Direct Finance	26.2	19.7	0	68	0.98	0.096	16.7	30.4	10.35	0	0.93	0.776
	Indirect Finance	19.0	25.7	0	50.6	0.99	0.051	14.3	19.5	7.65	0	0.88	0.79
	Overall	18.8	16.6	0	34.1	0.98	0.059	9.5	27.9	7.5	0	0.87	0.739
1981-92	Agriculture	8.7	14.5	0	30.2	0.95	0.068	7.7	6.0	9.99	0	0.9	0.873
	Direct Finance	9.3	17.0	0	30.7	0.97	0.061	9.4	6.3	10.5	0	0.91	0.881
	Indirect Finance	1.5	1.8	0.1	11.6	0.25	0.105	-0.1	8.8	-0.1	0.92	-0.1	0
	Overall	10.7	21.2	0	27.9	0.98	0.039	8.6	8.3	17.23	0	0.96	0.919
1993-04	Agriculture	-1.3	-1.5	0.16	0.1	0.17	0.112	8.6	39.6	9.41	0	0.88	0.684
	Direct Finance	-1.5	-1.9	0.09	0.1	0.24	0.11	6.9	33.5	7.72	0	0.83	0.677
	Indirect Finance	4.7	2.1	0.06	0.3	0.29	0.282	15.0	42.0	9.81	0	0.89	0.678
	Overall	1.1	1.3	0.21	0.1	0.14	0.078	10.4	38.3	19.95	0	0.97	0.762
2005-12	Agriculture	10.0	12.8	0	0.2	0.97	0.04	15.7	12.8	12.3	0	0.96	0.896
	Direct Finance	8.2	13.3	0	0.19	0.97	0.033	16.8	16.0	11.27	0	0.95	0.871
	Indirect Finance	20.0	3.3	0.02	0.63	0.68	0.388	9.6	35.8	3.47	0.02	0.65	0.521
	Overall	6.8	8.9	0	0.16	0.94	0.043	14.3	14.1	11.18	0	0.95	0.88
1992-12	Agriculture	3.1	3.5	0	29.83	0.41	0.237	11.9	50.5	13.96	0	0.91	0.64
	Direct Finance	2.7	3.3	0	28.96	0.34	0.256	10.8	47.6	11.6	0	0.88	0.637
	Indirect Finance	7.6	5.4	0	80.05	0.62	0.513	15.6	59.1	17.21	0	0.94	0.601
	Overall	4.1	5.8	0	30.35	0.65	0.185	12.4	46.0	25.57	0	0.97	0.713
1972-12	Agriculture	6.8	9.9	0	0.58	0.72	0.31	8.7	52.0	22.54	0	0.93	0.644
	Direct Finance	6.8	9.7	0	0.58	0.71	0.311	8.8	49.5	21.65	0	0.92	0.654
	Indirect Finance	4.1	8.2	0	0.85	0.64	0.518	8.2	73.7	14.57	0	0.84	0.431
	Overall	7.2	14.1	0	0.64	0.84	0.257	9.1	51.3	36.49	0	0.97	0.677

$I^* = CV\sqrt{(1-\overline{R}^2)}$ I* = Instability Index, CV = Coefficient of Variation, $\overline{R}^2$ = Coefficient of Determination at N-K= Degrees of Freedom

Source: Author`s own calculation from BSR (RBI Various Issues)

Appendix Table: 5C: Statewise distribution of number of operational holdings (OH), and agricultural credit accounts of SCB

State	1981-82			1991-92			1996-97			2001-02			2006-07			2010-11		
	share in		Gap	share in		Gap	Share in		Gap	Share in		Gap	Share in		Gap	Share in		Gap
	Hold	Acc		Hold	Acc		Hold	Acc		Hold	Acc		Hold	Acc		Holding	Acc	
Andhra	8.6	17.4	8.8	8.7	13.9	5.2	9.2	14.5	5.3	9.6	15.6	6.0	9.3	17.2	7.9	9.6	17.9	8.3
Assam	2.7	0.4	-2.3	2.4	1.2	-1.2	2.3	1.4	-0.9	2.3	0.6	-1.7	2.1	0.9	-1.2	2	1.3	-0.7
Bihar*	13.2	5.4	-7.8	12.2	8.1	-4.1	12.2	9	-3.2	9.7	5.3	-4.4	11.3	4.2	-7.1	13.7	7.5	-6.2
Gujarat	3.4	3.1	-0.3	3.3	3.5	0.2	3.3	3.6	0.3	3.5	4.3	0.8	3.6	3.8	0.2	3.4	3.6	0.2
Haryana	1.2	1.7	0.5	1.4	2.1	0.7	1.5	1.8	0.3	1.3	2.4	1.1	1.2	2.1	0.9	1.2	2	0.8
Himachal	0.8	0.7	-0.1	0.8	0.5	-0.3	0.7	0.4	-0.3	0.8	0.5	-0.3	0.7	0.6	-0.1	0.7	0.6	-0.1
Jammu &	1.2	0.4	-0.8	1.1	0.3	-0.8	1.2	0.3	-0.9	1.2	0.3	-0.9	1.1	0.2	-0.9	1.1	0.2	-0.9
Karnataka	3.8	7.8	4.0	5.4	7.8	2.4	5.4	7.7	2.3	5.9	8.6	2.7	5.9	6.7	0.8	5.7	7.2	1.5
Kerala	3.9	10.9	7.0	5.1	5	-0.1	5.4	4.9	-0.5	5.6	6.6	1.0	5.3	6.6	1.3	5	5.4	0.4
Madhya	6.5	4.2	-2.3	7.9	5.6	-2.3	8.3	5.8	-2.5	8.9	5.8	-3.1	8.8	5.3	-3.5	9.2	4.5	-4.7
Maharashtra	8.2	5.2	-3.0	8.9	9.7	0.8	9.2	6.6	-2.6	10.1	6.6	-3.5	10.6	4.7	-5.9	9.9	5.7	-4.2
Orissa	4.1	5.5	1.4	3.7	4.8	1.1	3.4	4.7	1.3	3.4	3.8	0.4	3.4	3.5	0.1	3.4	3.6	0.2
Punjab	1.2	3	1.8	1	2.8	1.8	0.9	2.4	1.5	0.8	3.6	2.8	0.8	2.5	1.7	0.8	2.2	1.4
Rajasthan	4.4	2.7	-1.7	4.8	3.8	-1.0	4.6	3.9	-0.7	4.9	4.9	0.0	4.8	4.9	0.1	5	5	0.0
Tamil Nadu	7.7	14.5	6.8	7.5	11	3.5	6.9	12.4	5.5	6.6	10.8	4.2	6.3	14.3	8.0	5.9	14.4	8.5
Uttar Pradesh*	20.9	10.1	-10.8	18.8	12.8	-6.0	18.6	13	-5.6	18.8	15.4	-3.4	18.1	16.1	-2.0	17.3	14.6	-2.7
West Bengal	7	5.3	-1.7	5.9	5.8	-0.1	5.7	5.7	0.0	5.7	3.8	-1.9	5.4	3.8	-1.6	5.2	3.3	-1.9
Southern	24.4	51.4	27.0	27.0	38.2	11.2	27.2	40.3	13.1	28.0	42.0	14.0	27.2	46.1	18.9	26.4	45.4	19.0
Backward	61.5	35.4	-26.1	58.2	43.5	-14.7	57.8	45.0	-12.7	56.1	40.9	-15.3	56.4	40.5	-15.9	58.1	41.0	-17.2
ADS	2.4	4.7	2.3	2.5	5.0	2.5	2.5	4.3	1.8	2.1	6.1	4.0	2.0	4.7	2.7	2.0	4.3	2.3
IS	11.7	8.5	-3.2	12.3	13.3	1.0	12.6	10.4	-2.2	13.8	11.1	-2.8	14.4	8.7	-5.7	13.5	9.4	-4.1
Spearmans' Rank (ρ)	**0.713**			**0.924**			**0.9215**			**0.857**			**0.813**			**0.8815**		

Chapter 6: Financial sector reforms and size class biasness of agriculture credit in India

6.1 Background

The previous chapter extensively analysed the patterns in distribution of agriculture credit delivered by the Schedule Commercial Banks (SCBs) and found a notable interstate difference in 'Outreach' and 'Credit Depth'. In addition, remarkable difference in growth rates across the states in different regimes viz. social banking (before 1992), intense reform (1992-04), and regime of the financial inclusion drive (2005-12) was also noted while analysing the data. Precisely, convergence in interstate disparity in agriculture sector's 'Outreach' and 'Credit Depth' was noted during the social banking regime while divergence was noted during the period of intense reforms. The present study finds an increase in agriculture sectors' 'Outreach' and 'Credit Depth' during inclusion drives, but this could not bring down the interstate disparity as changes in the states were asymmetric. There was poor response of agricultural loan on output and private investment during the regimes of social banking and inclusion drive, but relatively stronger response during intense reform. This added new dimensions to the debate on financing of agriculture through banks. Economists seem divided on this issue, while some believe that agriculture sector had been overemphasised in bank lending and hence their exposure must be rationalised, many believe that this sector has been under-represented in bank credit. Researches those stand in favour of higher loans disbursement to the agriculture sector, argue that large proportions of farmer households, especially at bottom of the social and economic pyramid in most of the states, are yet out of the network of commercial banks (Agriculture Census, 2014; NSSO, 2015: EPWRF, 2008; GOI, 1991; GOI, 2004). In contrast to this, those who stand for downsizing of the agriculture loans, cite selective instances of diversion, leakages, NPA, adverse selection and moral hazards etc. Most of the studies in this regard have used macro aggregates and have grossly ignored the diversities and local factors that influence demand and supply dynamics of agriculture loan. A number of studies in this context found that the demand of agriculture loan at local level are influenced by many factors such as dynamics of the money market in rural areas, change in level and growth of holdings under different size class, and availability and ease of access to banking, non-banking and informal institution etc. (Kochar, 1997; GOI, 1991).

During intense reforms, no specific measures were aimed at restricting agriculture financing through banks. However, there was notable structural shift in rural banking infrastructure and agriculture lending during this period as noted in chapters three and four. It was found that there was a shift in bankers' priority to urban centric activities, thinning of banking infrastructure in the rural areas, gradual reduction of states' authority in banking business and rural finance, dilution of staff strength in rural branches, and high street banking etc. In the Indian context, banking intensity historically had positive and robust association with agriculture and rural outreach. But reduction in rural branches led to additional burden of transaction, travel and time cost on existing borrowers on the one hand and at the same time also restricted potential borrowers' willingness to access banking services on the other hand (Basu, 2005, NCAER 2002). As a result, despite, decline in interest rate and interest subsidy, formal loans became economic unviable for the rural poor (Basu, 2002; Rawal, 2005; Chavan 2005).

During reforms, there was emphasis on the following: maintenance of clean and surplus balance sheets, universal application of accounting standards, prudential capital adequacy norms on banks irrespective of their size and working environment, competition for maintenance of the profit and efficiency of the rural branches at par with urban branches as well as other competing banks. These measure exerted indirect pressure on the staff and managers of rural branches. Besides, stress also increased on bankers as they had to achieve these objectives under the dwindling banking staff, and declining quality and quantity of enabling infrastructure in rural branches. These pressures are reflected in the phenomenon of lazy banking/ fear banking during intense reform. The automation of the branches through enhanced use of information and communication technology was conducted with the following objectives: to reduce human interface in lending and other banking services, bring change in the attitude of bankers, to weed corruption, to monitor nepotism and delay etc. However, the findings of the present study suggest that such steps ended with lower outreach of agriculturists and rise in inequalities in the access and use of banking services. It is also learnt that the new age banking is helpful for those who possess knowledge and capability to align with the technology and changed environment, but it would not be much effective amongst those lacking minimum desirable qualities. Instead, this digital divide pushed society into deeper dualism. Certainly, marginal farmers, artisan, agriculture labourers, and other disadvantage groups and people at the margin of

social and economic ladder fall under the latter category (Bagchi, 2005). As per Census 2011, there is increase in literacy across the board in the last two decades but stark inequalities exist in skill and human capabilities across the various stakeholders of the society. Thus, the impact of banking reforms on diverse stakeholders in rural communities was uneven (Chavan, 2008; Mishra and Mohapatra, 2008; Mishra and Sharma, 2017).

The tightening of prudential norms for the sustenance of profit orientation of banks under intense reforms put additional constraints on poor and vulnerable groups (Rawal, 2005; Ramkumar, 2014; UNDP, 2006). Besides, banking access to poor and agriculturists at the lower strata also suffered when personnel working in the rural branches carried their business with 'high street' and elite frames of mind (Basu, 1977; Basu, 2002; Mehrotra et al., 2009; Chandrasekhar, 2005; Chavan, 2005; Shetty, 2005 and 2009). Unfortunately, inadequate attention has been paid by the researchers on these aspects when they assess the impact of banking sector reforms. This chapter aims at analysing the pattern in access (outreach), and use of the bank loans (Credit depth) of different size class[1] of famers across the three regulatory regimes for national and sub national level.

6.2 Land and Credit Market Inter-linkage

Indian agriculture has been dominated by marginal and small holdings although they are asymmetrically distributed in diverse agro-climatic zones of different regions (MoA, 2015). Parliament[2] aiming at correcting the distortions of the land market, passed legislation since independence, however, 'a dream of land to tillers' is far from reality. Like many developing nations, land market in India is also imperfect. The rural money market has not been different from the land market. Land constitutes the largest component in the collateral offered by the agriculturists to the institutional lenders in obtaining loans (NSSO 2014). Studies noted that absence of clear land title was one of the main culprits behind agriculturist's reduced banking access and also

[1] Study divides holdings into three categories: marginal (holdings with operated area less than 1 hectare); small (holdings having area above I hectare but less than 2 hectares); and large or `others' (all holdings with operated area 2 hectare and above) .

[2] Indian constitution empowers the parliament to enact and pass land reform policy; but framing rules and executions of the policy falls in the domain of the states and local authorities. Although such arrangement was devised in order to accommodate the local diversity; but it ended with creating more ambiguity. The authorities at diverse level were given enough discretionary power in extending exemptions to individual and group of individual in land ceiling which was grossly misused by them for their ulterior motives. In the land ceiling act, upper limit of the land holding was fixed on the basis of the quality of land (irrigated and irrigated) but limit varied across the states and hardly and limitation was done after the independence. Despite of extensions of irrigation facilities, and investment on rural infrastructure, classification of the farmers on the basis of size of holding has not changed since independence.

for the sub-optimal supply of bank loan to agriculture (Binswanger and Mcintire, 1987). The supply of bank loan had largely been determined by the value of marketable collateral offered by borrower, perceived default risks and cost of recovery of loans etc. (Ray, 2004). Moreover, the value of collateral depends on the quantity and quality of land under possession or at the disposal of borrowers, structure of the land markets, and legal infrastructure in which contract is enforced. Land market structure and credit market in rural India are intertwined (Bhaduri, 2005).

Marginal and small farmers have been the backbone of Indian farming since colonial rule and even before that. Their influence has grown in the number of farmer households, operational holdings, operated and net shown area (NSSO, 2015; Agriculture Census, 2012; Mehrotra, 2009; Dev, 2012). A remarkable diversity also exists in these farmer households in terms of economic and social status within and amongst the states. Rise in the number of smaller holdings is an outcome of the subdivision and fragmentation of holdings. Larger holding tend to have better access to institutional support including banks than that of the marginal despite latter being larger in number. The marginal farmers are the most vulnerable group after agricultural labourers in all states, specifically in terms of access to institutional sources including banks (NSSO, 2014).

A peculiar situation exists in the Indian rural credit market. Banks are often unwilling in extending loan to marginal farmers on the grounds that they cannot deposit requisite collateral, despite better track record of repayment. By contrast, large farmers having better collateral at their possession succeed in obtaining disproportionate loan amounts from banks and other financial institutions despite not having a good track record of repayment (RBI, 2012; Chavan, 2005; Rawal, 2005; Gill, 2003). Field studies show that marginal and small farmers suffered due to under-lending[3] by banks, whereas over-lending was common for the rich and powerful farmers. The latter group also succeeded in obtaining loan from multiple institutional sources simultaneously while former were denied their due share (MoA, 2015; NSSO, 2014; Dev 2012). Studies also suggest that marginal and small farmers have disproportionately contributed in commercialisation, diversification and agricultural growth, despite poor access to formal loans. In contrast to this, owners of the large

[3] The small and marginal farmers in the country were given lesser amounts than what they applied for. It was much less than their credit need which compelled them to borrow from the informal sources (Dev 2012).

holdings remained risk-averse and preferred traditional crops, despite overshooting by the banks and other formal sources (Dev, 2012; MoA, 2015). The level and growth of agricultural loans depend on host of factors including borrowers income, rates and terms of the debt servicing obligations of the banks, ease and cost of the loan of the other sources of the finance, travel distance to the branches, ease of access to availability and quality of agriculture infrastructure, command over common property in villages, and the availability of the risk coping mechanisms at disposal of the farmers (Chand, 2011; Alagh, 2005; Bhalla, 2005).

As per the scope of study, trend in SCB loans disbursed to the marginal (holding size less than 1 hectare), small (holding size above 1 but less than 2 hectare) and large (holding size above 2 hectare) holdings at national and sub national level have been analysed under the three regimes.

6.3 Methodology, data source, objective and hypotheses

Like previous chapters, present chapter divides the study period (1980-81 to 2010-12) into two broad regimes: social banking (1980-91), and banking sector reforms (1992-12). Banking reform regime has further been divided into two sub regimes- intense reform (1992-01) and financial inclusion drive (2002-12). The access and use of bank loans have been assessed through two indicators, namely 'Outreach' (measured through accounts) and 'Credit Depth' (measured through amount disbursed/outstanding in the bank). The following pertinent research questions have been addressed in this chapter:

1. Was there any specific pattern in structural composition of land holdings?
2. Was allocation of bank credit to farmers related to the dynamics of the land holding patterns in states?
3. Did intrastate disparities in access and use of t bank credit of various farmer groups show any trend during the banking reform?
4. Did relative access and use of bank credit by small and marginal farmers show any pattern during reform?

In this regard, following null hypotheses have been tested:

1. Banking sector reform was size and state neutral.
2. Enhanced flow of agriculture credit and financial innovations during reform helped in improving the access and use of bank loan to small and marginal farmers in states.
3. Credit intensity and debt service payments declined during reform and remained size neutral.

This chapter has been structured as follows: the first section analyses trends in distribution of land holdings and relative ‘‘Outreach’’ and Credit Depth across the marginal, small, and large farms at the national level. The second section investigates patterns in interstate disparities in “Outreach”, “Credit Depth”, indebtedness and debt service liabilities of the marginal, small and large farmers across the regimes. The last section presents a summary of the findings and concludes.

Data source used in analysis of this chapter

The time series data in regards to agriculture loan, extended by the commercial banks with respect to size class of farmers since 1979-80, is available in the Currency and Finance Reports of RBI at national level, but the same data set is not compiled for the states. The ‘Banking Statistics’ have been publishing annual data on state-wise disbursement and outstanding agriculture credit by size of the loan, but it cannot be used for the approximation of ‘Outreach’ and ‘Credit Depth’ for different size class of holding. In the view of deficiency of reliable time series data from banks and RBI, study excavated information of loan and various attributes of land holding from the Inputs Surveys (Agriculture Census), the Situation Assessment of Farmers, Some Aspects of Land Holdings and All India Debt and Investment Surveys (NSSO). It should be noted that survey data provides information on larger[4] attributes of the agriculture loans, but these information are not comparable because of differences in methods of data collection and reporting. The data of the input surveys are not easily comparable with its previous series owing to change in definition and also because of the exclusion[5] of many states in the surveys. Thus, appropriate adjustment is being done while making them comparable.

[4] Despite suffering from many deficiencies, Input Surveys conducted after Agriculture Census contains information related to wider aspects of farming such as: crop wise net shown area, areas under irrigation by source of irrigations, credit by sources and durations, use of credit by duration and purpose, yield per hectares. Information on bank credit across the size class of the farmers is available for the most recent period, say 2011-12. However, input survey are regularly conducted since 1971-72, but exclusive information related to commercial bank credit by the size class of farmers and states is available from 1985-86 to 2011-12. Despite change in concept, the major limitations of input survey data is that it is based on small sample and many states have been excluded in surveys.

[5] West Bengal, Assam, and Jammu & Kashmir were not included in the Input Surveys 1986-87; while in 1991-92 the excluded states were Maharashtra, Jammu and Kashmir, and Tamil Nadu (The Input Surveys wise list of the excluded states in have been given in Appendix Table 6C). The information pertaining to all the states is available in input surveys 2011-12. To have an analogous series, information of the new states has been clubbed with their old state.

6.4 Pattern in distribution of land holdings- National Scenario

Table 6.1 shows change in the composition of operational[6] land holdings at the national level from 1970-71 to 2010-11. It is noted that marginal holdings had not only been dominating in the operational holdings but also that their share has grown disproportionately since 1970-71. For instance, the number of operational holdings almost doubled (from 71.1 million in 1970-71 to 138 million in 2010-11) in the last four decades in the country. The contribution of small and large holdings increased by 1.84 times and 0.98 times respectively. Asymmetric change in holdings led to rise in the share of marginal holdings from 51% in 1970-71 to 67% in 2010-11, while the share of large holdings[7] almost halved. Nonetheless, the share of small holdings in total operational holdings remained almost stable and hovered around 18-19% during this period. Theil Index, Hirschman Herfindahl Index (HHI), and Gini coefficient shown in the table confirm progressive marginalisation of holdings in the country (Table 6.1).

Table 6.1: Pattern in the distribution of operational holdings size class of farmers –national *(Number in 000; Share in %)*

Holdings Size		1970-71	1975-77	1980-81	1985-86	1990-91	1995-96	2000-01	2005-06	2010-11
Marginal (< 1 ha.)	Number	36200	44523	50122	56147	63389	71179	75408	83694	92356
	Growth	-	4.2	2.4	2.3	2.5	2.3	1.2	2.1	2.0
	Share	51.0	54.6	56.4	57.8	59.4	61.6	62.9	64.8	67.0
Small (above 1 and < 2 ha)	Number	13432	14728	16072	17922	20092	21643	22695	23930	24705
	Growth		1.9	1.8	2.2	2.3	1.5	1.0	1.1	0.6
	Share	18.9	18.1	18.1	18.4	18.8	18.7	18.9	18.5	17.9
Semi-medium (above 2 and < 4 ha)	Number	10681	11666	12455	13252	13923	14261	14021	14127	13840
	Growth	-	1.8	1.3	1.2	1.0	0.5	-0.3	0.2	-0.4
	Share	15.0	14.3	14.0	13.6	13.1	12.3	11.7	10.9	10.0
Medium (> 4 and < 10 ha)	Number	7932	8212	8068	7916	7580	7092	6577	6375	5856
	Growth	-	0.7	-0.4	-0.4	-0.9	-1.3	-1.5	-0.6	-1.7
	Share	11.2	10.1	9.1	8.1	7.1	6.1	5.5	4.9	4.3
Large (> 10 hectare)	Number	2766	2440	2166	1918	1654	1404	1230	1096	1000
	Growth	-	-2.5	-2.4	-2.4	-2.9	-3.2	-2.6	-2.3	-1.8
	Share	3.9	3.0	2.4	2.0	1.6	1.2	1.0	0.8	0.7
'Large farms' (Above 2 hectare)	Number	21379	22318	22689	23086	23157	22757	21828	21598	20696
	Growth	-	0.86	0.33	0.35	0.06	-0.35	-0.83	-0.21	-0.85
	Share	30.1	27.4	25.5	23.7	21.8	19.6	18.2	16.6	15
Total	Number	71011	81569	88883	97155	106638	115579	119931	129222	137757
	Growth	-	2.8	1.7	1.8	1.9	1.6	0.7	1.5	1.3
	Share	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inequality Measures	HHI	0.33	0.36	0.38	0.39	0.41	0.43	0.45	0.47	0.49
	Gini	0.41	0.44	0.47	0.49	0.51	0.53	0.55	0.57	0.59
	Theil	0.29	0.36	0.39	0.43	0.47	0.51	0.55	0.58	0.63

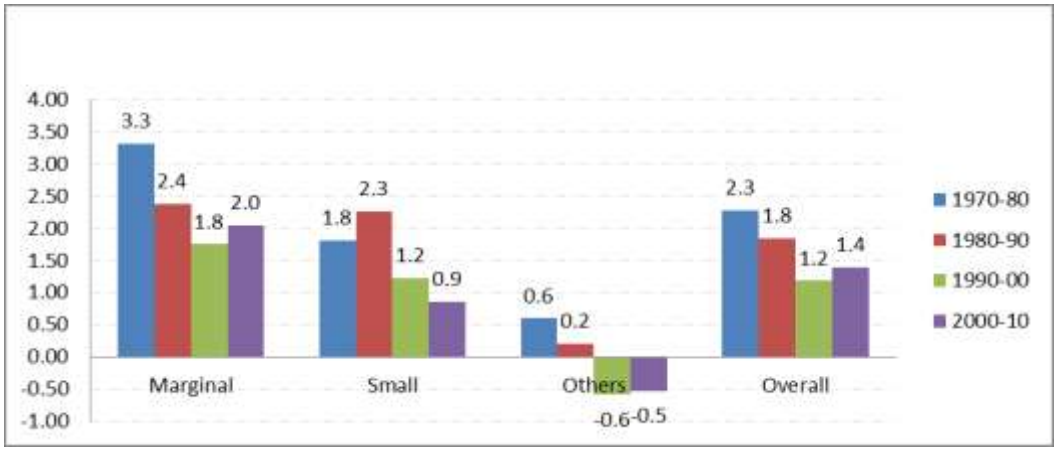
Source: Computed by author from Agriculture Census (Various Issues)

[6] Operational holding is defined as: "all land used wholly or partly for agricultural production and operated as one technical unit by one person alone or with others, without regard to the title, legal form, size or location". Further, technical unit means unit under the same management, having the same means of production such as labour force, machinery and animals". Extracted from Input survey 2006-07 pp.,1 Agriculture Census Division ; Ministry of Agriculture, 2012

[7] 'Large holding' includes the sum of the semi Medium (2 hectares to 3.99 hectares), medium (4 hectare to 9.99 hectares) and the large (10 hectares and above) holdings.

Figure 6.1 shows growth differentials (CAGR) of the number of holding under marginal, small and large categories between 1970-71 and 2010-11. It is noticed that there was not only remarkable variation in growth rate across the farmer groups in regimes, but notable variations were also recorded in the growth for the same farmer groups in different sub periods. The growth in the number of holdings remained highest for marginal farmers and lowest for large holding in all the surveys.

Figure 6.1: Growth of holdings (number) to size class of farmers



Source: Computed by author from the same source mentioned in table 6.1

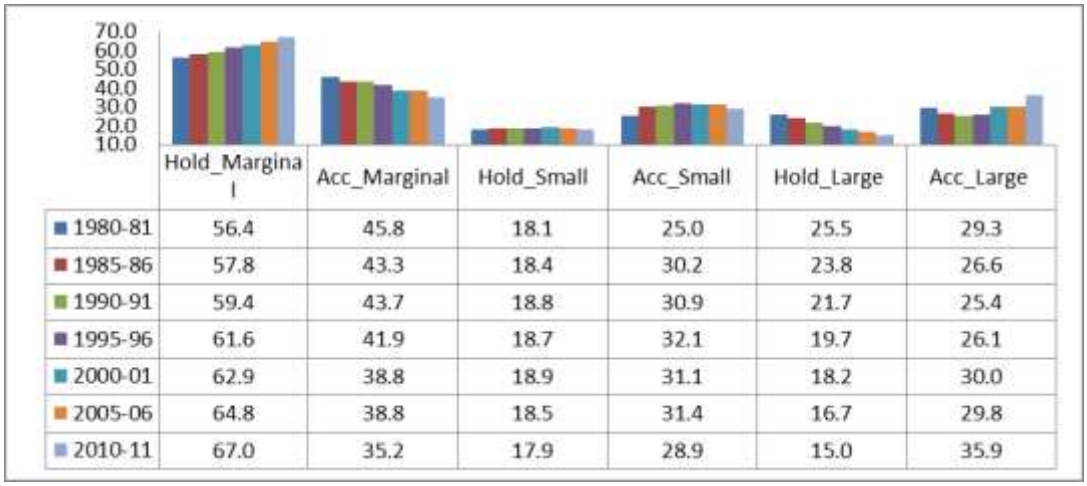
6.4.1 Trends in 'Outreach' across size class of land holdings- national scenario

Figure 6.2 displays relative contributions of marginal, small, and large in total agriculture loan accounts[8] of the SCBs and also in number of operational holdings from 1980-81 to 2011-12. The figure shows that movement in the shares of different land holding size in bank accounts and number of holdings has been non-synchronous. For instance, large farms claimed disproportionately high share in bank loan accounts, despite sustained decline in their contribution in number of operation holding. In contrast, the claim of marginal farmers in bank accounts has shown declining trends, despite their growing contribution in number of holdings. From the figure, in 1980-81 the contribution of marginal farms in the total number of holdings and agriculture loan accounts of the SCBs was 56.4% and 45.8% respectively, hence a deficit of 10.6%. This deficit grew to 15.7% in 1990-91, then to 24.1% in 2000-01 and almost tripled (31.7%) in 2010-11. In contrast to this, the large holding not only had positive gap in 1980-81 but it widened over the years, especially during reform which further zoomed between 2000-01 and 2010-11 (to 20.9%). Non-calibration

[8] Non overlapping three year annual averages of direct finance to agriculture account in SCB data obtained from the BSR and holding data from the Agriculture Census.

between pattern in holding and agriculture loan accounts across the farmers groups led to asymmetric change in relative banking 'Outreach' i.e., favour for large holdings and indeed disfavour for marginal holdings. The figure displays that it was the small farmer group that benefitted most out of the expansion of agriculture accounts during social banking, but there was a turnaround during the periods of reform and inclusion drive (Figure 6.2).

Figure-6.2: Pattern in distribution of holding (number) and agriculture loan account by size class of farmers –national



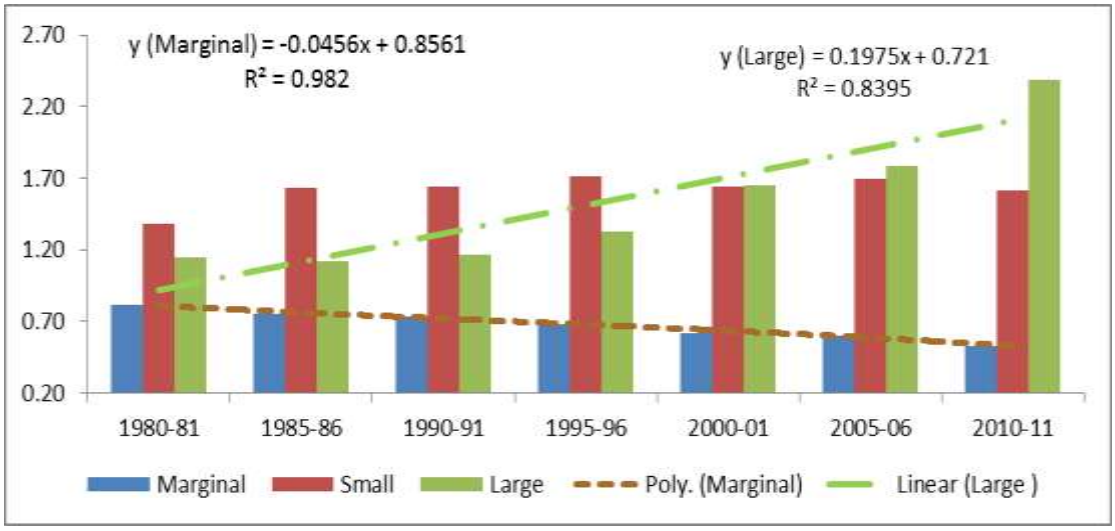
	Hold_Marginal	Acc_Marginal	Hold_Small	Acc_Small	Hold_Large	Acc_Large
1980-81	56.4	45.8	18.1	25.0	25.5	29.3
1985-86	57.8	43.3	18.4	30.2	23.8	26.6
1990-91	59.4	43.7	18.8	30.9	21.7	25.4
1995-96	61.6	41.9	18.7	32.1	19.7	26.1
2000-01	62.9	38.8	18.9	31.1	18.2	30.0
2005-06	64.8	38.8	18.5	31.4	16.7	29.8
2010-11	67.0	35.2	17.9	28.9	15.0	35.9

Source: Computed by author from the BSR and Agriculture Census data (Various Rounds)

Figure 6.3 depicts change in Relative Access Ratio (henceforth-RAR[9]) of the marginal, small and large holdings from 1980-81 to 2010-11. The RAR tracks the movement in the extent of banking exclusion and/or inclusion with respect to contribution in holdings of different farmers groups. The downward trend line shown in the figure points towards intensification of vulnerability and increased exclusion for marginal farmers during reform, whereas upward trend line indicates disproportionate inclusion and favour for the large holdings. It is also worth noting that RAR value remained less than one for marginal farmers throughout while greater than one for large holdings in all the three regimes. In other words, marginal holding has been under-represented in banks while over-representation was noted for large farms.

