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The Journal provides a forum for in-depth analysis of the problems of social, economic, political, institutional, cultural and environmental transformation taking place in the world today, particularly in developing countries. It welcomes articles with rigorous reasoning, supported by proper documentation. Articles, including field-based ones, are expected to have a theoretical and/or historical perspective. The Journal encourages inter-disciplinary articles that are accessible to a wider group of social scientists and policy makers, in addition to articles specific to particular social sciences. The Journal also gives scope to Research Notes, Comments, Book Reviews and Review Articles.

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Spatial Inequality in Nigeria: The Imperative of Geographic Perspectives in the Development Process

Ignatius A Madu*

Abstract

The focus of this paper is on regional inequality in socio-economic standards in Nigeria. The inequality in the country is not only known to have persisted and widened over the years, but is also known to have a spatial dimension. In this study, the magnitude of the inequality has been determined by the mean logarithmic deviation index using data from the Nigeria Demographic and Health Survey of 2003, while the influence of geography has been assessed through regression analysis. The results show total inequality indices of 0.260 and 0.321 for rural-urban and regional decompositions respectively and indicate that geography is a significant determinant of socio-economic conditions in the country. The southern regions, which are more favoured geographically, have advanced more than the northern. Therefore, a geographic perspective in development policies and planning is required in order to reduce or eliminate inequality in Nigeria. Accordingly, recommendations have been made to redress the adverse effects of geography so as to achieve even development in the country.

Introduction

Inequality is the dispersion of a distribution in terms of income, consumption or some other welfare indicator or attribute of a population. Accordingly, spatial inequality refers to uneven distribution of income or other variables across spatial location (World Bank 1999; Kanbur *et al* 2003).

An appreciation of the patterns of inequality is important for the analysis of direction of economic growth and development (Henderson *et al* 2001; Kanbur and Venables 2005). This is because recent empirical works have established that a link exists between inequality and growth. Moreover, high level of income inequality produces an unfavourable environment for economic growth and development (Alayande 2003; Erubami and Young 2003; Oyekale *et al* 2004). More importantly, if inequality within countries exists because of barriers to competition, it can foment internal tension, and economic and social development within countries is negatively affected (Anderson and Pomfret 2004).

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The awareness of these relationships has combined with increased social and political pressures and academic interests to give impetus to the study of spatial inequality. This has led to a growing recognition of the importance of space to socio-economic development, which, in turn, has been reflected in theoretical, policy and empirical developments (Goodchild *et al* 2000; Kanbur and Venables 2005; Rey and Janikas 2005; Shorrocks and Wan 2005).

Geography affects development through the interaction between environment, space and society. As a result, spatial disparities in living conditions exist both within and between localities since these variables vary spatially. Thus, inequality exists between regions as it does between individuals and this has to do partly with spatial variations in institutions and endowments and partly also to do with the spatial relationship between economic units (Deichmann 1999; Henderson *et al* 2001).

Specifically, the most significant channels of influence of geography on economic development are the productivity of the land, presence of endemic disease, natural disasters, the location of countries and their population in relation to the coast, and the concentration of population in urban areas (Gallup *et al* 1998; 2003). However, in some instances, spatial location is often not of interest itself, but rather because of its association with many other important influences, such as natural resources, weather conditions, infrastructure, cultural traditions and even institutional arrangements, some of which may contribute positively to the between group component of inequality (Shorrocks and Wan 2005).

In stressing the import of geography in development, one is not trying to re-introduce environmental determinism. Rather, it is understood that some geographical factors are a constraint to development so that by understanding them and designing appropriate policies to deal with them can help countries liberate themselves from the constraints. Therefore, policies and development strategies can be designed to turn geography into an advantage, but only if as a first step there is an understanding of the different channels through which geography influences the potential for economic and social development (Gallup *et al* 2003).

In Nigeria, the study of inequality is not new. A lot of effort has been devoted to the documentation of differences among Nigerian citizens' standards of living and access to opportunities over the last decades by various authors and institutions. Several of the studies have shown that inequality is increasing and has led to a growing dimension of poverty in the country (Aigbokhan 2000; Ipinaiye 2001; Thomas and Canagaraja 2002; Erubami and Young 2003; Oyekale *et al* 2004). A majority of the studies have indicated that geography or space is correlated with inequality in Nigeria (FOS 1999; Okojie *et al* 2001; Alayande 2003; Erubami and Young 2003).

One limitation of the studies is that while extensive analyses in income inequalities exist in the country, relatively little analyses are available on inequality in other dimensions of human development. More importantly, despite the acknowledgement of the importance of geographic factors on inequality, little or no effort has been made to establish the strengths of the geographic variables. The present study arose out of the necessity to close this research gap. Thus, the study aims at ascertaining whether the persistence inequality in socio-economic conditions in Nigeria is related to geographical factors.

Geographical Characteristics and Diversity of Nigeria

Nigeria lies roughly between longitudes 3^o and 15^o east of Greenwich and 4^o and 14^o north of the equator. It has a total area of 923,768 sq km and shares borders with French-speaking countries, namely, Benin Republic to the west, Niger to the north, Chad to the northeast and Cameroon to the east. In the south, the country is bounded by the Atlantic Ocean.

The position in relation to land and Ocean makes it face in two directions -- towards land in the north and Ocean in the south. This position, as seen later, has important implications for the geographical variations in the country. One major outcome is the diversity in both physical and human activities.

In terms of physical features, there is a diversity of relief. For instance, there are the Jos Plateau, which rises to over 1,830 m above the sea level and other impressive mountains like the Cameroonian, and Adamawa highlands on the eastern boundary. Apart from these highlands, most of the northern Nigeria lies between 305 and 915 m. In contrast, the land drops to under 15 m over much of the Niger Delta in the south. Similarly, significant variations exist in terms of rock types. There are Precambrian basement rocks across the country together with quaternary rocks in the Chad Basin, the coast and the Niger Delta.

There are also variations in rainfall amount and duration of rainy seasons across the country. Rainfall averages over 200 cm per annum in the south, 100 cm in the middle but only 60 cm in the northern parts of the country. The dry season increases from four months in the south to eight in the north. The range of temperature also increases inland from the coast.

Diversity also exists in terms of vegetation. Mangrove and freshwater swamp vegetations are well-developed on the coast followed by moist forests further inland. In the centre, wide expanses of moist woodland savanna are found followed by dry woodland savanna and scrub vegetation in the north.

The human variation is also remarkable. Nigeria has a total population of 136 million and this ranks 9th in the world. It is the most populous country in Africa. However, the concentration of major ethnic groups that make up the population show regional variation. The Yoruba are concentrated in the southwest while the

major groups in the north are Hausa, Fulani and Kanuri. The 'Middle Belt' has diverse and often non-Islamic peoples of varied cultural levels, including Tiv, Idoma and Nupe. The Ibo dominate the southeast while the south-south are dominated by Urobo, Ijaw, Efik, Ibibio and Edo. The greatest population clusters are, however, found around the Yoruba, Hausa-Fulani and Ibo heartlands.

The strength of Nigeria lies in the diversity of its resources and the large market, which its population offers. The south is largely responsible for the economic products and indeed for the bulk of the export trade of the whole country. The products include oil, which is the main export commodity of the country, timber, rubber, cocoa, oil palm products and coal, which for now is not being exported although efforts are being made for its revitalisation.

The Middle Belt of the savanna is a mixed crop zone producing grain crops (maize, rice, beans, beniseeds) and surplus yams and some livestock. The Sudan savanna of the north is rich in products like grain crops, irrigated cane sugar, vegetable crops, cotton, groundnuts and livestock. Figure 1 shows the vegetation, mineral distribution and diverse agricultural products in the country.

Figure 1: Nigeria: Geographical Diversity

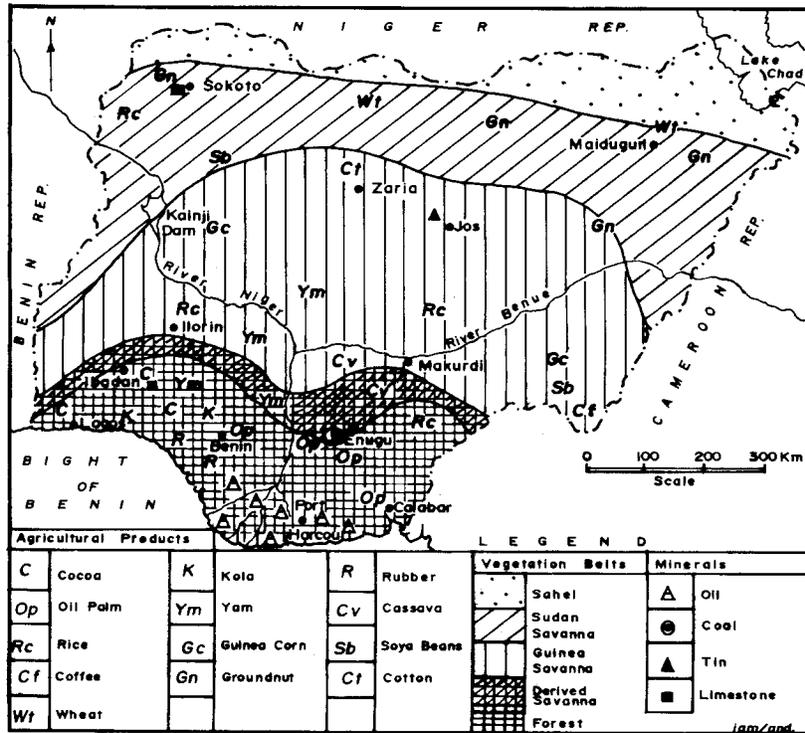


Table 1: Summary of Geographical Characteristics of Nigeria by Geo-Political Zones

SI No.	Zone	Land Average Area (Km ²)	Mean Altitude (m)	Mean Tempature (°c)	Average Rainfall (cm)	Arable Land (ha / Person)	Total Population	Population Density	Urban Population (per cent)	Average Distance from the Coast (km)
1.	North Central	242,425	572	33	1,157	1.45	12,590,655	55	29.8	385
2.	North East	272,395	702	36	865	1.05	13,407,442	44	21.6	715
3.	North West	216,065	380	33	926	1.03	22,264,182	127	26.7	770
4.	South East	29,525	229	32	2,506	0.05	10,712,675	403	44.0	220
5.	South South	84,587	76	31	1,888	0.75	12,939,226	189	29.6	165
6.	South West	78,771	264	31	1,300	0.63	17,600,641	473	66.0	165

Source: Diverse.

The figure clearly shows that tree crops and root crops are found in the south, mixed root and grain crops in the middle and grain crops in the north. This crop distribution is mainly governed by rainfall distribution. Similarly, Table 1, which is a summary of key geographical characteristics of the country, captures the diversity. The table indicates that regions in the south have lower elevation and temperature, more rainfall and greater percentage of urban population than those in the north.

Methods

The Data Source: The socio-economic data for the study were obtained from the National Demographic and Health Survey (NDHS) conducted in Nigeria in 2003 and jointly published in 2004 by the National Population Commission (NPC), Nigeria, and ORC Macro, USA. The survey, which used 7,225 households, is the most recent of such surveys in the country. It shows the economic and social conditions aggregated at both rural-urban and geo-political zones. The data for the geographic variable were, however, obtained from various sources.