[9] Relative Access Ratio (RAR) is defined as the ratio of the share of holdings having access to banks credit to the share of individual size class of holdings in overall operational holdings of States. The RAR value less than one signifies favourable terms for individual farmer categories, RAR value one represents neutral status and less than one dictates unfavourable terms.

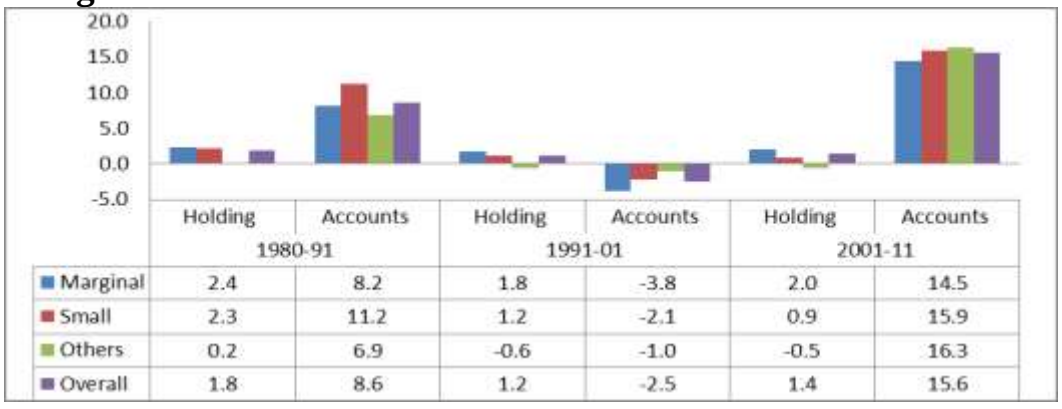
Figure-6.3: Relative Access Ratio (RAR) across the size class of holding–National



Source: Computed by author

Figure 6.4 displays trends in relative growth rates[10] of agriculture loan accounts and holdings of the three farmer groups across the three regulatory regimes. The figure shows that growth agriculture loan accounts (8.6%) were markedly higher than holdings (1.8%) for all farmers during the social banking regime. Amongst farmer groups, the growth differential was the highest for small farmers followed by the marginal farmers.

Figure 6.4: Growth of account across the size class of farmers



	Holding	Accounts	Holding	Accounts	Holding	Accounts
	1980-91		1991-01		2001-11	
Marginal	2.4	8.2	1.8	-3.8	2.0	14.5
Small	2.3	11.2	1.2	-2.1	0.9	15.9
Others	0.2	6.9	-0.6	-1.0	-0.5	16.3
Overall	1.8	8.6	1.2	-2.5	1.4	15.6

Source: based on authors calculations (RBI various issues)

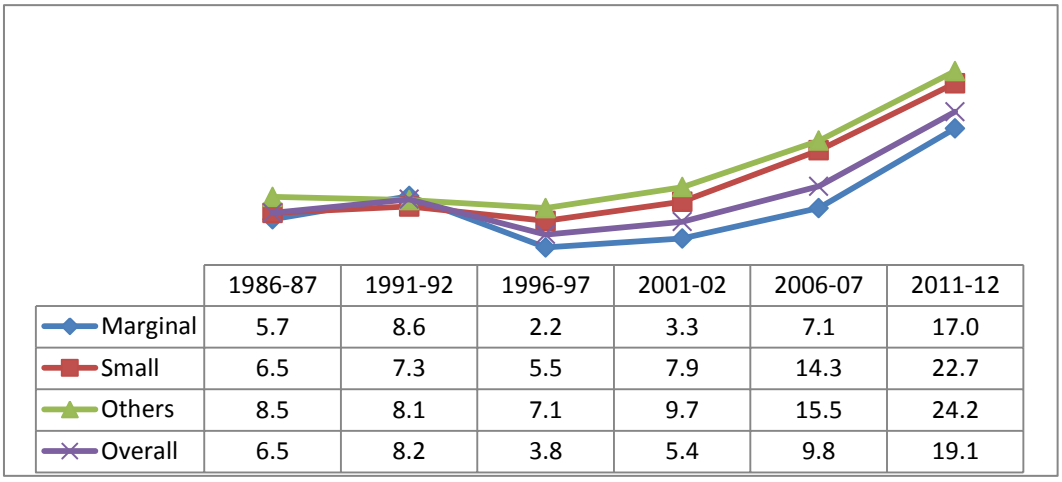
In contrast to this, growth differentials were found negative for all farmers during the period of intense reform (1992-01). However, country experienced utmost erosion in bank accounts for marginal farmers as they recorded the highest growth in number of holdings during this period. Certainly, adverse impact was least for large holdings

[10] Three year annual average of the agriculture accounts (outstanding).

because they experienced negative growth in both holdings and accounts. Although, growth differential are positive for all the three categories during revival phase[11],the maximum benefit was accorded to the large holdings and gap between growth of holdings and accounts was least for the marginal holdings. This partially explains the reason behind the divergence in size class disparity during reform despite improvement in 'Outreach' (Figure 6.4).

The above analysis was based on the data belonging to difference sources, for example the number of operational holdings data was taken from the Agriculture census, agriculture loan accounts of the SCBs data was taken from BSR and Currency and Finance Report (Both published by the RBI). Hence, trends are indicative only.

Figure 6.4A: Banking Access Ratio across the size class of farmers 1985-86 to 2010-11



	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12
Marginal	5.7	8.6	2.2	3.3	7.1	17.0
Small	6.5	7.3	5.5	7.9	14.3	22.7
Others	8.5	8.1	7.1	9.7	15.5	24.2
Overall	6.5	8.2	3.8	5.4	9.8	19.1

Source: Computed by author from the Input survey

Banking Access Ratio[12] depicted in figure 6.4A has been computed from the data of Input Surveys (MoA). Both, number of operational holding of the marginal, small and large categories and corresponding 'banked holding'[13] data pertain to same source which was collected directly from farmers during field surveys. The figure exhibits poor banking access across the farmer groups in 1986-87. For instance, only 6.5% of the holdings reported that they have taken loan from commercial banks for agriculture purposes in 1986-87 at national level. The highest banking access was recorded for

[11] Definition of revival phase in this section is distinct from the time period considered in earlier chapters. Here, the revival phase covers the period between 2001-02 and 2010-11; while in the earlier case it was 2004-05 to 2010-11.

[12] Banking access is defined as proportion of holdings reported to having taken loans from commercial banks for agriculture purpose to the total number of holding in each category. Banks includes commercial banks and Regional Rural Banks as reported in Input Surveys of Agriculture Census.

[13] 'Banked holding' is defined as holdings that reported to have taken bank loans for agriculture purpose from commercial banks inclusive of the RRBs reported in various Input Surveys (MoA)

large farmers (8.5%), while lowest for the marginal farmers (5.7%). The banking access gap between large and marginal holding was about 1.8% in 1986-87. The figure further noted an increase in the banking access ratio for marginal and small holdings and decline for large holdings in subsequent input survey i.e., during 1991-92. On account of improved banking access of marginal and small holdings, and relative decline for large holdings, there was a decline in inter size class disparity (Figure 6.4A).

The figure noted collapse of banking access ratio in two consecutive surveys conducted after banking reform. This implies that momentum generated in favour of marginal and small holdings in pre-reform period could not sustain during the period of intense reforms. Although, lower banking access ratio was noted for all farmers groups during 1996-97 than the level reported in 1991-92, but the largest decline was noted for the marginal (-6.4%) followed by small holdings (-1.8%).

Banking access ratio began to improve across the board after 1996-97 but the gain was least for marginal farmers while highest for large holdings (Figure 6.4A). This period coincided with the phase of rural banking undergoing significant churning. During this phase, decline in branches and shrinking of agriculture accounts (direct finance to farmers), especially in rural areas of backward states was recorded. The figure certainly confirms the revival of agriculture loan account in banks during financial inclusion drive. However, owing to asymmetric distribution of banked holdings, the gap between banking access ratio of large and marginal holdings have widened in the two consecutive surveys (Figure 6.4A).

6.4.2 Pattern in use of bank loan across the size class of holding-national scenario

The contribution of large holdings remain to be higher than the combined area operated[14] by marginal and small holding despite former being less in number. Table 6.2 confirms structural[15] change in operated area at national level between 1970-71

[14] Operated area includes both cultivated and uncultivated area, provided part of it is put to agricultural production during the reference period. It also covers the land occupied by farm buildings, including the house of the holder, provided such buildings are located within the operated area. If the farms buildings are located outside the cultivated area and are covered under abadi area, such buildings would not be included in operated area. It exclude government forest land, government waste land, village common grazing land, abadi area etc but if government wasteland is allotted to an individual then it will be included in the holding (Source : . http://agcensus.nic.in)

[15] Change in relative contribution of the marginal, small and large holdings in total operated area of the country.

and 2010-11. The table highlights not only rise in the share of marginal and small holdings but also decline for the large holdings in total operated area of the country.

Table 6.2: Patten distribution of operated area by size class of farmers-national

Area (in 000 ha); Average Area per Holdings (in hectare): Share and Growth rate (in per cent)

Holding	Indicators	1970-71	1975-77	1980-81	1985-86	1990-91	1995-96	2000-01	2005-06	2010-11
Marginal (< 1 ha.)	Area	14599	17509	19735	22042	24894	28121	29814	32026	35410
	AAPH	0.40	0.39	0.39	0.39	0.39	0.40	0.40	0.38	0.38
	Growth rate		3.7	2.4	2.2	2.5	2.5	1.2	1.4	2.0
	Share	9.0	10.7	12.0	13.4	15.0	17.2	18.7	20.2	22.2
Small (above 1 and < 2 ha)	Area	19282	20905	23169	25708	28827	30722	32139	33101	35136
	AAPH	1.44	1.42	1.44	1.43	1.43	1.42	1.42	1.38	1.42
	Growth rate		1.6	2.1	2.1	2.3	1.3	0.9	0.6	1.2
	Share	11.9	12.8	14.1	15.6	17.4	18.8	20.2	20.9	22.1
Semi-medium (above 2 and < 4 ha)	Area	29999	32428	34645	36666	38375	38953	38193	37898	37547
	AAPH	2.81	2.78	2.78	2.77	2.76	2.73	2.72	2.68	2.71
	Growth rate		1.6	1.3	1.1	0.9	0.3	-0.4	-0.2	-0.2
	Share	18.5	19.9	21.2	22.3	23.2	23.8	24.0	23.9	23.6
Medium (above 4 and < 10 ha	Area	48234	49628	48543	47144	44752	41398	38217	36583	33709
	AAPH	6.08	6.04	6.02	5.96	5.90	5.84	5.81	5.74	5.76
	Growth rate		0.6	-0.4	-0.6	-1.0	-1.5	-1.6	-0.9	-1.6
	Share	29.7	30.4	29.6	28.6	27.0	25.3	24.0	23.1	21.2
Large (Above 10 hectare)	Area	50064	42873	37705	33002	28659	24160	21072	18715	17379
	AAPH	18.10	17.57	17.41	17.21	17.33	17.21	17.13	17.08	17.38
	Growth rate		-3.1	-2.5	-2.6	-2.8	-3.4	-2.7	-2.3	-1.5
	Share	30.9	26.2	23.0	20.1	17.3	14.8	13.2	11.8	10.9
'Large farms' above 2 ha	Area	128297	124929	120893	116812	111786	104511	97482	93196	88635
	AAPH	6.0	5.6	5.3	5.1	4.8	4.6	4.5	4.3	4.3
	Growth rate		-0.53	-0.65	-0.68	-0.88	-1.34	-1.38	-0.90	-1.00
	Share	79.1	76.5	73.8	71	67.5	63.9	61.2	58.8	55.7
Total	Area	162178	163343	163797	164562	165507	163354	159435	158323	159181
	AAPH	2.28	2.00	1.84	1.69	1.55	1.41	1.33	1.23	1.16
	Growth rate		0.14	0.06	0.09	0.11	-0.26	-0.48	-0.14	0.11
	Share	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inequality Measures	**(HHI)**	0.240	0.228	0.220	0.214	0.210	0.208	0.208	0.209	0.211
	Gini Coef.	0.25	0.21	0.18	0.15	0.12	0.11	0.11	0.11	0.11
	Theil Index	0.10	0.07	0.05	0.04	0.02	0.02	0.02	0.03	0.03

Source: Computed by author from Agriculture Census (Ministry of Agriculture: Various Issues)

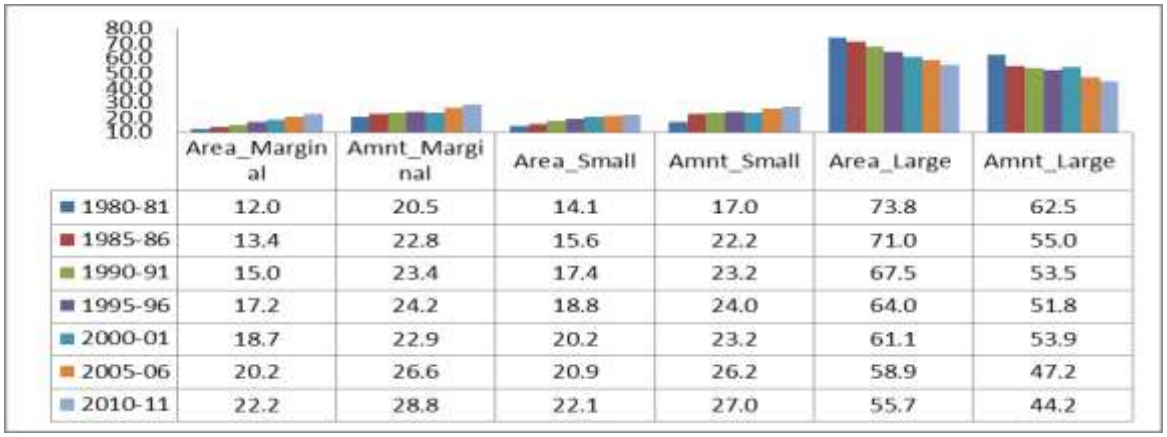
In spite of decline in share, a few[16] large holdings still had control over more than half of the operated area in the country in 2010-11. The inequality measures such as Herfindahl Hirschman Index (HHI), Theil Index (General Entropy_GE-1), and Gini coefficient presented in Table 6.2 confirm diversification i.e., decline in dominance of large holdings and commensurate increase in shares of marginal and small farmers in total operated area. Table further highlights invariable change in operated areas by

[16] Out of 137.5 million number of holdings in 2011-12, the contribution large holding (area above 2 hectare) was only 20.7 million (15% of the total number of the operational holdings)

small, marginal and large holding as the growth rates[17] of operated area by them varied remarkably across the farmer groups over the period. Precisely, growth rate of operated area by marginal and small holdings was positive and high, while it was negative and slow for the large holdings (Table 6.2). Noticeably, overall operated area remained almost stable since 1991-91

Figure 6.5 displays changes in claims of marginal, small, and large holdings in outstanding agriculture loan amounts of the SCBs and their respective contribution in the operated area during 1980-11 and 2010-11. In contrast to the trends in relative outreach, the figure reports credit depth for marginal farmers. In other words, marginal farmers have lager claims in loan amount than their contribution in operated areas. For instance, the share of marginal farmers in bank loans was about 20.5% while they accounted only 12.0% in operated area in the country. The figure noticed increase in gap between share in agriculture loan and operated area from 8.5% in 1980-81 to 9.4% in 1985-86 and declined during 1991-92. In other words, marginal farmers maintained better 'Credit Depth' than the small and large farmers during the social banking but, their relative strength at national level appears to have enfeebled during 1991-92 and 2010-11 on account of decline in their share in loan amount and increase in operated area. Trend was not much different for the small holdings also (Figure 6.5). In contrast, the share of large holdings in bank loans during inclusion drive witnessed an upward trend despite decline in their contribution in operated areas (Figure 6.5)

Figure-6.5: Share in operated area & outstanding loan amount by size class of farmers–national



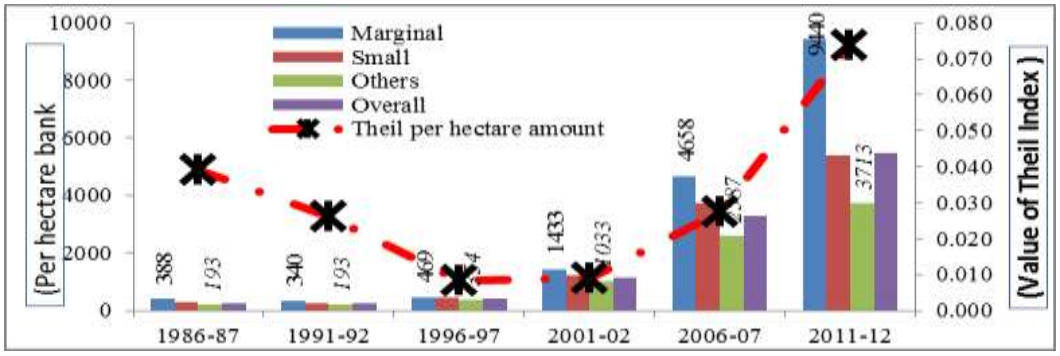
	Area_Marginal	Amnt_Marginal	Area_Small	Amnt_Small	Area_Large	Amnt_Large
1980-81	12.0	20.5	14.1	17.0	73.8	62.5
1985-86	13.4	22.8	15.6	22.2	71.0	55.0
1990-91	15.0	23.4	17.4	23.2	67.5	53.5
1995-96	17.2	24.2	18.8	24.0	64.0	51.8
2000-01	18.7	22.9	20.2	23.2	61.1	53.9
2005-06	20.2	26.6	20.9	26.2	58.9	47.2
2010-11	22.2	28.8	22.1	27.0	55.7	44.2

Source: Computed by author

[17] Compound Average Growth Rate

Figure 6.6 displays relative trends in credit intensity (bank loan per hectare at 1999-00 prices) of marginal, small and large farmers during 1986-87 and 2011-12. The figure shows rise in credit intensity for all farmer groups during the period under analysis, although pace of change varied across the farmer groups in different regimes (Figure 6.6). For instance, the average credit intensity of marginal farmers at the national level increased from ₹315.4 in 1986-87, to ₹9440 in 2011-12 (i.e., 24.3 times in 24 years), while it was lower for small and large holdings. The Theil Index shown in figure also suggests varying trend in inter-size disparity over the regime, decline between 1986-87 and 1996-9, stable between 1996-97 and 2001-02 and widening thereafter (Figure 6.6).

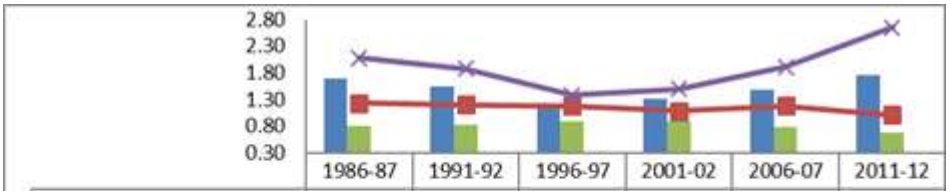
Figure-6.6: Trends in Relative 'Credit Depth'



Source: Computed by author

Figure 6.6A shows trend in relative credit depth estimated through ratio of loan amount to net sown area (RLTNSA[18]) of aforementioned three categories of the farmers. As per definition, value of the RLTNSA greater than one indicates favourable terms, while less than one points towards unfavourable terms for the three groups of farmers. Varying trends in RLTNSA across the farmer groups is also noted. The trend in Figure 6.6A and 6.6 do not differ much except the level.

Figure-6.6 A: Trends in RLTNSA across the farmer groups



	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12
Marginal	1.69	1.54	1.23	1.31	1.47	1.76
Others	0.81	0.82	0.89	0.88	0.77	0.66
Theil Index	0.04	0.03	0.01	0.01	0.03	0.08
Small	1.23	1.20	1.18	1.09	1.17	1.01
Ratio of marg to other	2.08	1.87	1.38	1.49	1.91	2.65

Source: Computed by author

[18] Credit depth or Ratio of Loan amount to Net Shown Area (RLTNSA) is computed as a proportion of the share of ith category of the farmer who has taken loans for agriculture purpose (both short and long run) from the SCB to their corresponding share in operated area of the country as reported in input survey of the agriculture census. The farmer groups have been clubbed into three categories i=1,2,3 where 1 indicates marginal holdings, 2 small holdings, and 3= holdings of the 'Large farms'. From definition, RLTNSA >1 favourable terms, RLTNSA =1 neutral status, and RLTA<1 unfavourable terms for the farmer group. Similarly rise in value of RLTNSA over the time indicates improvement; otherwise worsening of the situation for the farmer group.

Theil index shown in both figures points towards convergence in inter-size class disparity between 1986-87 and 2001-02, but divergence was recorded thereafter. Most of the marginal farmers are income deficit households (Average income of the family was lower than the consumption expenditure of family) and do not have savings. They require loan for consumption smoothing, buying modern inputs from the market, and also for meeting emergencies. The literature highlights the fact that these farmers have disproportionately contributed to the modern input-intensive crops, despite having lower access to banks (NSSO 2014; Rawal 2005; Dev 2012; Sarthak et al., 2011).

The above analysis can be summarised as follows:

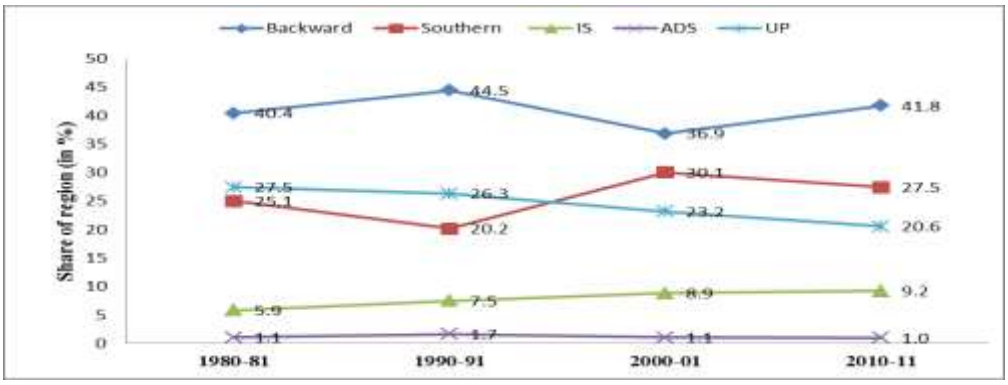
There has been progressive marginalisation of holdings in the country under which contribution of marginal holdings have increased both in number of operational holdings and also in operated areas of the country in last two decades. During this period, share of small farms as a proportion of total holdings and also in operated areas was almost stable. The outreach and relative outreach of marginal holdings improved during the social banking period on account of disproportionate expansion of bank branches in rural areas. The present study finds a decline in outreach and relative outreach of the marginal farmers during intense reforms. However, improvement in banking access was noted for marginal farmers during financial inclusion drive but such improvement was also accompanied by the rising inter size class disparities. Moreover, no synergy has been found between compositional change in holding (number) and change in composition of agriculture accounts in SCBs during the reform and inclusion drive. Non-calibration in holding and bank accounts led to rise in inter size class disparity in intense reform as well as in revival phase.

As against poor relative outreach, marginal farmers had relatively better 'Credit Depth' than that of small holding and large holdings both in pre and post reform period. This shows that marginal farmers have claimed relatively larger share in agriculture loans extended by the SCBs than what they contributed in the operated areas/net sown area of the country. However, the present study finds weakening of their relative strength during intense reform and financial inclusion drive. Noteworthy, despite innovation and many experiments in banking, only 17% farmers could access the banks. Had the banking access of these two groups been universalised, the bankers would not have worried about the stagnation of loan demand and problems of NPA after the reforms. The higher 'Credit Depth' of marginal and small farmer points towards the higher absorption capacity of bank loan of these groups

6.5 'Outreach' and 'Credit Depth' of the marginal farmers: interstate scenario

Historical, socio, cultural, political, economic and geographical factors not only pushed country into progressive marginalisation, but marginal holdings in country were also asymmetrically distributed across states[19]. For example, out of the 46.7 million operational marginal holdings in the country the combined shares of three states, namely Uttar Pradesh including (Uttarakhand), Bihar (inclusive of Jharkhand) and West Bengal (8.8%) was more than half (53.6%); while, additional one fourth was contributed by the four southern states in 1980-81. Thereafter, country witnessed remarkable increase in the number of operational holding in states (91.4 million in 2010-11), while such rise was also accompanied by notable change in shares of the states/state groups. For example, Uttar Pradesh, and West Bengal[20] witnessed a decline in their contributions in total marginal holdings, while the shares of Madhya Pradesh, Maharashtra and Karnataka increased during 1980-81 and 2010-11. The share of Bihar (second largest contributor in total number of the operational marginal holdings) in last three decades was almost stable (Appendix Table 6B).

Figure 6.7: Distribution of marginal holdings across the groups of states from 1980-81 to 2010-11



Source: Computed by author from agriculture census

Figure 6.7 and Appendix table 6B show relative shift in the share of marginal holding amongst the groups of states (as classified in chapter 4) between 1980-81 and 2010-11. The figure notices the highest concentration of the marginal holdings in backward group followed by Southern. Despite, increase in the share of industrialised states (IS)

[19] The combined share of the 20 Indian states which has been considered for analysis constitutes about 99% share in total number of marginal holding and almost same share in operated area by the marginal holding in country.

[20] Input surveys were not conducted in West Bengal in 1991-92, while Agriculture Census was done in 1990-91.

they, remained a minor players in terms of the strength of the marginal holding after the ADS in last three decades,. UP is treated as a separated group due to its strength in the marginal holding of the country and also to avoid the outlier in backwards states. Although, UP remained to be a largest contributor of the marginal holding of the country but it strength were subjected to secular decline especially after 2001-02.

Table 6.3 displays trend relative strength of the marginal farmer in the states during 1980-81 and 201-11. The table confirms a progressive marginalisation in majority of the states however, remarkable variation were also noted in strength of these farmers groups. For instance marginal holding accounted more than three fourths share in total holdings of the states in four states namely; Kerala (96.3%), Bihar (87.8%), West Bengal (82.2%), and Uttar Pradesh (79%) in 2010-11. The states where marginal holdings were relatively less significant are Punjab (15.6%), Rajasthan (36.5%), Gujarat (36.9%), MP (48.1%), and Haryana (48.1%). Barring Punjab and Gujarat, most of the states witnessed increase marginalisation in last two decades (Appendix Table 6C).

Pertinent question arises here; had change in the distribution of bank loan accounts (here 'banked holding') been in accordance to change in holdings under the marginal category in states or not. The national trends show changes were inordinate in different regimes as relative banking outreach of the marginal farmers improved during social banking but worsened during intense reform and financial inclusion drive. In this section, study pertinent aims to analyses trends in relative outreach of the marginal farmers across the states and also to identify the states that have followed national trends and also those states deviated from national trend in different regimes. Study also explores pattern in interstates disparities in 'Outreach' and 'Relative Outreach' of marginal holdings in different regimes.

6.5.1.1 Trend in banking 'Outreach' of marginal farmers - interstate scenario

Appendix Table 6C notices a capricious change in the contribution of banked and total holding under marginal categories in states between 1986-87 and 2011-12. This table noted larger asymmetry in share of state in 'banked holding' under the marginal categories than their respective share in total holdings over the input surveys conducted between 1985-86 and 2011-12. As per 1986-87 Input Survey 50.92 million holding was categorised as 'marginal', of which only 2.91 million were banked

holding. The Banking Access Ratio[21] was not only low (5.7%) in 1986-87 but it was also accompanied by the interstate variations on account of asymmetrical distribution of the banked holdings. For instance, more than 70% banked holdings under marginal categories of the country were concentrated in two states, namely Bihar (58.5%) and Andhra Pradesh (11.5%), while their combined contribution in total marginal holdings of the country was only 25.9% in 1986-87. In contrast, Uttar Pradesh and Tamil Nadu contributing about 26.9% and 9.6% in total pool of the marginal holdings of the country had claimed 8.1% and 1.9% share in the banked holdings under marginal categories. Inordinate change in distribution of the banked and total holding under the marginal category led to remarkable variation in Banking Access Ratio of the states between 1986-87 and 2011-12 (Table 6.3).

Table 6.3: State-wise marginal farmers' Banking Access Ratio

States	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12
Andhra Pradesh	8	6.3	6.7	17.8	36.4	30.7
Assam	NA	0.5	NA	0.5	1.8	3.3
Bihar*	19	33.1	NA	NA	NA	13.6
Gujarat	1.5	3.8	2.3	5.9	4.0	5.9
Haryana	2.2	1.8	0.5	1.7	5.9	14.9
Himachal Pradesh	32.9	23.1	NA	0.2	0.2	26.3
J & K	NA	NA	NA	NA	1.3	NA
Karnataka	3.9	4	5	6.3	10.5	6.3
Kerala	0.9	2.5	1.6	1.9	4.4	1.9
MP*	1.8	1.8	2.1	0.7	1.1	20.4
Maharashtra	1.2	NA	NA	3.3	NA	17.5
Orissa	6.6	1.2	1.4	3	1.5	54.6
Punjab	34.5	32.1	0.1	4.1	5.9	12.8
Rajasthan	2.7	0.7	0.8	2.5	7.3	12.2
Tamil Nadu	1.1	NA	0.8	2.4	3.2	1.6
Uttar Pradesh*	1.7	2.9	0.5	1	7.5	24.6
West Bengal	NA	5.8	5.9	3.5	10.0	11.2
All India	**5.7**	**8.6**	**2.2**	**3.3**	**9.2**	**17.0**
Range Coefficient	***0.95***	***0.97***	***0.97***	***0.98***	***0.99***	***0.94***
P, 10	1.1	0.9	0.5	0.6	1.2	2.6
P,90	28.7	29.4	5.8	6.1	10.2	28.5
Percentile ratio	***25.4***	***34.6***	***11.6***	***10.6***	***8.7***	***10.8***
CV	**139.1**	**136.4**	**98.4**	**118.0**	**131.2**	**83.6**

Note- NA shows that input survey was not conducted for the state while state was included agriculture census

Source: Author's own calculation from the Input Survey (M oA)

Appendix table 6C noticed unseeingly change in holding and banked holdings in states. Indeed, the table noted a higher growth in banked holding (CAGR was 10.9%

[21] Only 5.7% holding reported that they have taken (banked holding) loans from the commercial banks including RRBs.

per annum) than that of overall growth of the marginal holdings (CAGR was 2.18%) between 1986-87 and 1991-92 at national level hence greater inclusion in banks. Moreover, if we analyses data, a palpable interstate disparity is noted in growth rates during the social banking. For example, out of 1.98 million incremental banked holdings during 1986-87 and 1991-92, 84.17% were claimed by the marginal farmers of the Bihar, while contribution the state in incremental marginal holdings of the country was only 21% during 1986-87 and 1991-92. Besides, the table show declined in Banking Access Ratio in many states on account of decline in share of states in banked holding during this period. Between 1986-87 and 1992-92, utmost fall in banking access ratio was recorded in states such as Himachal Pradesh, Andhra Pradesh and Rajasthan (Table 6.3; Appendix Table 6C).

These two tables noted a collapse in banking access ratio in majority of the states on account of declined in banked holding between 1991-92 and 1996-97. Indeed, this was the period when sharper decline was also noted in direct finance accounts marginal farmers across the states. Noticeably, contraction of the banked holding shown in table was not an outcome of decline in bank accounts or dwindling of the rural branches as noticed in chapter 5 of this study, but collapse shown in table was also an outcome of the exclusion of many states in input surveys conducted during this period (See excluded list in table). In order to decompose the impact of exclusion and genuine decline in bank exposer, state has been divided in two groups. The first group includes the states those were included in all surveys; while latter group consists states included and excluded in surveys. Table noted lower banking access ratio in 1996-97 and 2001-02 for the majority of states than the banking ratio of the 1991-92 level (Appendix Table 6C). As we noted, this period was coincided with the period when country noticed steeper decline in direct finance agriculture account of the SCBs and decline in rural branches. Thus, it would not be unwise to conclude that it were farmers at lowest strata that suffered most out of restricting of the branches in rural areas (Appendix Table 6C). Subsequently, the tables noticed a rebound in the banking access ratio in majority of states on account of faster increase in 'banked holding' that that of the holding under marginal category pertinently after 2001-02; but such revival was also coincided with an asymmetric distribution amongst the states. In revival phase, improved Banking Access ratio was escorted by higher interstate disparities in 2006-07; however interstates disparity converged during 2011-12. The Banking Access Ratio was about 17% for the marginal holding during 2010-

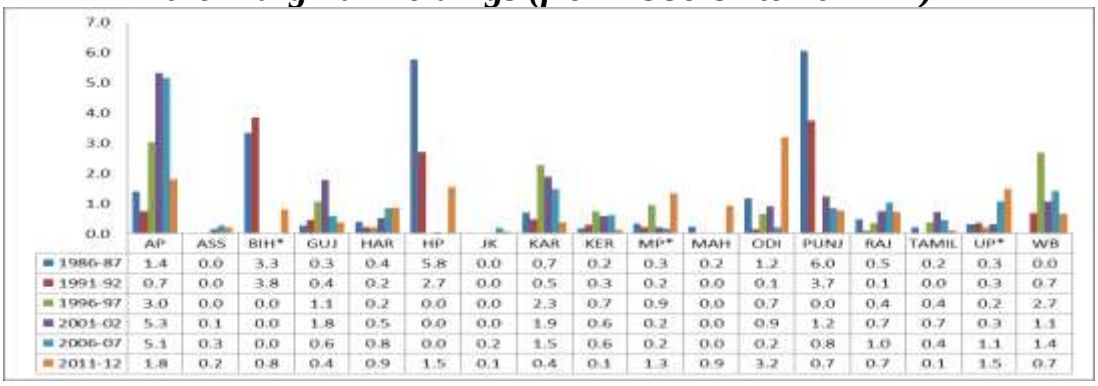
11, which is about 8 times higher than the banking access of the 1996-97and almost 10% higher than that 2006-07 level . Besides, during this period, faster increase in banking access ratio was recorded in poorer states than the developed states or better banked states (Appendix Table 6C and Table 6.3)

In order to assess the relative change in banked holding and total holding of the marginal categories, the "Relative Access Ratio" has been computed for the period between 1986-87 and 2011-12 and result for both set of states is given in Appendix Table 6D and figure 6.8. As noticed from the Appendix table 6D and Figure 6.8, movement in the share of states in banked holdings and total marginal holdings were uncoordinated input surveys. For instance, in first group, out of 11 states, four recorded favourable term while unfavourable terms were noted in five states in 1991-92. The lower interstate disparity in RAR was noticed as value of the CV and Theil index in 1991-92 were lower than 1986-87 (Table 6D). Among the states, most favourable RAR was recorded for Punjab (RAR for Punjab was 10.6[22]) at one end while, most unfavourable is being observed for Uttar Pradesh (0.5). In subsequent input survey, the figure and the table both show higher interstate inequalities however, trends were inconsistent (Appendix Table 6D). As observed from the appendix table, relative concentration of the banked holding increased in in southern states during 2001-02 and 2006-07 input surveys however, balance started shifting in favour of the poor states specifically, towards the Orissa, Assam and Uttar Pradesh between during 2011-12. During this period, the largest increase in RAR was recorded for Orissa because it replaced Punjab amongst the states on the top, Jammu and Kashmir remained at the bottom throughout reform period (Appendix Table 6D)

The study also analysed trends in relative outreach of marginal holdings in comparison to small and large holdings within states and over the regimes. As defined already, RAR>1 (value of Relative Access Ratio greater than unity points) towards favourable terms for marginal farmers over other two groups in states, while, RAR<1 suggests unfavourable term. Further, a rise in the value of RAR over the time indicates a relative improvement in banking access of the marginal farmers and decline otherwise into the state. Figure 6.8 gives summary of change in value of RAR for marginal holdings across the states over periods between 1986-87 and 2011-12.

[22] Punjab claimed 10.7 times higher share in banked holding than what it constituted in total marginal holding of the country in 1986-87.

Figure 6.8: Interstate variations in Relative Access Ratio (RAR) of the Marginal Holdings (from 1986-87 to 2011-12)



Note- Zero indicates data is not available for the state/s in input surveys ; Source: Same as figure 6.7

As evident form Figure 6.8 and table marginal farmers have witnessed relatively unfavourable terms in majority of states during 1986-87 and 2011-12. In addition to this, inordinate change in value of RAR of marginal farmers is being noted from the table 6.4 and the figure 6.8.

Table 6.4: Ranking of states as per RAR value- marginal farmers

1986-87		1991-92		1996-97		2001-02		2006-07		2011-12	
State	**RAR**	**State**	**RAR**	**State**	**RAR**	**State**	**RAR**	**State**	**RAR**	**State**	**RAR**
PUNJ	6.0	BIH*	3.8	AP	3.0	AP	5.3	AP	5.1	ODI	3.2
HP	5.8	PUNJ	3.7	WB	2.7	KAR	1.9	KAR	1.5	AP	1.8
BIH*	3.3	HP	2.7	KAR	2.3	GUJ	1.8	WB	1.4	HP	1.5
AP	1.4	AP	0.7	GUJ	1.1	PUNJ	1.2	UP*	1.1	UP*	1.5
ODI	1.2	WB	0.7	MP*	0.9	WB	1.1	RAJ	1.0	MP*	1.3
KAR	0.7	KAR	0.5	KER	0.7	ODI	0.9	PUNJ	0.8	MAH	0.9
RAJ	0.5	GUJ	0.4	ODI	0.7	RAJ	0.7	HAR	0.8	HAR	0.9
HAR	0.4	UP*	0.3	TAMIL	0.4	TAMIL	0.7	KER	0.6	BIH*	0.8
MP*	0.3	KER	0.3	RAJ	0.4	KER	0.6	GUJ	0.6	PUNJ	0.7
UP*	0.3	HAR	0.2	UP*	0.2	HAR	0.5	TAMIL	0.4	RAJ	0.7
GUJ	0.3	MP*	0.2	HAR	0.2	UP*	0.3	ASS	0.3	WB	0.7
MAH	0.2	ODI	0.1	PUNJ	0.0	MP*	0.2	ODI	0.2	KAR	0.4
TAMIL	0.2	RAJ	0.1	HP	0.0	ASS	0.1	JK	0.2	GUJ	0.4
KER	0.2	ASS	NA	ASS	NA	HP	NA	MP*	0.2	ASS	0.2
ASS	NA	JK	NA	BIH*	NA	BIH*	NA	BIH*	NA	KER	0.1
JK	NA	MAH	NA	JK	NA	JK	NA	MAH	NA	TAMIL	0.1
WB	NA	TAMIL	NA	MAH	NA	MAH	NA	HP	NA	JK	0.1

Source: Authors' own calculation from Input Surveys

For instance, marginal farmers of Punjab had most favourable terms than that of the small and large farms in 1986-87 because RAR was 6.1. In other words, in Punjab, marginal farmers claimed six times more share in banked holding that their contribution in marginal holding of the states in 1986-87. On the contrary, relative deprivation of the marginal farmers in Kerala was worst in comparisons to small and

large farms. Observation from the table and the figure show invariable change in relative banking outreach of marginal farmers both in states as well as over the period under consideration (Table 6.4 and Figure 6.8).

6.5.1.2 Trend in 'Credit Depth' of marginal farmers- interstate scenario

In concurrence with national trend, table 6.5 show rise in the contribution of marginal holdings in total operated area in majority of the states albeit, notable variation was also noted in the share of marginal farmers in operated area. It is further observed that not only remarkable variation is observed in the share operated of marginal farmers, but change was inordinate during 1986-87 and 2010-11. Amongst states, marginal holdings claimed about 42.0% in total operated area in Kerala at one end (at the top of the ranking amongst states) their claim in operated area of Rajasthan was as low as 2.7% in 1986-87. The table show nascent increased in share of marginal farmers in majority of states during 1986-87 and 2010-11, hence relatively stable ranking of the states (Table 6.5).

Table 6.5: Marginal Farmer's contribution in total operated area of the states 1980-81 to 2010-11

States	*Share of marginal farmers in total operated area of the state (in %)*					*Ranking based on contribution*			
	1980-81	*1990-91*	*2000-01*	*2010-11*	*Change*	*1980-81*	*1990-91*	*2000-01*	*2010-11*
AP	*17.5*	*16.6*	*21.6*	*26.1*	*8.6*	*9*	*10*	*9*	*9*
ASS	*21.6*	*19.9*	*21.3*	*25.8*	*4.2*	*7*	*9*	*10*	*10*
*BIH**	*26.4*	*33.5*	*43.1*	*46.4*	*20*	*5*	*4*	*4*	*4*
GUJ	*4*	*5.3*	*7*	*8.6*	*4.6*	*14*	*15*	*15*	*15*
HAR	*5.2*	*7.8*	*8.9*	*9.9*	*4.7*	*12*	*13*	*14*	*14*
HIM	*17.4*	*21.3*	*25.7*	*28.5*	*11.1*	*10*	*7*	*7*	*8*
J&K	*29.9*	*34.5*	*44.6*	*46.5*	*16.6*	*3*	*3*	*3*	*3*
KAR	*7.7*	*9*	*12.1*	*15.2*	*7.5*	*11*	*11*	*12*	*12*
KER	*42*	*51*	*56.3*	*58.6*	*16.6*	*1*	*1*	*1*	*1*
*MP**	*3.7*	*5.7*	*10.1*	*13.7*	*10*	*15*	*14*	*13*	*13*
MAH	*4.8*	*8*	*13.2*	*16.1*	*11.3*	*13*	*12*	*11*	*11*
ORI	*17.7*	*20.2*	*22.7*	*39.5*	*21.8*	*8*	*8*	*8*	*5*
PUN	*3.4*	*3.5*	*1.9*	*2.5*	*-0.9*	*16*	*17*	*17*	*17*
RAJ	*2.7*	*4.2*	*4.2*	*5.9*	*3.2*	*17*	*16*	*16*	*16*
TN	*24.5*	*32.3*	*31*	*35.3*	*10.8*	*6*	*5*	*6*	*7*
*UP**	*27.8*	*29.4*	*36.6*	*39.1*	*11.3*	*4*	*6*	*5*	*6*
WB	*30.1*	*37.8*	*49.7*	*52.5*	*22.4*	*2*	*2*	*2*	*2*
India	***13.4***	***15.3***	***18.7***	***22.2***	***8.8***	***Spearman`s Rank Correlation coefficient***			
CV	*0.72*	*0.72*	*0.70*	*0.63*	*10.8*	*1980-81and 1990-91*		*1980 and*	*1980-81 2010-11*
						*0.968**		*0.96*	*0.946*

*Note- * indicates significant at 1% level. Source: Authors' own calculation from agriculture census data*

Table 6.6 show trends in per hectare credit disbursed for agricultural purposes by banks to marginal farmers during 1986-87 and 2011-12. A noteworthy increase in the credit density (real amount per hectare operated area) in states is observed from the table viz., per hectare disbursement increased by more than 24 times between 1986-87 and 2011-12. A large interstate variation in per hectare agricultural loan extended by the banks to marginal farmers was also noticed from the table. For example, per hectare loan disbursed to marginal farmers in Haryana (Rs. 77359) was 153 time higher than Assam (Rs. 504) in 2011-12, while ratio between the same states was 5 times in 1991-92.

Table 6.6: Per hectare real[23] outstanding bank loan amount to the marginal farmers-Interstates differences

State	Input Survey Year					
	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12
AP	1225	940	1032	3501	7663	7058
ASS	NA	121	NA	143	463	504
BIH*	177	190	NA	NA	NA	15210
GUJ	NA	1004	385	2638	1294	3097
HAR	902	617	464	1757	5350	77359
HP	NA	NA	NA	28	73	23260
JK	NA	NA	NA	NA	439	1091
KAR	NA	951	1208	2179	4296	2327
KER	311	1160	2395	2278	16970	21310
MP*	235	158	206	154	594	7846
MAH	736	NA	NA	1006	NA	6875
ODI	972	143	262	455	444	5206
PUNJ	31	18	42	2264	12151	57523
RAJ	NA	309	452	1608	3562	7514
TAMIL	298	NA	207	2662	4748	3003
UP*	384	NA	51	673	5606	11342
WB	NA	818	698	272	1970	4895
India	388	340	469	1433	4371	9112
Total Amount (in ₹ Crore)	645	683	934	4936	10973	30732
Max	1225	1160	2395	3501	16970	77359
Min	31	18	42	28	73	504
Max min ratio	40	64	57	125	232	153
CV	1.32	1.28	0.92	1.28	0.88	0.71

Source: Based on author's own calculation

The coefficient of variation (CV) shown in table 6.7, although points towards high interstate disparities in per hectare loans of the marginal farmers, but pattern in interstate disparity was indefinite during 1986-87 and 2011-12 (Table 6.6).

The statewise trend in relative 'Credit Depth' is presented in Table 6.7. As mentioned earlier, 'Relative Credit Depth' (or RLTNSA) of marginal farmers

[23] Deflated through wholesale price index at 1999-00 prices

represents ratio of claims of marginal farmers in total outstanding loan amount given by banks in state to marginal farmers' share in total net sown area of state . High relative 'Credit Depth' (RLTNSA>1) indicate favourable term for the marginal farmers, while opposite suggests unfavourable term. Further, increase in value of relative 'Credit Depth' over the time points to intensification of credit intensity in favour of marginal farmers and decline suggests weakening of their position in states. Although, the table shows relatively favourable terms for marginal farmers in majority of states; but, remarkable interstate variations also observed from the table. Besides, pattern in interstate disparity was also inconsistent (Table 6.7).

Table 6.7: Relative 'Credit Depth' of the Marginal Farmers – Interstate

1986-87		1991-92		1996-97		2001-02		2006-07		2011-12	
State	**RLTNSA**	**State**	**RLTNSA**	**State**	**RLTNSA**	**State**	**RLTNSA**	**State**	**RLTNSA**	**State**	**RLTNSA**
RAJ	4.15	RAJ	4.46	RAJ	2.30	GUJ	2.20	HP	2.20	PUNJ	6.21
MAH	3.09	ASS	3.67	MP*	1.66	WB	1.79	PUNJ	1.89	MP*	3.35
ODI	2.84	GUJ	2.29	KAR	1.47	RAJ	1.76	WB	1.79	HAR	3.02
AP	2.02	UP*	1.90	ODI	1.38	MAH	1.40	RAJ	1.57	HP	1.91
HP	1.52	AP	1.68	WB	1.35	TAMIL	1.26	ASS	1.53	MAH	1.82
KAR	1.38	KAR	1.63	AP	1.35	ODI	1.21	JK	1.44	JK	1.81
BIH*	1.32	WB	1.53	HAR	1.35	AP	1.17	HAR	1.41	BIH*	1.70
UP*	1.22	ODI	1.42	KER	0.98	KAR	1.08	MP*	1.34	ODI	1.52
HAR	1.18	MP*	1.37	UP*	0.91	PUNJ	1.01	AP	1.30	UP*	1.46
TAMIL	0.95	BIH*	1.26	TAMIL	0.90	ASS	0.99	KER	1.24	RAJ	1.35
MP*	0.73	HAR	0.87	PUNJ	0.67	MP*	0.83	GUJ	1.20	GUJ	1.35
KER	0.72	KER	0.74	GUJ	0.32	KER	0.79	TAMIL	1.13	WB	1.22
GUJ	0.69	PUNJ	0.30	ASS	NA	HAR	0.56	KAR	1.13	KER	1.17
PUNJ	0.17	HP	NA	BIH*	NA	UP*	0.50	ODI	0.98	AP	1.08
ASS	NA	JK	NA	HP	NA	HP	0.32	UP*	0.73	ASS	0.94
JK	NA	MAH	NA	JK	NA	BIH*	NA	BIH*	NA	TAMIL	0.93
WB	NA	TAMIL	NA	MAH	NA	JK	NA	MAH	NA	KAR	0.84
India	**1.66**	**India**	**1.48**	**India**	**1.17**	India	1.25	India	1.42	India	1.72
Max	4.15	Max	4.46	Max	2.30	Max	2.20	Max	2.20	Max	6.21
Min	0.17	Min	0.30	Min	0.32	Min	0.32	Min	0.73	Min	0.84
CV	0.70	CV	0.64	CV	0.42	CV	0.46	CV	0.27	CV	0.70

Note - NA indicates State was not included in Input survey.
Source: computed by Author form the Input surveys (Various Issues: Agriculture Census MoA)

6.5.1.3 Debt and interest burden of marginal farmers interstate scenario

Was the revival in agricultural credit successful in bringing down the influence of non-institutional players in the debt of marginal farmers? Did it help in reducing the obligation of debt service payments? And if so, then in which regions and states did marginal farmers benefit? The answers are difficult, as notable variations are found in the loan amounts reported by various publications from commercial banks, input surveys and AIDIS. The commercial bank data reported in RBI is the most reliable ata, but this data is not available for the states across land holding size. Thus, this section analyses trends in debt composition of marginal farmers by source, and also expenses including the interest burden of marginal farmers.

Table 6.8: Debt composition by source of loan - marginal farmers

State	Share in total outstanding debt (in %)								
	Commercial Banks including RRB#			Institutional total			Moneylenders*		
	2003	2013	Change	2003	2013	Change	2003	2013	Change
Andhra Pradesh	13.5	25.3	11.8	22.2	30.8	8.6	61.9	61.6	-0.3
Assam	22.5	28.1	5.6	33.5	31.8	-1.7	16.8	11.6	-5.2
Bihar	**29.1**	**12.1**	**-17.0**	33.9	20.1	-13.9	37.4	59.8	22.4
Chhattisgarh	**49.3**	**44.2**	**-5.2**	76.7	48.7	-28.0	70.8	37.9	-32.9
Gujarat	20.0	26.7	6.8	37.8	52.9	15.2	15.5	25.9	10.4
Haryana	35.8	47.4	11.6	58.8	61.0	2.3	30.7	31.1	0.4
Himachal	45.4	56.0	10.6	64.3	82.4	18.1	7.7	1.7	-6.0
J& K	**42.7**	**31.4**	**-11.4**	61.3	45.3	-16.0	1.5	3.5	2.1
Jharkhand	**45.9**	**18.1**	**-27.8**	52.7	20.0	-32.7	25.3	30.9	5.6
Karnataka	30.6	38.7	8.1	47.8	58.4	10.7	33.3	19.9	-13.4
Kerala	44.6	56.8	12.2	81.5	88.6	7.1	8.7	2.6	-6.2
MP	26.8	31.6	4.9	39.4	40.6	1.2	33.4	33.3	0.0
Maharashtra	**24.1**	**20.0**	**-4.1**	81.7	68.4	-13.3	7.1	4.7	-2.5
Orissa	**45.0**	**30.3**	**-14.7**	69.8	42.4	-27.4	19.8	11.4	-8.5
Punjab	**26.8**	**16.5**	**-10.4**	47.4	40.6	-6.8	24.1	17.8	-6.4
Rajasthan	14.2	17.9	3.7	20.8	26.9	6.1	53.4	55.6	2.1
Tamilnadu	19.1	46.3	27.2	41.7	55.3	13.6	50.2	31.1	-19.1
Uttarakhand	47.0	48.0	1.0	75.8	68.1	-7.7	5.6	13.1	7.5
Uttar Pradesh	36.3	40.0	3.7	43.3	46.5	3.2	28.5	33.2	4.7
West Bengal	23.0	35.5	12.5	52.9	57.7	4.7	15.5	18.0	2.6
All India	**28.4**	**34.3**	**5.9**	**48.1**	**50.1**	**2.0**	**31.3**	**29.9**	**-1.4**
CV	**0.37**	**0.40**		**0.36**	**0.38**		**0.71**	**0.73**	
Southern	26.9	41.7	14.8	48.3	58.3	10.0	38.5	28.8	-9.7
Backward	34.8	30.8	-4.0	52.4	43.7	-8.7	25.9	24.5	-1.4
ADS	44.7	40.1	-4.6	76.8	71.1	-5.7	39.5	33.3	-6.2
IS	32.0	36.7	4.7	78.6	87.1	8.5	19.1	28.2	9.2
UP	36.3	40.0	3.7	43.3	46.5	3.2	28.5	33.2	4.7

Note: #RRB – Regional Rural Banks;
Moneylenders includes Agriculturist and professional moneylender*
Source: Author's own calculation from the NSSO report no 500 and 573

The data are obtained from the 59th (2003) and 70th (2013) rounds of the NSSO. Since the definition of cultivator households in the 70th round slightly differs

from the 59th round, the present study considers marginal farmers as those households that possess land above 0.01 hectares. The change in the share of SCBs (the Commercial & Regional Rural Banks) and 'Agriculturists and Professional Moneylenders' in the total outstanding debt of the marginal farmers in 21 states between 59th round (2003), and 70th round (2013) is shown in Table 6.8. The table highlights notable regional and interstate variations in the shares of both institutional and commercial banks in the outstanding debt of marginal farmers.

For instance, the share of SCBs in the outstanding debt of marginal farmers increased by 5.9% at all India level, but largest increase was recorded for southern states (incremental change in the share was about 14.8% between 2003 and 2013). In contrast to this, contribution of the banks in outstanding debt of marginal farmers in backward and agriculturally developed states observed a decline during the same period. Uttar Pradesh, the largest contributor in the marginal farmer households of the country, witnessed rise in the share of SCBs in outstanding debt of marginal farmers, but it was on account of decline in share of cooperative and government and not on account of decline in share of moneylenders. Instead, the share of moneylenders in outstanding debt of marginal farmers in UP increased between 2003 and 2013 (Table 6.8).

The table shows a close coordination and negative association between the movement in the share of bank and share of moneylenders in the debt of marginal farmers. In southern states, decline in latter was the result of rise in the former. States like Jharkhand (27.8%), Bihar (17%), Orissa (17.7%) and Chhattisgarh (5.2%) also observed coordination but trend was different as rise in the share of moneylenders was accompanied by the decline of banks and institutional sources during 2003 and 2013. Government launched schemes after schemes to deal the menace of growing farmers' suicides in many part of the country pertinently after 2006[24], but the table suggest that impact of these initiatives were not similar in states. Besides, benefits of the schemes did not reach / percolated to the bottom of the pyramid of the farmers in

[24] In 2006, the Government of India identified 31 districts in the four states of Andhra Pradesh, Maharashtra, Karnataka, and Kerala that were prone to higher incidence of farmers' suicides. A special rehabilitation package was launched to mitigate the distress of these farmers. This package includes debt relief to farmers, improved supply of institutional credit, improved irrigation facilities, appointment of the experts and social service personnel for providing farming support services. Besides, the subsidiary income opportunities through horticulture, livestock, dairy and fisheries were also introduced, and ex-gratia cash assistance from Prime Ministers National Relief Fund to the farmers were also provided.

states. Certainly, rise in contributions of the agriculturists and professional moneylenders in outstanding debt of the marginal farmers in poor and backward states during 2003 and 2013 points towards a serious problem and put a question mark on the effectiveness of on-going inclusion drive. Because, besides, other objectives financial inclusion drive followed by the All India Debt Waiver Scheme of 2008 were targeted to provide relief to the poor farmer households through increased banking access. But, data suggest that strategy did not work much instead it failed in reducing marginal farmers' dependency on moneylenders despite many fold rise in the bank loans to the agriculture sector after the 2004-05. In addition to this, table also highlights that inclusion drive was not inclusive in true sense; instead, it suffered with the marked regional and size class disparity. It happened, despite an increase in access to commercial banks in backward states.

Table 6.9: Debt servicing liability- marginal farmers

	Interest Burden as a proportion of (in %)					
	Total expense			**Total Value added**		
State	**2002**	**2012**	**Change**	**2002**	**2012**	**Change**
Andhra Pradesh	2.67	2.89	0.22	1.81	1.67	-0.15
Assam	0.25	0.24	-0.01	0.04	0.05	0.02
Bihar	0.06	0.21	0.14	0.03	0.12	0.09
Chhatisgarh	2.15	3.21	1.06	0.78	0.79	0.01
Gujarat	0.57	0.17	-0.40	0.27	0.06	-0.20
Haryana	1.29	0.53	-0.76	0.51	0.33	-0.18
Himachal Pradesh	0.09	0.09	0.00	0.03	0.02	-0.01
Jammu & Kashmir	0.00	0.15	0.15	0.00	0.02	0.02
Jharkhand	0.00	0.17	0.17	0.00	0.05	0.05
Karnataka	2.19	1.74	-0.45	1.06	0.92	-0.14
Kerala	1.62	1.28	-0.34	0.58	0.48	-0.11
Madhya Pradesh	0.45	0.24	-0.21	0.16	0.09	-0.07
Maharashtra	0.86	0.21	-0.65	0.39	0.09	-0.30
Orissa	1.20	0.55	-0.66	0.57	0.22	-0.36
Punjab	2.21	1.69	-0.52	0.75	0.39	-0.36
Rajasthan	0.30	1.15	0.85	0.14	0.56	0.42
Tamilnadu	3.23	0.79	-2.44	1.85	0.46	-1.39
Uttarakhand	0.02	0.00	-0.02	0.00	0.00	0.00
Uttar Pradesh	0.21	0.59	0.38	0.10	0.24	0.14
West Bengal	2.29	0.32	-1.97	2.29	0.22	-2.07
All India	0.80	0.87	0.08	0.34	0.38	0.03

Source: Author's own calculation from the NSSO report no 500 and 573

Table 6.9 shows change in interest burden on marginal farmers both as proportion of total expenses, and also in relation to the value added in states between the 59th and 70th rounds of NSSO. It is evident from the table that sustained dependence of the marginal farmers on moneylenders led to rise in unit cost of fund (debt servicing), both as a proportion of total value added, and also as proportion of total farm

expenses. It happened in spite of enhanced flows of institutional loan to the marginal farmers between 2001 and 2012. It is further noted that debt servicing burden was non-uniform across states, as 12 states reported downward trend in debt servicing while 8 states reported upward trend in 2012-13 over 2002-03. The utmost decline in debt servicing was reported for Tamil Nadu followed by West Bengal, while increase was recorded for Chhattisgarh followed by Uttar Pradesh and Andhra Pradesh, albeit the intensity varies across the states and groups (Table 6.9).

The following conclusions have been drawn from the above analysis:

Contribution of the marginal farmer in total number of operational holdings (OH) and also operated areas have been increasing in majority of the states since last four decades. Moreover, their contributions in operated areas and also in the number of operational holdings vary remarkably in states. The present study finds a positive correlation between the extent of banking access and possession of land in states. It implies that higher the size of land holding in possession, greater the banking access and vice-versa in all the three regimes. Moreover, this study also notes the weakening of correlation between the two during social banking regime, while strengthening was noticed during the reform. Though financial inclusion drive was aimed at reducing the size class disparity in outreach and access to the banks in the states, the present analysis suggests that it utterly failed in achieving its objective due to widening of the outreach gap (or, gap in relative access ratio of marginal and large farmers). Initially credit depth for marginal holdings, in comparison to small and larger holdings, was favourable, but the gap amongst them started converging during reform. As far as change of 'outreach' and 'relative outreach' is concerned, it not only varied across the states but remarkable variation was also noted within states in distinct regimes. The marginal farmers of southern states suffered with poor banking access, despite having better overall outreach for agriculturists. Deterioration of their situation during reforms indicates that it was the non-marginal farmer group which benefitted more out the inclusion drive. Situation was not different in other regions.

Like national trend, the credit depth of marginal farmers in many states was favourable but its level continued to significantly vary in comparison to small and large farmers. However, this neither succeeded in bringing down the debt of service payments, nor in decreasing the influence of moneylenders in rural areas.

6.5.2 Trends in 'Outreach' and Credit Depth of small farmers interstate scenario

Unlike trends in marginal farmers, the contribution of small farmers in total number of operational holdings was stable over the years, at the national level. Strength of these farmers in operational holding varied across states ranging from Maharashtra, Gujarat and Karnataka at the high ends, while Bihar and Jammu and Kashmir at the lower end in 2011-12. Appendix Table 6E points towards changes in the shares of these groups, but ranking of these states based on the share of small holdings seems to be stable over the years.

6.5.2.1 Small Farmer's Banking 'Outreach': interstate

Comparison of the trends in the banking access of the three farm size holdings are shown in tables 6.3 and 6.10.We find small farm holdings to have relatively better access to banking services as compared to the marginal farmers in majority of the states throughout the input surveys conducted between 1986-87 and 2011-12.An erratic pattern in distribution of banked holdings and total holding under the small categories is also noted. Invariable change in bank holding across the states led to notable interstate disparity in banking access ratio but trends were inconsistent under the study period (Appendix Table 6E).

Table 6.10: Statewise Banking Access Ratio- small farmers

	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12
Andhra Pradesh	9.4	10.1	11.5	32	64.1	48.2
Assam	NA	0.9	NA	1.8	2.7	5.6
Bihar*	26.6	47.1	NA	NA	NA	11.2
Gujarat	3.3	5.2	19.1	9.7	10.5	12.2
Haryana	3.8	5	1.1	6.1	10.9	24.0
Himachal Pradesh	42.3	42.2	NA	NA	NA	19.0
J & K	NA	NA	NA	NA	1.8	NA
Karnataka	8	7.7	10.6	14.4	21.8	17.2
Kerala	3.3	6.8	7.5	11	17.2	11.9
MP*	2.8	4.1	3.9	1.2	2.2	23.6
Maharashtra	2.1	NA	NA	5.3	NA	14.3
Orissa	6.4	2	1.7	4.6	2.8	36.1
Punjab	34.8	34.1	0.3	5.2	10.9	12.8
Rajasthan	3.2	0.4	1.2	3.6	13	23.9
Tamil Nadu	2.3	NA	1.1	6	6.9	4.1
Uttar Pradesh*	3.2	1.3	1.3	2.9	17.4	30.9
West Bengal	NA	8	7.7	5.4	9.9	16.8
All India	**6.5**	**7.3**	**5.5**	**7.9**	**14.3**	**22.7**
CV	123.9	128.0	104.5	100.5	114.9	59.0

Note –NA indicates input survey was not conducted for the state or figures were insignificant.
Source: Computed by Author from the Input Survey (Agriculture Census: MoA, GOI)

For instance, Himachal Pradesh, Punjab, Bihar, Andhra Pradesh and Orissa had better banking access i.e., above national average (6.5%), while small farmers' banking access ratio was below the national average for the nine states. The CV shown in table confirms distinguished interstate disparity in banking access, however, changes were inconsistent during 1986-87 and 2011-12. Like trends in marginal farmers, the table

shows that there was a steeper decline in banking access of t small farmers in majority of states during 1991-92 and 1996-97. The table also indicates that impact of the banking reform was not uniform across the states. The table noted increase in banking access ratio for three out of four southern states, Gujarat and Rajasthan between 1991-92 and 1996-97. At the same time, steeper decline was noted for Punjab and Haryana (Table 6.11). An improvement in banking access ratio in majority of the states is noted since 2001-02, but balance seems to be tilted in favour of small farmers of the southern region (Appendix Table 6F). As mentioned, complete set of data for the states of the banked holding and total holding is available only for 2011-12 input survey. Surprisingly, the table noted significant increase in the banking access ratio for the poor and thinly banked states and lower interstate disparity between 2006-07 and 2011-12 on account of lower gap between banked and under banked states (Appendix Table 6F and Table 6.10)

Table 6.11 shows a trend in the change of the Relative Access Ratio (RAR) of small holdings of the state in relation to large and marginal farmers during 1986-87 and 2011-12. From the table, out of 14 surveyed states, 5 reported a favourable term (RAR >1) while 9 reported unfavourable terms in 1986-87. Not only this, the RAR values significantly varied across the states ranging from Punjab (6.0), Himachal Pradesh (5.4) at one extreme, and Maharashtra (0.3) and Tamil Nadu (0.4) at another extreme. The higher range coefficient, percentile coefficient, and CV value indicate high interstate disparity in banking access.