Indicators of Socio-Economic Conditions: An analysis of spatial inequality typically begins with a measure of living standards for a population of individuals or households. For this study, the measure used is socio-economic conditions at the household level, which were aggregated at the regional levels using the six geo-political zones in the country.

The 2003 NDHS gathered information on housing characteristics such as source of water, electricity, cooking fuel, type of toilet facilities, number of sleeping rooms in the house and housing material. These characteristics are correlated with health and are also an indicator of socio-economic status. Similarly, the availability of durable consumer goods is an indicator of a household's socio-economic status. Moreover, particular goods have specific advantages. For example, having access to a radio or a television exposes household members to innovative ideas, a refrigerator prolongs the wholesomeness of foods, and a means of transport allows greater access to services away from local area (NPC 2004).

Accordingly, aggregating the performance of a household on the housing characteristics and the durable consumer goods gives a measure of living standard of the household. By aggregating these indicators, the socio-economic status of a region was determined by the weighted rank on the variables. The performance of the regions on the indicators were ranked 1 – 6 since there were six regions and rank 1 weighted 6, 2 weighted 5 and so on. The weights of a region in the indicators summed up to give aggregate socio-economic status for the region. This method of aggregating ranked variables has been used successfully in Latin American countries (Deichmann 1999).

Decomposition of Inequality: The decomposition of inequality, according to a partition of the aggregate population into geographical regions begins with the

choice of an entropy index (Shorrocks and Wan 2005). For this work, the mean log deviation index (Eo) was employed and the inequality measured was the static decomposition (i.e., inequality in one year). This was done since we were only concerned with the assessment of household specific attributes with a view to determining the influence of geography.

Accordingly, the inequality was computed, using the following formula by Shorrocks and Wan (2005) as follows:

$$= \sum_{k=1}^M \frac{n_k}{n} \frac{1}{n_k} \sum_{i \in N_k} \ln \left(\frac{\mu}{y_i} \right) + \frac{1}{n} \sum_{K=1}^M \sum_{i \in N_k} \ln \left(\frac{\mu}{\mu_k} \right) = W + B \dots \dots \dots (1)$$

Where n is the population of all the region or both urban and areas, n_k is the population of a region or urban/rural area, v_k is the population share of a region or urban/rural area = n_k/n , μ is the mean score on the socio-economic indicators for all the regions, \ln is the natural logarithm, y_i is a region or urban/rural score on the individual indicators (Shorrocks and Wan 2005).

W is a weighted average of sub-group inequality values, traditionally referred to as the within group component of inequality while B is the between group contribution to inequality.

For this study, therefore, B was obtained using the average of each geo-political zone or urban/rural areas in the country. This was done because the data were aggregated at geo-political zones and rural/urban domiciles. This kind of analysis is typical for representation at high level of aggregation (Elbers *et al* 2005). It provides the most immediate answer to the counterfactual question; how much inequality would occur if there were no inequalities within regions? Or how much inequality would occur if inter-regional income differences were the only source of inequality (Shorrocks and Wan 2005).

Influence of Geography: Regression analysis was employed to determine the influence of geography on the socio-economic conditions. The dependent variable is socio-economic status by geo-political zones while the geographical variables are the independent variables. Geographical variables used are location, climate, land resources and urbanisation.

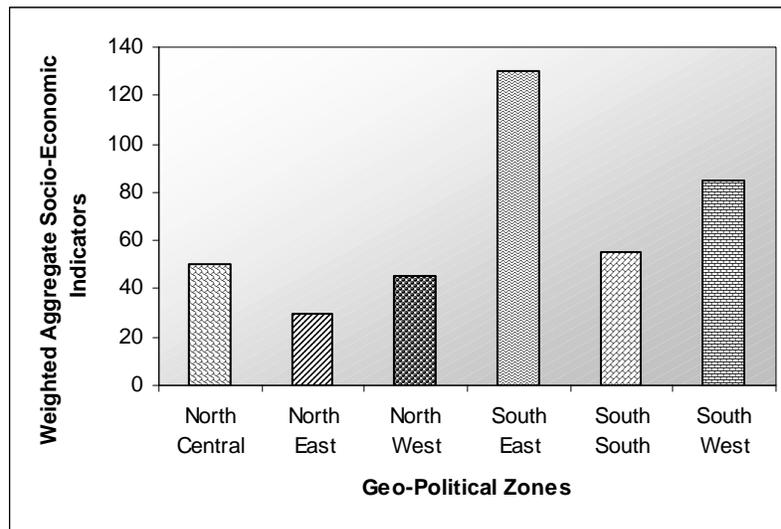
Results

Spatial Inequality: The results of the analyses reveal that socio-economic conditions varied spatially in the country. A high level of inequalities was found to exist between urban and rural areas as well as between geo-political zones. The analyses show that on the average, 40.5 per cent of the urban dwellers surveyed enjoyed the socio-economic indicators selected while only 19.6 per cent of the rural dwellers

enjoyed the same socio-economic indices. The imbalance was partly due to the fact that urban dwellers usually earn more than rural dwellers as a result of their higher literacy level and better jobs and partly due to rural neglect by successive governments in the country. This provided the push factor for rural-urban migration in the country.

In regional context, southern regions were generally better off than the northern regions. Figure 2 clearly shows that the northern regions were disadvantaged with the northeast being the worst hit. The southeast and southwest were, by contrast, the most developed with indices of 123 and 81 respectively. Even though our analysis was not on poverty, the result was in line with earlier findings by World Bank (1996), UNDP (1997) FOS (1999) and Erubami and Young (2003), which established that both poverty and inequality were severest in northern Nigeria and that they were increasing.

Figure 2 : Level of Socio-Economic Development by Geo-Political Zones in Nigeria



Some explanations have been made for the inequalities. According to Erubumi and Young (2003), spatial poverty rate correlated fairly with the distance from the ocean. Similarly, Alayande (2003) asserted that geography or location was one of the factors determining earnings and, therefore, inequalities in the country.

The decomposition of spatial inequality shows that total rural-urban inequality index was 0.260. Out of this, the between group rural-urban inequality index was 0.110 representing 42 per cent of the total inequality. This extra-ordinary high value of between group inequalities again confirmed the state of rural neglect

in the country. It was quite unfortunate that three decades after Olatunbosun (1975) wrote his popular book, *Nigeria's Neglected Rural Majority*, the rural areas in the country have not been able to extricate themselves from the shackles of neglect and poverty. As a result, rural-urban migration has continued unabated in the country.

Also, the decomposition of inequality by regions shows abnormal high contribution of inter-zonal inequalities to the total inequality in Nigeria. The decomposition shows that the total inequality index was 0.321 within and between groups contributing 63 per cent and 37 per cent respectively. This again shows a clear evidence of lack of serious efforts to achieve even development in the country. This situation portends danger to the survival of the country as an entity. As noted by Kanbur *et al* (2003), the importance of between group inequality lies in the fact that if its existence coincides with the division of socio-economic groups, it could lead to severe consequences such as discontent, conflict and even war. As is well known, conflicts and agitations have become common features in Nigeria due mainly to the awareness of neglect and marginalisation of some sections of the country.

Geographical Determinants of Inequality: The results of the regression analyses show that all the four geographical variables have statistically significant associations with socio-economic conditions (Table 2). The table indicates that they had co-efficients of determination of 0.821, 0.791, 0.919 and 0.971 respectively. This means that urbanisation was the most important determinant of socio-economic status in the country, accounting for 97 per cent of the variation in levels of socio-economic conditions. This was closely followed by land resource (92 per cent), location (82 per cent) and climate (79 per cent).

The channels of influence can, however, be better appreciated by examining the contribution of each variable in the regression using the standardised coefficients and confidence intervals (Table 3). This table shows that the distance from the coast was a very important contributing coefficient in the regression. It reveals that a percentage increase in the distance from the coast brought a decline in development by 1.387 per cent. This was in agreement with worldwide experiences and findings which showed that coastal areas achieved greater development than inland locations (Gallup *et al* 1998; 2003; Demurger *et al* 2002). The location advantage of being closer to the ocean, therefore, gave southern Nigeria the initial development lead which enabled localities there to finance education from their own resources. This, in turn, affected the rate of growth and investment in human capital. Again, the coast-interior dichotomy highlights the importance of transport costs in determining a country's participation in the international division of labour; hence the initial concentration of infrastructure in southern Nigeria.

Table 2: Geographical Determinants of Socio-Economic Status in Nigeria

Independent Variable	Dependent Variable: Socio-Economic Status			
	1	2	3	4
• Location				
Altitude	0.442 (-0.795)			
Latitude	0.102 (1.770)			
Distance from the coast	0.002* (-4.070)			
• Climate				
Temperature		0.008* (-3.112)		
Rainfall		0.008* (3.109)		
• Land				
Land area			0.000* (-7.70)	
Arable land per hectare			0.030** (2.431)	
• Urbanization				
Population density				0.000* (6.98)
Urban population				0.001* (4.265)
R²	0.821	0.791	0.971	0.919

* Significant at 5 per cent

** Significant at 10 per cent

t Statistics are in parentheses

Source: Author 's calculations.

The influence of latitude can be explained in a similar way to that of the distance from the coast. Nigeria as already noted lies between 4^oN and 14^oN. The 4^oN lies on the Atlantic Ocean off the coast of the country. Therefore, an increase in latitude will correspond to an increase in distance away from the coast, which will have a corresponding decrease in socio-economic condition. In the same way, a percentage increase in altitude has a declining effect on socio-economic status in the country by -0.165 per cent. Although the impact of this factor was minimal, it affected negatively development in the northeast where the topography is rugged and transport and communications difficult.

Temperature and rainfall are climatic variables that influence development in Nigeria. Again, the south is more favourable than the north in terms of these variables. The northern regions have higher temperature figures and range because of greater distance from the ocean. The rainfall also decreases northward. There are, therefore, lower annual rainfall amounts and longer duration of dry season in the north. Accordingly, socio-economic status declined by 0.496 of additional degree of temperature but increased by the same amount of additional rainfall. As a result, the land use systems in Nigeria were correlated with the major eco-climatic zones in

the country, the climate being the limiting factor for geographical range of crops and livestock production (Areola 1982; Madu 2002).

Table 3: Standardised Coefficients and Confidence Intervals of the Independent Variables

Variable	Standard Coefficient (Beta)	95 % Confidence Interval for B	
		Lower Bound	Upper Bound
Altitude	0.165	-0.331	0.154
Latitude	0.676	-0.545	5.260
Distance from the coast	-1.378	-1.151	-0.348
Temperature	-0.496	-11.683	-2.109
Rainfall	0.496	0.091	0.505
Land area	-1.302	-0.134	-0.075
Arable land per hectare	0.411	0.122	2.069
Population density	0.610	0.202	0.424
% Urban population	0.426	0.389	1.186

Source: Author's calculations

The regression also shows that an increase in land area brought about a decline in socio-economic status by 1.302 while an increase in arable land per hectare brought about an increase in development by 0.411. This indicates that land mass is an obstacle to development in the country, particularly in the north. Sparsely populated settlements widely separated from each other do not make for viable socio-economic investments. This results in large space of empty lands dotted with small settlements that are highly under-developed. The long distances also result in weak interactions between urban and rural areas, which are necessary for economic integration and development.

Finally, the regression analysis shows that the population density and urbanisation were very important determinants of socio-economic development in Nigeria. The results show that an increase in population density brought about a corresponding increase in development by 0.610. In the same way, an increase in percentage of urban population increased the level of development by 0.426.

This was expected because there was a considerable evidence to show that only at higher population densities that one found more intensive and efficient land use (NRC 1999). Also, there was a strong relationship between economic growth and urbanisation. This was because as urbanisation increased, good openings such as increased political participation, gender equity, industrialisation, diversification of economic activities and indeed national development increased (World Bank 2000).

In line with the global trend in development, population density and urban development accounted for higher level of development in southern Nigeria. In some parts of the southern regions, urbanisation was so rapid that not only were cities expanding beyond their administrative boundaries but also several individual urban centres coalesced to form conurbations (Okoye 1996). In the Ibo heartland of southeastern zone, for instance, one could hardly know when one entered another town without the sign-posts or the street names. Figure 3 shows the level of urbanisation by geo-political zones in the country.

The figure together with Table 1 shows that urban development corresponded very closely to the area of high population densities and these explain why south eastern geo-political zone ranked first in socio-economic development as earlier shown in Figure 2.

Measures to Reduce Spatial Inequality

The significance of geography in the development of the country requires that a number of steps be taken to address the adverse impacts and turn them into advantages. The following measures are proposed to that effect:

Incorporation of Geographic Perspective into Development Policy and Planning:

It is obvious that there exist some inherent differences in the characters of the component units of locations. As a result, the development of the units requires an incorporation of spatial or geographic perspective into the development process.

A geographic perspective involves an understanding of the spatial patterns and processes on the earth surface. It can also be described as seeing meaning in the arrangement of things in space, seeing relationship between people, places and environments (*Geography for Life* 1994). It entails using geography or location information to gain new insights and make better and more informed decisions (ESRI 2002). As a result, most development projects require geographical analysis to ascertain their suitable locations. For example, agriculture and rural industrial projects should not be randomly located because of the spatial variation in both physical and human resources that are required for their development. Consequently, some developments projects in Nigeria can best thrive in certain zones but not in others (Madu 2003). There should, therefore, be an agency or institution responsible for the identification and setting up of capital-intensive development projects in Nigeria. The agency should be very knowledgeable in the geography and characters of the country. Fortunately, there is in place the Federal Character Commission, which should be strengthened for that purpose

Emphasis on Integrated Regional Development: It is a fact that most development activities in the country are concentrated in the urban centres. This followed the initial adoption of a regional development strategy in which urban centres were regarded as growth centres or poles that were meant to spread development to the

surrounding settlements within the regions. However, the urban centres in Nigeria rather than spread development have become parasitic, thereby exacerbating economic dualism between urban and rural areas, with the latter being marginalised.

Rural areas in Nigeria have continued to experience low quality of life, despite various efforts by the government to address these disparities. This calls for an integrated regional development that gives equal and simultaneous attention to both urban and rural development.

Proper Management of Existing Urban Centres: We have seen that there were efficiency gains associated with population density and the concentration of urban centres. Also, it has been shown elsewhere that de-concentration did occur at a certain stage in a country's development so that policies that promoted this – positively, rather than by damaging the existing centres -- could be effective (Henderson *et al* 2001).

To achieve proper development of urban centres in the country, an urban development policy was launched in Nigeria in 1997. The aim was to ensure regional balance in the growth and development of urban systems in the country. However, much of the work has been on paper rather than on the ground. This calls for a concerted effort towards its implementation as it holds good promise for urban management and the achievement of a balanced regional network of towns and cities in the country.

Agricultural Land Development: Nigeria is blessed with abundant lands that are wasting especially in the northern regions. Proper development of the lands will increase the income of farmers and enhance their socio-economic status. For increased utilisation of agricultural lands in Nigeria, it is recommended here that the National Agricultural Land Development Authority (NALDA) or equivalent institutions be re-established. The goal of NALDA was to ensure the optimal use of the nation's land and human resources to uplift the quality of rural life. One of its specific objectives was to provide strategic public support for land development including agricultural mechanisation and provision of irrigation facilities. This strategy should be vigorously pursued if inequalities between the regions are to be reduced.

Human Capital Development: Human capital development is above all the most important aspect of development. This is because it determines how far human ingenuity can be applied to combat adverse conditions, including geographical conditions. This calls for the development of education, improvement in health, sanitation and nutrition, gender equity as well as skill acquisition and training. Adequate attention should be paid to education, especially school enrolment, and adult literacy and women empowerment in the northern regions if they are to 'catch up' with their southern counterparts.

Conclusion

It is evident from this paper that geography is a crucial factor in Nigeria's development. This explains the greater achievement in socio-economic conditions in southern regions when compared to northern regions. However, the fact that geography influences development does not mean that geography is necessarily a destiny (Gallup *et al* 2003). Rather, geography provides an underlying explanation for the regional arrangements, which require policy initiatives to shape the desired changes. Therefore, the failure of the relevant institutions to transform the initial endowments into economic resources has led to the inter-regional disparities and their accentuation in Nigeria. This brings to the fore the importance of geographic perspectives in development policies and planning.

A geographical perspective enhances the appreciation of the importance of linkages and diversity of activities and the difficulties of developments in some locations. Such an appreciation will equip planners and policy-makers with the necessary knowledge to tackle the problems creating gaps in well-being. Therefore, identification of the geographical determinants of inequality in Nigeria is a necessary step in the right direction towards the achievement of even development in the country.

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Financial Sector Reforms and Rural Credit in India

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Abstract

This study examines the performances of the rural institutional credit agencies in India in the pre- and post-reforms periods. Another question addressed here is: Do the institutional credit agencies perform in a discriminatory manner while lending to the rural/agricultural sector in various states of India?

The study involving 15 major states of the country shows that financial sector reforms actually weakened the link between the financial institutions and rural areas; this development is in complete contrast with that observed prior to the 1990s. The rural areas were affected adversely as a result of economic policies in all the 15 states. Furthermore, the credit institutions showed discriminatory attitude while lending to the rural areas. The prevailing situation in the rural credit market of India calls for a decisive change in the banking policy to ensure increased geographical and functional reach of the rural credit institutions and unbiased distribution of rural credit across the states.

Introduction

Credit is considered one of the most basic inputs for conducting agricultural development programmes. Recognising the importance of credit in agricultural development, during the pre-Independence period, the Government of India passed several important Acts, namely the Land Improvement Act (1871), the Land Improvement Loans Act (1883), the Agriculturists' Loans Act (1884) and so on, to provide institutional credit support to rural people (Dandekar and Wadia 1989). In spite of such attempts by the government, moneylenders were found to abuse their position and take away farmers' land in the event of loan default. To protect farmers from the clutches of exploitative moneylenders, the co-operative movement was started in India through the passage of the Co-operative Credit Societies Act, 1904. However, the co-operative movement in India received a boost following the recommendations of the Maclagen Committee (1915). Finally, the Reserve Bank of

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India, with a separate agricultural credit department, was established in 1935 that recognised the need of institutional credit for agricultural development in the country.

At the time of Independence, co-operative banks were the only suppliers of institutional credit for agriculture and allied activities. However, with the advent of new technology in agriculture during the mid-'60s, the All-India Rural Credit Review Committee (1969) realised that the co-operative credit structure would not succeed in meeting the entire credit demand of the agricultural sector. The Committee, therefore, recommended that commercial banks play an active and positive role in the sphere of agricultural credit. Following this recommendation, 14 major commercial banks were nationalised in July 1969 and their lending policies and procedures were re-oriented to meet the requirements of the most neglected sectors of the economy, including agriculture.

In order to expand the operations of commercial banks in rural areas, the policy of 'branch-licencing' was brought into force. Further, for every branch opened in metropolitan areas, banks were asked to open four branches in un-banked rural areas. Specific lending targets in actual terms were also fixed for different sectors. In fact, this has been the first attempt to encourage target-oriented lending to the priority sectors of the economy. However, an institutional definition of the 'priority sector' for lending was first attempted in 1972. The term 'priority sector' indicated those activities that had national importance and had been assigned priority for development. Agriculture, small-scale industries and exports were initially identified for this purpose, and each major bank was asked to fulfill a credit target covering these sectors. The Reserve Bank of India was assigned the responsibility to monitor the performances of banks in this regard. In order to encourage priority sector lending by commercial banks, the Reserve Bank of India took two concrete steps - one was to provide liberal re-finance facilities to banks, and the other was to introduce a credit guarantee scheme as a support measure in lending to the priority sector.

Public sector banks were required to extend loans to the priority sector to the extent of at least one-third of their total loans outstanding by March 1979. Subsequently, the target of lending to the priority sector was raised to 40 per cent of the bank credit of all domestic commercial banks and this target was supposed to be achieved by 1985. The banks were specifically instructed to direct 14 per cent of net bank credit to agriculture and allied activities within the priority sector. This target was subsequently raised to 16 per cent in March 1987, then to 17 per cent in March 1989 and 18 per cent in March 1990. Domestic commercial banks were also asked to direct 10 per cent of their net bank credit to 'weaker sections' that included small and marginal farmers, agricultural labourers and scheduled caste and schedule tribe households (Srinivasan 1995).

Several other steps were also thought out to increase the flow of credit to rural areas and ensure its more even distribution. For example, the Working Group headed by Narasimham, formed in 1975, noted that mere reorganising and

restructuring of co-operatives and commercial banking systems would not eliminate the major regional and functional gaps in rural credit. It viewed that certain desirable features of the two banking systems (co-operatives and commercial banks) should be combined. Accordingly, it proposed the establishment of state-sponsored, region-based and rural-oriented banks, to be called Regional Rural Banks. These banks were supposed to possess the co-operative's local feel and familiarity and the commercial bank's business acumen and modern outlook. Finally, to provide undivided attention on credit problems in rural India, a new apex bank, National Bank for Agriculture and Rural Development (NABARD) was set up in July 1982. It appears clearly that the period prior to 1990, following the nationalisation of commercial banks, witnessed planned efforts by the government to bring all institutional agencies at the doorsteps of the rural poor.

However, the winds started blowing exactly in the opposite direction since the introduction of economic reforms in 1991. As stated earlier, priority sector lending had emerged after nationalisation of commercial banks as a major directed credit programme, primarily aimed at extending credit support to the hitherto neglected key sectors of the economy. However, it is alleged that taking advantage of this broad approach, a section of politicians utilised credit as an instrument for creating vote banks in their respective constituencies (Dasgupta 2002). As a result, neither banking institutions nor the neglected sectors/sections benefited ultimately. On the contrary, the health of banks started deteriorating with accumulating overdue. The ultimate casualty has been priority sector lending itself. This is evident from the recommendations made by the Committee on the Financial System (1991) under the chairmanship of M Narasimham. As regards priority sector lending, the Committee recommended: (a) directed credit programmes should cover a redefined priority sector constituting of small and marginal farmers, tiny sector of industry, small business and transport operators, village and cottage industries, rural artisans and other weaker sections; (b) credit targets for this redefined priority sector should be fixed at 10 per cent of aggregate bank credit; (c) stipulations of concessional interest rate to the redefined priority sector should be reviewed for its eventual elimination, in about three years; and (d) a review should be undertaken at the end of three years to see whether the directed credit programmes should be continued.