Table -6.11: State wise Relative Access Ratio (RAR)-small farmers

1986-87		1991-92		1996-97		2001-02		2006-07		2011-12	
State	**RAR**	**State**	**RAR**	**State**	**RAR**	**State**	**RAR**	**State**	**RAR**	**State**	**RAR**
HP	6.5	BIH*	6.5	GUJ	3.5	AP	4.0	AP	4.5	AP	2.1
PUNJ	5.4	HP	5.8	AP	2.1	KAR	1.8	KAR	1.5	ODI	1.6
BIH*	4.1	PUNJ	4.7	KAR	1.9	KER	1.4	UP*	1.2	UP*	1.4
AP	1.4	AP	1.4	WB	1.4	GUJ	1.2	KER	1.2	MP*	1.3
KAR	1.2	WB	1.1	KER	1.4	HAR	0.8	RAJ	0.9	RAJ	1.1
ODI	1.0	KAR	1.1	MP*	0.7	TAMIL	0.7	HAR	0.8	HAR	1.0
HAR	0.6	KER	0.9	ODI	0.3	WB	0.7	PUNJ	0.8	HP	0.8
KER	0.5	GUJ	0.7	UP*	0.2	PUNJ	0.7	GUJ	0.7	KAR	0.8
GUJ	0.5	HAR	0.7	RAJ	0.2	ODI	0.6	WB	0.7	WB	0.7
RAJ	0.5	MP*	0.6	TAMIL	0.2	RAJ	0.5	TAMIL	0.5	PUNJ	0.6
UP*	0.5	ODI	0.3	HAR	0.2	UP*	0.4	ODI	0.2	GUJ	0.6
MP*	0.4	UP*	0.2	HP	NA	ASS	0.2	ASS	0.2	KER	0.5
TAMIL	0.4	RAJ	0.1	PUNJ	NA	MP*	0.2	MP*	0.2	MAH	0.5
MAH	0.3	ASS	NA	ASS	NA	HP	NA	JK	0.1	BIH*	0.5
ASS	NA	JK	NA	BIH*	NA	BIH*	NA	HP	NA	ASS	0.2
JK	NA	MAH	NA	JK	NA	JK	NA	BIH*	NA	TAMIL	0.2
WB	NA	TAMIL	NA	MAH	NA	MAH	NA	MAH	NA	JK	NA
CV	1.24	CV	1.22	CV	0.97	CV	1.02	CV	1.15	CV	0.60

Note –NA indicates input survey was not conducted for the state or figures were insignificant.

Source: Computed by Author from the Input Survey (Agriculture Census: MoA, GOI)

6.5.2.2 'Credit Depth' of small farmers: an interstate scenario

Table 6.13 notes notable interstate variations in the relative strength of small farmers in operated area of the states, ranging from 32.3% in Bengal at one end and 7.3% for Rajasthan at the other end in 1986-87. It is further noticed that change in share of this group in operated areas was invariable but majority of the states observed increase in contribution while five states reported decline in contribution between 1980-81 and 2010-11. Owing to change at diverse pace, ranking of the states also changed in last three decades as shown in significant Spearman's rank correlation (Table 6.12).

Table 6.12: Small farmers' contribution in operated area of the states from 1980-81 to 2010-11

States	Small farmers contribution in Total Operated Area of the state					Rank of the state based on share			
	1980-81	1990-91	2000-01	2010-11	Change in 2010-11 over 1980	1980-81	1990-91	2000-01	2010-11
Andhra Pradesh	17.4	19.9	24.8	28.8	11.4	9	9	6	3
Assam	27	25.4	23.5	22.9	-4.1	2	5	9	10
Bihar*	15	18.1	19.2	18.6	3.6	10	12	11	14
Gujarat	9.5	14.2	18.6	20.1	10.6	13	13	13	12
Haryana	9	11.1	11.9	12.7	3.7	14	15	15	15
Himachal Pradesh	19.8	23.4	25	25.5	5.7	8	7	5	6
J & K	24	27.1	26	26.3	2.3	5	4	3	5
Karnataka	14.9	19.2	22.3	24.8	9.9	11	10	10	8
Kerala	23.6	23.6	19.1	18.7	-4.9	6	6	12	13
MP*	8.3	12.1	17.8	22.2	13.9	15	14	14	11
Maharashtra	11	18.9	25.5	28.9	17.9	12	11	4	2
Orissa	24.3	27.3	30.4	30.8	6.5	4	3	1	1
Punjab	7.6	7.5	6	6.8	-0.8	16	17	17	17
Rajasthan	7.3	7.9	8.2	10.2	2.9	17	16	16	16
Tamil Nadu	25.4	20.6	24.6	25.3	-0.1	3	8	7	7
Uttar Pradesh*	22.2	28.7	24.4	24.7	2.5	7	2	8	9
West Bengal	32.3	31	29	28.3	-4	1	1	2	4
All India	**15**	**18.1**	**20.2**	**22.1**	**7.1**	**Spearman`s Rank Correlation coefficient**			
CV	45.1	36.6	32.8	31.0	144.4	1980-81 & 1990-91		1980-81& 2000-01	1980-81& 2011-12
							0.9118*	**0.750***	**0.588***

*Note- * indicates significant at 1% level.*
Source: Computed by Author from the Agriculture Census (Various Issues: Ministry of agriculture GOI)

Table 6.13 shows trend in 'Credit Depth' of small farmers of the states in last six input surveys. The table noticed an uncoordinated movement between the shares of small farmers in net sown area and their corresponding shares in amount disbursed by the banks, hence remarkable interstate variations. The ranking of states on the basis of the value of the credit depth was subjected to inordinate change (Table 6.13).

Table 6.13: Relative 'Credit Depth' across states - small farmer

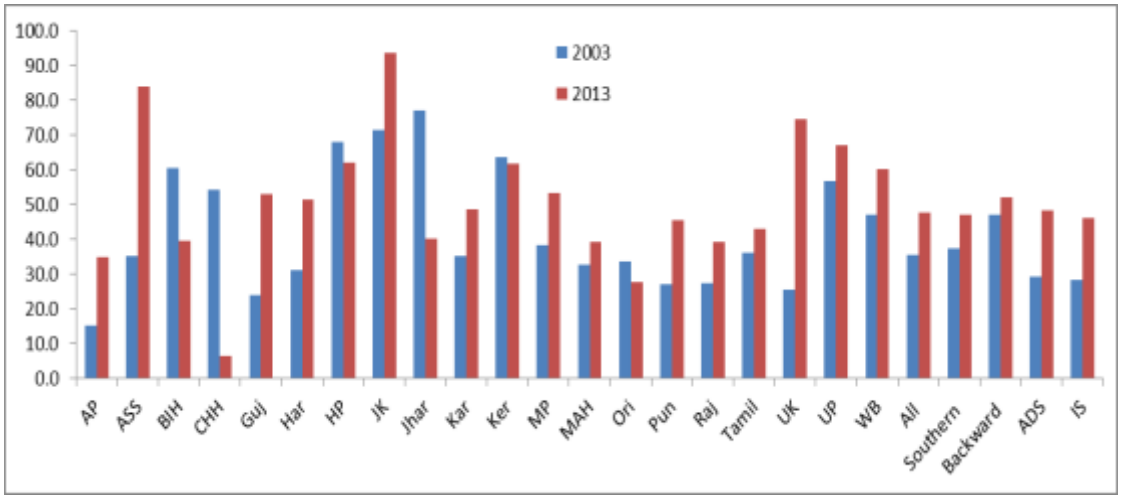
1986-87		1991-92		1996-97		2001-02		2006-07		2011-12	
State	RLTNSA	State	RLTNSA	State	RLTNSA	State	RLTNSA	State	RLTNSA	State	RLTNSA
KER	2.16	RAJ	1.81	RAJ	1.94	HP	1.87	RAJ	1.39	PUNJ	2.63
RAJ	1.77	GUJ	1.68	KAR	1.24	KER	1.36	PUNJ	1.35	HAR	1.98
MAH	1.71	BIH*	1.49	GUJ	1.22	RAJ	1.35	GUJ	1.22	RAJ	1.38
BIH*	1.57	MP*	1.45	AP	1.19	ASS	1.32	AP	1.11	GUJ	1.16
KAR	1.45	KAR	1.34	HAR	1.09	GUJ	1.26	KAR	1.07	TAMIL	1.12
AP	1.32	AP	1.16	KER	0.86	MP*	1.16	HAR	1.04	MAH	1.1
TAMIL	1	ODI	0.98	TAMIL	0.85	AP	1.14	UP*	1.04	AP	1.09
HAR	0.96	KER	0.86	MP*	0.85	KAR	1.14	TAMIL	1.04	MP*	1.05
UP*	0.94	HAR	0.82	UP*	0.83	MAH	1.1	ODI	0.97	KAR	0.97
MP*	0.82	WB	0.77	WB	0.79	WB	0.99	ASS	0.94	ASS	0.91
ODI	0.72	PUNJ	0.61	ODI	0.72	UP*	0.97	MP*	0.86	UP*	0.9
HP	0.7	ASS	0.48	PUNJ	0.51	ODI	0.96	WB	0.73	KER	0.85
GUJ	0.65	UP*	0.12	ASS	0.36	HAR	0.85	KER	0.7	WB	0.8
PUNJ	0.31	HP	NA	BIH*	NA	PUNJ	0.83	JK	0.65	ODI	0.77
ASS	NA	JK	NA	HP	NA	TAMIL	0.81	HP	0.56	HP	0.76
JK	NA	MAH	NA	JK	NA	BIH*	NA	BIH*	NA	BIH*	0.27
WB	NA	TAMIL	NA	MAH	NA	JK	NA	MAH	NA	JK	NA
India	**1.19**	**India**	**1.14**	**India**	**1.12**	**India**	**1.05**	**India**	**1.15**	**India**	**0.98**
CV	0.46	CV	0.48	CV	0.41	CV	0.24	CV	0.25	CV	0.49

Note - NA indicates State was not included in Input survey.
Source: Authors own calculation from the sources as mentioned in table 6.4

6.5.2.3 Debt and interest burden of small farmers - interstate scenario

Appendix table 6F shows a compositional change in the debt exposure of small farmers during 2002-03 and 2012-13. Deviating from the trends in debt exposure of the marginal farmers, there has been an increase in the contribution of banks in the outstanding debt of small farmers and at the same time decline is noted in the share of moneylenders across the four groups of the states, although at diverse intensity. Southern region is an exception in this regard as it witnessed slow increase in share of bank and sharp rise in the share of professional and agriculturist moneylenders in the debt of small farmers (Appendix Table 6F). As far as change in the share of commercial banks in the debt exposure to small farmers is concerned, largest gain was recorded for Uttarakhand and Assam while greatest losers were Chhattisgarh and Assam (Appendix Table 6F and Figure 6.9). For the small farmers, decline in the share of cooperative banks was supplemented by commercial banks in backward and industrialised states. Rise in the share of the commercial banks in debt of small farmers led to substantial decline in the share of professional and agriculturists' moneylenders in agriculturally developed states (ADS).

Figure 6.9: Commercial bank's share in outstanding debt - Small Farmers



Source: Based on Authors own calculation from the source mentioned in Table 6.9

Interest burden as proportion of total farms expenses, and also as a proportion of total value added of the agriculture is given in Appendix Table 6G.A marginal increase is noted for the small farmers during 2003 and 2013. Out of twenty states, seven reported lower interest whereas eight states experienced higher burden as a proportion of total farm expenses in 2013 in comparison to 2003 (Appendix Table 6F).

6.5.3 Large Farmer's 'Outreach' and 'Credit Depth'- interstate scenario

The large farmers (holdings sized above two hectare) although hold a minor share in the total number of operational holdings but have been operating on more than half of the area of the country albeit decline in their share. Besides, these groups have influence on social, political and economic decision making and also claim dominant share in common property in rural areas. They also enjoy disproportionate benefit in policies and institutional support given by the government for the development of agriculture (NSSO 2014). These households are by and large initial surplus households in majority of the states but owing to their influence on banking business they use their savings and disproportionate loan for the purpose of lending to marginal and small farmers and also agricultural labourers. In the recent past, they have got into the business of supplying agricultural inputs and farm equipment in many states (Input Survey: 2015-16).

6.5.3.1 Banking outreach of large holding- interstate scenario

As evident from Table 6.14, despite lower contribution in number of holdings, large farmers have been enjoying better banking access ratio than that of the marginal and small farmers. Post 1991-92, interstate disparity in access to banking services has converged as CV has declined 1996-97 onwards (Table 6.14).

Table 6.14: State-wise Banking Access Ratio- large farmers

States	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12
Andhra Pradesh	10.8	12.2	12.9	38.2	60.5	52.1
Assam	NA	0.9	NA	1.8	4.9	9.2
Bihar*	45.7	55	NA	NA	NA!	11.4
Gujarat	4.5	6.1	22.1	10.8	11.6	14.1
Haryana	7.7	6.1	2.4	11.1	17	25.1
Himachal Pradesh	48.6	48.9	NA	NA	NA	15.5
J & K	NA	NA	NA	NA	2.3	NA
Karnataka	10	9	14.8	20.3	29.6	25.8
Kerala	4	10.6	12.5	13.7	24.1	14.1
MP*	4.2	4.1	5.3	1.6	3.6	22.3
Maharashtra	2.2	NA	NA	6.1	NA	13.4
Orissa	7.2	1.4	2.8	6.7	4.6	31.8
Punjab	24.6	25	0.6	12.6	17.2	13.7
Rajasthan	3.2	0.5	2.1	5	16.8	34.1
Tamil Nadu	3.6	NA	1.7	9.1	9.2	6.4
Uttar Pradesh*	5.1	3.9	2.2	4.2	19.1	34.3
West Bengal	NA	7.9	6.8	5.3	15.4	17.5
All India	**8.5**	**8.1**	**7.1**	**9.7**	**15.5**	**24.2**
CV	120.0	127.1	94.9	90.5	88.5	56.5

Note –NA indicates input survey was not conducted for the state or figures were insignificant.

Source: Computed by Author from the Input Survey (Agriculture Census: MoA, GOI)

Table 6.15 displays trends in Relative Access Ratio (RAR) of large farms from 1986-87 to 2011-12. The table clearly points towards a better RAR for these groups in the majority of states. This indicates that these farmers had relative higher shares in banked holdings than the proportion in number of holding in states. For example, in 2011-12, out of 17 surveyed states; only four states have shown unfavourable terms (approximately neutral status) except Orissa. Table further highlights inordinate change in value of the RAR in states hence the interchange in ranking of the states across the input surveys.

Table -6.15 State wise Relative Access Ratio (RAR)-large farmers

1986-87		1991-92		1996-97		2001-02		2006-07		2011-12	
HP	5.7	BIH*	6.8	GUJ	3.1	AP	4.0	AP	3.9	AP	2.2
BIH*	5.4	HP	6.0	KAR	2.1	KAR	2.1	KAR	1.9	UP*	1.4
PUNJ	2.9	PUNJ	3.1	AP	1.8	KER	1.4	KER	1.6	RAJ	1.4
AP	1.3	AP	1.5	KER	1.8	PUNJ	1.3	UP*	1.2	ODI	1.3
KAR	1.2	KER	1.3	WB	1.0	HAR	1.2	PUNJ	1.1	KAR	1.1
HAR	0.9	KAR	1.1	MP*	0.7	GUJ	1.1	HAR	1.1	HAR	1.0
ODI	0.8	WB	1.0	ODI	0.4	TAMIL	0.9	RAJ	1.1	MP*	0.9
UP*	0.6	HAR	0.8	HAR	0.3	ODI	0.7	WB	1.0	WB	0.7
GUJ	0.5	GUJ	0.7	UP*	0.3	WB	0.6	GUJ	0.8	HP	0.6
MP*	0.5	MP*	0.5	RAJ	0.3	RAJ	0.5	TAMIL	0.6	GUJ	0.6
KER	0.5	UP*	0.5	TAMIL	0.2	UP*	0.4	ASS	0.3	KER	0.6
TAMIL	0.4	ODI	0.2	PUNJ	0.1	ASS	0.2	ODI	0.3	PUNJ	0.6
RAJ	0.4	RAJ	0.1	HP	NA	MP*	0.2	MP*	0.2	MAH	0.6
MAH	0.3	ASS	NA	ASS	NA	HP	NA	JK	0.2	BIH*	0.5
ASS	NA	JK	NA	BIH*	NA	BIH*	NA	HP	NA	ASS	0.4
JK	NA	MAH	NA	JK	NA	JK	NA	BIH*	NA	TAMIL	0.3
WB	NA	TAMIL	NA	MAH	NA	MAH	NA	MAH	NA	JK	NA
CV	1.20	CV	1.21	CV	0.95	CV	0.90	CV	0.89	CV	0.56

Note –NA indicates input survey was not conducted for the state or figures were insignificant.

Source: Computed by Author from the Input Survey (Agriculture Census: MoA, GOI)

6.5.3.2 Large farmers' 'Credit Depth': interstate scenario

Table 6.16 shows a decline in the dominance of large farms in operated areas in majority of the states. The table shows an asymmetric decline in the dominance of these farmer groups in states. Despite this decline, their contribution to operated areas in states like Punjab, Rajasthan, Haryana, and Gujarat was more than 50%, while they had less than one fourth shares in operated areas in states like West Bengal and Kerala (Table 6.16).

Table 6.16: Large farmers contribution in operated area of the states from 1980-81 to 2010-11

State	Share of 'Large farms' in total operated area of the state					Ranking of the state			
	1980-81	1990-91	2000-01	2010-11	Change	1980-81	1990-91	2000-01	2010-11
	Share	Share	Share	Share	2011 over 1980	Rank	Rank	Rank	Rank
AP	65.1	63.5	53.7	45.1	-20	8	8	9	10
ASS	51.4	54.7	55.3	51.3	-0.1	12	10	8	8
BIH*	58.6	48.4	37.7	35	-23.6	10	12	14	13
GUJ	86.5	80.5	74.4	71.3	-15.2	4	5	4	4
HAR	85.8	81.1	79.2	77.4	-8.4	5	4	3	3
HIM	62.8	55.3	49.2	46	-16.8	9	9	10	9
J&K	46.2	38.4	29.4	27.4	-18.8	15	15	15	15
KAR	77.4	71.8	65.6	60	-17.4	7	7	6	6
KER	34.4	25.4	24.7	22.7	-11.7	17	17	16	16
MP*	88	82.2	72.1	64.1	-23.9	3	3	5	5
MAH	84.2	73.1	61.3	55	-29.2	6	6	7	7
ORI	58	52.4	46.9	29.7	-28.3	11	11	11	14
PUN	89	89	92.1	90.7	1.7	2	1	1	1
RAJ	90	88	87.6	83.9	-6.1	1	2	2	2
TN	50.1	47.1	44.5	39.3	-10.8	13	13	12	11
UP*	50	41.9	39	36.1	-13.9	14	14	13	12
WB	37.6	31.2	21.3	19.3	-18.3	16	16	17	17
India	**71.6**	**66.6**	**61.1**	**55.7**	**8.8**	**Spearman`s Rank Correlation coefficient**			
Max	90.0	89.0	92.1	90.7	1.7	1980-81 and 1990-91		1980-81& 2000-01	1980-81& 2011-12
CV	29.3	33.6	38.9	43.1	-57.4	.9853*		0.9387*	0.9265*

*Note- * indicates significant at 1% level.*

Source: Computed by Author from the Agriculture Census (Various Issues: Ministry of agriculture GOI)

Table 6.17 shows trends in the relative 'Credit Depth' of states from 1986-87 to 2011-12. This table highlights the stark interstate disparity and disproportionate change in 'Credit Depth', hence inconsistencies in the ranks of the states based on credit depth.

Table 6.17: Relative 'Credit Depth' of the large farmers

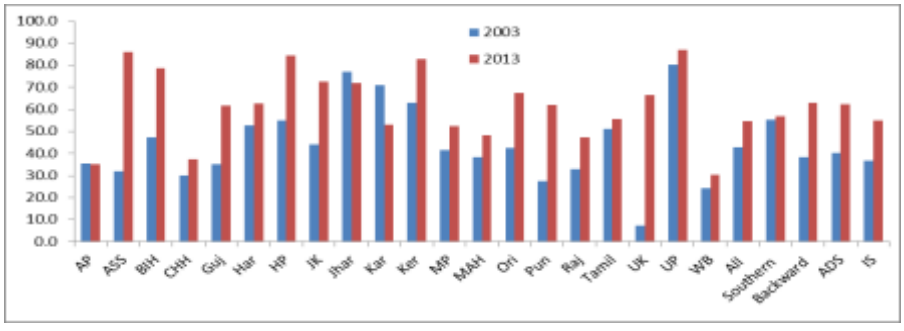
1986-87		1991-92		1996-97		2001-02		2006-07		2011-12	
State	**Depth**	**State**	**Depth**	**State**	**Depth**	**State**	**Depth**	**State**	**Depth**	**State**	**Depth**
PUNJ	1.09	KER	1.64	ASS	1.94	UP*	2.49	UP*	1.82	ASS	1.10
GUJ	1.07	PUNJ	1.06	KER	1.18	KER	1.27	ODI	1.04	KAR	1.06
MP*	1.03	HAR	1.03	TAMIL	1.18	HAR	1.10	MP*	0.98	TAMIL	1.00
TAMIL	1.03	UP*	0.96	UP*	1.18	PUNJ	1.01	PUNJ	0.95	RAJ	0.92
HAR	0.99	MP*	0.91	PUNJ	1.04	MP*	0.98	KAR	0.94	GUJ	0.90
UP*	0.90	ODI	0.84	GUJ	1.01	HP	0.94	HAR	0.92	AP	0.88
HP	0.90	KAR	0.83	ODI	1.00	KAR	0.93	GUJ	0.92	PUNJ	0.72
KAR	0.86	GUJ	0.79	MP*	0.95	ODI	0.92	RAJ	0.91	MAH	0.66
RAJ	0.81	RAJ	0.76	HAR	0.92	RAJ	0.92	TAMIL	0.83	WB	0.58
MAH	0.69	AP	0.74	RAJ	0.88	TAMIL	0.89	AP	0.77	KER	0.56
AP	0.68	BIH*	0.60	KAR	0.87	MAH	0.85	ASS	0.65	UP*	0.50
BIH*	0.59	WB	0.58	AP	0.77	AP	0.84	JK	0.61	ODI	0.50
KER	0.52	ASS	0.33	WB	0.71	ASS	0.83	KER	0.52	HAR	0.48
ODI	0.52	HP	NA	BIH*	NA	GUJ	0.80	WB	0.31	MP*	0.44
ASS	NA	JK	NA	HP	NA	WB	0.27	HP	0.30	HP	0.41
JK	NA	MAH	NA	JK	NA	BIH*	NA	BIH*	NA	JK	0.40
WB	NA	TAMIL	NA	MAH	NA	JK	NA	MAH	NA	BIH*	0.16
India	**0.82**	**India**	**0.84**	**India**	**0.90**	**India**	**0.90**	**India**	**0.79**	**India**	**0.68**
CV	0.24	CV	0.36	CV	0.29	CV	0.46	CV	0.43	CV	0.41

Note - NA indicates State was not included in Input survey.
Source: computed by Author form the Input surveys (Various Issues: Agriculture Census MoA)

6.5.3.3 Debt and interest burden on large holdings - interstate scenario

Appendix Table 6H displays change in the composition of the debt (by major source of deb)t of the large farmers between 2003 and 2013. The tables show higher banking exposure, and lower share of agriculture and professional moneylenders in the debt of large farms as compared to the debt composition of marginal and small holdings in majority of the states.

Figure 6.10: Share of SCBs in outstanding debt of the large farmer



Source: same as Figure 6.9

Figure 6.10 displays pattern in changes in the debt exposure of large farmers to the commercial banks between 2013 and 2003. This figure reveals massive increase (63.4% in 2013 against 38.4% in 2003 i.e., net increase was about 24.6%) in share of commercial banks in debts of large farmers of the backward states, followed by the agriculturally developed states (22.1, % increase) and industrialised states (18%). However, Jharkhand and Karnataka were exceptions in this regard as they experienced lower shares in 2013 than that in 2003 (Figure 6.10; Appendix Table 6H).

Despite increase in share of the commercial banks, table 6I shows a marginal increase in debt burden, especially as proportion of the total expenses between 2003 and 2013. Like composition of the debt of the large farms, remarkable inter-state disparity was observed in interest burden as proportion of the value added and total expenses between 2003 and 2013.

Chapter summary

The country witnessed diverse pattern in change in distribution of holding across the three major stake holders in farming community over the three distinct regimes. Pertinently, an increase was recorded in shares of marginal farmers in operational holdings (both in number and operated area), while palpable decline was recorded for the larger holdings (holdings above 2 hectares) in last three decades. Nonetheless, share of small holdings remained stable both as a proportion of number of holdings and also in the operated area at national level during this period. The study noted that pattern in distribution of bank accounts and outstanding amount to the diverse framer groups were not only asymmetric but remained non synchronous to the change in operated area and number of the holdings, during reform and financial inclusion drive. Non-synchronous in holding and distribution of the agriculture accounts and operated area and amount led to asymmetric change in outreach and credit depth across the size class of farmers. The study noted convergence in size class disparity in outreach and credit depth during social banking but divergence during intense reform period. As against the expectation of the policy makers, financial inclusion drive could not create any notable dent in rising inter-size class disparity in outreach as well as credit depth, however, larger disparity was recorded in the former than latter.

As for trends in interstate disparity in outreach and credit depth across the three regimes are concerned, the present study did not find any definite pattern during the

inclusion drive as states responded differently to the measure of economic reforms. But for the time period under study, interstate disparity seems to be converging in outreach during social banking, while divergence was noted during intense reform. The findings of the present study confirm a progressive marginalisation in majority of the states in all the three regimes but owing to asymmetric pattern in distribution of the agriculture accounts banks in favour of the marginal farmers, the outreach and relative outreach across the states and also over the regimes were different. As far as credit depth is concerned, marginal and small farmers both had favourable terms than the large holding in many states, but convergence was noted during the reform and inclusion drive. It was also noted that there was relative increase in debt burden and interest payments burden both as proportion of the value added and agriculture income for all categories of the farmers, despite improved credit depth and better outreach in many states. Under lending to agriculture sector is confirmed on accounts of the rising indebtedness to moneylenders in backward states during 2001-02 and 2011-12.This analysis calls for revisiting the on-going strategy of the agriculture financing by the banks.

The present study noted that incidence of indebtedness to all institutional sources of the marginal and small holdings were 28.8% and 44.5% in 2011-12. This show that remaining farmers were either dependent on non-institutional sources or had some other arrangements in meeting their agriculture financing needs (most of which were exploitative). The analysis of the national trend of relative outreach and credit depth brings many interesting facts but jumping to any decisive conclusion on the macro level pattern can be misleading because of the remarkable interstate diversity in agricultural operations and command over resources across size classes of the farmers. Thus, next section analyses change in interstate disparity in bank 'Outreach' and 'Credit Depth' of marginal, small and large farms in the three regimes.

Appendix Table 6A: Growth in number of operational holding, bank account, operated area and outstanding agriculture loan# across the farmer groups _National

Period	CAGR of number of operational holding				CAGR of credit accounts –Direct Finance			
	Marginal	Small	Large	Total	Marginal	Small	Large	Total
1980- 81 to 1985-86	2.3	2.2	0.3	1.8	11.1	16.7	10.2	12.3
1985-86 to 1990-91	2.5	2.3	0.1	1.9	3.8	4.1	2.6	3.6
1990-91 to 1995-96	2.3	1.5	-0.3	1.6	-2.0	-0.4	-0.6	-1.1
1996-96 to 2000-01	1.2	1.0	-0.8	0.7	-3.7	-2.8	0.5	-2.3
2000-01 to 2005-06	2.1	1.1	-0.2	1.5	12.4	12.6	12.2	12.4
2005-06 to 2010-11	2.0	0.6	-0.8	1.3	16.0	16.3	22.8	18.3
Period	CAGR of operated area				CAGR of outstanding amount			
	Marginal	Small	Large	Total	Marginal	Small	Large	Total
1980- 81 to 1985-86	2.2	2.1	-0.7	0.1	13.9	17.6	8.7	11.5
1985-86 to 1990-91	2.5	2.3	-0.9	0.1	4.7	5.2	3.7	4.3
1990-91 to 1995-96	2.5	1.3	-1.3	-0.3	-1.8	-1.8	-3.1	-2.5
1996-96 to 2000-01	1.2	0.9	-1.4	-0.5	4.8	5.2	6.7	5.9
2000-01 to 2005-06	1.4	0.6	-0.9	-0.1	27.4	26.6	20.4	23.6
2005-06 to 2010-11	2.0	1.2	-1.0	0.1	13.3	12.1	10.0	11.4

1. #Amount is computed by using WPI deflator (at1990-00 prices) on outstanding agriculture loans to the direct finance to farmers reported in Basic Statistical Returns (BSR).
2. Compound Average Growth rate of the account and Amount has been computed by using semi log function with respect to time (log Y_t=a + bT)
3. The growth rate of operated area and number of holdings has been computed through compound interest formulae.

Appendix Table 6A1; Loan amount* per hectare shown area (in Rs) across the farmer Groups

	Marginal	Small	Others	Overall	Theil Index	Ratio of marginal to others
1986-87	357	257	177	216	0.039	2.08
1991-92	320	246	181	215	0.026	1.87
1996-97	451	432	341	377	0.007	1.38
2001-02	1380	1157	994	1103	0.009	1.49
2006-07	4384	3528	2435	3083	0.027	1.91
2011-12	9100	5198	3579	5279	0.074	2.65

Note

1. *Amount is computed by using WPI deflator (at1990-00 prices) on outstanding agriculture loans reported in input surveys of Agriculture census.