It is to be noted that while the Narasimham Committee recommended redefining the priority sector to cover only weaker sections and a drastic reduction in the target for priority sector lending, what the authorities did was exactly the opposite. While the previous target of providing 40 per cent of total bank credit to the priority sector continued, in the post-reforms period (since 1991), the government widened the coverage of priority sector by including many new items in it. Officially, the targets till date are for advancing 40 per cent of total credit to the priority sector, 18 per cent to agriculture alone and 10 per cent to weaker sections of society.

Let us now have a look at the definition of priority sector during pre- and post-economic reforms periods. In the pre-reforms period, agricultural credit was earmarked directly for farmers (mainly marginal and small farmers) and this was advanced mostly for various agricultural purposes such as production, storage, transportation of agriculture and allied products and so on. Within agriculture, food crops were emphasised. Assistance for traditional plantation was confined only to marginal farmers with less than five acres of land. Therefore, there was marked emphasis on food crops and also on small and marginal farmers since short-term advance or crop loan was limited to Rs 5,000.

In the post-reforms period, the ceiling of short-term loan to be considered under direct finance to agriculture had been increased to Rs 1 lakh, although one estimate by the Central Statistical Organisation indicates that the average input cost per hectare in agriculture in 1996-97 was only Rs 5,200 (Dasgupta 2002). There are obviously some medium and large farmers whose demand would be higher than the average. Nevertheless, it becomes clear that by increasing the ceiling of loan amount for the priority sector, banks sought to target more medium and large farmers as their prospective customers. Another justification to this conclusion is provided by the fact that while only small and marginal farmers could get credit for plantation crop earlier, in the post-reforms era, no such restriction is maintained. The fallout of these policy changes in this era of liberalisation is that credit could flow more freely and in larger amounts to better-off farmers and also for the production of non-food crops.

Another feature of agricultural finance that needs to be noted is that in the pre-reforms period, direct finance to agriculture constituted only loans advanced for agricultural and agri-allied activities. In the pre-reforms period, the norm was that direct finance to agriculture would be at least 18 per cent of net bank credit. In the post-reforms period, however, apart from loans under these heads, direct finance also includes loans for acquisition of jeeps, pick-up vans, mini buses, etc., which are neither required by marginal and small farmers nor for transportation of agricultural products. Perhaps, this has been to help affluent farmers diversify their activities to non-farm sectors (*ibid*).

As far as indirect finance to agriculture during the pre-reforms period is concerned, all the items were related to agricultural activities, though indirectly (e.g. credit for financing the distribution of fertilisers, pesticides, seeds, and so on). In the post-liberalisation period, however, indirect finance to agriculture includes loans advanced to dealers, commission agents, non-banking financial companies, state electricity boards and those investing in selected bonds and depositing in apex level financial institutions. All these items were not a part of priority sector lending in the pre-reforms period. As a result of these definitional changes in the post-reforms period, direct lending to agriculture to total agricultural lending declined sharply from 73 per cent in 1995-96 to 45 per cent in 1999-00, with a share of indirect

lending almost doubling during the period. Moreover, credit to agriculture (direct plus indirect) under the priority sector as a proportion of total commercial bank credit for the whole of India fell from 17.4 per cent in 1989 to 10.7 per cent in 2000. Further, although it was proposed in the post-reforms period that 10 per cent of net bank credit would be flown to weaker sections comprising small and marginal farmers, agricultural labourers, scheduled caste and scheduled tribe households, the data show that there was in fact a sharp decline in the proportion of advances to net bank credit given to these sections, from 9.5 per cent in 1991 to 1.7 per cent in 2001 (Ramachandran and Swaminathan 2005).

Another disturbing feature during the 1990s has been that the health of regional rural banks started deteriorating. In 1995, as many as 164 regional rural banks had incurred a loss amounting to Rs 423 crore. The inevitable outcome of such a huge loss was lower credit flow to the rural sector by regional rural banks. The percentage of overdue to total loans outstanding by regional rural banks had also increased from 17.68 per cent in 1981 to 36.11 per cent in 1993. The situation was no better as regards commercial banks and co-operatives. In 1993, the percentage of overdue to total loans outstanding for commercial banks in the country as a whole was 25.98 per cent, while the corresponding figure for primary agricultural credit societies was 36.51 per cent. The annual growth rates of loans advanced by co-operatives and regional rural banks in two periods (1980-89) and (1990-98) in India show that though co-operative credit grew at a higher rate in 1990s than in 1980s (3.11 per cent in 1980s and 5.27 per cent in 1990s), regional rural banks showed a substantial fall as regards annual growth rates of credit advanced by them (from 23.53 per cent in 1980-89 to 4.93 per cent in 1990-98) [RBI Bulletin, 1993 & 2000]. It clearly emerges that the decade following financial liberalisation witnessed a deterioration in credit flow to the agricultural sector primarily because of policy changes by commercial banks with respect to the rural sector of the economy and high overdue of agricultural loans for all institutional agencies.

Against the above backdrop, the present study seeks to review the changes that have come about in rural credit in India and its 15 major states following some financial sector reforms in recent years. More specifically, we focus on the development of banking infrastructure as also the flow of credit in rural areas both in the pre- and post-reforms periods. In order to obtain a comprehensive idea about the effects of reforms policies on rural credit in India, we consider all types of institutions, viz., commercial banks, co-operatives¹ and regional rural banks. Furthermore, our comparison of state-level performances helps to understand discriminatory attitude, if any, of institutional agencies while extending rural credit in various states of India.

This study is divided into six sections. The present section provided a brief introduction on important reforms initiated from time to time with regard to rural institutional credit in India. Section II reveals the sources of data used for this

study and also the data adjustment attempted to enable inter-temporal comparison of expansion of rural credit. Section III examines the development of rural banking infrastructure at the all-India and state level since the time of bank nationalisation. The two indicators used to capture banking infrastructure development are population served per bank branch and credit-deposit ratio. Section IV discusses the progress of priority sector lending by commercial banks during our study period. Section V examines the flow of credit specifically to the agricultural sector by different credit institutions in the pre- and post-reforms periods. The final Section VI provides the summary of the main findings and the conclusion of the study.

Database and Methodology

This study is exclusively based on secondary data collected from various issues of Banking Statistics² and Statistical Tables Relating to Banks in India (published by the Reserve Bank of India) and also Statistical Statements Relating to Co-operative Movements in India (published by the RBI / NABARD)³.

In order to understand the progress of institutional credit in the states of India, some adjustments to data have become essential. First, prior to 1990, all data relating to credit, deposit etc. are provided as on June and December every year while these have been available as on March every year since 1990. For ensuring inter-temporal comparability, we used simple interpolation method to convert all data into a series that provides information on these aspects as on March every year. Secondly, all data on credit, deposits etc. are provided at current prices by the published reports of RBI/NABARD. We have converted state-wise figures on credit, deposit etc. at constant prices (Base: 1981-82 = 100) by using the wholesale price index for all commodities (India). In general, our study period extends from the early 1970s to 2004. In this study, the period from early 1970s to 1990 represents the pre-reforms period, while the latter part has been designated as the post-reforms period. However, since detailed data regarding co-operatives are not available after March 1999, we are compelled to restrict our analysis regarding co-operative credit up to March 1999.

Development of Rural Banking Infrastructure

As is well known, the major objectives of nationalisation of commercial banks in India were (i) to ensure wider territorial and regional spread of branch network, (ii) to mobilise savings through deposits, and (iii) to extend and expand credit facilities to those sectors that were found severely neglected in terms of the availability of credit. Thus, it would be worth investigating the development of rural banking infrastructure at the state as well as national level both in the pre- and post-reforms period. To do that, we consider two indicators, namely, population per bank branch and the credit-deposit ratio. As our purpose is to evaluate the expansion of

banking network in the rural areas⁴ only, we concentrate on rural bank branches and credit-deposit ratios for rural areas.

Area of Operation

Commercial Banks: Commercial banks⁵ undertook massive expansion of branches especially in the rural areas of the country since the nationalisation of banks. While there were 5,438 branches of commercial banks in rural areas throughout India in 1973, the number of such branches increased to 14,656 at the end of March 1980, and further to 34,184 by the end of March 1990. The number of rural branches of commercial banks in the country, however, declined to 32,107 at the end of March 2004. The improvement of rural banking facilities in the country is also reflected from the sizeable reduction in the average population served per rural branch of the commercial banks.

Table 1 gives data on changes in rural population per commercial bank branch in major states as well as on an all-India basis from 1972-73 to 2003-04. It is evident from the table that, at the all-India level, the average population served per commercial bank branch in rural areas was high at 83,760 in 1972-73, which declined significantly to 17,920 in 1990-91. This is clearly an indication of expansion of the commercial banking network in rural areas after nationalisation. However, this trend seems to have reversed since 1991 in as much as the average population served per commercial bank branch has started increasing. It is found that for all-India, the average rural population served per commercial bank branch is 24,310 in 2003-04. The same trend is observed for all 15 major states of India. The increasing trend in the rural population per commercial bank branch after 1991 indicates that commercial banks started diverting their business from rural areas after 1991.

Among the major states of India, the rural population per commercial bank branch has been the lowest in Punjab all through the period, 1972-73 to 2003-04. In 2003-04, the states where the rural population per commercial bank branch has been on the lower side are Karnataka, Orissa, Gujarat, Tamil Nadu, Haryana and Andhra Pradesh. On the other hand, in 2003-04, the rural population per commercial bank branch has been the highest in Kerala, followed by Assam, Bihar, Maharashtra, Uttar Pradesh, West Bengal, Rajasthan and Madhya Pradesh. It is also observed from table 1 that all through our study period (1972-73 to 2003-04), the rural population served per commercial bank branch in the eastern Indian states of West Bengal, Assam and Bihar remained higher than the all-India average. This implies that the spread of the commercial banking network in rural areas of West Bengal, Assam and Bihar has been less impressive as compared to the all-India average. It is also observed that Kendall's coefficient of concordance⁶ is statistically significant, which implies that the ranking of the states in terms of rural population per commercial bank branch has not undergone any significant change with the passage of time.