Source: Computed by Author from Input Surveys (Agriculture Census various rounds) and Basic Statistical Returns (RBI various Issues)

Appendix Table -6B
Contribution of marginal farmers in total number of operational holding

(Number in 00: Share in in %)

	1980-81		1990-91		2000-01		2010-11	
	Number	**Share#**	**Number**	**Share**	**Number**	**Share**	**Number**	**Share**
Andhra Pradesh	3660	7.8	4823	8.5	7023	9.3	8425	9.1
Assam	1367	2.9	1531	2.7	1699	2.3	1831	2.0
Bihar*	8237	17.6	10193	17.9	9743**	12.9	16592	18.0
Gujarat	689	1.5	946	1.7	1298	1.7	1748	1.9
Haryana	324	0.7	621	1.1	704	0.9	778	0.8
Himachal Pradesh	354	0.8	532	0.9	615	0.8	670	0.7
J & K	705	1.5	897	1.6	1175	1.6	1207	1.3
Karnataka	1093	2.3	2237	3.9	3252	4.3	3849	4.2
Kerala	2846	6.1	3850	6.8	6335	8.4	6580	7.1
MP*	1491	3.2	2167	3.8	4585	6.1	6074	6.6
Maharashtra	2022	4.3	3117	5.5	5306	7.0	6709	7.3
Orissa	1732	3.7	2072	3.6	2295	3.0	3368	3.6
Punjab	197	0.4	271	0.5	123	0.2	164	0.2
Rajasthan	742	1.6	1656	2.9	1849	2.5	2512	2.7
Tamil Nadu	3981	8.5	2263	4.0	5846	7.8	6266	6.8
Uttar Pradesh*	12692	27.2	14211	25.0	17287	22.9	18839	20.4
West Bengal	4094	8.8	4860	8.6	5462	7.2	5853	6.3
Total of 17 States	46226	98.9	56247	99.0	74597	98.9	91465	99.0
HHI (17 state)	0.278	0.278	0.255	0.255	0.224	0.224	0.225	0.225
All India	**46728**	**100.0**	**56789**	**100.0**	**75408**	**100.0**	**92356**	**100.0**
Share of various state groups in number of operational holdings								
	Number	Share	Number	Share	Number	Share	Number	Share
UP*,BIH*,WB	25023	53.6	29264	51.5	32492	43.1	41284	44.7
SOUTHERN	11580	24.8	13173	23.2	22456	29.8	25120	27.2
HHI (Grouped	0.136		0.125		0.109		0.110	

Note –

1. *Operational Holding is defined as all land which is used wholly or partly for Agricultural production and is operated as one technical unit (by same management having same means of Production such has labour force, machinery, animals, credit etc) by one person alone or with others without regard to the title, legal form, size or location.*
2. *Number@- indicates number of operational holding as reported in Agriculture Census*
3. *Share# - indicates the state's share in total operational holdings of the country*
4. *** - Excluding states of Jharkhand*

Source: Computed by author from the data of Agriculture Censuses (Department of Agriculture, Cooperation & Farmers Agriculture Census Division; Ministry of Agriculture and Farmers Welfare) Various Rounds)

Appendix Table -6C

State wise pattern in distribution of the total and indebted holdings-Marginal Holdings (1986-87 to 2011-12)

State	No. of operational holdings that reported to have taken loans from bank (in 000)						Total number of the marginal holdings (in Lack)					
	1986 -87	1991 -92	1996 -97	2001 -02	2006 -07	2011 -12	1986 -87	1991- 92	1996 -97	20 01	2006- 07	2011- 12
AP	336	302	408	1248	2702	2585	420	4823	609	70	7417	8425
ASS	0	7	NA	8	32	61	NA	1531	163	16	1753	1831
BIH*	1704	3369	NA	NA	NA	2258	895	10193	NA	97	13139	16592
GUJ	12	36	24	77	64	107	788	946	103	12	1585	1748
HAR	11	11	4	12	45	115	498	621	815	70	764	778
HP	158	123	NA	1	**NA**	176	480	532	555	61	637	670
JK	NA	NA	NA	NA	15	12	NA	897	960	11	1123	1207
KAR	60	89	131	205	382	244	153	2237	260	32	3656	3849
KER	32	95	74	119	290	126	354	3850	457	63	6602	6580
MP*	32	38	80	32	57	1369	176	2167	387	45	5118	6074
MAH	30	NA	0	177	**NA**	1061	245	3117	NA	53	6118	6709
ODI	122	24	31	69	38	1838	184	2072	213	22	2597	3368
PUNJ	86	87	NA	5	8	21	249	271	200	12	135	164
RAJ	31	11	12	46	150	307	114	1656	148	18	2073	2512
TAMIL	55	NA	49	140	197	97	488	2263	610	58	6228	6266
UP*	236	414	75	181	1357	4729	136	14211	162	17	18165	18839
WB	NA	281	299	192	569	653	435	4860	504	54	5675	5853
India	2912	4890	1194	2524	5923	1578	509	56789	538	75	83694	92356
State	**State's share in indebted holding (in %)**						**State's share in total marginal holding ((in %)**					
AP	11.5	6.2	34.2	49.5	45.6	16.4	8.3	8.5	11.3	9.	8.9	9.1
ASS	0.0	0.1	NA	0.3	0.5	0.4	NA	2.7	3.0	2.	2.1	2.0
BIH*	58.5	68.9	NA	NA	NA	14.3	17.6	17.9	NA	12	15.7	18.0
GUJ	0.4	0.7	2.0	3.1	1.1	0.7	1.5	1.7	1.9	1.	1.9	1.9
HAR	0.4	0.2	0.3	0.5	0.8	0.7	1.0	1.1	1.5	0.	0.9	0.8
HP	5.4	2.5	NA	0.0	NA	1.1	0.9	0.9	1.0	0.	0.8	0.7
JK	NA	NA	NA	NA	0.3	0.1	NA	1.6	1.8	1.	1.3	1.3
KAR	2.1	1.8	10.9	8.1	6.4	1.5	3.0	3.9	4.8	4.	4.4	4.2
KER	1.1	1.9	6.2	4.7	4.9	0.8	7.0	6.8	8.5	8.	7.9	7.1
MP*	1.1	0.8	6.7	1.3	1.0	8.7	3.5	3.8	7.2	6.	6.1	6.6
MAH	1.0	NA	0.0	7.0	NA	6.7	4.8	5.5	NA	7.	7.3	7.3
ODI	4.2	0.5	2.6	2.7	0.6	11.6	3.6	3.6	4.0	3.	3.1	3.6
PUNJ	3.0	1.8	NA	0.2	0.1	0.1	0.5	0.5	0.4	0.	0.2	0.2
RAJ	1.1	0.2	1.0	1.8	2.5	1.9	2.3	2.9	2.8	2.	2.5	2.7
TAMIL	1.9	NA	4.1	5.5	3.3	0.6	9.6	4.0	11.3	7.	7.4	6.8
UP*	8.1	8.5	6.3	7.2	22.9	30.0	26.9	25.0	30.1	22	21.7	20.4
WB	NA	5.7	25.0	7.6	9.6	4.1	8.5	8.6	9.4	7.	6.8	6.3
India	100.	100.	100.	100.	100.	100.	100.	100.0	100.	10	100.0	100.0

*Note: * -Undivided states # -Schedule commercial banks (Commercial Banks plus Regional Rural Banks)*

Source: Input Survey of Agriculture Censuses (Department of Agriculture, Cooperation & Farmers: Agriculture Census Division; Ministry of Agriculture and Farmers Welfare- Various Rounds)

Appendix Table 6D: Relative Access Ratio of the Marginal Farmers

RAR of the states included in all input census						
States	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12
Andhra Pradesh	2.4	1.7	2.6	4.1	3.5	1.5
Gujarat	0.5	1.0	0.9	1.4	0.4	0.3
Haryana	0.7	0.5	0.2	0.4	0.6	0.7
Karnataka	1.2	1.1	1.9	1.4	1.0	0.3
Kerala	0.3	0.7	0.6	0.4	0.4	0.1
Madhya Pradesh	0.6	0.5	0.8	0.2	0.1	1.1
Orissa	2.0	0.3	0.6	0.7	0.1	2.6
Punjab	10.6	8.7	0.2	0.9	0.6	0.6
Rajasthan	0.8	0.2	0.3	0.6	0.7	0.6
Uttar Pradesh*	0.5	0.8	0.2	0.2	0.7	1.2
West Bengal	NA	1.6	2.3	0.8	1.0	0.5
CV	158.9	156.9	92.7	108.9	113.1	82.7
Theil	0.70	0.66	0.32	0.43	0.44	0.29
RAR of the states with broken series						
States	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12
AP	1.3	0.6	2.8	4.5	3.9	1.8
ASS	NA	NA	NA	0.1	0.2	0.2
BIH*	3.0	3.4	NA	NA	NA	0.8
GUJ	0.2	0.4	1.0	1.5	0.4	0.4
HAR	0.4	0.2	0.2	0.4	0.6	0.9
HP	5.2	2.4	NA	NA	NA	1.5
JK	NA	NA	NA	NA	0.1	0.1
KAR	0.6	0.4	2.1	1.6	1.1	0.4
KER	0.1	0.3	0.7	0.5	0.5	0.1
MP*	0.3	0.2	0.9	0.2	0.1	1.3
MAH	0.2	NA	NA	0.8	NA	0.9
ODI	1.0	0.1	0.6	0.8	0.2	3.2
PUNJ	5.5	3.3	NA	1.0	0.6	0.7
RAJ	0.4	0.1	0.3	0.6	0.8	0.7
TAMIL	0.2	NA	0.3	0.6	0.3	0.1
UP*	0.3	0.3	0.2	0.3	0.8	1.5
WB	NA	0.6	2.5	0.9	1.1	0.6
CV	1.39	1.30	0.91	1.12	1.25	0.89

Note- Vertical distribution indicates the proportions of share of i^{th} states in total banked holding, to its respective share in total marginal holdings of country in each survey.

Source: Computed by author from input surveys (various Rounds)

Appendix Table 6E
State wise pattern in distribution of the total and indebted holdings-Small holdings (1986-87 to 2011-12)

States	Small Farmer's contribution in total holdings of the state (in %)						Small Farmer's contribution in indebted holdings of the state (in %)					
	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12
AP	20.6	22.5	21.2	21.8	21.9	22.1	21.6	26.8	27.4	28.6	30.2	28.4
ASS	NA	22.2	21.0	20.7	21.5	18.3	NA	31.3	70.1	38.5	24.2	22.4
BIH*	11.2	11.0	NA	9.2	6.7	7.3	13.0	14.0	NA	NA	NA	6.1
GUJ	23.4	26.9	28.0	29.7	28.9	29.1	22.2	26.7	33.7	32.0	34.7	34.3
HAR	19.8	19.7	19.6	19.2	19.4	19.5	15.4	23.8	17.1	20.2	20.0	23.3
HP	20.8	19.9	20.2	19.0	18.8	18.2	23.4	27.0	100.0	0.0	0.0	14.6
JK	NA	16.3	14.5	12.4	12.3	11.5	NA	NA	NA	NA	14.3	0.0
KAR	27.2	27.9	27.5	27.0	26.6	27.3	29.8	32.1	30.5	31.6	31.6	33.8
KER	6.8	6.3	5.1	3.4	3.1	2.6	19.6	14.4	17.8	15.9	10.6	13.3
MP*	22.4	24.0	23.9	25.1	25.6	26.0	19.9	29.0	25.4	26.9	26.0	31.3
MAH	26.3	28.8	NA	29.7	30.3	29.6	29.9	NA	NA	33.6	AN	24.4
ODI	25.2	26.4	27.9	27.4	26.5	19.7	24.3	36.4	27.4	31.1	32.3	14.5
PUNJ	19.2	19.1	16.8	17.4	18.2	18.5	23.2	22.9	9.7	8.8	13.8	17.9
RAJ	19.7	20.2	20.2	20.8	21.4	21.9	20.6	14.3	16.0	19.2	21.8	21.9
TAMIL	17.0	21.4	15.8	15.6	15.1	14.6	24.1	NA	18.5	25.6	24.4	25.4
UP*	15.0	19.1	14.6	14.4	14.0	13.3	20.3	9.5	24.9	25.9	24.8	15.5
WB	19.2	17.2	16.9	14.9	14.4	13.8	NA	21.7	20.6	20.5	14.0	18.9
India	18.4	20.3	18.9	18.9	18.5	17.9	18.4	17.9	27.1	28.0	27.0	21.2
	State's share in total Small holding of the country						State's share in total indebted holding of the country					
States	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12	1986-87	1991-92	1996-97	2001-02	2006-07	2011-12
AP	9.8	10.0	12.9	11.1	11.0	11.8	14.2	14.0	27.1	44.6	49.3	25.1
ASS	0.0	2.8	3.3	2.5	2.5	2.0	0.0	0.3	NA	0.6	0.5	0.5
BIH*	8.0	7.1	0.0	4.7	4.1	5.6	32.7	45.6	NA	NA	NA	2.7
GUJ	4.5	4.8	6.3	5.5	5.6	5.6	2.3	3.4	21.9	6.8	4.1	3.1
HAR	1.6	1.5	2.0	1.3	1.3	1.3	0.9	1.0	0.4	1.0	1.0	1.3
HP	1.0	0.8	1.0	0.8	0.7	0.7	6.5	4.8	NA	NA	NA	0.6
JK	0.0	1.0	1.1	0.8	0.7	0.7	0.0	0.0	NA	NA	0.1	0.0
KAR	7.3	8.0	10.2	8.4	8.4	8.7	9.0	8.5	19.6	15.3	12.8	6.6
KER	1.6	1.3	1.5	1.0	0.9	0.7	0.8	1.2	2.1	1.4	1.1	0.4
MP*	8.2	8.2	13.6	11.8	12.2	13.3	3.6	4.6	9.6	1.8	1.8	17.0
MAH	13.2	13.1	0.0	15.9	17.3	16.4	4.3	NA	NA	10.5	NA	8.4
ODI	5.4	5.1	6.6	4.9	4.8	3.7	5.3	1.4	2.1	2.8	0.9	5.9
PUNJ	1.3	1.1	1.1	0.8	0.8	0.8	6.8	5.0	NA	0.5	0.6	0.4
RAJ	5.2	5.2	6.2	5.3	5.5	6.1	2.5	0.3	1.4	2.4	5.0	6.4
TAMIL	7.3	3.9	7.7	5.4	5.2	4.8	2.6	0.0	1.6	4.0	2.5	0.9
UP*	17.0	19.2	18.7	14.3	13.6	12.8	8.3	NA	4.4	5.2	16.6	17.6
WB	7.2	5.6	6.6	4.4	4.2	4.0	NA	6.1	9.3	3.0	2.9	2.9

Source: Computed by author from same source as mentioned in Appendix Table 6.3

Appendix Table 6F: Composition of debt of the Small farmers by broad source

State	*Commercial Bank including RRB#*			*Cooperative*			*Institutional total*			*Agriculturist and professional moneylenders*		
	2003	*2013*	*Change*	*2003*	*2013*	*Change*	*2003*	*2013*	*Change*	*2003*	*2013*	*Change*
AP	15.2	34.8	19.6	11.1	6.7	-4.4	26.6	42.6	16.0	54.6	26.4	-28.2
ASS	35.2	83.9	48.7	9.7	3.1	-6.6	45.2	87.7	42.5	15.3	1.5	-13.8
BIH	60.3	39.4	-20.9	5.3	0.7	-4.6	66.1	44.1	-22.0	19.8	17.1	-2.7
CHH	54.1	6.4	-47.7	24.1	26.4	2.3	80.4	55.4	-25.0	9.8	10.8	1.0
Guj	23.9	52.8	28.9	41.3	26.1	-15.2	65.2	90.1	24.9	7.0	0.3	-6.8
Har	31.0	51.4	20.4	30.6	11.8	-18.8	62.0	67.0	5.0	34.0	14.9	-19.1
HP	67.8	61.9	-5.9	9.5	17.9	8.4	79.4	83.5	4.1	7.5	0.9	-6.6
JK	71.2	93.4	22.2	0.1	0.0	-0.1	73.9	94.3	20.4	0.0	0.3	0.3
Jhar	76.8	40.2	-36.6	0.5	2.2	1.7	87.6	45.7	-41.9	5.7	4.1	-1.6
Kar	35.0	48.6	13.6	22.3	10.8	-11.5	58.7	62.3	3.6	30.2	11.2	-19.0
Ker	63.4	61.5	-1.9	29.3	27.7	-1.6	92.9	90.6	-2.3	1.3	0.9	-0.4
MP	38.2	53.3	15.1	13.5	16.4	2.9	52.7	70.9	18.2	21.1	10.8	-10.3
MAH	32.5	39.3	6.8	45.8	34.5	-11.3	78.8	75.7	-3.1	7.0	2.5	-4.6
Ori	33.5	27.5	-6.0	20.8	29.6	8.8	72.1	62.5	-9.6	13.0	9.6	-3.4
Pun	27.1	45.3	18.2	22.0	19.1	-2.9	49.1	74.1	25.0	35.5	7.0	-28.6
Raj	27.2	39.3	12.1	5.3	6.8	1.5	32.9	49.1	16.2	41.0	20.4	-20.7
Tamil	36.1	42.8	6.7	23.5	23.4	-0.1	61.5	67.0	5.5	29.9	9.4	-20.6
UK	25.3	74.4	49.1	2.2	24.9	22.7	76.7	99.3	22.6	0.8	0.0	-0.8
UP	56.6	67.1	10.5	8.0	4.2	-3.8	68.5	72.7	4.2	14.3	5.4	-8.9
WB	46.9	60.0	13.1	27.8	8.1	-19.7	80.1	69.4	-10.7	5.8	7.3	1.5
All	35.4	47.5	12.1	20.5	14.7	-5.8	57.6	64.8	7.2	25.9	11.7	-14.3
CV	0.42	0.39		0.75	0.73		0.27	0.25		0.86	0.92	
State	***2003***	***2013***	***Chan***	***200***	***2013***	***Chan***	***200***	***2013***	***Chan***	***2003***	***2013***	***Change***
Southern	37.4	46.9	9.5	21.6	17.2	-4.4	59.9	65.6	5.7	29.0	12.0	-17.0
Backward	47.0	52.1	5.1	11.7	12.9	1.2	66.4	69.7	3.3	14.6	7.5	-7.1
ADS	29.1	48.4	19.3	26.3	15.5	-10.9	55.6	70.6	15.0	34.8	10.9	-23.8
IS	28.2	46.1	17.9	43.6	30.3	-13.3	72.0	82.9	10.9	7.0	1.4	-5.7
UP	56.6	67.1	10.5	8.0	4.2	-3.8	68.5	72.7	4.2	14.3	5.4	-8.9

Note: #RRB – Regional Rural Banks; Moneylenders includes Agriculturist and professional moneylender*

Source: Author's own calculation from the NSSO report no 500 and 573

Appendix Table 6G: Interest Burden on the Small Farmers

State	As a proportion of total Expenses			As a proportion of total value added		
	2003	**2013**	**Change**	**2003**	**2013**	**Change**
Andhra Pradesh	3.1	2.5	-0.6	1.92	1.50	-0.42
Assam	1.1	0.0	-1.1	0.17	0.00	-0.17
Bihar	0.0	0.6	0.6	0.00	0.30	0.30
Chhattisgarh	1.3	1.2	0.0	0.45	0.28	-0.17
Gujarat	2.7	0.4	-2.3	1.17	0.17	-1.00
Haryana	2.1	2.6	0.5	0.86	1.12	0.26
Himachal Pradesh	0.0	0.0	0.0	0.00	0.00	0.00
Jammu & Kashmir	0.0	0.0	0.0	0.00	0.00	0.00
Jharkhand	0.0	0.0	0.0	0.00	0.00	0.00
Karnataka	2.2	4.4	2.2	0.98	2.02	1.04
Kerala	1.1	1.1	0.0	0.37	0.40	0.03
Madhya Pradesh	0.5	0.4	-0.1	0.22	0.11	-0.11
Maharashtra	2.8	0.3	-2.5	1.26	0.13	-1.12
Orissa	0.8	0.5	-0.3	0.40	0.23	-0.16
Punjab	1.6	3.4	1.7	0.61	1.23	0.62
Rajasthan	0.1	0.7	0.6	0.05	0.31	0.26
Tamilnadu	2.9	2.0	-0.9	1.84	1.01	-0.82
Uttarakhand	0.4	3.3	2.9	0.11	0.68	0.57
Uttar Pradesh	0.3	0.9	0.5	0.15	0.33	0.18
West Bengal	0.2	0.3	0.2	0.08	0.22	0.14
All India	***1.2***	***1.5***	***0.2***	***0.53***	***0.57***	***0.04***

Source: Author's own calculation from the NSSO report no 500 and 573

Appendix Table 6H: Composition of debt of the large farmers by source

State	*Commercial Banks including RRB*			*Cooperative*			*Institutional total*			*Agriculturist and professional moneylenders*		
	2003	*2013*	*Change*	*2003*	*2013*	*Change*	*2003*	*2013*	*Change*	*2003*	*2013*	*Change*
AP	35.4	35.2	-0.3	10.5	8.2	-2.4	46.5	44.3	-2.2	36.5	52.5	16.0
ASS	31.9	86.1	54.2	0.0	1.0	1.0	34.7	88.3	53.6	7.8	1.8	-6.1
BIH	47.3	78.5	31.2	1.5	1.8	0.3	51.0	82.3	31.3	33.9	11.3	-22.6
CHH	30.1	37.4	7.3	51.8	43.8	-8.1	87.4	82.6	-4.8	5.0	2.9	-2.2
Guj	35.1	61.5	26.4	52.7	29.7	-23.0	88.4	92.2	3.8	2.0	2.1	0.1
Har	52.8	62.7	9.9	17.8	15.0	-2.9	73.5	78.8	5.3	17.1	20.4	3.3
HP	55.1	84.4	29.4	12.6	7.5	-5.1	73.6	94.7	21.2	1.3	0.0	-1.3
JK	44.0	72.7	28.7	0.5	0.1	-0.4	44.5	75.6	31.1	5.8	8.3	2.5
Jhar	77.0	72.0	-5.0	0.2	1.4	1.1	86.2	78.7	-7.5	8.3	7.2	-1.1
Kar	71.1	53.1	-18.0	13.3	13.3	0.1	85.8	71.1	-14.7	9.0	32.0	22.9
Ker	63.0	82.8	19.8	14.9	13.7	-1.2	78.0	96.8	18.8	0.0	0.8	0.8
MP	41.5	52.3	10.8	23.2	18.1	-5.1	67.8	71.9	4.0	17.4	25.5	8.1
MAH	38.5	48.3	9.9	48.2	29.4	-18.8	87.9	81.1	-6.8	6.0	5.7	-0.3
Ori	42.5	67.4	24.9	22.9	19.6	-3.3	66.2	87.3	21.1	1.1	3.8	2.7
Pun	27.5	61.9	34.4	17.9	17.8	0.0	46.3	79.9	33.7	44.1	21.6	-22.6
Raj	32.8	47.4	14.6	6.1	10.7	4.6	40.1	61.2	21.2	26.2	41.2	14.9
Tamil	51.1	55.7	4.6	21.7	20.4	-1.3	74.1	81.7	7.6	19.8	19.9	0.1
UK	7.3	66.4	59.1	0.0	33.3	33.3	7.3	99.7	92.4	0.0	0.0	0.0
UP	80.2	86.8	6.6	7.7	6.5	-1.2	88.8	94.5	5.7	4.1	3.7	-0.4
WB	24.4	30.3	5.9	15.9	22.3	6.5	48.4	56.0	7.7	12.4	20.2	7.8
All	42.7	54.6	11.8	22.9	15.8	-7.1	67.2	72.6	5.5	19.1	29.3	10.2
CV	0.41	0.28		0.98	0.76		0.36	0.18		1.02	1.06	
Regions	*2003*	*2013*	*Cha*	*2003*	*2013*	*Chan*	*2003*	*2013*	*Cha*	*2003*	*2013*	*Chan*
Southern	55.2	56.7	1.6	15.1	13.9	-1.2	71.1	73.5	2.4	16.3	26.3	10.0
Backward	38.4	63.1	24.6	12.7	14.8	2.1	54.4	79.8	25.4	13.6	12.0	-1.6
ADS	40.2	62.3	22.1	17.9	16.4	-1.5	59.9	79.4	19.5	30.6	21.0	-9.7
IS	36.8	54.9	18.2	50.5	29.6	-20.9	88.1	86.6	-1.5	4.0	3.9	-0.1
UP	80.2	86.8	6.6	7.7	6.5	-1.2	88.8	94.5	5.7	4.1	3.7	-0.4

Appendix Table 6I: Interest Burden on the large farmers

State	As a proportions of total Expenses			As a proportions of total value added		
	2003	**2013**	**Change**	**2003**	**2013**	**Change**
Andhra Pradesh	2.14	2.92	0.77	1.21	2.15	0.94
Assam	0.13	0.03	-0.10	0.03	0.00	-0.03
Bihar	0.00	0.13	0.13	0.00	0.04	0.04
Chhattisgarh	1.20	0.43	-0.77	0.55	0.07	-0.48
Gujarat	4.09	2.35	-1.74	2.22	0.87	-1.35
Haryana	2.49	0.34	-2.15	1.20	0.10	-1.10
Himachal Pradesh	0.16	0.00	-0.16	0.05	0.00	-0.05
Jammu & Kashmir	0.00	0.08	0.08	0.00	0.02	0.02
Jharkhand	0.00	0.27	0.27	0.00	0.08	0.08
Karnataka	2.07	1.75	-0.32	0.88	0.60	-0.28
Kerala	0.37	1.52	1.15	0.17	0.27	0.10
Madhya Pradesh	0.98	1.24	0.26	0.39	0.50	0.11
Maharashtra	1.76	1.01	-0.75	0.79	0.43	-0.36
Orissa	0.20	1.51	1.31	0.15	0.85	0.70
Punjab	2.04	3.27	1.23	0.88	1.78	0.90
Rajasthan	0.41	0.86	0.45	0.26	0.23	-0.02
Tamilnadu	1.93	0.69	-1.24	0.88	0.28	-0.60
Uttarakhand	0.00	0.00	0.00	0.00	0.00	0.00
Uttar Pradesh	0.43	0.25	-0.18	0.18	0.13	-0.06
West Bengal	0.04	2.19	2.14	0.02	1.49	1.47
All India	**1.59**	**1.70**	**0.11**	**0.72**	**0.71**	**-0.01**
CV	**0.89**	**1.02**		**0.84**	**0.78**	

Source: Author's own calculation from the NSSO report no 500 and 573

Appendix Table 6J: Average area operated (in hectare) by different size class of farmers –Major Indian States From 1980-81 to 2010-11

State	Marginal				Small				Others				Overall			
	1980-81	1990-91	2000-01	2010-11	1980-81	1990-91	2000-01	2010-11	1980-81	1990-91	2000-01	2010-11	1980-81	1990-91	2000-01	2010-11
AP	0.68	0.50	0.44	0.44	1.51	1.43	1.42	1.41	4.79	4.33	3.88	3.52	1.96	1.62	1.25	1.08
ASS	0.44	0.44	0.39	0.42	1.43	1.54	1.30	1.38	3.54	4.27	3.80	3.91	1.21	1.34	1.15	1.10
BIH*	0.35	0.35	0.30	0.27	1.27	1.37	1.21	1.29	4.10	3.94	3.34	3.59	0.99	0.83	0.58	0.51
GUJ	0.55	0.55	0.53	0.49	1.44	1.47	1.46	1.45	5.42	4.80	4.36	4.42	3.36	2.78	2.33	2.11
HAR	0.56	0.46	0.45	0.46	1.68	1.35	1.44	1.47	6.19	4.94	5.31	5.38	3.52	2.41	2.32	2.25
HP	0.49	0.40	0.41	0.41	1.43	1.42	1.41	1.39	4.37	4.11	3.86	3.78	1.58	1.21	1.07	0.99
JK	0.42	0.39	0.37	0.34	1.41	1.38	1.40	1.41	3.59	3.47	3.14	3.22	0.99	0.83	0.67	0.62
KAR	0.58	0.49	0.46	0.48	1.43	1.47	1.44	1.41	4.99	4.59	4.21	3.95	2.55	2.13	1.74	1.55
KER	0.24	0.20	0.14	0.13	1.38	1.37	1.32	1.57	3.60	3.48	4.08	4.83	0.49	0.37	0.24	0.22
MP*	0.48	0.51	0.47	0.47	1.43	1.42	1.44	1.42	6.03	5.23	4.63	4.11	3.57	2.82	2.03	1.66
MAH	0.48	0.52	0.50	0.47	1.44	1.45	1.42	1.42	5.18	4.36	3.82	3.71	2.95	2.21	1.66	1.45
ODI	0.52	0.51	0.50	0.57	1.36	1.38	1.39	1.63	3.66	3.47	3.61	3.78	1.48	1.34	1.25	1.04
PUNJ	0.66	0.54	0.63	0.62	1.48	1.46	1.40	1.38	5.66	5.83	5.28	5.19	3.85	3.72	4.03	3.77
RAJ	0.58	0.48	0.48	0.49	1.42	1.45	1.44	1.43	6.74	6.82	6.74	6.19	4.32	3.71	3.65	3.07
TAMIL	0.48	0.76	0.37	0.37	1.37	1.41	1.40	1.39	3.64	4.17	3.94	3.81	1.20	1.46	0.89	0.80
UP*	0.37	0.38	0.40	0.37	1.33	1.35	1.41	1.40	4.23	3.60	3.63	3.53	0.97	0.90	0.83	0.75
WB	0.40	0.43	0.51	0.49	1.53	1.51	1.59	1.59	3.24	3.15	3.70	3.65	0.93	0.84	0.82	0.77
India	0.43	0.42	0.40	0.38	1.41	1.42	1.42	1.42	5.04	4.70	4.47	4.28	1.79	1.59	1.33	1.16
10^{th} percentile	0.36	0.37	0.34	0.31	1.35	1.36	1.31	1.38	3.57	3.47	3.50	3.53	0.95	0.83	0.63	0.57
90^{th} percentile	0.61	0.55	0.52	0.52	1.52	1.49	1.45	1.58	6.09	5.47	5.29	5.26	3.68	3.18	2.86	2.58
Dimension	1.68	1.49	1.53	1.67	1.13	1.09	1.10	1.14	1.71	1.58	1.51	1.49	3.87	3.82	4.52	4.51
STDEV	0.113	0.115	0.108	0.113	0.089	0.054	0.078	0.085	1.080	0.944	0.882	0.796	1.242	1.018	1.048	0.941
CV	23.12	24.66	24.98	26.18	6.21	3.82	5.58	5.90	23.26	21.52	21.02	19.18	58.81	56.73	67.22	67.40
Gini	0.125	0.124	0.125	0.135	0.031	0.021	0.027	0.029	0.127	0.112	0.102	0.096	0.318	0.306	0.346	0.345
Theil Index	0.026	0.030	0.033	0.038	0.002	0.001	0.001	0.002	0.025	0.021	0.019	0.016	0.163	0.150	0.195	0.195

Source: Computed by authors from Agriculture Census (various rounds)

Chapter 7

Conclusion and Policy Suggestions

This thesis aimed at analyzing the growth and distribution of the banking sector and its linkages with the development process in India under various regulatory regimes, specifically focusing on social banking.

The first chapter discussed the circumstances under which choices were made in favor of development planning and a mixed economy, amongst the diverse alternatives. The debate with regards to various development strategies for the adoption of hybrid model of banking sector regulations was summarized in this chapter. The theoretical underpinnings of an inclusive financial system, their application in banking regulations and the problems associated with those regulations were also summarized. After a brief overview of Indian banking regulations and banking sector development, this chapter elaborated on the objectives, hypotheses, tools and methods of data analyses, along with a description of data sources and the underlying limitation.

An overview of the literature on the interconnections between development of formal finance, economic growth and equity was presented in Chapter Two of this thesis. The theoretical background of changing monetary policy and the role of the State in regulation were described in chronological order, from monetarism to most recent financial and legal views. The debate on applicability and efficacy of financial liberalization instruments in the context of developing countries was summarized in a separate section, followed by examples of successes and failures of banking regulations in various developing and developed nations in the last six decades or more. An overview of important studies related to various dimensions of the Indian banking was given separately at the end of this chapter.

Chapter Three listed the chronology of events, regulations, policies and programs related to banking sector of India from the advent of modern banking since the late 17^{th} century to the most recent period. The first section of this chapter described the development of money and currency markets, the role of indigenous bankers and regulations related to commercial banking in the pre-colonial phase. Thereafter, the study highlighted the

circumstances and deliberations of various colonial administrators for enactment of the RBI Act 1934 and establishment of the RBI as the central bank of the country. It was found that commercial banking in India thrived during World War II, when most banks in the colonized countries and developed world were either on the verge of collapse or struggling for survival. The chronology of events and statutory provision for the nationalization of the RBI through RBI Act 1949 were also discussed in this chapter. In a subsequent section, the problems associated with 'financial dualism' and the inadequacies of the cooperative movement in the country were noted. The chapter also included an overview of steps taken by the government and the RBI for infusion of formal banking and stimulation of the cooperative institutions before nationalization of the banks, as well as a review of the recommendations of important committees related to various aspects of social banking. A summary of the discussion related to political economy of the bank nationalization was also presented in this chapter, with a detailed chronology of the development of regulations related to bank branches, directed credit programs, agriculture financing, priority sector lending, and rural banking during the period of social banking (1969-91), and thereafter.