Table 1: Rural Population per Bank Branch in Major States and All-India figures from 1972-73 to 2003-04 [in Thousands]

State	1972-73	1980-81	1985-86	1990-91	1995-96	2003-04
1	2	3	4	5	6	7
Commercial Banks						
Andhra Pradesh	92.75 (9)	29.44 (6)	18.68 (7)	18.22 (8)	21.34 (9)	24.83 (7)
Assam	194.12 (13)	65.84 (15)	28.58 (14)	22.66 (14)	25.73 (14)	31.08 (14)
Bihar	230.82 (15)	40.94 (12)	21.73 (12)	20.39 (12)	24.00 (13)	29.55 (13)
Gujarat	36.31 (3)	23.46 (4)	16.81 (3)	15.94 (3)	19.18 (4)	23.47 (4)
Haryana	60.89 (5)	23.25 (3)	18.00 (5)	16.82 (6)	20.34 (7)	24.31 (6)
Karnataka	36.12 (2)	19.28 (2)	13.43 (2)	13.06 (2)	14.98 (2)	17.59 (2)
Kerala	45.57 (4)	24.70 (5)	33.60 (15)	38.74 (15)	64.90 (15)	68.90 (15)
Madhya Pradesh	116.13 (10)	32.99 (9)	18.32 (6)	16.55 (4)	20.28 (6)	25.21 (8)
Maharashtra	87.91 (8)	33.88 (10)	21.43 (11)	19.09 (10)	23.07 (11)	28.00 (12)
Orissa	218.11 (14)	35.69 (11)	19.94 (8)	17.30 (7)	18.35 (3)	20.68 (3)
Punjab	30.00 (1)	14.83 (1)	12.22 (1)	12.15 (1)	14.09 (1)	15.93 (1)
Rajasthan	73.19 (7)	29.77 (7)	17.78 (4)	16.70 (5)	19.97 (5)	25.41 (9)
Tamil Nadu	67.14 (6)	30.07 (8)	20.58 (9)	19.08 (9)	20.90 (8)	24.14 (5)
Uttar Pradesh	133.66 (11)	41.07 (13)	21.10 (10)	19.39 (11)	22.76 (10)	27.29 (11)
West Bengal	185.33 (12)	50.34 (14)	27.18 (13)	20.79 (13)	23.49 (12)	26.65 (10)
All India	83.76	31.22	19.49	17.92	20.73	24.31
Kendall's Coefficient of Concordance: 326.79 ^s						
Regional Rural Banks						
Andhra Pradesh	-	127.89 (7)	44.99 (7)	42.94 (8)	46.36 (7)	50.97 (6)
Assam	-	286.29 (11)	59.36 (9)	48.65 (9)	52.40 (9)	60.56 (9)
Bihar	-	87.40 (1)	38.17 (6)	39.53 (6)	44.62 (6)	54.36 (7)
Gujarat	-	508.62 (14)	84.70 (12)	62.15 (11)	70.59 (11)	89.55 (13)
Haryana	-	102.92 (4)	51.67 (8)	42.14 (7)	47.26 (8)	56.24 (8)
Karnataka	-	96.25 (3)	29.27 (1)	28.41 (1)	30.66 (1)	33.13 (1)
Kerala	-	117.32 (6)	79.75 (11)	77.34 (13)	80.60 (13)	65.13 (10)
Madhya Pradesh	-	136.01 (8)	32.47 (3)	31.36 (2)	34.96 (2)	42.58 (3)
Maharashtra	-	458.94 (13)	98.49 (13)	81.04 (14)	89.69 (14)	105.81 (14)
Orissa	-	90.70 (2)	33.04 (4)	33.67 (4)	35.84 (4)	39.16 (2)
Punjab	-	-	118.82 (14)	70.14 (12)	76.52 (12)	87.08 (12)
Rajasthan	-	115.84 (5)	31.59 (2)	31.48 (3)	35.68 (3)	45.48 (4)
Tamil Nadu	-	370.25 (12)	227.92 (15)	172.05 (15)	181.06 (15)	193.23 (15)
Uttar Pradesh	-	157.14 (9)	36.29 (5)	36.22 (5)	40.38 (5)	48.19 (5)
West Bengal	-	201.74 (10)	64.37 (10)	56.78 (10)	60.41 (10)	67.76 (11)
All India	-	145.76	45.14	42.84	46.60	53.22

Kendall's Coefficient of Concordance: 261.39^s

(Contd.....)

Co-operative Banks						
Andhra Pradesh	261.85 (12)	117.31 (11)	96.85 (11)	94.18 (11)	98.72 (10)	107.55 (11)
Assam	370.48(14)	2236.63(15)	1466.16(15)	1078.10(15)	1082.10(15)	-
Bihar	329.13 (13)	244.43 (14)	200.06 (13)	196.72 (13)	169.97 (13)	259.78 (14)
Gujarat	40.66 (2)	30.60 (3)	27.68 (3)	27.66 (3)	29.21 (3)	31.17 (3)
Haryana	68.79 (6)	53.43 (5)	49.34 (5)	47.13 (4)	49.77 (4)	48.83 (4)
Karnataka	182.94 (10)	51.88 (4)	48.85 (4)	61.12 (7)	56.58 (7)	64.10 (8)
Kerala	65.48 (5)	89.06 (9)	70.35 (7)	55.32 (6)	52.78 (6)	49.15 (5)
Madhya Pradesh	58.77 (4)	57.35 (6)	52.97 (6)	50.72 (5)	52.13 (5)	62.39 (7)
Maharashtra	36.33 (1)	24.36 (2)	18.50 (1)	15.59 (1)	14.85 (1)	16.59 (1)
Orissa	216.97 (11)	123.71 (12)	102.96 (12)	104.12 (12)	98.91 (11)	104.17 (10)
Punjab	49.54 (3)	20.51 (1)	21.74 (2)	21.80 (2)	23.51 (2)	22.17 (2)
Rajasthan	141.06 (9)	95.28 (10)	77.44 (9)	85.22 (10)	99.99 (12)	120.67 (12)
Tamil Nadu	96.00 (7)	82.15 (7)	71.24 (8)	65.00 (8)	58.61 (8)	56.14 (6)
Uttar Pradesh	131.43 (8)	86.29 (8)	81.56 (10)	81.16 (9)	83.30 (9)	100.05 (9)
West Bengal	396.09 (15)	221.77 (13)	222.53 (14)	260.29 (14)	235.50 (14)	238.51 (13)
All India	100.34	69.62	60.91	58.20	57.01	61.94

Kendall's Coefficient of Concordance: 400.41^s

All Banks Combined (Commercial Banks + RRBs + Co-operatives)						
Andhra Pradesh	68.49 (11)	19.88 (9)	11.62 (10)	11.26 (10)	12.73 (10)	14.45 (9)
Assam	127.38 (14)	52.28 (15)	19.04 (15)	15.24 (14)	16.99 (14)	20.54 (15)
Bihar	135.67 (15)	25.02 (13)	12.95 (11)	12.59 (11)	14.29 (12)	17.83 (13)
Gujarat	19.18 (2)	12.94 (3)	9.31 (4)	8.70 (4)	9.95 (4)	11.65 (4)
Haryana	32.30 (5)	14.00 (5)	10.51 (7)	9.58 (6)	11.06 (7)	12.59 (6)
Karnataka	36.48 (6)	12.27 (2)	7.75 (2)	7.80 (3)	8.54 (3)	9.74 (3)
Kerala	23.28 (3)	16.60 (6)	17.70 (14)	17.60 (15)	21.39 (15)	19.91 (14)
Madhya Pradesh	39.02 (7)	18.15 (7)	9.59 (5)	8.93 (5)	10.30 (5)	12.63 (7)
Maharashtra	25.71 (4)	13.74 (4)	9.02 (3)	7.76 (2)	8.21 (2)	9.48 (2)
Orissa	108.77 (12)	21.22 (11)	11.10 (8)	10.30 (8)	10.81 (6)	11.98 (5)
Punjab	18.68 (1)	8.61 (1)	7.34 (1)	7.02 (1)	7.90 (1)	8.38 (1)
Rajasthan	48.19 (9)	18.97 (8)	9.92 (6)	9.67 (7)	11.35 (8)	14.36 (8)
Tamil Nadu	39.51 (8)	20.78 (10)	14.92 (12)	13.58 (12)	14.20 (11)	15.53 (11)
Uttar Pradesh	66.27 (10)	23.64 (12)	11.47 (9)	10.93 (9)	12.39 (9)	14.84 (10)
West Bengal	126.26 (13)	34.09 (14)	17.60 (13)	14.38 (13)	15.78 (13)	17.71 (12)
All India	45.65	18.78	11.12	10.38	11.46	13.14

Kendall's Coefficient of Concordance: 354.35^s

Notes: @ Figures in the brackets indicate ranks; (*) \$ indicates significance at 1% level; # There has been no district central cooperative bank in Assam since 2003.

Sources: (1) Reserve Bank of India, Banking Statistics, Basic Statistical Returns (various years); (2) RBI, Statistical Tables Relating to Banks in India (various years).

Regional Rural Banks: Table 1 also shows that rural population served per regional rural bank branch in all-India was 145,760 in 1980-81, which declined to 42,840 in 1990-91. This declining trend had been reversed in the '90s. In the year 2003-04, rural population served by each branch of regional rural banks throughout India was found to be 53,220, higher than that in 1990-91.

In 2003-04, the concentration of regional rural banks was the highest in Karnataka, followed (in descending order of population served per bank branch) by Orissa, Madhya Pradesh, Rajasthan, Uttar Pradesh, Andhra Pradesh, Bihar, Haryana, Assam, Kerala, West Bengal, Punjab, Gujarat, Maharashtra and Tamil Nadu.

Co-operative Banks: As we have mentioned earlier, prior to nationalisation of commercial banks, co-operatives were the only source of institutional credit for agriculture in India. However, the expansion of branches of co-operative banks in rural areas continued even after the nationalisation of commercial banks. This is evident from the data presented in table 1 as regards rural population served per branch of co-operative bank in an all-India level and that in the major states. While at the all-India level each co-operative bank, on an average, served 100,340 people in rural areas in 1972-73, it reduced to 57,010 in 1995-96, and increased thereafter to 61,940 in 2003-04. Among the 15 major states, the spread of branches of co-operative banks seems to be quite impressive in the states of Maharashtra, Punjab, Gujarat, Haryana, Kerala, Tamil Nadu, Madhya Pradesh and Karnataka, while this has been low in Assam, Bihar, West Bengal, Rajasthan, Andhra Pradesh, Orissa and Uttar Pradesh.

All Banks Combined: Table 1 also provides data on the average rural population served by all institutional credit agencies together (i.e. commercial banks, regional rural banks and co-operative banks). It clearly emerges that in terms of rural population served per institutional credit agency in 2003-04, Punjab ranks first among the 15 major states, which is followed (in descending order of rural population served per bank branch) by Maharashtra, Karnataka, Gujarat, Orissa, Haryana, Madhya Pradesh, Rajasthan, Andhra Pradesh, Uttar Pradesh, Tamil Nadu, West Bengal, Bihar, Kerala and Assam. There is clear evidence of discrimination by institutional credit agencies (all considered together) as regards the establishment of rural branches in the states of India. While the states of Punjab, Maharashtra, Karnataka, Gujarat, Madhya Pradesh and Haryana seem to receive better attention from the point of view of the establishment of rural bank branches, the states that continue to suffer are Assam, West Bengal, Bihar, Tamil Nadu and Uttar Pradesh. The statistically significant value of Kendall's coefficient of concordance also confirms this finding. The fact that rural population served per bank branch had been declining rather consistently till 1990-91 in all-India as well as in all major states, but increasing thereafter, indicates that institutional credit agencies in the country have not ventured much to extend their operations in rural areas, specifically after the adoption of financial liberalisation policies in the 1990s.

Rural Credit-Deposit Ratio

The credit-deposit ratio is one of the indicators to assess the strength of banking development. Table 2 shows the changes in credit-deposit ratios in rural areas in the major states as well as for all-India from 1972-73 to 2003-04.

Commercial Banks: As regards commercial banks, the rural credit-deposit ratio increased steadily at the all-India level till 1985-86. This is probably due to the commercial banks' policy of extending credit facilities to the rural sector after nationalisation. However, since 1990-91, the rural credit-deposit ratio of commercial banks started declining continuously at the all-India level and also for most of the states. In 1972-73, the rural credit-deposit ratio of commercial banks at the all-India level was 48.74, which increased steadily to 63.76 in 1985-86. But after 1990-91, it declined monotonically with time and it stood at just 43.58 in 2003-04. The declining trend of the rural credit-deposit ratio of commercial banks after 1991 is probably the result of financial sector reforms, which encouraged commercial banks to view rural areas as centres to mobilise deposits rather than making loan advances.