Chapter Four provided an analysis of the progress of banking infrastructure since bank nationalization till the year 2011-12. This chapter addressed questions such as whether trends in spread of the banking infrastructure had any impact on existing disparities in availability, access, and use of banking services of rural and non-rural population groups, across the regions and also across major states in pre and post reform periods. The indicators in this regard included geographical and demographic penetration of bank branches, access to credit and deposit accounts, and use through credit and deposit amount both in absolute as well as in normalized terms. Spatial and temporal change in indicators were assessed for three regimes i.e., social banking (1969-91), intense reforms (1992-04) and financial inclusion drive (2005-12). The study found that outcomes of change in banking regulations were different at national and sub national level in the three regimes. For instance, rural-urban disparity in availability and access of banking services declined during social banking, but clear divergence was found during the intense reform and inclusion drive. A similar trend was observed for the interstate disparity. However, in the wake of growing financial exclusion in the country, the state

started intervening in the pattern of distribution of banking infrastructure and business, however it could hardly create any visible dent in the pattern of widening of interstate disparity in access and availability. It is true that during financial inclusion, the decline in availability and access of banking services that had occurred during the intense reform period in rural and backward states was halted. But, in contrast to the trends of social banking period, developed and well off states were able to garner larger benefits out of the technology and innovation driven inclusion regime. The study further found a significant statistical correlation between availability, access and use of banking services during social banking, while the intensity of the correlation weakened in subsequent regimes.

Chapter Five focused on analyses of the trends in distribution of bank loans extended by the SCBs to the agriculture sector in the three regulatory regimes. The agriculture sector's outreach and 'Use of Bank loan' was assessed through outstanding loan account and loan amounts delivered by the SCBs across major groups of the state, also across the broad population centres. Analysis of data showed that during the first decade of social banking (1972-91), the country witnessed remarkable growth in agriculture accounts and amounts, especially for direct finance to the farmers; while trend reversals was observed during intense reform. This implies that widening and deepening both were going hand in hand during the earlier period. Growth rates of agriculture accounts were distinctly higher than those of non-agriculture and overall accounts, suggesting expansion of banking access and use to farmer households of unbanked backward regions.

The rate of expansion of accounts during social banking was distinctly higher than that of amount in the majority of the states; however, a complete trend reversal was observed particularly during intense reforms. This also highlights that during the supply leading approach (in social banking), farmer households of the backward and unbanked regions (albeit in small proportions) started using banking services, while banking reform altered the process of inclusion. The study also reported notable compositional change in agriculture lending of the SCBs. Interestingly, higher growth was recorded in favor of direct finance than that of indirect finance in many states, but the opposite happened during intense reform (1992-04), when the majority of states witnessed a notable decline

in direct finance accounts (with negative growth) and remarkable growth in accounts and amounts in favor of indirect finance. Another fact that emerged from the analysis is that in the intense reform period, the scheduled commercial banks, specially private and foreign banks, met agriculture loan target of the priority sector not by bringing new farmers into the banking network but instead they preferred enhancing credit limit of the exiting borrowers and or disbursement through indirect finance during 1992-04. Further, they increased advances to their existing borrowers and disproportionately disbursed loans in the form of indirect finance from the urban branches to show their adherence to the priority sector lending target. It was done to deceive the government and the RBI by manipulating the target of agriculture lending to the priority sector on one hand and to maintain so called "clean balance sheets" on the other. No doubt, a massive improvement in the flow of agriculture loans (both in accounts as well as in outstanding amount) was observed during 2005-12, but such an increase failed to correct imbalances within agriculture loan because this period too witnessed relatively higher growth in indirect finance accounts and amount than that of direct finance in majority of the states. Trends in interstate disparity in outreach and used of credit were analyzed for the three regimes, showing that during the social banking regime, rapid expansion of the branches led to faster increase in farmers' outreach in backward states. In contrast to this, southern and agriculturally developed states observed slower growth, which led to convergence in interstate disparity in access and use of agriculture loans. But during the reform, agriculture lending suffered heavily on account of the decline in rural branches in backward regions, leading to strong divergence across states. A change in the composition of agriculture loan accounts was also recorded when backward states witnessed massive declines in direct finance accounts whereas very little impact was observed in indirect finance. In contrast to this, impacts were less severe in developed states during this period, especially in outreach. Besides growth differentials, a robust check of the trends in interstate disparity across three regimes was done using the Hirschman Herfindahl Index, the Theil Index, and the σ convergence test. These tests were done for the state-wise absolute agriculture loan data, and also for the agriculture loan data normalized by number of holding, operated area, net shown area and agriculture value added. The results showed divergence in interstate disparity in direct finance and

convergence in indirect finance amounts during the reform and continuation of trend during the financial inclusion drive. The difference between the two was that effective intervention in the distribution of bank credit by the RBI and the government in the latter regime corrected the bias against the agriculture sector *per se*, but it failed in reducing the interstate disparity.

Chapter Six of this study was devoted to analyzing trends in composition of agricultural loans disbursed by the commercial banks, with regards to structural shift in agriculture land holdings of the marginal, small and large farmers across the states and in three distinct regimes. The findings suggested poor synchronization in disbursement of loans by the commercial banks with respect to change in composition of the holdings (number and operated areas) during the reform. The analysis showed that marginal farmers across the states observed enhanced access, especially in the backward states during the social banking period, while it worsened during intense reform. There was convergence in 'inter size class' disparity in banking access in majority of the states during social banking, and divergence during the intense reform and financial inclusion drive. As far as relative 'Credit Depth' of the diverse groups of farmers is concerned, the study found favorable terms for marginal and small farmers relative to large farms in the majority of states, both in pre and post reform period. This implies that these farmer groups claimed a larger share in agriculture loans given by the banks than their contribution in operated areas/net sown area, at least at aggregate level. Moreover, relative 'Credit Depth' of marginal farmers observed a small decline during 1986-87 to 1996-97, and a sharp decline thereafter. Despite improvement in credit depth and outreach for all farmer groups 2001-02 onwards, the benefit was distributed unevenly amongst farmer groups i.e., relatively favorable for large farmers and unfavorable for small and marginal farmers. Undoubtedly, after bank nationalization, farmers' access to bank for agriculture loans began to improve. However, notwithstanding many experiments in banking regulations, about 83% of the marginal and 77.3% of the small holdings could not get access to commercial banks for financing of their agriculture operations. Further, overall institutional finance access (including co-operatives, land development banks and government) to marginal, small and large farmers in 2012-13 was about 28.8%, 44.5% and 48.8% respectively. This shows that farmers outside the institutional network were

forced to borrow from non-institutional sources on highly unfavorable terms. These facts indicate massive prospects of banking business in the countryside, provided that they design and deliver loan products as per the need of poor customers in rural areas. Bankers' aggressive lending to distress farmers would not only help in improving their income and livelihood and thereby economic and social progress, but it would also be a profitable venture for the banks struggling to get customers in urban areas.

Policy Recommendations

The policy suggestions emerging from this analysis may be considered at two levels, one with regard to banking infrastructure of the SCBs and the other referring to the distribution of bank loans to diverse stakeholders of the rural households in general and agriculturalists in particular. As far as the SCBs infrastructure is concerned, a comprehensive programme of non-overlapping banking institutions with borrower-friendly staff equipped with enabling physical and ICT infrastructure is the need of the hour. No doubt, recent developments in ICT have created a favorable opportunity for expanding the coverage of banking services to geographically disadvantaged and difficult terrains of the country. But the digital divide, poor human resources, and inadequate and poor quality of enabling supporting infrastructure could be major hurdles for expansion of the banking network. The recent financial inclusion schemes i.e., Pradhan Mantri Jan Dhan Yojna (PMJDY) based on JAM ternary (The Jan Dhan, Aadhar and Mobile) succeeded in achieving near-universal access to banking services for every household in most of the districts by February 22, 2017. The success of this scheme shows that if the State implements a policy in mission mode, then achieving universal access of finance to every adult is achievable.

Unprecedented success of the PMJDY scheme lied in a judicious mix of technology and human efforts. The success of this scheme is important because it linked every household with zero balance savings accounts to the formal financial institutions in record time, irrespective of their place of residence in the country, without creating

additional branches. While these saving accounts have a limited overdraft[1] facility, the real challenge is to keep them functional and alive in the long run. The second challenge is to motivate the account holders to use these accounts judiciously for the purpose of financing projects supporting their livelihood. Through these accounts, the government can easily monitor progress in real time, but the success of these initiatives would depend upon the cost of access and use of information and communication technology, as well as level and growth of the financial literacy amongst the diverse stakeholders of the society.

In order to improve the availability of institutional credit for the rural economy in general, and the agriculture sector in particular, the government should rethink its banking sector reform policies which have led to the dilution of the traditional role of SCBs in rural India. Specifically, there is a need for further spread of branch networks by SCBs, which includes RRBs, in unbanked areas or areas having relatively high population density in terms of banking infrastructure. Apart from improving the banking infrastructure, the delivery of credit both in terms of number of accounts and outstanding amount should be increased significantly. In a sense, there should be pump priming of credit in the rural economy. In fact, in order to improve the delivery of credit in rural areas, the SCBs should fix annual targets for new accounts and additional disbursements for the poor states. However, since NPAs have been one of the major complaints of the SCBs in delivering the credit, they should improve their recovery practices which include sending timely demand notice and onsite inspections, etc.

Interestingly, the study found contrasting trends i.e., rise in access to loan accounts across the stakeholders in states, along with widening of the size class and spatial disparity during the financial inclusion drive owing to asymmetric change. Therefore, a comprehensive approach for public provisioning of credit in rural economy in general and agriculture sector in particular is needed. While specific targets have been fixed for agriculture loans and weaker section in priority sector loan disbursement no precise targets were fixed for accounts belonging to the diverse categories of farmers. Therefore, in fixing priority sector lending targets, the needs of diverse farmers groups in state

[1] The overdraft facility is provided upto Rs 5000/- after six months of satisfactory performance of saving / credit history. In case of default in overdraft account losses would be covered through Credit Guarantee Fund.

should be considered on the basis of a dynamic formula of the cost of cultivation statistics at most disaggregate level. The household as a target unit for universal access under PMJDY leaves possibility for exclusion as huge diversity exists within the households. Thus, criteria must be extended to each adult person for universal access. Also, the targets for credit to marginal and small farmers should be fixed separately for rural branches and it must be capped for urban areas so that the shortfall within the rural areas cannot be compensated for in the urban areas. Importantly, since the commercial banks do not strictly adhere to priority sector norms (rather, they park their shortfall amounts with NABARD, SIDBI and other financial institutions), the RBI should devise some sort of mechanism to prohibit this practice.

Moreover, within agriculture and weaker sections, priority should be accorded to those at the bottom of the social and economic pyramid while designing loans and other financial products of the SCBs. In this regard, each branch of the SCBs should have an expert agriculture and rural development cell which will help to design and evaluate the proposals for marginal and small farmers and other small and micro enterprises in the rural economy. A collateral-free, cost effective and competitive loan product suited for the customized need of the tenants, sharecroppers, agriculture laborers, women and people engaged in off farm and non-farm activities should be designed with the help of people having ground level knowledge. Real-time monitoring and evaluation of the progress of the funded households should be undertaken in a non-partisan and transparent manner. Since lack of funding from the banks compels these groups to borrow from moneylenders and other players in informal money markets, the SCBs should devise projects which also take note of the consumption needs of these groups.

Bibliography

Agarwal, P. (2000); "Savings, Investment and Growth in South Asia", Indira Gandhi Institute of Development Research, June, 1

Aggarwal, R., & Jacques, K.T. (2001); "The impact of FDICIA and prompt corrective action on bank capital and risk: Estimates using a simultaneous equations model, Journal of Banking and Finance 25: 1139-1160

Akerlof, George A., (1970); "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism." Quarterly Journal of Economics, 84(3), pp. 488-500, 1970

Alagh, Y. K., (2013); "The Future of Indian Agriculture" National Book Trust, India,

Allen F., Carletti, E., (2008); 'The roles of banks in financial system', Oxford Handbook of Banking, Oxford

Andrew Crockett (2011);"What financial system for the 21st century? Per Jacobsson lecture, Basel, June 26, 2011available at www.bis.org/events/agm2011/sp110626.pdf

Ang, J. B. (2008); "What are the mechanisms linking financial development and economic growth in Malaysia?" Economic Modelling, 25: 38-53.

Angkinand P. A., Sawangngoenyuang, W., & Wihlborg, C., (2010); "Financial liberalization and banking crises: a cross- country analysis", International Review of Finance, Vol.10, No. 2, 263-292.

Arestis, P., and Caner, A., (2004); "Financial Liberalization and Poverty: Channels of Influence", Working Paper, Levy Economics Institute of Bard College. Annandale-on-Hudson, New York.

Arestis, P., (2007); "What is the New Consensus in Macroeconomics?", chapter 2 in P. Arestis (ed.), Is There a New Consensus in Macroeconomics?, Houndmills, Basingstoke: Palgrave Macmillan

Arestis, P., and Demetriades P., (1999); "Financial Liberalisation The experiences of developing Countries" Eastern Economic Journal Vol 25 .No 4

Arestis, P., (2004); "Washington Consensus and Financial Liberalisation", Journal of Post Keynesian Economics, .

Arestis, P., and Murray G., (2002); "Financial Liberalization and Poverty: Channels of Influence" The Levy Economics Institute; Working Paper NY

Arestis, P. (1998); " Post-Keynesian Monetary Economics". Aldershot: Edward Elgar.

Arestis.P, (2005); "Financial Liberalisation and the Relationship Between Finance and Growth": CEPP Working Paper No. 05/05

Armendáriz De Aghion, B. and Morduch, J.,(2000); "Microfinance Beyond Group Lending', Economics of Transition, Vol 8, No

Atkinson, Anthony Barnes (1970); "On the measurement of Inequality", Journal of Economic Theory 2, 244-263

Atkinson, A. B., (1983); 'The Economics of Inequality' Clarendon Press, 1983

Azariadas, C., Smith, B. (1996); "Private Information, Money and Growth: Indeterminacies, Fluctuations, and the Mundell-Tobin effect." Journal of Economic Growth, 1: 309-322.

Bađun M., (2009). "Financial Intermediation by Banks and Economic Growth: a Review of Empirical Evidence". Financial Theory and Practice 33 (2) 121-152 (2009)

Bagchi A. K. (1982); "Political Economy of Underdevelopment", Cambridge University Press.

Bagchi A. K., (2005); “Rural credit and systematic risks” In Ramachandran V.K. and Swaminathan M.S. (eds.) Financial Liberalization and Rural Credit In India. Tulika Books , New Delhi

Bagchi A.K., Banerjee S. (2005) “How strong are the argument for Bank Merger” Economic and Political Weekly March 19, 2005 PP 1181-1205.

Bagehot, W. (1873); “A Description of the Money Market”, London: John Murray. Irwin, Homewood, Ilinois.

Baker, C. B (1984); ‘Role of Credit in the Economic Development of Small Farm Agriculture’, Analytical Papers, Vol. XIX, AID Spring Review of Small Farm Credit, pp. 78-95. Boulder CO: West view Press, 1984.

Baker, C.J. (1984); “The Tamilnadu Countryside”, Oxford University Press

Balasubramonyam, G,, 1968); “Evolution of banks in India”. Journals of bankers

Banerjee A., V., Duflo E., (2007): “The Economic Lives of the Poor”. Journal of Economic perspectives-Volume 21, (2007), P 141-167

Banerjee A., V., Duflo E., (2005). ‘The Economic Lives of the poor and Unorganised Money Markets in India’ Lalvani Publishing. House, Bombay

Banerjee, A., A. G. Chandrasekhar, E. Duflo, and M. O. Jackson (2013); “The diffusion of microfinance”, Science 341 (6144).

Banerjee, Abhijit (2001); “Contracting Constraints, Credit Markets and Economic Development”, Working Paper 02-17, Department of Economics, Massachusetts Institute of Technology

Banerjee, Abhijit, and Esther Duflo (2005); “Growth Theory through the Lens of Development Economics,” Handbook of Economic Growth, Volume 1A, ed. Steve Durlauf and Philippe Aghi

Banerjee, Abhijit, Angus Deaton, and Esther Duflo (2004); “Wealth, Health, and Health Services in Rural Rajasthan.” American Economic Review, 94(2): 326–30.

Bank for International Settlement (2010); “Assessing the macroeconomic impact of transition to stronger capital and liquidity requirement”, Final Report, BASEL.

Bardhan, P., K. (1984); ‘Land, Labour and Rural Poverty: Essays in Development Economics’. Oxford University Press. 135-42.Delhi

Barro, R.J (1984); ‘Macroeconomics’. Wiley, 1st edition, New York, 1984.

Barro, R.J (1991)., "Economic Growth in a Cross Section of Countries," Quarterly Journal of Economics, 106, 1991.

Basu S. K., (1979); ‘Commercial banks and agricultural credit: a study in regional disparity in India’. Allied Publisher; New Delhi 1979

Basu S.K., (1974); Recent Banking Development , The Book Exchange, Calcutta 1974

Basu, P. (2006); “Improving access to finance for India’s rural poor”. Washington, DC: The World Bank.

Basu, P. and P. Srivastava (2005); “Exploring Possibilities: Microfinance and Rural Credit Access for the Poor in India”, Economic and Political Weekly, April 23

Basu, S. (1997); “Why institutional credit agencies are reluctant to lend to the rural poor: A theoretical analysis of the Indian rural credit market”. World Development 25(2): 267-280

Basu, S. K., (1979), “Commercial Banks and Agricultural Credit – A study of Regional Disparity in India”. Allied Publications, Bombay.

Baumol, W.J (1986) "Productivity Growth, Convergence, and Welfare: What the Long Run Data Show," American Economic Review, 76, December 1986, 1072—1085.

Beck, T., Demirguc-Kunt, A., & Levine, R. (2007); “Finance, inequality and the poor” Journal of Economic Growth, 12, 27-49.

Beck, T., Demirguc-Kunt, A., Peria, M., & Soledad, M. (2006); “Banking services for everyone? Barriers to bank access and use around the world” Working Paper Series No. 4079. World Bank Policy Research

Beck, T., Demirguc-Kunt, A./Martinez Peria, M.S. (2006); “Reaching Out: Access and Use of Banking Services Across Countries” World Bank, Washington D.C., July 2006.

Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine (2007);"Finance, Inequality and the Poor," Journal of Economic Growth 12(1): 27–49.

Bell, C. (1990) “Interactions between Institutional and Informal Credit Agencies in Rural India” World Bank Economic Review 4(3): 297-327

Bell, C. (1993): "Interactions between Institutional and Informal Credit Agencies in Rural India." In K. Hoff, A. Braverman, and J.E. Stiglitz, (eds.)`The Economics of Rural Organization`. Oxford University Press ; New York, PP; 186-213.

Bell, C., and Srinivasan T.N., (1989), “Interlinked Transactions in Rural Markets : An Empirical Study of Andhra Pradesh, Bihar and Punjab”, Oxford Bulletin of Economics and Statistics, Vol. 51, No. 1, pp. 73-83.

Berger, A N and D B Humphrey (1997); “Efficiency of Financial Institutions: International Survey and Directions for Future Research”, European Journal of Operational Research, 98: 175-212.

Berger, A.N.and Mester L.J.(1997); “Inside the Black Box : What explains differences in the financial institutions? Journal of Banking and Finance 21

Berger, A.N.and Mester L.J.(1997) “Inside the Black Box : What explains differences in the financial institutions? Journal of Banking and Finance 21

Bernanke, B. S., Kuttner, K. N. 2005. “What Explains the Stock Market’s Reaction to Federal Reserve Policy?” Journal of Finance, 60(3):1221-1257.

Besley, T. (1995); “Saving, Credit and Insurance,” in Behrman, J. and T.N. Srinivasan (ed) Handbook of Development Economics, Vol. IIIa Amsterdam: North Holland

Bhaduri A., and Nayyar D., (1996); ‘The Intelligent Person's Guide to Liberalization’, Penguin India

Bhaduri, A. (2006): ‘Provision of Rural Financial Services’, in Employment and Development: Essays from an Unorthodox Perspective, Oxford University Press

Bhaduri, A. and Harris, D. J. (1987); “The complex dynamics of the simple Ricardian system', Quarterly Journal of Economics, 102, 4, November

Bhalla G.S., Singh G.S. (2010); “Economic Liberalisation and Indian Agriculture: A Statewise Analysis” Economic and Political Weekly Vol. 44, No. 52 (DECEMBER 26, 2009-JANUARY 1, 2010), pp. 34-

Bhattacharya, A, C., Lovell A K, and Sahay P., (1997); “The Impact of Liberalisation on the Productive Efficiency of Indian Commercial Banks” European Journal of Operational Research, 98, 332-45.

Bhattacharyya, A, A Bhattacharyya and S C Kumbhakar (1997); “Changes in Economic Regime and Productivity Growth: A Study of Indian Public Sector Banks”, Journal of Comparative Economics, 25(2): 196-219.

Binswanger, H.P., S.R. Khandker and M.R. Rosenzweig (1993): "How Infrastructure and Financial Institutions Affect Agricultural Output and Investment in India", Journal of Development Economics, 41: 337-366

Binswanger, Hans P ., and John Mcintire (1987):"Behavioral and Material Determinants of Production Relations in Land-Abundant Tropical Agriculture," Economic Development and Cultural Change, Vol. 36, No. 1, October 1987, pp. 73-99.

Binswanger, Hans.P. and Shahidur Khandker (1992): 'The Impact of Formal Finance on Rural Economy of India', World Bank, Working Paper No. 949.

Bipin K Deokar and S L Shetty (2014); "Growth in Indian Agriculture Responding to Policy Initiatives since 2004-05" Review of Rural Affairs. EPW Vol - XLIX No. 26-27, June 28, 2014

Blyn, G. (1966); 'Agricultural Trends in India, 1891-1947: Output, Availability, and Productivity'. Philadelphia: University of Pennsylvania 42.

Boeke J.H. (1953); "Economics and Economic Policy of Dual Societies": Institute of Pacific Relations New York.

Bordo, M. D., Murshid, A. P. (2000); "Are Financial Crises Becoming Increasingly More Contagious? What is the Historical Evidence on Contagion?" NBER Working Papers 7900.

Borio, C. (2003); "Towards a macroprudential framework for financial supervision and regulation?". Economic Studies, 49:181-216.

Borio, C., English, B., Filardo, A. (2003): "A tale of two perspectives: old or new challenges for monetary policy?" BIS Working Papers 127.

Borio, C., Lowe, P. (2002): "Asset prices, financial and monetary stability: exploring the nexus." BIS Working Papers 114.

Borio, Claudio (2006); "Monetary and financial stability: Here to stay?" Journal of Banking & Finance, 30:3407-3414.

Bose, Sugata (1993); 'Peasant Labour and Colonial Capital: Rural Bengal Since 1770 Cambridge: Cambridge University Press.

Bose, Sugata (2005): 'Regional Rural Banks: The Past and Present Debate', Macro Scan, URL: http://www.macroscan.com/fet/jul05/fet200705RRB_Debate.htm.

Boyce James K., (1986); "Practitioners' Corner: Kinked Exponential Models for Growth Rate Estimation". Oxford Bulletin of Economics and Statistics Vol 48 Issue 4 November 1986 pp 385-391

Boyd, J. H., Levine, R., Smith, B. D. (2001);"The impact of inflation on "financial sector performance" , Journal of Monetary Economics, 47:221-248.

Boyd, J. H., Smith, B. D. 1998. "Capital market imperfections in a monetary growth model", Economic Theory, 11, 241-273.

Brahmanand P.R., (1978); 'Planning for a Futureless Economy' Himalaya Publishing House, Bombay 1978

Brahmanand P.R., (1980): 'Growth less Inflation by Means of Stockless Money', Himalaya Publishing House, Bombay 1980.

Braun, P. A., Mittnik, S. (1993); "Mis-specifications in Vector Auto-regressions and Their Effects on impulse Responses and Variance Decompositions." Journal of Econometrics, 59:319-341.

Braverman, Avishay, and Joseph E. Stiglitz (1982); "Sharecropping and the Interlinking of Agrarian Markets", American Economic Review , 72 (September) 6: 95-715.

Bumann, S., Hermes, N., Lensink, R., (2013); "Financial liberalization and economic growth: a meta-analysis" Journal of International Money and Finance, 33, 255-281

Burgess Robin, Pandey et el (2005), ' Banking for the Poor: Evidence from India' Journal of the European Economics Association Papers and Proceedings, Vol. 3 (2-3), 268-278.

Burgess, R. and R. Pande (2002); "Do Rural Banks Matter? Evidence from the Indian Social Banking Experiment" The American Economic Review, Vol. 95, No. 3 (Jun., 2005), pp. 780-795

Chandrasekhar, C.P. (2016); "National Development Banks in A Comparative Perspective" in "Rethinking Development Strategies after the Financial Crisis Volume II: Country Studies and International Comparisons" available at http://unctad.org/en/PublicationChapters/tdr2015ch2_en.pdf

Calderon, C., Duncan, R., Schmidt-Hebbel, K. (2004); "The role of credibility in the cyclical properties of macroeconomic policies: Evidence for emerging markets." Review of World Economics, 140(4):613-633.

Calomiris, Charles W., and Himmelberg, Charles P., (1994); "Directed Credit Programs for Agriculture and Industry Arguments from Theory and Fact" World bank 1994. available at http:/ documents.worldbank.org/curated/pt/968051468739802512/pdf/multi-page.pdf

Calomiris, Charles W., R. G. Hubbard, and J. H. Stock (1986);"The Farm Debt Crisis and Public Policy.", Brookings Papers on Economic Activity 2: 441-85

Calvo, G. (1997); "Capital flows and macroeconomic management: Tequila lesson." International Journal of Finance and Economics, 1(3):207-223.

Campbell, John Y. and N. Gregory Mankiw (1990), "Permanent Income, Current Income and Consumption," Journal of Business and Economic Statistics, 8(3), 265-79

Campbell, John Y., and N. Gregory Mankiw. (1987); "Permanent and transitory components in macroeconomic fluctuations." American Economic Review, 77(2): 111-117.

Catanach, I.J. (1970); "Rural Credit in Western India; 1875-1930" , Berkeley

Cevik, E. I., Dibooglu, S., Kenc, T. (2013); "Measuring financial stress in Turkey". Journal of Policy Modelling, 35: 370-383.

CGAP (2004): Interest Rate Ceilings and Microfinance: The Story So Far, Occasional Paper, Washington

Chakrabarty K C., (2012); "Financial inclusion – issues in measurement and analysis" lecture delivered at Bank for International Settlements-Central Bank of Malaysia Workshop on "Financial inclusion indicators", Kuala Lumpur, 5 November 2012

Chakrabarty T.K. (2003); "Rural Income: Some Evidence of Effect of Rural Credit during Last Three Decades" Reserve Bank of India Occasional Papers. Vol. 24, No. 3, Winter 2003

Chakravarty, S. (1987); 'Development planning: the Indian experience' Oxford, Clarendon Press.

Chakravarty, Sukhamoy (1993): 'Selected Economic Writings'. Oxford University Press

Champernowne, D. G ., (1974); "The Distribution of Income between Persons" Journal of Economic Literature 12 (3) (1974), 901-902

Chandrasekhar C.P. (2004) "Banking: The New FDI Frontier" www.macroscan.com

Chandrasekhar C.P., Ghosh Jayati (2002): 'The Market That Failed: Neoliberal Economic Reform in India" LeftWord Publication Delhi

Chandrashekhar, C.P. and S.K. Ray (2005): 'Financial Sector Reform and the Transformation of Banking', in Ramachandran, V.K. and M. Swaminathan (ed); Tulika Books Delhi: ISBN:81-8229-94-5

Chattopadhyay, S.K (2009) **"**Priorities in Lending and Distribution of Bank Loans in India: Pre & Post Reform Scenario" www.hss.iitb.ac.in/ties07/paper/ts3/psC/2.doc

Chaudhuri Sarbajit (2002):"Interactions between two informal sector lenders and interest Rate determination in the informal credit market: a theoretical Analysis" source: http://papers.ssrn.com/author=294419

Chavan Pallavi and Ramkumar R.,(2005); "Interest rates on micro credit" In Ramachandran V.K. and Swaminathan M.S. (eds) Financial Liberalization and Rural Credit In India. Tulika Books , New Delhi

Chavan Pallavi, (2012); "The Access of Dalit Borrowers in India's Rural Areas to Bank Credit" Review of Agrarian Studies Vol. 2, No. 2 July-December, 2012

Chavan Pallavi. (2005); ":How Inclusive are Banks under Financial Liberlisation?" Economic and Political Weekly, 22 October 2005

Chavan, Pallavi (2005); "Banking Sector Liberalisation and the Growth and Distribution of Regional Banking" in Ramachandran, V.K. and M. Swaminathan (ed) 'Financial Liberalization and Rural Credit In India'. Tulika Books , New Delhi

Chavan, Pallavi (2013); "Public Banks and Financial Intermediation in India: The Phases of Nationalisation, Liberalisation and Inclusion", Christoph Scherrer (ed.) Public Banks and Financial Development.

Chavan, Pallavi and R. Ramakumar (2005): 'Interest Rates on Micro-Credit', in Ramachandran, V.K. and M. Swaminathan (ed) 'Financial Liberalization and Rural Credit In India'. Tulika Books , New Delhi

Choi, S., Boyd, J., Smith, B. (1996); "Inflation, financial markets, and capital formation", Federal Reserve Bank of St. Louis Review, 78: 9-35.

Chukwuma Dim et.al (2013): " Does Agriculture Matter for Economic Development? Empirical Evidence from Nigeria" Journal of Finance & Economics ; Volume 1, Issue 1 (2013), 61-77; ISSN 2291-4951 E-ISSN 2291-496X

Ciravegna, D. (2005); "The Role of Microcredit in Modern Economy: The Case of Italy", www.flacso.or.cr/fileadmin/documentos/FLACSO/auCiravegna2.DOC

Cochrane, John H. (1988); "How Big is the Random Walk in GNP?", Journal of Political Economy, 96(5):893-920.

Colin Rogers (2008); "The Principle of Effective Demand and the State of Post Keynesian Monetary Economics" The University of Adelaide, School of Economics, Research Paper No. 2008-04

Cook, T., Hahn, T. (1989); "Federal Reserve Information and the Behaviour of Interest Rates", Journal of Monetary Economics, 24:331- 351.

Cramb, R.A. (2007); "Reinventing Dualism: Policy Narratives and Modes of Oil Palm Expansion In Sarawak". Source: https://crawford.anu.edu.au/palm/palm_pdf/Policy_narratives.pdf

Crowther (2007); 'An Outline of Money' Read Books, 2007

Cukierman, (1992); 'Central Bank Strategy, Credibility and Independence: Theory and Evidence' Cambridge, Mass, MIT press. D, P. (Second Edition 1990). Money Interest & Prices - Integration of Monetary & Value Theory . MIT Press.

Culbertson J. M. 1958; "Intermediaries and Monetary Theory: A Criticism of the Gurley-Shaw Theory" The American Economic Review Vol. 48, No. 1 (Mar., 1958), pp. 119-131

Dalton (1920) "The Measurement of the Inequality of Incomes" The Economic Journal, Vol. 30, No. 119

Dandekar, V.M. and F.K. Wadia (1989); "Development of Institutional Finance for Agriculture in India", Journal of Indian School of Political Economy

Darling M.L. (1947); 'The Punjab Peasantry in Prosperity and Debt' .4th Edition, Oxford University Press London

Darling, M. L. (1925): 'The Punjab Peasant in Prosperity and Debt'. Oxford University Press

Das Abhiman, Nag Ashok, Ray S.C.,(2005); " Liberalisation, Ownership and efficiency in Indian Banking : A Non parametric Analysis" Economic and Political Weekly March 19, 2005 PP 1190-1197.

Das, Abhiman & S. Ghosh. (2006); "Financial Deregulation and Efficiency: An Empirical Analysis of Indian Banks During the Post Reform Period" Review of Financial Economics, 15(3), 193-221.