Table 2 further shows that the rural credit-deposit ratio of commercial banks varied significantly across states. While that of West Bengal and Uttar Pradesh remained below the all-India level all through our study period, for Andhra Pradesh, Karnataka, Kerala, Maharashtra and Tamil Nadu it remained at a higher level. Hence, there is clear evidence that the states with a high rural credit-deposit ratio in 1972-73 continued to enjoy the same even in 2003-04. The statistically significant value of Kendall's coefficient of concordance also revealed that the ranking pattern of states in terms of the credit-deposit ratio remained unaltered over the years.

Regional Rural Banks: As regards regional rural banks, table 2 shows that the rural credit-deposit ratio at the all-India level declined continuously all through the period, 1980-81 to 2003-04. Among the 15 major states of India, in 2003-04, the states with a relatively high rural credit-deposit ratio were Kerala, Karnataka, Tamil Nadu, Andhra Pradesh, Orissa, Haryana, Maharashtra, and Punjab. On the other hand, Bihar, Uttar Pradesh, Assam, Madhya Pradesh, West Bengal, Gujarat and Rajasthan fell at the other end of the spectrum. Such discrimination in the rural credit-deposit ratio prevails all through the study period, which is again evident from the statistically significant value of the Kendall's coefficient of concordance.

Co-operative Banks: The credit-deposit ratio of co-operatives at the all-India level was 162.22 in 1972-73, which declined continuously over time. In 2003-04, the same stood at only 84.67. In 2003-04, it stood at an impressive level for the states of Andhra Pradesh, Haryana, Punjab, Orissa, Rajasthan, Karnataka, Tamil Nadu and Madhya Pradesh. However, it was low for West Bengal, Assam, Kerala, Bihar, Maharashtra, Uttar Pradesh and Gujarat.

Table 2: Credit-Deposit Ratios in Rural Areas in Major States and All-India figures from 1972-73 to 2003-04

State	1972-73	1980-81	1985-86	1990-91	1995-96	2003-04
1	2	3	4	5	6	7
Commercial Banks						
Andhra Pradesh	147.19 (1)	110.43 (1)	110.35 (2)	95.07 (2)	86.28 (1)	87.06 (1)
Assam	25.44 (11)	37.60 (13)	61.64 (10)	65.05 (10)	57.78 (6)	35.77 (11)
Bihar	78.74 (4)	52.92 (10)	49.94 (13)	47.58 (12)	37.03 (13)	24.22 (15)
Gujarat	25.15 (12)	47.69 (11)	52.29 (12)	59.93 (11)	43.79 (11)	31.85 (13)
Haryana	52.22 (7)	79.74 (5)	78.53 (7)	67.17 (7)	43.58 (12)	53.34 (7)
Karnataka	93.77 (3)	75.36 (6)	95.62 (3)	87.95 (3)	71.64 (3)	73.79 (3)
Kerala	58.91 (6)	63.15 (9)	67.57 (9)	65.16 (9)	54.31 (7)	56.19 (5)
Madhya Pradesh	40.79 (9)	65.12 (8)	80.09 (6)	68.80 (6)	50.11 (8)	46.21 (9)
Maharashtra	69.38 (5)	67.05 (7)	74.83 (8)	74.72 (5)	63.38 (4)	76.34 (2)
Orissa	19.26 (13)	94.63 (2)	118.56 (1)	82.47 (4)	59.97 (5)	51.31 (8)
Punjab	17.91 (14)	35.38 (14)	33.73 (15)	44.00 (15)	44.42 (10)	46.04 (10)
Rajasthan	43.47 (8)	81.14 (4)	85.33 (5)	65.98 (8)	48.48 (9)	54.68 (6)
Tamil Nadu	99.71 (2)	90.66 (3)	90.96 (4)	101.53 (1)	84.38 (2)	60.38 (4)
Uttar Pradesh	37.02 (10)	47.45 (12)	54.72 (11)	46.81 (13)	32.44 (15)	32.30 (12)
West Bengal	16.56 (15)	30.36 (15)	40.39 (14)	44.11 (14)	36.72 (14)	28.56 (14)
All India	48.74	57.98	63.76	59.98	47.32	43.58
Kendall's Coefficient of Concordance: 311.94 [§]						
Regional Rural Banks						
Andhra Pradesh	-	187.51 (3)	170.56 (5)	114.19 (6)	85.39 (4)	71.90 (4)
Assam	-	64.10 (12)	76.71 (14)	76.14 (9)	53.04 (8)	37.88 (13)
Bihar	-	74.07 (11)	78.32 (13)	57.32 (13)	3.88 (15)	27.27 (15)
Gujarat	-	44.52 (14)	92.02 (10)	74.52 (10)	57.24 (7)	44.60 (10)
Haryana	-	113.81 (7)	82.33 (11)	84.06 (7)	44.39 (12)	56.04 (6)
Karnataka	-	180.31 (4)	174.94 (3)	121.62 (3)	92.61 (2)	84.01 (2)
Kerala	-	212.99 (2)	181.80 (2)	184.63 (1)	132.02 (1)	96.24 (1)
Madhya Pradesh	-	102.34 (9)	109.88 (9)	77.04 (8)	47.09 (9)	38.76 (12)
Maharashtra	-	111.40 (8)	115.06 (8)	117.13 (5)	61.13 (6)	47.67 (7)
Orissa	-	162.42 (5)	196.85 (1)	119.39 (4)	63.27 (5)	59.31 (5)
Punjab	-	-	162.42 (6)	65.03 (11)	45.65 (11)	46.94 (8)
Rajasthan	-	150.75 (6)	120.98 (7)	54.72 (15)	41.27 (14)	45.20 (9)
Tamil Nadu	-	234.58 (1)	172.34 (4)	126.80 (2)	86.62 (3)	83.88 (3)
Uttar Pradesh	-	53.63 (13)	67.25 (15)	56.41 (14)	41.39 (13)	35.89 (14)
West Bengal	-	93.68 (10)	80.14 (12)	59.57 (12)	47.00 (10)	39.82 (11)
All India	-	113.12	105.40	77.34	53.59	46.54

Kendall's Coefficient of Concordance: 225.44[§]

(Contd.....)

Co-operative Banks						
Andhra Pradesh	223.39 (5)	231.37 (2)	224.15 (2)	393.77 (1)	384.16 (1)	233.98 (1)
Assam	556.61 (1)	129.11 (10)	102.51 (11)	80.71 (13)	79.03 (13)	-
Bihar	320.66 (2)	175.66 (5)	117.03 (9)	119.96 (5)	98.91 (7)	66.58 (11)
Gujarat	134.15 (13)	100.39 (14)	89.34 (14)	78.89 (14)	72.35 (15)	71.43 (9)
Haryana	168.51 (12)	213.50 (4)	207.01 (3)	178.99 (3)	202.04 (2)	166.62 (2)
Karnataka	188.24 (8)	128.43 (11)	128.34 (7)	114.30 (6)	104.02 (5)	104.70 (7)
Kerala	196.49 (7)	114.73 (12)	101.71 (12)	101.10 (8)	101.81 (6)	64.92 (12)
Madhya Pradesh	299.05 (3)	161.12 (6)	138.01 (5)	100.65 (9)	95.68 (8)	81.96 (8)
Maharashtra	121.74 (14)	84.44 (15)	78.76 (15)	95.63 (10)	85.95 (10)	69.06 (10)
Orissa	212.05 (6)	244.12 (1)	311.00 (1)	200.23 (2)	124.31 (4)	112.42 (4)
Punjab	113.78 (15)	113.91 (13)	111.79 (10)	78.86 (15)	82.50 (11)	112.44 (3)
Rajasthan	235.57 (4)	217.09 (3)	201.62 (4)	105.32 (7)	93.84 (9)	111.24 (5)
Tamil Nadu	184.72 (9)	129.70 (9)	134.98 (6)	146.50 (4)	136.43 (3)	107.42 (6)
Uttar Pradesh	172.19 (11)	135.74 (8)	120.88 (8)	86.71 (12)	80.83 (12)	59.19 (13)
West Bengal	179.09 (10)	138.63 (7)	95.48 (13)	88.41 (11)	75.12 (14)	52.45 (14)
All India	162.22	125.19	114.03	110.02	100.54	84.67

Kendall's Coefficient of Concordance: 277.96[§]

All Banks Combined (Commercial Banks + RRBs + Co-operatives)						
Andhra Pradesh	183.14 (2)	140.19 (2)	132.79 (2)	134.82 (1)	122.06 (1)	103.80 (1)
Assam	120.81 (7)	40.00 (15)	64.27 (12)	67.30 (11)	56.83 (9)	36.43 (13)
Bihar	141.45 (4)	66.48 (12)	59.27 (13)	53.42 (13)	14.04 (15)	26.86 (15)
Gujarat	87.86 (13)	72.67 (10)	70.65 (10)	68.45 (10)	55.81 (10)	46.03 (11)
Haryana	113.73 (8)	115.58 (4)	105.38 (6)	89.24 (6)	71.95 (6)	82.36 (2)
Karnataka	131.92 (6)	92.88 (7)	109.59 (5)	96.88 (4)	81.37 (4)	82.23 (3)
Kerala	107.84 (11)	84.48 (8)	90.05 (8)	90.86 (5)	86.20 (3)	66.59 (6)
Madhya Pradesh	209.98 (1)	101.30 (6)	102.16 (7)	78.39 (8)	61.66 (8)	52.87 (10)
Maharashtra	112.12 (10)	78.35 (9)	77.91 (9)	88.81 (7)	78.27 (5)	70.03 (5)
Orissa	139.71 (5)	145.13 (1)	163.72 (1)	100.53 (3)	68.94 (7)	62.11 (7)
Punjab	57.47 (15)	51.10 (14)	47.40 (15)	50.63 (14)	52.15 (12)	59.45 (9)
Rajasthan	113.69 (9)	123.86 (3)	115.42 (3)	70.86 (9)	54.03 (11)	60.08 (8)
Tamil Nadu	153.96 (3)	110.47 (5)	110.00 (4)	118.94 (2)	104.77 (2)	79.15 (4)
Uttar Pradesh	97.38 (12)	67.07 (11)	67.72 (11)	53.98 (12)	41.28 (14)	36.57 (12)
West Bengal	61.87 (14)	51.82 (13)	50.55 (14)	50.25 (15)	41.73 (13)	33.88 (14)
All India	106.53	80.49	80.39	73.43	61.04	53.85

Kendall's Coefficient of Concordance: 315.60[§]

Notes: @ Figures in the brackets indicate ranks; (*) \$ indicates significance at 1% level; # There has been no district central cooperative bank in Assam since 2003.

Source: (1) Reserve Bank of India, Banking Statistics, Basic Statistical Returns (various years); (2) RBI, Statistical Tables Relating to Banks in India (various years).