Davidson, P., (2011); "Post Keynesian Macroeconomic Theory: A Foundation for Successful Economic Policies for the Twenty-First Century (Cheltenham 2011)

Davidson, P.,(2008); "Is the current financial distress caused by the subprime mortgage crisis a Minsky moment? Or is it the result of attempting to securitize illiquid non-commercial mortgage loans?, in: Journal of Post Keynesian Economics 30/4 (2008) 669-76.

Deb Kusum Das, Abdul Azeez Erumban, Pilu Chandra Das (2016); "Productivity Dynamics in Indian Industries- Input re-allocation and Structural Change" Paper presented at 34th IARIW General Conference Dresden, Germany, August 21-27, 2016

Debraj Ray (2004); 'Development Economic' . OUP India

Deere, C. D. and C. R. Doss (2006); The Gender Asset Gap: What Do We Know and Why Does it Matter? Feminist Economics, 12 (1-2): 1-50.

Demetriades, P. and Hussein, K. (1996) "Does Financial Development Cause Economic Growth?: Evidence for 16 Countries", Journal of Development Economics, 51:387-411.

Demetriades, P. O., & Hussein, K. A. (1996); " Does Financial Development Cause Economic Growth? Time Series Evidence from 16 Countries", Journal of Development Economics, 51, 384-411

Demetriades, Panicos O. & P. Devereux, Michael & Luintel, Kul B. (1998):"Productivity and financial sector policies: Evidence from South East Asia". Journal of Economic Behavior & Organization Elsevier, vol. 35(1), pages 61-82,.

Demirgüç-Kunt, A., and E. Detragiache (2001); "Financial Liberalization and Financial Fragility"in G. Caprio, P. Honohan and J. E. Stiglitz (eds), Financial Liberalization: How Far, How Fast? Cambridge University Press.

Demirgüç-Kunt, A., B. Karacaovali and L. Laeven (2005). 'Deposit insurance around the World: A comprehensive database,' World Bank Policy Research Working Paper No. 3628, the World Bank: Washington, DC.

Demirguc-Kunt, A., Levine, R. (1996); "Stock Market Development and Financial Intermediaries: Stylized Facts", World Bank Economic Review, World Bank Group, 10(2):291-321.

Denizer, Cevdet/ Desai, Raj M. and Gueorguiev, Nikolay (1998); "The Political Economy of Financial Repression in Transition Economies" Working Paper World Bank, pp. 1-32.

Dev, Kalipada (1988):'Indian Banking Since Independence', Ashish Publishing House , New Delhi 1988

Diamond, D. (1984); "Financial Intermediation and Delegated Monitoring", Review of Economics Studies, Vol. 51, pp. 393-414.

Diamond, D. W., and R. G. Rajan (2006); "Money in a Theory of Banking." American Economic Review, 96 (1): 30–53.

Diamond, D. W., and R. G. Rajan (2012); "Illiquid Banks, Financial Stability, and Interest Rate Policy." Journal of Political Economy,120 (3): 552–91.

Domar, E.D., (1957); 'Essays in thse Theory of Economic Growth'. Oxford University Press, 1957

Dovern, J., Meier, C., Vilsmeier, J.(2010); "How resilient is the German banking system to macroeconomic shocks?" Journal of Banking & Finance, 34:1839-1848.

Drechsler, W. (2005): 'The Rise and Demise of the New Public Management', Post-Autistic Economics Review, http://www.paecon.net/PAEReview/issue33, September

Dreze, J. (1990): 'Poverty in India and the IRDP Delusion', Economic and Political Weekly, XXV, 39, 29 September.

Driffill, J., Rotondi, Z., Savona, P., Zazzara, C. (2006); "Monetary policy and financial stability: what role for Dymski, Gary (2004) `Credit Rationing and Social Ex clusion in the age of financial globalization' Paper presented at the Conference on Development in Open Economies: The current perspective held at New Delhi and organized by UNCTAD and Jamia Millia Islamia, April.

Dwivedi D. N., (2010); 'Macroeconomics: Theory and Policy' McGraw Hill Education; 3 edition

Dymski, Gary A. (1999); "The Bank Merger Wave. Armonk, N.Y.: M. E. Sharpe. the futures market?", Journal Financial Stability, 2, 95–112.

Dymski, Gary A. (2002) The global bank merger wave: implications for developing countries, The Developing Economies, XL-4 (December 2002): 435–66

Easterly, W.R. (1993); "How Much Do Distortions Affect Growth?", Journal of Monetary Economics, 32(2), pp. 187-212.

Eastwood, Robert, and Renu Kohli (1997); "Directed Credit and Investment in Small Scale Industry in India: Evidence from Firm-Level Data 1965-78." University of Sussex, Discussion Papers in Economics, .2000a. "Indian Macroeconomic Management: At the Crossroads

Eichberger, J., Summer, M. 2005. "Bank Capital, Liquidity, and Systemic Risk", Journal of the European Economic Association, 3(2):547-555.

Eichengreen, B., Arteta, C. (2000); "Banking Crises in Emerging Markets: Presumptions and Evidence", Center for International and Development Economics Research Working Paper No. 115.

Elgie Robert and Thompson Helen (1998); " The Politics of Central Banks" Rutledge , New York, 1998

Elisabeth Springler (2005); "Financial Liberalization, Stock Markets and Growth in Economies with underdeveloped Financial Markets" European Political Economy Review. Vol. 3, No. 2 (Winter 2005-2006), pp. 53-86

EPW Research Foundation (2002) " Need to resurrect credit Institution" Economic and Political Weekly October 19, 2002 PP 4256-4262

EPW Research Foundation (2007): 'Need for Calibrated Policy in Interest Rates and Credit', Economic and Political Weekly, February 24

Éric Tymoigne and L. Randall Wray (2013); "Modern Money Theory 101; "A Reply to Critics". Working Paper No. 778, Levy Economics Institute of Bard College; page 2.

Eswaran, M., and A. Kotwal (1993); "Credit and Agrarian Class Structure" in Pranab Bardhan, (ed) `The Economic Theory of Agrarian Institutions` Oxford University Press; New York: 1989.

Fernandez, A.P. (2007): 'Sanghamithra – An MFI with a Difference: Are SHGs Only Financial Intermediaries?', Economic and Political Weekly, Vol. XLII, No. 13

Fisher, Irving (1933), "The Debt-Deflation Theory of Great Depressions", Econometrica 337 -57

Fisher, T. and M.S. Sriram (2002); "Beyond Micro-Credit: Putting Development Back into Micro-Finance", Vistaar, New Delhi

Floro Sagrario Maria and Debraj Ray (1997); "Vertical Link Between Formal and informal Institutions". Review of Development Economics 1(1) 34-56 1997

Frederic S. Mishkin,(2011); 'Macroeconomics: Policy and Practice' Pearson Series in Economics, 1st Edition

Friedman, M., & Schwartz, A. J. (1963): 'A Monetary History of the United States, 1867-1960'. Princeton University Press.

Fry, M. (1982), "Models of Financially Repressed Developing Economics", World Development, 10, pp.317-27.

Fry, M.J. (1995): 'Money, Interest and Banking in Economic Development', London: John Hopkins University Press.

Fry, M.J. (1997); "In Favour of Financial Liberalisation", Economic Journal, 107(442), 754-770.

Gajdhane Amol (2012);"The Evolution of Banking in India". "Avishkar" – Solapur University Research Journal, Vol. 2, 2012

Galbraith John Kenneth (1975); 'Money: Whence it Came, Where it Went'. Houghton Mifflin Company, Boston

Gambacorta, L.(2011); "Do Bank Capital and Liquidity Affect Real Economic Activity in the Long Run? A VECM Analysis for the US", Economic Notes, 40(3):75-91.

Gary S Becker (1962), "Investment in Human Capital: A theoretical Analysis" The Journal of Political Economy, Volume 70, Issue 5

Gerald M. Meier and James E Raunch (2005); 'Leading Issues in Economic Development' 8th Edition. Oxford University Press. USA

Gerschenkron Alexander (1962); "Economic Backwardness in Historical Perspective", Cambridge, MA.

Gerschenkron A (1962): 'Economic Backwardness in Historical Perspective: A Book of Essays' . Cambridge, MA, The Belknap Press of Harvard University Press.

Gerschenkron, Alexander (1962); "Economic Backwardness in Historical Perspective: A Book of Essays", Harvard University Press, 1962.

Gertler Mark L., (1987); "Financial Structure and Aggregate Economic Activity: An Overview", Journal of Money, Credit and Banking

Ghate et al, (1992): 'Informal Finance: Some findings from Asia' published for the Asian Development Bank, Oxford 1992

Ghate, P. (1992); "Interaction between the Formal and Informal Financial Sectors", World Development, 20(6), pp. 859-872.

Ghate, P. (2006); "Microfinance in India: A State of the Sector Report, 2006. CARE & Ford Foundation, New Delhi

Ghate, P. (2007); "Consumer Protection in Indian Microfinance: Lessons from Andhra Pradesh and the Microfinance Bill", Economic and Political Weekly, Vol. XLII, No. 13

Ghosh Jayati (2005); "Economic and Social effect of financial liberalization DESA Working Paper No. 4 http://www.un.org/esa/desa/papers

Ghosh Jayati (2005); "Bank Nationalisation: The Record" www.macroscan.com

Ghosh Jayati, (2009): "Global Crisis and the Indian Economy" in Global Financial Crisis: Impact on India's Poor Some Initial Perspectives. UNDP http://www.undp.org/

Ghosh P., Mookharjee D., and Ray D., (1999); "Credit rationing in developing countries ; An overview of Theory" in Dilip Mookherjee and Debraj Ray (eds), A Reader in Development Economics, London: Blackwell (2000)

Ghosh, Jayati (2009); 'After crisis: adjustment, recovery, and fragility in East Asia' Tulika Books. New Delhi

Ghosh, S. (2011); “A Simple Index of Banking Fragility: application to Indian Data”, Journal of Risk Finance, 12(2):112-120.

Gibson, H.D., Tsakalatos, E., (1994); “The scope and limits of financial liberalization in developing countries: a critical survey” , Journal of Development Studies, 30, 578-628.

Gill Anita (2003); “Interlinked Agrarian Credit Markets in A Developing Economy: A Case Study Of Indian Punjab” Paper Presented in the International Conference On Globalization And Development Organised By The Development Studies Association, U.K. The University Of Strathclyde, Glasgow 10-12 September, 2003

Glick Reuven & Michael M. Hutchison, (1999); "Banking and currency crises; how common are twins?," Proceedings, Federal Reserve Bank Working Paper

Glick, R. and M. Hutchison (1999), “Banking and Currency Crises: How Common Are Twins?”, Working Paper No.PB99-07, Center for Pacific Basin Monetary and Economic Studies, Federal Reserve Bank of San Francisco, (December)

Goetz, A.M. and R.S. Gupta (1996): 'Who Takes the Credit? Gender, Power, and Control over Loan Use in Rural Credit Programmes in Bangladesh', World Development, Vol 24, No1

GOI (1929); “Report of the Royal Commission on Agriculture”, Government of India

GOI (1942); “Report on the Marketing of Rice in India and Burma”

GOI (1991): Report of the Committee on the Financial System, (chaired by M. Narasimham)

GOI (2005); “Report of the Task Force on Revival of Cooperative Credit Institutions”, Ministry of Finance

GOI (2006); “From Hariyali to Neeranchal: Report of the Technical Committee on Watershed Programmes in India”, Ministry of Rural Development

GOI (2007); “Report of the Working Group on Rain-fed Areas for the 11th Five Year Plan”, Planning Commission

GOI (2008); “Report of the Committee on Financial Inclusion” (Rangarajan Committee 2008)

GOI (2009); “A Hundred Small Steps - Report of the Committee on Financial Sector Reforms” (Raghuram G. Rajan (2009).

GOI (2009); “Report of the High Powered Committee on Cooperatives”

GOI (2016);‘Pradhan Mantri Jan-Dhan Yojana (PMJDY); A National Mission on Financial Inclusion’. Department of Financial Services, Ministry of Finance, Government of India available at : www.financialservices.gov.in

Goldsmith, R. W. (1969); “Financial Structure and Development”. New Haven, CT: Yale University Press.

Gonzalez-Vega, C. (1984); “Cheap Agricultural Credit: Redistribution in Reverse”. Dale W. Adams, D.H. Graham, and J.D. Von Pischke, eds. ‘Undermining Rural Development with Cheap Credit’

Goodfriend, M. (1987): “Interest rate smoothing and price level trend stationary”, Journal of Monetary Economics” 19:335-348.

Graciela L. Kaminsky; Carmen M. Reinhart (1999); “The twin crises: the causes of banking and balance-of-payments problems” The American Economic Review, Vol. 89, No. 3 (Jun., 1999), 473-500

Graeve, F. De, Kick, T., Koetter, M. (2008); “Monetary policy and financial (in) stability: An integrated micro–macro approach”, Journal of Financial Stability, 4(3):205-231.

Granville, B., Mallick, S (2009); "Monetary and financial stability in the euro area: Pro-cyclicality versus trade-off", Journal of International Financial Markets, Institutions and Money, 19(4):662-674.

Greenwood, J., & Jovanovic, B. (1990). Financial Development, Growth, and the Distribution of Income. Journal of Political Economy, 98(5), 1076-1107

Gupta, M. R. and Chaudhuri, S., (1997); "Formal Credit, Corruption and the Informal Credit Market in Agriculture: A Theoretical Analysis". Economica, Vol. 64, pp. 331-343.

Gupta, S. B. (1982): 'Monetary Economics-Institutions, Theory & Policy'. S CHAND & COMPANY New Delhi :

Haggblade, S. and Hazell, P., (1989); "Agricultural technology and farm-nonfarm growth linkages" Agric. Econ., 3: 345-364.

Hallwood C.P. and MacDonald R., (2004); "International Money and Finance, Chapter 21: The order of liberalisation in developing countries, 3rd ed. UK: Blackwell Publishing

Handa, Jagdish (2009) 'Monetary Economics', Routledge, New York

Hannig Alfred and Stefan Jansen (2010); Financial Inclusion and Financial Stability: Current Policy Issues, No. 259 December 2010, ADBI Working Paper

Haque, T. and S. Verma (1988); "Regional and Class Disparities in the Flow of Agricultural Credit in India: Indian Journal of Agricultural Economics, XVIII, 3

Harper, M., E. Esipisu, A.K. Mohanty and D.S. Rao (1998): 'The New Middlewomen – Profitable Banking Through On-Lending Groups' Oxford & IBH

Harrod R.F.,(1934); "The expansion of Credit in Advance Communities".Economica, No.1, 287-299

Hashemi, S.M., S.R. Schuler and A.P. Riley (1996); "Rural Credit Programmes and Women's Empowerment in Bangladesh", World Development, Vol.24, No.4

Hawkins J., and Mihaljek D., (2001); "The banking industry in the emerging market economies: competition, consolidation and systemic stability - an overview". BIS paper No 4 Available at http://www.bis.org/publ/bppdf/bispap04.pdf

Hawkins, Penelope (2006); "Financial Access and Financial Stability," Paper prepared for the Conference on Central Banks and the Challenge of Development. Bank for International Settlements, Basel, March 14–15

Hayek Fredrick A., (1933); 'Monetary Theory and Trade Cycle' Sentry Press USA also available at http://www.mises.ch/library/Hayek_Monetary_Theory&Trade_Cycle.pdf

Henry Dunning Macleod (1856): 'The theory and practice of banking: with the elementary principles of currency, prices, credit, and exchanges' London : Longman, Brown, Green, and Longmans,

Henry Dunning Macleod (1856): 'The theory and practice of banking: with the elementary principles of currency, prices, credit, and exchanges'Longman, Brown, Green, and Longmans, 1855-1856. London.

Henry Dunning Macleod: 'The theory and practice of banking: with the elementary principles of currency, prices, credit, and exchanges' London : Longman, Brown, Green, and Longmans, 1855-1856

Hermes, N. and R. Lensink (2007):"Impact of Microfinance: A Critical Survey", Economic and Political Weekly, Vo.XLII, No.6, February 10

Herrero, A. G., Rio, P. (2003): "Financial Stability and the Design of Monetary Policy", Banco de Espana Working Paper No. 0315.

Hicks, J. R. (1969): 'A Theory of Economic History'. Oxford": Clarendon Press.

Hillard, J. (1988); 'J.M. Keynes in Retrospect'; Aldershot: Edward.

Hoff, K. and Stiglitz, J. (1993). Imperfect Information and Rural Credit Markets: Puzzles and Policy Perspectives, pp. 33-52 in K. Hoff , A. Braverman and J. Stiglitz (eds.) The Economics of Rural Organization: Theory, Practice and Policy , Oxford University Press, Oxford.

Hoff, K. and Stiglitz, J. (1993); "Imperfect Information and Rural Credit Markets: Puzzles and Policy Perspectives" , pp. 33-52 in K. Hoff, A. Braverman and J. Stiglitz (eds.) The Economics of Rural Organization: Theory, Practice and Policy, Oxford University Press, Oxford.

Horinuchi, Akiyoshi, and Masayuki Ohbaki (1987) "Finance: The Importance of Government Interventions and the Role of Bank Lending." In Koichi Hamada, Masahiro Kuroda, and Akiyoshi Horiuchi Nihonkeizaino Matiuro Bsnseki (Macroeconomic Analysis of the Japanese Economy). Tokyo: University of Tokyo Press

Huybens, E., Smith, B. (1998): "Financial Market Frictions, Monetary Policy, and Capital Accumulation in a small open economy". Journal of Economic Theory, 81:353-400.

Huybens, E., Smith, B. (1999); "Inflation, financial markets, and long run real activity". Journal of Monetary Economics, 43:283-315.

ICRA (2004); "The Indian Banking Industry", New Delhi.

IMF. (2012); " Financial Access Survey (FAS)" . Washingto DC : International Monetary Fund .

IMF. (2014); " Financial Access Survey (FAS)" . Washingto DC : International Monetary Fund .

IMF. (2015): "Financial Access Survey (FAS)". Washington DC : International Monetary Fund .

IMF. (2016): "Financial Access Survey (FAS)". Washington DC : International Monetary Fund .

Institute for International Finance (2011): "The Cumulative Impact on the Global Economy of Changes in the Financial regulatory Framework", Final Report, September.

Issing, O. (2003); "Monetary and Financial Stability: Is there a Trade-off?", BIS Working Paper No. 18.

Mohan, J. V. (2004); "Regional Rural Banks (RRBs): The Vehicles for Bridging the Banking Divide. State Bank of India Monthly Review, XLIII, 21-41.

Jain Sumit, Parida T.K. and Ghosh S.K (2015); 'Rethinking Priority Sector Lending for Banks in India' IIBF Macro Research Paper for the Year 2014-15

Japan Development Bank (1993); "Policy-Based Finance: The Experience of Postwar Japan" Tokyo

Jorgenson Dale (1967); "The Theory of Investment Behavior" available at http://www.nber.org/books/ferb67-1

Joshi P. K., Gulati Ashok, and Ralph Cummings Jr. (2007): 'Agricultural Diversification and Small Holders in South Asia' (Eds.), Academic Foundation, New Delhi.

Jung, W. S. (1986); "Financial Development and Economic Growth: International Evidence" Economic Development and Cultural Change, 34(2), 333-346.

K. Krishnamurty, V.N. Pandit and P.D. Sharma (1991). "Macro-Economic Modelling in India: A Selective Review of Recent Research," Development Papers No.

. Jomo K. S (2005); 'The Pioneers of Development Economics: Great Economists on Development' The University of Chicago Press Book USA

Kabeer, N. (2005); "Is Microfinance a 'Magic Bullet' for Women's Empowerment?", Economic and Political Weekly, 29 October

Kalecki M (1954): 'Theory of Economic Dynamics. An essay on cyclical and long run changes in capitalist economy' London: Allen and Unwin

Kaminsky Graciela and Schmukler, Sergio (2003); “Short-Run Pain, Long-Run Gain: The Effects of Financial Liberalization” NBER Working Paper No. 9787 June 2003

Kaminsky Graciela Laura & Sergio L. Schmukler, (2008); "Short-Run Pain, Long-Run Gain: Financial Liberalization and Stock Market Cycles," Review of Finance, Oxford University Press for European Finance Association, vol. 12(2), pages 253-292.

Kang, Sung Jin1; Sawada, Yasuyuki (2000); “Financial repression and external openness in an endogenous growth model” Journal of International Trade & Economic Development, Volume 9, Number 4, 1 December 2000, pp. 427-443(17)

Kannabiran, V. (2005); “Marketing Self-Help, Managing Poverty”, Economic and Political Weekly, 20 August

Kashyap, A.K., Stein, J.C. (2000); “What do a million observations on banks say about the transmission of monetary policy?”, American Economic Review, 90 (3):407–428.

Kashyap, A.K., Stein, J.C. (1995); “The impact of monetary policy on bank balance sheets”, Carnegie-Rochester Conference Series on Public Policy, 42:151-195.

Keynes, J.M. (1930); ‘A Treatise on Money’ London: Macmillan.

Keynes, J.M. (1936); ‘The General Theory of Employment, Interest and Money’, London: Macmillan.

Keynes, J.M. (1971): Indian Currency and Finance, Collected Writings, Vol.I

Khan, Akhter Hameed (1978); “Ten Decades of Rural Development: Lessons from India” Michigan State University (MSU), Rural Development Paper No. 1 1978

Khandker, S.R. (2005); “Microfinance and Poverty: Evidence using Panel Data from Bangaladesh”, The World Bank Economic Review, Vol.19, No.2

Kindleberger, C.P. (1978): ‘Manias, Panics and Crashes. Basic Books’, New York.

King, J.E. (2002): A History of Post Keynesian Economics Since 1936, Cheltenham: Edward Elgar

King, R., Levine, R. (1993); “Finance and growth: Schumpeter might be right”, Quarterly Journal of Economics, 108:717-737.

King, R.G. and Levine, R. (1993a); “Finance and Growth: Schumpeter Might Be Right”, Quarterly Journal of Economics, VIII, pp. 717-737.

King, R.G. and Levine, R. (1993b); “Finance, Entrepreneurship, and Growth: Theory and Evidence”, Journal of Monetary Economics, 32(3), pp. 513-542.

Kirtti Ranjan, Paltasingh et.al (2013); “Analyzing Growth and Instability in Subsistence Agriculture of Odisha: Evidence from Major Crops” . Agricultural Economics Research Review Vol. 26 (Conference Number) 2013 pp 67-78

Kishan, R.P., Opiela, T.P. (2000). “Bank Size, bank capital, and the bank lending channel”, Journal of Money ,Credit and Banking. 32(1):121- 141.

Kochar A. (1997); “Does Lack of Access to Formal Credit Constrain Agricultural Production? Evidence from the Land Tenancy Market in Rural India” Source: American Journal of Agricultural Economics, Vol. 79, No. 3 (Aug., 1997), pp. 754-763

Kochar, A., (1997). An Empirical Investigation of Rationing Constraints in Rural Credit Markets in India’ Journal of Development Economics, Vol. 53, pp. 339-371.

Konig and Koch (1990); “External financing of Micro enterprises in LDCs: Lessons from Colombia” Savings and Development, 14, (3) 1990 233-246

Koskela, Loikkanen, and Viren (1992); “House Prices, Household Saving and Financial Market Liberalization in Finland,” European Economic Review, 36, 549-558.

Krishnaswamy, K.S., K. Krishnamurthy and P.D. Sharma (1987); Improving Domestic Resource Mobilisation through Financial Development: India, Asian Development Bank, Manila

Krugman, P (1999); "Balance Sheet, the Transfer Problem and Financial Crisis". Available At: http://web.mit.edu/krugman/www/#other

Krugman, Paul (1979). " A model of Balance-of –Payments Crises, " Journal of Money, Credit, and Banking, Vol. 11, pp. 311-25

Krugman, Paul (1998); "What happened to Asia?" January 1998, Available At: http://web.mit.edu/krugman/www/DISINTER.html.

Kumar Dharam and Desai Meghnad (2008); 'The Cambridge Economic History of India' (Ed); Cambridge University Press,

Kumar, D. (1965); "Land and Caste in South India Kumar" in D Kumar (ed) (1984): The Cambridge Economic History of India, Vol.II, c.1757-c.1970, Orient Longman

Kuttner, K. N. (2001): "Monetary policy surprises and interest rates: Evidence from the Fed funds futures market", Journal of Monetary Economics, 47(3):523-544.

La Porta, R., F.L. de Silanes and A. Shleifer, (2002); "'Government Ownership of Banks", Journal of Finance, February

Laeven, L. (2000); "Does Financial liberalization Reduce Financial Constraints?" Mimeo, The World Bank.

Lekhi R.K (2007); "Economics of Development & Planning" Kalyani Publishers New Delhi (2007)

Levine, R (1999); "Law, Finance, and Economic Growth", Journal of Financial Intermediation, 8(1-2), 8-35.

Levine, R. (1997); Financial Development and Economic Growth: Views and Agenda. Journal of Economic Literature, XXXV, 688-726.

Lewis, W. Arthur (1954); "Economic Development with Unlimited Supplies of Labor," Manchester School of Economic and Social Studies, Vol. 22, pp. 139-91.

Lewis, W. Arthur (1955); 'The Theory of Economic Growth'. Homewood, Illinois, Richard D. Irwin.

Lewis, W. Arthur (1969); Aspects of Tropical Trade 1883-1965' Stockholm, Almquist and Wicksell.

Little I.M.D. Joshi V.(1996); 'India`s Economic Reforms:1991-2001' . Oxford University Press New Delhi

Liu, W., Hsu, C. (2006): "Role of financial development in economic growth: experiences of Taiwan, Korea, and Japan", Journal of Asian Economics, 17:667-690.

Llambi, L. & Lindemann, T. (2001); "State reforms and the decentralization of the agricultural and rural public sector: Lessons from the Latin American experience. Available at http://www.fao.org/sd/2001/N0502a_en.htm

Locarno, A. (2011): "The macroeconomic impact of Basel III on the Italian economy" Occasional Papers No. 88, Banca D' Italia.

Luo, Y. (2014); "The impact of financial liberalisation on bank performance: international evidence on efficiency and productivity" . Unpublished PhD Thesis; https://curve.coventry.ac.uk/open/file/c55cb429-5314-4c91-bd30-

Mahajan, V. (2004): 'Deregulating Rural Credit', Seminar, September.

Mahajan, V. (2005): 'From Microcredit to Livelihood Finance', Economic and Political Weekly, 8 October

Mahendra Dev S. (2012): "Small Farmers in India: Challenges and Opportunities" WP-2012-014 Indira Gandhi Institute of Development Research, Mumbai June 2012. h*ttp://www.igidr.ac.in/pdf/publication/WP-2012-014.pdf*

Maji,C.C., T. Haque and A. Bhattacharya, (1995); "Small Farms, Employment and Surplus Generation - A Case of West Bengal" NIAP Policy Paper No.5 http://www.ncap.res.in/ncap_policy_papers.html

Maji,C.C., T. Haque Rasheed Sulaiman, V., Pal,Sasanka S, (1995); "Impact of Tenancy Reforms on Production and Income Distribution - A Case Study of Operation Barga in West Bengal" NIAP Policy Paper No.1 http://www.ncap.res.in/ncap_policy_papers.html

Malhotra, H.C. and Kulshreshtha , D.K (1977); "Development of Banking in Rural Area" Economic Affairs, Vol 22, No 11, 1977

Mankiw, N. Gregory , David Romer,and David Weil (1992): , "A Contribution to the Empirics of Economic Growth" Quarterly Journal of Economics , May 1992, 107 , 407–438.

Marr, A. (2004): 'A Challenge to the Orthodoxy Concerning Microfinance and Poverty Reduction', Journal of Microfinance, Vol 5 No 2

Marty, Alvin L. (1961); "Gurley and Shaw on Money in a Theory of Finance", Journal of Political Economy, Volume 69; No. 1. pp. 56-62.

Marx, K. (1976): 'Das Capital', Vol.III, Penguin

Matthew J. Higgins, Andrew T. Young, Daniel Levy Robust (2008); "correlates of county-level growth in the United State" Applied Economics Letters, 17: 3, 293 — 296

Mayoux, L. (2002); "Women's Empowerment or Feminisation of Debt? Towards a New Agenda in African Micro-Finance" Department for International Development, London.

Mazzucato at el. (2015); "Financing the Capital Development of the Economy: A Keynes-Schumpeter-Minsky Synthesis" Working Paper No 837, Levy Economics Institute 2015. ISSN 1547-366X; http://www.levyinstitute.org

McCallum, B. (2000); "Alternative monetary policy rules: A comparison with historical settings for the United States, the United Kingdom, and Japan" Federal Reserve Bank of Richmond Economic Quarterly, 86(1), 49-77

McCartney, Mathhew (2009): 'India -the Political Economy of Growth, Stagnation and the State, 1951-2007': Routledge; London

McIntosh, C., A. de Janvry and E. Sadoulet (2005 "How Rising Competition among Microfinance Institutions Affects Incumbent Lenders" Economic Journal, Vol.115, No.506

McKinnon, R. (1991): ' The Order of Economic Liberalization: Financial Control in the Transition to a Market Economy, Baltimore' John Hopkins University Press.

McKinnon, R.I. (1973), Money and Capital in Economic Development, Washington, DC: Brookings Institution.

McKinnon, R.I. (1988a), "Financial Liberalisation in Retrospect: Interest Rate Policies in LDCs", in G. Ranis and T.P. Schultz (eds.), The State of Development Economics, Oxford:Basil Blackwell.

McKinnon, R.I. (1988b), "Financial Liberalisation and Economic Development: a reassessment of Interest-rate Policies in Asia and Latin America", Occasional Papers, No. 6, International Centre for Economic Growth.

Mehrez, Gil; Kaufmann, Daniel (2000); "Transparency, Liberalization, and Banking Crisis. Policy Research Working Paper; No. 2286. World Bank, Washington

Mehrotra N., , Puhazhendhi V.G., Nair G. and Sahoo B B (2009); ""Financial inclusion overview" http://www.nabard.org/fileupload/DataBank/Occasioal Paperonfinancialinclusion_080509.pdf.

Meyer, R.L. and G.Nagarajan (2000): Rural Financial Markets in Asia: Policies, Paradigms and Performance, Asian Development Bank

Michael Artis, J. (1984); 'Macroeconomics'. Oxford: Clarendon Press.

Todaro Michael P. and Smith Stephen C. (2009); Economic Development, 10/e ISBN: 0-321-48573-4 Pearson Education, Inc., publishing India

Minsky, H. (1991); The Financial Instability Hypothesis: A Clarification. in M. Feldstein (edited) 'The Risk of Economic Crisis' , University of Chicago Press: Chicago, 158-70.

Minsky, H. P (1975): 'John Maynard Keynes' New York 1975.

Minsky, H. P., (2008): 'Stabilizing an Unstable Economy' New Haven, CT, 1986; second edition New York 2008).

Mishkin, F. S. (1996); "The Channels of Monetary Transmission: Lessons for Monetary Policy". NBER Working Paper, No 5464.

Mishkin, F.S., (1999) "Global Financial Instability: Framework, Event Issues" . The journal of Economic Perspectives, Vol.13, No. 4, (Autumn, 1999), pp 3-20.

Mishra Akhilesh (2017);"Penetration and Growth of Banking in Madhya Pradesh" 'Yuyutsu' Volume II pp 128-135 ISSN No 2394-9201

Mishra Akhilesh and Mohapatra B.B. (2010);"Financial Liberalisation: The Impact on Banking Infrastructure in Rural India" Indian Journal of Social Enquiry pp 17-36 Vol II ISSN 0974-9012

Mishra Akhilesh and Sharma Vaishnavi (2017);"Financial Sector Reform and Financial Inclusion in India" , Asian Journal on Research in Banking and Finance Volume 7. No.7, pp 240-254 ISSN No 2249-732

Mishra B.S. (2003);"Analytics of Credit - Output Nexus in India" Reserve Bank of India Occasional Papers Vol. 24, Nos. 1 & 2; Summer and Monsoon 2003

Mishra S.K (1993); 'Indian Economy' Second Edition, Pragati Publication, Delhi

Mishra S.K and Puri V.K. (2016); 'Indian Economy' Himalaya Publication Mumbai

Misra, B.S. (2006); 'The Performance of Regional Rural Banks in India: Has Past Anything to Suggest for Future?', RBI Occasional Papers, Vol.27, Nos.1 and 2

Modigliani, F. & Miller, M., (1958); "The Cost of Capital, Corporation Finance and the Theory of Investment", The American Economic Review, 48: 261-297.

Mohan Rakesh (2005); "Financial Sector Reforms in India: Policies and Performance Analysis" Economic and Political Weekly March 19, 2005 PP 1106-1119

Mohan Rakesh and Ray Partha (2017); "Indian Financial Sector: Structure, Trends and Turns" IMF Working Paper 17/7 January 2017 Available at *https://www.imf.org/~/media/Files/.../wp1707.ashx*

Mohan, T T R and S Ray (2004): 'Comparing Performance of Public and Private Sector Banks: A Revenue Maximisation Efficiency Approach', Economic and Political Weekly, March 20: 1271-75.

Mohan,T T R and S Ray (2004); "Productivity Growth and Efficiency in Indian Banking: A comparison of Public private and Foreign Banks". Working Paper 2004-27.University of Connecticut

Mohapatra , B.B., (2012) "Public Provisioning of Finance for Unorganised Rural Manufacturing Enterprises in India: The Emerging Trends since Early 1990s" Unpublished Ph. D. Thesis Jawaharlal Nehru University New Delhi

Montiel, P ., (2003): 'Macroeconomics in Emerging Markets' . Cambridge University Press.

MPBEC Report (1930): Madras Provincial Banking Enquiry Committee Report, 5 Vols., Madras, Government of Madras

Mukharjee, P.K. (1972): Modern banking Theory. The World Press Private Limited Calcutta 1972.

Munshi, Kaivan and Mark R. Rosenzweig.(2006); Traditional Institutions Meet the Modern World:Caste, Gender and Schooling Choice in a Globalizing Economy. American Economic Review. 96(4): 1225-1252.

Murray, I. and E. Lynch (2003); "What Do Microfinance Customers Value?' http://www.womensworldbanking.org

Myint (1985); "Organizational Dualism and Economic Development" Asian Development Review, London

Myrada (2002): Impact of Self Help Groups (Group Processes) On the Social/Empowerment Status of Women Members in Southern India, NABARD

NABARD (1994); "Reorientation of the Rural Cooperative Credit Structure, Budget Speech, New Delhi.

NABARD (2000); 'Task Force on Supportive Policy and Regulatory framework for Micro Finance in India'

NABARD (2002); 'Ten Years of SHG-Bank Linkage': 1992-2002 NABARD : Annual Report

NABARD (2016); 'Annul Report'. Mumbai

Nadhanael G V ., (2012); "Recent Trends in Rural Wages: An Analysis of Inflationary Implications" Reserve Bank of India Occasional Papers Vol. 33, No. 1 & 2: 2012

Naidu, B.V. Narayanswami (1946); "Report of the Economist for Enquiry into Rural Indebtedness", Government of Madras, Madras

Nair Tara S (2000); "Rural financial Intermediaries and commercial Banks" Economic and Political Weekly,January 19, 2000 PP 299-305

Nair, A. (2001): Sustainability of Microfinance Self Help Groups in India: Would Federating Help?, Princeton University

Narayana, D. (2000); "Banking Sector Reforms and the Emerging Inequalities in Commercial Credit Deployment in India" Centre for Development Studies, Thiruvananthapuram

Narayanamoorthy A. (1985); "Institutional Credit for Agriculture Development –An Inter-State Analysis", Economic and Political Weekly, September, Vol.26, No.12, pp.122-127.

Narayanan Sudha (2015); "The Productivity of Agricultural Credit in India" WP-2015. Indira Gandhi Institute of Development Research, Mumbai January 2015 available at http://www.igidr.ac.in/pdf/publication/WP-2015-01.pdf

Nayyar Deepak (2008); 'Liberalization and Development: Collected Essays', Oxford University Press. USA

NCAER (1974); "Credit Requirements for Agriculture", National Council of applied Economic Research, August 1974. New Delhi Pp.56-58.

Nickel, W. and S. Khan (1993); "Rural Credit□Towards a Sustainable System for the 21st Century" Indira Gandhi Institute of Development Research, Bombay

NSSO (1995) "Situation of Agriculture Households In India 48th Round December 2014: MOPSI

NSSO (2005) "Situation of Agriculture Households In India 59th Round December 2014: MOPSI

NSSO (2005a): 'Situation Assessment Survey of Farmers Indebtedness of Farmer Households ' NSS 59th Round (January–December 2003), National Sample Survey Organisation, Government of India, Report No. 498 (59/33/1)

NSSO (2005b): 'Household Indebtedness in India as on 30.06.2002', All India Debt and Investment Survey, NSS Fifty-Ninth Round, January–December 2003, National Sample Survey Organisation, Government of India, Report No. 501 (59/18.2/2)

NSSO (2014) "Key Indicators of Debt and Investment in India; 70th Round December 2014: MOPSI

NSSO (2014) "Key Indicators of Situation of Agriculture Households In India 70th Round December 2014: MOPSI

NSSO (2014) "Key Indicators of Situation of Agriculture Households In India 70th Round December 2014: MOPSI

Odedokun, M.O., (1996); "Alternative Econometric Approaches for Analyzing the Role of the Financial Sector in Economic Growth: Time Series Evidence from LDCs", Journal of Development Economics, 50(1):119-146.

Padoa-Schioppa, T. (2002): "Central Banks and Financial Stability: Exploring a Land in Between", 2nd ECB Central Banking Conference.

Pagano, M. (1993); "Financial Markets and Growth: An Overview", European Economic Review, 37(2-3), pp. 613-622.

Pal P., and Ghosh Jayati (2007); "Inequality in India: A survey of recent trends" DESA Working Paper No. 45 ST/ESA/2007/DWP/45 July 2007'

Panda R.K. (1985); "Farmers Demand for Credit –Pre and Post-independence in India", International Economic Review, June, Vol.7, No.2, pp.34-41.

Parson,D.,Gotlib,C.,and Denny, M.,(1993); "Productivity and computer in Canadian Banking" Journal of Productivity Analysis 4,95-113

Parson,D.,Gotlib,C.,and Denny, M.,(1993); "Productivity and computer in Canadian Banking" Journal of Productivity Analysis 4,95-113

Patel, U. R. (2004); "Role of State-Owned Financial Institutions In India: Should the Government "Do" Or "Lead"? World Bank. 2004

Patil,V.B., (2005) "Rural Banking: Problems of localized banking Institution" Economic and Political Weekly March 19, 2005 PP 1224-1228

Patnaik, P., (2005); " Financial liberalization and credit policy" . In Ramachandran V.K. and Swaminathan M.S. (eds) Financial Liberalization and Rural Credit In India. Tulika Books , New Delhi

Patnaik, P. (2008); 'The Value of Money' New Delhi: Tulika Books.

Patrick, H. (1966); "Financial Development and Economic Growth in Underdeveloped Countries"; Economic Development and Cultural Change; 14(2):174-189.

Pitt, M.M. and S.R. Khandker (1998): 'The Impact of Group-based Credit Programmes on Poor Households in Bangladesh: Does the Gender of Participants Matter?', Journal of Political Economy, Vol. 106, No. 5

Piyu Yue (2004) "Data Envelopment Analysis and Commercial Bank Performances: a Primer with applications to Missouri Bank" www.idea.org

Planning Commission (1956); "Building up a cooperative sector as part of a scheme of planned development" in The Second Five-Year Plan (1956-1961)

Poloz, S. S. 2006. "Financial stability: A worthy goal, but how feasible?", Journal of Banking & Finance, 30: 3423-3427.

Prabhakar Rahul (2013): Varieties of Regulations: How State Pursue and Set International Financial Standard" Oxford University CEG, (June 1, 2013)

Puhazhendi, V. and K.C. Badatya (2002); "SHG-Bank Linkage Programme for Rural Poor – An Impact Assessment", NABARD

Quah, Danny T. (1993); "Galton 's Fallacy and the Convergence Hypothesis." Scandinavian Journal of Economics, 95, 427– 43.

Quah, Danny T. (1997) "Empirics for Growth and Distribution: Stratification, Polarization, and Convergence Clubs."Journal of Economic Growth,2, 27–59.

Rahman, Atiq, (1992) "The Informal Financial Sector in Bangladesh: An Appraisal of its Role in Development", Development and Change. 23:147-168.

Raj K N (1974); "Monetary Management and Nationalization of Banking in India" in A. Mitra (ed) Economic Theory and Planning: Essays In Honour of A K Dasgupta, Oxford University Press

Rajan, R. G., (2005); "Has Financial Development Made the World Riskier?" NBER Working Paper No. 11728.

Rajan, Raghuram and Luigi Zingales (1998); "Financial Dependence and Growth", American Economic Review, 88, 559-586.

Rajan, Raghuram G., Zingales, Luigi (1998);"Financial dependence and growth". American Economic Review, 88 (3), pp. 559-586.

Rajasekhar, D. and V. Vyasalu (1993): 'Managerial Changes, Rural Credit and Economic Development: A Study in Orissa, India', Sa+3-vings and Development, Vol. XVII, No.2

Rajasekhar, D., (2000); "Microfinance Programme and Women's Empowerment: A Study of Two NGOs from Kerala', Journal of Social and Economic Development, Vol 3, No 1

Ramachandran V.K. and Swaminathan M.S (2005) "Debt and Unfreedom among Landless Manual Workers in Rural Haryana In Ramachandran V.K. and Swaminathan M.S. (eds) Financial Liberalization and Rural Credit In India. Tulika Books , New Delhi

Raman, A., (1968); 'Central Banking in India' , Bookland Private Limited Calcutta 1968.

Ramesh Chand, Praduman Kumar and Sant KumarNew (2011); "Total Factor Productivity and Contribution of Research Investment to Agricultural Growth in India". Policy Paper 25 National Centre for Agricultural Economics and Policy Research March 2011 Delhi

Ramkumar R & Chavan P., (2014) ; "Bank Credit to Agriculture in India in the 2000s: Dissecting the Revival" Review of Agrarian Studies. Vol 4 No.1

Rangarajan,C.(1996): 'Indian Economy: Essays on Money and Finance' USBPD New Delhi

Rao, C.H.H. (1994): 'Policy Issues Relating to Irrigation and Rural Credit in India', in G.S. Bhalla (ed.): Economic Liberalisation and Indian Agriculture, New Delhi: Institute for Studies in Industrial Development.

Rath, N. (1985); "Garibi Hatao: Can IRDP Do It?" Economic and Political Weekly, 9 February.

Rawal Vikas (2005); "Banking and Credit Relations in Rural West Bengal," in Swaminathan, Madhura and Ramachandran, V. K. (eds.), Financial Liberalisation and Rural Credit in India, Tulika Books, New Delhi, 2005.

Rawal Vikas and Madhura Swaminathan (2011); "Income Inequality and Caste in Village India", Review of Agrarian Studies, 1(2), 2011 available at http://ras.org.in/income_inequality_and_caste_in_village_india

Rawal Vikas and Mukherjee Keya (2005); "Rural Credit and Landless Manual Workers in Haryana," in Swaminathan, Madhura and Ramachandran, V. K. (eds.), Financial Liberalisation and Rural Credit in India, Tulika Books, New Delhi, 2005.

Raychaudhuri Tapan (2008); "The mid-eighteenth-century background" in Kumar Dharam and Desai Meghnad (Ed); 'The Cambridge Economic History of India' Cambridge University Press,

Raychaudhuri, Tapan (1969); "Permanent Settlement in Operation: Bakarganj District, East Bengal" in R.E. Frykenberg (ed.), 'Land Control and Social Structure in Indian History', Madison, 1969

RBI (1970): History of Reserve Bank of India Vol I (1935-1951)". RBI Mumbai

RBI (1998); "The High Level Committee Agriculture Credit through Commercial Banks", RBI, Bombay.

RBI (1998): History of Reserve Bank of India Vol II (1951-1967)". Oxford University Press, New Delhi (compiled by G. Balachandran)

RBI (1998); History of Reserve Bank of India Vol II (1951-1968)". RBI Mumbai

RBI (2004); "Handbook of Statistics of the Indian Economy 2003-04, Reserve Bank of India, Mumbai. www.rbi.org

RBI (2004a); "Report on the Trend and Progress of Banks in India 2003-04,Reserve Bank of India, Mumbai.

RBI (2004b); "Report on Currency and Finance 2003-04, Reserve Bank of India, Mumbai.

RBI (2005); "History of Reserve Bank of India Vol II (1968-1981)". RBI Mumbai

RBI (2013); History of Reserve Bank of India Vol IV (1981-1997)". Academic Foundation New Delhi

Reddy A.A., and Dharm Pal Malik (2011);"A Review of SHG-Bank Linkage Programme in India". Indian Journal of Industrial Economics and Development Volume 7 No. 2 (2011): 1-10

Reddy, Y.V. (2002a); "Monetary and Financial Sector Reforms in India: A Practitioner's Perspective", RBI Bulletin, May, pp. 357-374.

Reddy, Y.V. (2002b); "Public Sector Banks and the Governance Challenge: Indian Experience"RBI Bulletin, May, pp. 337-356.

Reddy, Y.V. (2005); "Microfinance: Reserve Bank's Approach, Speech at the Microfinance Conference", Indian School of Business, Hyderabad

Reddy, Y.V. (2006); "Rural Banking: Review and Prospects, Centre for Economic and Social Studies", Hyderabad

Reinhart, Carmen M. and Carlos A. Végh, (1995); "Intertemporal Consumption Substitution and Inflation Stabilization: An Empirical Investigation," University of Maryland Working Papers in International Economics No. 3

Rena, Ravinder (2004): "Green revolution: Indian agricultural experience – a paradigm for Eritrea. Available at;https://www.researchgate.net/publication/23543043

Reserve Bank of India (1954); "All-India Rural Credit Survey Report"

Reserve Bank of India (1989); "A Review of Agricultural Credit System in India"

Reserve Bank of India (1995); "Expert Committee on IRDP"

Reserve Bank of India (1999); "Report on Micro Credit, Micro Credit Special Cell Reserve Bank of India (2002)": Report on Currency and Finance 2000-01

Reserve Bank of India (2004); "Report of the Advisory Committee on Flow of Credit to Agriculture and Related Activities"

Reserve Bank of India (2004); "Report of the Advisory Committee on Flow of Credit to Agriculture and Related Activities"

Reserve Bank of India (2005); "Report of the Internal Group to Examine Issues Relating to Rural Credit and Microfinance"

Reserve Bank of India (2005); "Report of the Internal Group to Examine Issues Relating to Rural Credit and Microfinance"

Reserve Bank of India (2006); "Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks": March 2006

Reserve Bank of India (2013): Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks: March 2013

Reserve Bank of India (2014): Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks: March 2016

Reserve Bank of India (2015) "Report on Trend and Progress of Banking in India 2000-12", Reserve Bank of India

Reserve Bank of India (2016): Financial Stability Report, Issue No. 13 RBI June 2016

Reserve Bank of India "Basic Statistical Returns of the Schedule Commercial Banks in India (BSR)

Robert M. Solow (1956); "A Contribution to the Theory of Economic Growth" The Quarterly Journal of Economics, Vol. 70, No. 1 (Feb., 1956), pp. 65-94

Robinson, J. (1952): 'The Generalisation of The General Theory of the Rate of Interest and other Essays'. McMillian, London.

Robinson, J. (1952): 'The Rate of Interest and Other Essays". London: Macmillon .

Rodrik, D. (1987), "Trade and Capital Account Liberalization in a Keynesian Economy", Journal of International Economics, pp. 113-129.

Roland Benedikter (2011); "Social Banking and Social Finance: Answers to the Economic Crisis". Springer Briefs in Business, New York 2011

Dutt Romesh C., (1902); 'The Economic History of India Under Early British Rule Vol I. Published by Kegan Paul, Trench, Triibner, Available at http://www.efm.bris.ac.uk/het/dutt/EcHisIndia1.pdf

Rotondi, Z. and Giacomo V. (2005); "The Fed's reaction to asset prices", Journal of Macroeconomics, 30: 428-443.

Rouse, J.G. & Pischke, J.D. von (1997); Mobilizing capital in agricultural service cooperatives. Rome: FAO.

Rousseau, P. L., Wachtel, P. (2002); "Inflation thresholds and the finance– growth nexus", Journal of International Money and Finance, Vol 21 PP:777- 793.

Rousseau, P. L., Yilmazkuday, H. (2009); "Inflation, financial development, and growth: A trilateral analysis", Economic Systems, 33:310-324.

Rudebusch, G. D. (2005); "Monetary Policy Inertia: Fact or Fiction?", International Journal of Central Banking, 2(4):85-135.

Rudra Sensharma (2005): "Cost and Profit Efficiency of Indian Banks during 1986-2003 A Stochastic Frontier Analysis" Economic and Political Weekly March 19, 2005 PP 1198-1207.

Sachs, J. (1988); “Conditionality, Debt Relief and the Developing Countries' Debt Crisis”, in J.Sachs (ed.), Developing Country Debt and Economic Performance, Chicago: University of Chicago Press.

Sahu, G.B. and D. Rajasekhar (2005); “Banking Sector Reform and Credit Flow to Indian Agriculture”, Economic and Political Weekly, 31 December

Sajane, A. M., Basavaraja H., Guledgudda S . S., Patil B. L.,. Mahajanshetty S. B and Bhat A. R. S., (2011): “Economic evaluation of kisan credit card scheme”. Karnataka J. Agric. Sci.,24 (2) : (173-176) 2011

Sala-i-Martin, Xavier X. (1996); “ Regional Cohesion: Evidence and Theories of Regional Growth and Convergence.”European Economic Review,40, 1325–52.

Sapienza Paola (2004); “The effects of government ownership on bank lending” Journal of Financial Economics, 2004, vol. 72, issue 2, pages 357-384

Sarat Dhal, Purnendu Kumar and Jugnu Ansari (2011); “Financial Stability, Economic Growth, Inflation and Monetary Policy Linkages in India: An Empirical Reflection”. RBI working Paper, (Winter 2011) ; Vol. 32 - No. ISSN 0972 – 7493

Sarkar, J and S K Bhaumik (1998); “Deregulation and the Limits to Banking Market Competition: Some Insights from India”, International Journal of Development Banking, 16(2): 29-42.

Sarkar, J and S K Bhaumik (1998); “Deregulation and the Limits to Banking Market Competition: Some Insights from India”, International Journal of Development Banking, 16(2): 29-42.

Sarkar, J, S Sarkar and S K Bhaumik (1998); “Does Ownership Always Matter? Evidence from the Indian Banking Industry”, Journal of Comparative Economics, 26(2): 262-81.

Sarkar, J. and P. Agarwal (1996): 'Banking: The Challenges of Deregulation', India Development Report, IGIDR, Mumbai

Sathyanathan, W.R.S. (1935): ‘Report of the Special Officer for Inquiry into Agricultural Indebtedness’, Government of Madras, Madras

Satish, S. and K.K. Swaminathan (1988): Lending Costs and Margins: Agricultural Credit Review Report. Reserve Bank of India.

Satyasai K.J.S. “Debt and investment Survey: An Underutilised Tool”. Economic and Political Weekly March 19, 2005 PP 1181-1205

Sayuri Shirai (2001); “Assessment of India’s Banking Sector Reforms from the Perspective of the Governance of the Banking System” ESCAP-ADB Joint Workshop on “Mobilizing Domestic Finance for Development: Reassessment of Bank Finance and Debt Markets in Asia and the Pacific”, Bangkok, 22-23 November 2001.

Schumpeter, J. (1911): ‘The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and Business Cycle’, Cambridge Mass: Harvard University Press.

Schumpeter, J. (1942): ‘Capitalism, Socialism and Democracy’, Harper Collins, USA

Schwartz, A. J. 1995. “Why Financial Stability Depends on Price Stability”, Economic Affairs, 21-25.

Scully, N. (2004); “Microcredit No Panacea for Poor Women”, Global Development Research Centre, Washington, http://www.gdrc.org/icm/wind/micro.html

Selvavinayagam K (1995); “Improving Rural Financial Markets For Developing Microenterprises” Working Paper No.2 FAO http://www.fao.org/docrep/007/ae363e/ae363e00.htm

Sen, Abhijit (2005), “Rural Cooperative Banks – Their Present Problems” in V. K. Ramachandran and Madhura Swaminathan (eds.), Financial Liberalisation and Rural Credit , Tulika Books, New Delhi.

Sen, K. and R.R. Vaidya (1997): ‘The Process of Financial Liberalisation in India’, Oxford University Press

Shah, M. (1984): 'Capitalist Development and the Transformation of Agrarian Relations in Chingleput District 1780-1983', Ph.D. dissertation, Centre for Development Studies, Thiruvanathapuram

Shah, M., D. Banerji, P.S. Vijay Shankar and P. Ambasta (1998): 'India's Dry lands: Tribal Societies and Development through Environmental Regeneration', Oxford University Press, New Delhi

Shanmugam, K.R and Abhiman Das (2004); "Efficiency of Indian Commercial Banks during the Reform Period", Applied Financial Economics, 14(9): 681-86.

Sharma V.P (2011); "India's Agricultural Development under the New Economic Regime: Policy Perspective and Strategy for the 12th Five Year Plan" Working paper November 2011, IIM Ahmadabad

Sharma, A. J., Chandrasekhar S. (2014); "Growth of the Urban Shadow, Spatial Distribution of Economic Activities, and Commuting by Workers in Rural and Urban India", World Development, 61: 154–166

Shaw, E. (1973):`Financial deepening in economic development`. Oxford University Press, New York.

Shetty, S. L. (2005), "Regional, Sectoral and Functional Distribution of Bank Credit" in V. K. Ramachandran and Madhura Swaminathan (eds.), Financial Liberalisation and Rural Credit , Tulika Books, New Delhi.

Shetty, S.L.,(1995) "Regional Sectoral and Functional Distribution of Bank credit. In Ramachandran V.K. and Swaminathan M.S. (eds) 'Financial Liberalization and Rural Credit In India'. Tulika Books , New Delhi

Shigeyuki Abe, Maxwell J. Fry, Byoung Kyun Min, Pairoj Vongvipanond and Teh-Pei Yu (1977); "Financial Liberalisation and Domestic Saving in Economic Development: An Empirical Test for Six Countries The Pakistan Development Review Vol. 16, No. 3 (Autumn 1977), pp. 298-308

Shivmaggi,H.B (2003); "Reform in Rural Banking: Need for Bolder Approach" Economic and Political Weekly May, 13, 2003 PP 1714-1718

Shukla S.P. et.al (2005) "Independent Commission on Banking and Financial Policy Interim report." www.macroscan.com

Sibel Balı Eryiğit, Kadir Yasin Eryiğit, Ercan Dülgeroğlu (2015); "Local Financial Development and Capital Accumulations: Evidence from Turkey". PANOECONOMICUS, 2015, Vol. 62, Issue 3, pp. 339-360

Sibel Balı Eryiğit, Kadir Yasin Eryiğit, Ercan Dülgeroğlu (2015); "Local Financial Development and Capital Accumulations: Evidence from Turkey". PANOECONOMICUS, 2015, Vol. 62, Issue 3, pp. 339-360

Silke Bumann and Robert Lensink (2013); "Financial liberalization and income inequality: channels and cross-country evidences" DFID/ESRC Growth Research Programme "Politics, Finance and Growth". Report available at https://assets.publishing.service.gov.uk/media/57a08a3de5274a31e00004d2/61070_Baumann Lensink.pdf

Simanowitz, S. (2002): 'Microfinance for the Poorest: A Review of Issues and Ideas for Improving the Impact of Microfinance on Poverty', http:// www.microfinancegateway.org

Sims, C. A. (1992); "Interpreting the macroeconomic time series facts: The effects of monetary policy"; European Economic Review, 36:974- 1011.

Singh Gurdev and S.R. Asokan (1988) "Institutional Finance in Rural India: Efficiency and Efficacy". New Delhi: Oxford & IBH

Singh, A. (1997): "Stock Markets, Financial Liberalisation and Economic Development", Economic Journal, 107(442), 771-782.

Sinha, A., Kumar, R., and Dhal, S.C. (2011); "Financial Sector Regulation and Implications for Growth", CAFRAL-BIS International Conference on Financial Sector Regulation for Growth, Equity and Financial Stability in the post-crisis world." BIS Paper No. 62.

Slovik, P. and B. Cournède (2011); "Macroeconomic Impact of Basel III", OECD Economics Department Working Papers No. 844, OECD.

Smith, R.T., Egteren, V. H. (2004); "Interest Rate Smoothing and Financial Stability", Working paper, University of Alberta, Edmonton, Canada.

Sowell, Thomas (1973), Say's Law: An Historical Analysis, Princeton University Press

SPS (2006); "Towards Tribal Empowerment and Development through Women's Self-Help Groups" Samaj Pragati Sahayog, Bagli

Srivastava, P (2005): 'Microfinance in India: Odysseus or Interloper', Economic and Political Weekly, 13 August

Stammer, D. W. (1972); "Financial Development and Economic Growth in Underdeveloped Countries: Comment" Economic Development and Cultural Change, 20(2), 318-329.

Stglitz, J. (2001); "Information and the change in Paradigm in Economics" . Noble Prize Lecture December 8, 2001.

Stiglitz J. (1998). The Role of Financial System in Development. Fourth Annual Bank Conference on Development in Latin America and the Caribbean,, (pp. 133-139). SanSalvador, El Salvador June 29, .

Stiglitz, J. (1993); "The Role of the State in Financial Markets", World Bank Economic Review

Stiglitz, J. and A. Weiss (1981); "Credit Rationing in Markets with Imperfect Information", American Economic Review, Vol.71 (3)

Stiglitz, J., (1994). "Economic Growth Revisited," Industrial and Corporate Change,3(1), pp. 65-110.

Stiglitz, J., (2000). "Liberalization, Moral Hazard in Banking and Prudential Regulation: Are Capital Requirements Enough?" American Economic Review, 90(1), March 2000, pp.147-165.

Stiglitz, J.E. (1998), "The Role of the State in Financial Markets", in M. Bruno and B. Pleskovic (eds.), 'Proceedings of the World Bank Annual Conference on Development Economics', Washington, D.C.: World Bank, 19-52.

Stiglitz, J.E. (2000); "Capital Market Liberalization, Economic Growth and Instability", World Development, 28(6), 1075-1086.

Stiglitz. J. (2003); 'Bankruptcy Law: Basic Economic Principles' . Washintom: Oxford.

Subbarao, D. (2009):. "Financial stability - issues and challenges", FICCI-IBA Annual Conference on "Global Banking: Paradigm Shift", organised jointly by FICCI and IBA, Mumbai, 10 September 2009.

Subbarao, D. (2011); "Price stability, financial stability and sovereign debt sustainability policy challenges from the New Trilemma", Second International Research Conference of the Reserve Bank of India, Mumbai, February 2012.

Subbarao, Duvvuri (2012), "Agricultural Credit –Accomplishments and Challenges", Speech at the thirty years anniversary celebration of NABARD, Mumbai.

Suzuki, Yoshio (1987): 'The Japanese Financial System'. Clarendon Press, Oxford, 1987

Swaminathan, M. (2007): 'The Micro-credit Alternative?', Economic and Political Weekly, Vol. XLII, No. 13

Tankha, A. (2002): Self-help Groups as Financial Intermediaries in India: Cost of Promotion, Sustainability and Impact, ICCO and Cordaido,

Thirlwall, A. P (1993) "The renaissance of Keynesian economics, in: Banca Nazionale del Lavoro Quarterly Review 186 (1993) 327-37

Thorbecke, E. (1970);"The Role of Agriculture in Economic Development" National Bureau of Economic Research. Retrieved from http://www.nber.org/books/thor70-1

Tobin, J. (1970); "On Limiting the Domain of Inequality"', Journal of Law and Economics, Vol. 13, No. 2

Tsionas, Efthymios G. (2000) "Regional Growth and Convergence: Evidence from the United States." Regional Studies,34, 231–8.U.S. Bureau of Economic Analysis. (2001) Local-Area Personal Income, 1969– 1992, Regional Accounts Data.

UNDP (2006); Building Inclusive Financial Sectors for Development - UN Capital Development Fund (UNCDF) available at www.uncdf.org/sites/default/files/Documents/bluebook_1.pdf

Vaidyanathan, A., (2006); "Why financial system must legitimise moneylenders. The Hindu Business Line, 19 October 2006

Valverde, S. C., Lopez del Paso, R., & Fernandez, F. R. (2007):" Financial Innovations in Banking: Impact on Regional Growth". Regional Studies, 41(3), 311-326.

Varian Hall R., (2009): 'Intermediate Microeconomics: A Modern Approach' 8th Edition W.W. Norton, 2009

Varman, M.P. (2005); "Impact of Self-Help Groups on Formal Banking Habits", Economic and Political Weekly, April 23

Vasimalai, M.P. and K. Narender (2007); "Microfinance for Poverty Reduction: Kalanjiam Way", Economic and Political Weekly, Vol. XLII, No. 13

Vos, R., 1995, "Financial Liberalisation, Growth and Adjustment: Some Lessons from Developing Countries", in 'Financial Reform in Central and Eastern Europe' , S. Griffith-Jones and Z. Drabek (eds) London: Macmillan, pp. 179-220

Werner Richarad A. (2000a); Between Government and Markets." In Rising to the Challenge in Asia: A Study of Financial Markets, Vol. 5, India, ed. Ghon S. Rhee. Manila: Asian Development Bank.

Werner Richarad A., (2000b); "Macroeconomic Management in Thailand: The Policy-induced Crisis." In Rising to the Challenge in Asia: A Study of Financial Markets, Vol. 11, Thailand, ed. Ghon S. Rhee. Manila: Asian Development BankDiscussion Paper No. 02/97. University of Sussex, Brighton.

Werner Richarad A., (2003);"A Reconsideration of the Rationale for Bank-Centered Economic Systems and the Effectiveness of Directed Credit Policies in the Light of Japanese Evidence". The Japanese Economy, vol. 30, no. 3, May-June 2002, pp. 3-45.

Wickramanayake J (2004); Financial Structure, Rural Credit and Supportive Institutional Framework in Sri Lanka: An Empirical Analysis. ABERU Discussion Paper 2, 2004

Williamson (2004); "A Short History of the Washington Consensus" paper presented at conference entitles "From the Washington Consensus towards a new Global Governance," Barcelona, September 24–25, 2004 available at www.iie.com/publications/papers/williamson0904-2.pdf

World Bank (1989), 'World Development Report', Oxford: Oxford University Press.

World Bank (1993a); 'The East Asian Economic Miracle, Economic Growth and Public Policy' Oxford: Oxford University Press.

World Bank (1993b); "A Review of Bank Lending for Agricultural Credit and Rural Finance (1948-1 992), Operations Evaluation Department Washington DC: World Bank.

World Bank (1997);'World Development Report 1997' Oxford University Press.

World Bank (2016); “World Development Report 2016, Oxford University Press.

Yanique Carby et al (2012); “Finance and Growth Causality: A Test of the Patrick’s Stage-of-Development Hypothesis” International Journal of Business and Social Science Vol. 3 No. 21; November 2012.

Yaron, J. (1992):“Successful Rural Finance Institutions” World Bank Discussion Paper 150. Washington, D.C.

Yaron, Jacob, McDonald P. Benjamin, Jr., and Gerdal Piprek (1997); “Rural Finance: Issues, Design, and Best Practices, Environmentally and Socially Sustainable Development Studies and Monographs Series 14, World Bank, Washington, DC.

Young, Andrew T., Daniel Levy and Matthew J. Higgins (2007);“Heterogeneous Convergence.” Emory Law and Economics Research Paper MIT.

Zhao, Y. H. (1999a), “Leaving the Countryside: Rural to Urban Migration Decisions in Mainland China” American Economic Review 89, 281–6.

Zinman, Jonathan (2002): The Efficacy and Efficiency of Credit Market Interventions: Evidence from the Mankiw, N. Gregory, David H. Romer, and David N. Weil. (1992) “ A Contribution to the Empirics of Economic Growth” Quarterly Journal of Economics,107, 407-37.