All Banks Combined: Table 2 also provides data on changes in the rural credit-deposit ratio for all institutional agencies taken together. It emerges from the table that in terms of the rural credit-deposit ratio of all institutional agencies in 2003-04, Andhra Pradesh ranks first among the 15 major states of India, followed (in descending order of rural credit-deposit ratio) by Haryana, Karnataka, Tamil Nadu, Maharashtra, Kerala, Orissa, Rajasthan, Punjab, Madhya Pradesh, Gujarat, Uttar Pradesh, Assam, West Bengal and Bihar. West Bengal ranked 13th, 14th and 15th (among the 15 major states) all through our study period. The two other states with low rural credit-deposit ratios all through the periods are Uttar Pradesh and Gujarat. A low rating implies that there exists considerable scope for financial institutions to increase advances in the rural economy of these states.

Priority Sector Lending by Commercial Banks

Among various credit programmes followed in the post-bank nationalisation period, priority sector lending has been the most important one. Table 3 presents data on the percentage of priority sector credit to total bank credit by commercial banks at the all-India and state level in the country from 1970-71 to 2003-04. The table shows that the percentage of total commercial banks' credit flow to the priority sectors of the economy was 19.91 per cent in 1970-71 at the all-India level. The same increased to 35.20 per cent in 1985-86. However, in 1995-96, commercial banks' credit for priority sectors stood at only 25.59 per cent at the all-India level, though it showed some improvement in 2003-04, when the percentage stood at 35.37 per cent. This declining trend (from 1985-86 to 1995-96) in percentage terms of total priority sector lending to total bank credit seems true for the 15 major states as well. It is also found that commercial banks pursued a discriminatory policy with regard to lending to the priority sectors of the major states. Thus, states that have been favoured in terms of advancement of priority sector credit continued to enjoy such treatment all through the period since bank nationalisation, while almost the same set of states got neglected in this regard as well. In other words, the ranking of states in terms of the flow of priority sector credit has not gone any significant change over the years. The statistically significant value of the Kendall's coefficient of concordance justifies this observation. In 2003-04, the percentage of priority sector credit to total bank credit had been the highest in Punjab, followed by Haryana, Assam, Uttar Pradesh, Rajasthan, Orissa, Madhya Pradesh, Kerala, Andhra Pradesh, Karnataka, Bihar, Tamil Nadu, Gujarat, West Bengal and Maharashtra.

Table 3: Percentage of Total Priority Sector Advances to Total Bank Credit by Commercial Banks in Major States and All-India from 1970-71 to 2003-04

State	1972-73	1980-81	1985-86	1990-91	1995-96	2003-04
1	2	3	4	5	6	7
Andhra Pradesh	40.12 (2)	48.15 (5)	49.36 (6)	37.84 (7)	32.32 (9)	45.84 (9)
Assam	26.31 (11)	28.56 (13)	40.27 (11)	33.19 (11)	32.00 (10)	56.90 (3)
Bihar	20.83 (12)	48.10 (6)	50.43 (3)	41.88 (4)	37.38 (5)	43.83 (11)
Gujarat	29.33 (8)	38.30 (9)	43.97 (9)	35.38 (9)	29.93 (12)	36.78 (13)
Haryana	47.24 (1)	65.69 (1)	68.69 (1)	54.24 (1)	50.92 (1)	57.27 (2)
Karnataka	30.53 (5)	36.68 (10)	40.13 (12)	34.99 (10)	27.90 (13)	45.55 (10)
Kerala	29.96 (7)	33.61 (11)	38.48 (13)	32.41 (13)	33.58 (8)	46.58 (8)
Madhya Pradesh	27.53 (9)	47.19 (7)	47.24 (7)	41.07 (6)	33.90 (7)	49.75 (7)
Maharashtra	14.23 (14)	19.66 (14)	18.10 (15)	18.88 (15)	14.58 (15)	24.38 (15)
Orissa	18.27 (13)	48.52 (4)	45.86 (8)	37.13 (8)	34.04 (6)	51.88 (6)
Punjab	37.59 (3)	65.55 (2)	62.43 (2)	52.28 (2)	45.97 (2)	59.14 (1)
Rajasthan	31.15 (4)	44.52 (8)	49.70 (5)	43.14 (3)	39.74 (4)	52.81 (5)
Tamil Nadu	26.41 (10)	31.82 (12)	40.44 (10)	32.81 (12)	31.68 (11)	37.23 (12)
Uttar Pradesh	30.30 (6)	50.28 (3)	50.26 (4)	41.72 (5)	40.01 (3)	55.18 (4)
West Bengal	7.09 (15)	18.14 (15)	23.67 (14)	21.21 (14)	19.50 (14)	31.84 (14)
All India	19.91	30.76	35.20	30.60	25.59	35.37

Kendall's Coefficient of Concordance: 354.50⁵

Notes: @ Figures in the brackets indicate ranks; (*) \$ indicates significance at 1% level.

Source: Reserve Bank of India, Statistical Tables Relating to Banks in India (various years).

Institutional Credit to Agricultural Sector

Percentage of Agricultural Credit to Total Bank Credit

Among the priority sectors, agriculture occupies the most important position. Table 4 presents data on the percentage of total credit to agriculture to total bank credit by different institutional agencies at the all-India and state level from 1970-71 to 2003-04 (as detailed data relating to co-operatives are not available after 1999, our analyses regarding co-operatives and all banks combined have been restricted up to 1999).

Commercial Banks: As regards commercial banks, it is found that the decade of 1990s experienced a sizeable reduction in the percentage of credit flow to the agricultural sector at the all-India level as well as that of individual states. The percentage of total credit to agriculture to total bank credit by commercial banks was 8.48 per cent in 1970-71 at the all-India level (Table 4). The same had increased steadily to 15.34 per cent in 1985-86. However, the percentage of credit to the

agricultural sector to total bank credit by commercial banks started declining thereafter. In 2003-04, the same stood at only 9.54 per cent at the all-India level.

Furthermore, commercial banks continued with the same discriminatory attitude while lending to the agricultural sector in the major states of India. As a consequence, the states that have been favoured by commercial banks in terms of advancement of credit for the agricultural sector continued to enjoy such treatment all through the period under study. In 2003-04, the highest percentage of agricultural credit to total bank credit was reported in Haryana, followed by Rajasthan, Punjab, Madhya Pradesh, Uttar Pradesh, Andhra Pradesh, Karnataka, Bihar, Kerala, Gujarat, Assam, Tamil Nadu, Orissa, West Bengal and Maharashtra. In West Bengal and Maharashtra, the percentage of agricultural credit to total commercial banks' credit remained much lower than the all-India level all through the period, which implies that the agrarian economy of West Bengal and Maharashtra have been severely neglected by commercial banks in terms of disbursement of credit.

Regional Rural Banks: As regards credit advanced to the agricultural sector by regional rural banks, table 4 shows that the percentage of agricultural credit to total bank credit declined steadily at the all-India level over the period 1980-81 to 2003-04. In 2003-04, the states that enjoyed relatively higher percentage of agricultural credit from regional rural banks are Punjab, Haryana, Gujarat, Rajasthan, Uttar Pradesh, Karnataka and Kerala. On the other hand, states getting a lower percentage of such credit from regional rural banks were Assam, West Bengal, Orissa, Bihar, Tamil Nadu, Maharashtra, Andhra Pradesh and Madhya Pradesh.

Co-operative Banks: Table 4 further shows that the percentage of credit supplied to the agricultural sector by co-operative banks also declined steadily over the years at the all-India level. The percentage of credit to agriculture to total credit disbursed by co-operative banks was 86.02 per cent at the all-India level in 1970-71. The same stood at only 35.79 per cent in 1998-99. Among the 15 major states in 1998-99, Haryana ranked first in terms of availability of credit for the agricultural sector by co-operatives, followed (in descending order of percentage of agricultural credit to total bank credit) by Andhra Pradesh, Rajasthan, Madhya Pradesh, Orissa, Karnataka, Assam, Bihar, Punjab, Uttar Pradesh, Maharashtra, Gujarat, Tamil Nadu, Kerala and West Bengal.

All Banks Combined: Considering all financial institutions together, at the all-India level, the percentage of agricultural credit to total bank credit increased from 19.68 per cent in 1970-71 to 21.30 per cent in 1985-86. However, the same started declining thereafter and in 1998-99, the percentage stood at only 13.50. This declining trend after 1985-86 seems true for the 15 major states as well. This indicates that all the institutional credit agencies were getting increasingly reluctant to supply credit to the agricultural sector of the economy. Table 4 further shows that there is a clear case of discrimination by institutional credit agencies (all put together) as regards

Table 4: Percentage of Total Agricultural Credit to Total Bank Credit in Major States and All-India figures from 1970-71 to 2003-04

State	1972-73	1980-81	1985-86	1990-91	1998-99	2003-04
1	2	3	4	5	6	7
Commercial Banks						
Andhra Pradesh	23.51 (1)	31.07 (2)	29.07 (3)	20.83 (4)	16.80 (3)	16.26 (6)
Assam	2.92 (14)	10.04 (13)	11.52 (13)	8.80 (13)	12.05 (8)	9.84 (11)
Bihar	7.20 (11)	25.62 (6)	23.18 (5)	18.01 (6)	11.98 (9)	11.93 (8)
Gujarat	11.54 (7)	15.43 (11)	16.57 (11)	12.33 (12)	10.20 (13)	11.56 (10)
Haryana	20.42 (2)	30.91 (3)	33.01 (1)	26.49 (1)	17.60 (2)	23.51 (1)
Karnataka	15.90 (4)	18.83 (9)	19.52 (9)	15.97 (8)	14.11 (6)	13.68 (7)
Kerala	10.60 (9)	14.88 (12)	16.36 (12)	14.23 (10)	11.18 (10)	11.58 (9)
Madhya Pradesh	10.98 (8)	26.06 (4)	22.02 (7)	20.66 (5)	16.29 (5)	19.48 (4)
Maharashtra	5.28 (13)	7.16 (14)	6.09 (15)	5.90 (14)	4.89 (15)	3.71 (15)
Orissa	5.63 (12)	22.91 (7)	19.12 (10)	13.79 (11)	11.09 (12)	8.06 (13)
Punjab	9.65 (10)	33.63 (1)	32.81 (2)	26.02 (2)	20.73 (1)	19.89 (3)
Rajasthan	15.13 (5)	22.66 (8)	24.36 (4)	22.71 (3)	16.44 (4)	21.00 (2)
Tamil Nadu	13.38 (6)	15.67 (10)	20.13 (8)	15.55 (9)	11.15 (11)	9.72 (12)
Uttar Pradesh	16.05 (3)	25.72 (5)	22.69 (6)	16.86 (7)	12.13 (7)	18.72 (5)
West Bengal	1.23 (15)	5.53 (15)	7.32 (14)	5.58 (15)	7.53 (14)	7.64 (14)
All India	8.48	14.13	15.34	12.44	9.33	9.54
Kendall's Coefficient of Concordance: 360.76 ⁵						
Regional Rural Banks						
Andhra Pradesh	-	71.46 (5)	72.39 (2)	70.21 (2)	58.44 (5)	49.65 (9)
Assam	-	68.28 (9)	45.46 (14)	41.75 (13)	27.54 (14)	11.98 (15)
Bihar	-	64.52 (10)	49.85 (12)	35.69 (14)	33.28 (13)	35.05 (12)
Gujarat	-	56.75 (12)	69.95 (4)	75.21 (1)	64.75 (2)	62.46 (3)
Haryana	-	74.16 (2)	61.38 (6)	42.12 (12)	59.31 (4)	63.18 (2)
Karnataka	-	72.96 (4)	73.14 (1)	66.93 (3)	59.73 (3)	56.29 (6)
Kerala	-	53.45 (14)	49.29 (13)	46.72 (8)	48.76 (10)	53.03 (7)
Madhya Pradesh	-	62.91 (11)	57.08 (8)	48.57 (7)	55.24 (6)	50.85 (8)
Maharashtra	-	77.21 (1)	69.08 (5)	65.86 (4)	51.35 (7)	46.06 (10)
Orissa	-	69.06 (7)	57.16 (7)	44.96 (11)	37.54 (12)	26.21 (13)
Punjab	-	-	35.70 (15)	60.46 (5)	65.01 (1)	73.61 (1)
Rajasthan	-	73.62 (3)	71.36 (3)	50.46 (6)	51.20 (9)	58.53 (4)
Tamil Nadu	-	54.58 (13)	54.65 (9)	46.31 (9)	51.23 (8)	38.94 (11)
Uttar Pradesh	-	68.32 (8)	50.49 (11)	45.09 (10)	48.49 (11)	57.99 (5)
West Bengal	-	71.21 (6)	52.70 (10)	34.55 (15)	21.64 (15)	12.53 (14)
All India	-	67.14	58.75	50.32	49.06	47.03

Kendall's Coefficient of Concordance: 190.24⁵

(Contd.....)

Co-operative Banks						
Andhra Pradesh	85.34 (11)	82.99 (10)	78.74 (7)	77.59 (5)	93.07 (2)	NA
Assam	95.37 (1)	32.10 (15)	8.17 (15)	2.57 (15)	42.59 (7)	NA
Bihar	93.00 (7)	86.02 (7)	74.26 (9)	79.38 (4)	42.14 (8)	NA
Gujarat	77.96 (14)	70.14 (12)	58.16 (12)	61.98 (9)	26.46 (12)	NA
Haryana	90.59 (8)	85.16 (9)	86.38 (2)	81.95 (3)	97.16 (1)	NA
Karnataka	78.75 (13)	85.21 (8)	77.65 (8)	61.69 (10)	43.52 (6)	NA
Kerala	84.93 (12)	46.18 (14)	49.56 (13)	43.84 (13)	11.64 (14)	NA
Madhya Pradesh	93.90 (2)	91.03 (2)	79.11 (6)	71.54 (8)	55.29 (4)	NA
Maharashtra	86.83 (10)	79.36 (11)	65.56 (11)	55.61 (11)	32.26 (11)	NA
Orissa	93.03 (6)	86.45 (5)	84.28 (3)	72.80 (6)	48.61 (5)	NA
Punjab	87.70 (9)	88.01 (3)	82.56 (4)	95.55 (1)	39.89 (9)	NA
Rajasthan	93.72 (4)	96.86 (1)	91.94 (1)	88.62 (2)	55.76 (3)	NA
Tamil Nadu	74.03 (15)	52.20 (13)	47.22 (14)	42.84 (14)	23.58 (13)	NA
Uttar Pradesh	93.74 (3)	86.28 (6)	80.19 (5)	72.63 (7)	35.50 (10)	NA
West Bengal	93.14 (5)	87.33 (4)	68.35 (10)	54.32 (12)	8.73 (15)	NA
All India	86.02	78.13	69.27	62.83	35.79	NA

Kendall's Coefficient of Concordance: 21.71^{\$\$\$}

All Banks Combined (Commercial Banks + RRBs + Co-operatives)						
Andhra Pradesh	33.39 (7)	38.46 (6)	35.47 (4)	29.77 (3)	24.74 (3)	-
Assam	27.74 (10)	10.95 (14)	13.15 (13)	11.18 (13)	13.58 (11)	-
Bihar	25.16 (11)	31.78 (8)	28.72 (8)	23.22 (7)	15.99 (9)	-
Gujarat	28.23 (9)	26.21 (9)	25.12 (10)	20.37 (10)	14.48 (10)	-
Haryana	40.36 (2)	42.04 (2)	42.76 (1)	35.57 (1)	33.87 (1)	-
Karnataka	29.05 (8)	26.15 (10)	26.10 (9)	20.79 (9)	19.03 (8)	-
Kerala	24.91 (12)	19.33 (12)	21.31 (12)	18.61 (11)	12.52 (13)	-
Madhya Pradesh	47.99 (1)	40.97 (4)	33.94 (5)	28.30 (5)	25.16 (2)	-
Maharashtra	14.54 (14)	12.69 (13)	10.47 (14)	10.96 (14)	8.69 (14)	-
Orissa	38.69 (3)	43.25 (1)	33.53 (6)	21.86 (8)	19.73 (6)	-
Punjab	35.31 (5)	42.03 (3)	38.88 (2)	33.18 (2)	24.20 (4)	-
Rajasthan	37.01 (4)	38.52 (5)	37.16 (3)	29.62 (4)	23.12 (5)	-
Tamil Nadu	20.88 (13)	19.78 (11)	23.57 (11)	18.49 (12)	12.90 (12)	-
Uttar Pradesh	33.54 (6)	35.90 (7)	31.15 (7)	23.90 (6)	19.36 (7)	-
West Bengal	3.37 (15)	8.68 (15)	9.57 (15)	7.20 (15)	7.97 (15)	-
All India	19.68	20.99	21.30	17.76	13.50	-

Kendall's Coefficient of Concordance: 322.22^{\$}

Notes: @ Figures in the brackets indicate ranks; (*) \$ and \$\$\$ indicate significance at 1% & 10% levels respectively; # NA indicates data not available.

Sources: (1) Reserve Bank of India, Statistical Tables Relating to Banks in India (various years); (2) NABARD, Statistical Statements Relating to Co-operative Movement in India (various years).

disbursal of agricultural credit in the states. In 1998-99, Haryana, Madhya Pradesh, Rajasthan, Punjab, Uttar Pradesh, Andhra Pradesh, Karnataka and Orissa seemed to have received relatively better attention from the point of view of disbursement of credit to the agricultural sector by institutional credit agencies. The states that lagged behind in this regard were West Bengal, Maharashtra, Assam, Kerala, Tamil Nadu, Gujarat and Bihar. West Bengal was found to be the worst sufferer among the 15 major states in terms of the percentage of total agricultural credit to total bank credit (considering all institutional credit agencies together) throughout the study period. The statistically significant value of Kendall's coefficient of concordance implies that the same pattern of inter-state disparity continued over the years in the matter of advancement of credit to agriculture by institutional agencies.

Credit to Agriculture per Hectare of Gross Cropped Area

To assess the volume of credit flow to the agricultural sector by different institutional agencies properly, the amount of agricultural credit disbursed per hectare of gross cropped area has been examined at the all-India and state level. Table 5 provides the data on the amount of agricultural credit per hectare of gross cropped area at constant (1981-82) prices that was advanced by various institutional agencies from 1971-72 to 2003-04.

Commercial Banks: Table 5 shows that agricultural credit disbursed per hectare of gross cropped area at constant prices by commercial banks was Rs 67.96 only in 1971-72, which increased steadily to Rs 511.53 in 1990-91 at the all-India level. In 1998-99, it increased marginally to Rs 534.11, though it showed significant improvement in 2003-04 when it was Rs 1,020.66.

However, states differed significantly in terms of per hectare availability of agricultural credit from commercial banks. In 1971-72, the lowest agricultural credit per hectare of gross cropped area was provided to Orissa (Rs 5.84), while the highest was given to Tamil Nadu (Rs 204.85). In 2003-04, Tamil Nadu (the highest credit-receiving state) received Rs 3,180.24 as agricultural credit per hectare from commercial banks, while the same for Assam (the lowest credit-receiving state) was only Rs 251.41. Further, Kendall's coefficient of concordance implies that the states, which have been receiving higher amounts of agricultural credit per hectare from commercial banks continued to do so throughout the period under study.

Regional Rural Banks: As regards regional rural banks, table 5 shows that the amount of agricultural credit per hectare increased steadily during 1980-81 to 2003-04 at the all-India level. In terms of the amount of agricultural credit received per hectare from regional rural banks, among the 15 major states, Kerala ranked first in 2003-04, followed (in descending order of amount of agricultural credit per hectare) by Karnataka, Andhra Pradesh, Uttar Pradesh, Haryana, Bihar, Orissa, Rajasthan, Gujarat, Tamil Nadu, Madhya Pradesh, Punjab, West Bengal, Assam and Maharashtra.

Table 5: Total Agricultural Credit per Hectare of Gross Cropped Area at Constant (1981-82) Prices in Major States and All-India figures from 1971-72 to 2003-04

State	1972-73	1980-81	1985-86	1990-91	1998-99	2003-04
1	2	3	4	5	6	7
Commercial Banks						
Andhra Pradesh	108.37(4)	437.12(4)	830.80 (3)	890.75(3)	912.31(4)	1622.66(3)
Assam	7.83(14)	63.87(15)	142.97(15)	191.39(15)	194.69(15)	251.41(15)
Bihar	20.86(11)	183.87(11)	317.55(11)	411.52(9)	265.99(10)	435.85(13)
Gujarat	100.59(6)	241.75(7)	406.6 (7)	468.69(7)	491.20(9)	966.09(8)
Haryana	59.88(7)	317.45(5)	520.96(6)	641.87(6)	504.61(8)	1315.59(6)
Karnataka	105.92(5)	315.84(6)	605.72(5)	687.80(5)	797.47(5)	1549.58(4)
Kerala	153.03(2)	655.16(2)	1113.05(2)	1353.36(2)	1491.14(2)	2791.72(2)
Madhya Pradesh	15.91(13)	97.52(13)	165.13(14)	270.67(12)	231.85(12)	442.86(12)
Maharashtra	121.78(3)	222.75(8)	345.38(9)	430.84(8)	640.36(6)	994.76(7)
Orissa	5.84(15)	103.74(12)	200.10(12)	202.83(14)	211.06(13)	282.43(14)
Punjab	48.92(9)	488.14(3)	774.15(4)	879.05(4)	954.92(3)	1444.17(5)
Rajasthan	16.38(12)	96.20(14)	188.72(13)	224.40(13)	204.76(14)	548.27(11)
Tamil Nadu	204.85(1)	660.98(1)	1149.60(1)	1716.99(1)	2003.07(1)	3180.24(1)
Uttar Pradesh	50.49(8)	200.63(10)	326.04(10)	408.50(10)	259.33(11)	702.17(10)
West Bengal	42.86(10)	214.80(9)	380.71(8)	397.35(11)	546.68(7)	856.44(9)
All India	67.96	242.64	423.63	511.53	534.11	1020.66
Kendall's Coefficient of Concordance: 396.04 ^s						
Regional Rural Banks						
Andhra Pradesh	-	32.55(2)	94.56(2)	127.66(2)	169.57(3)	303.79(3)
Assam	-	5.36(11)	24.27(10)	52.69(6)	41.59(13)	39.89(14)
Bihar	-	15.70(5)	62.91(4)	72.87(5)	76.52(7)	148.57(6)
Gujarat	-	0.44(14)	9.40(13)	25.31(11)	51.08(9)	95.47(9)
Haryana	-	12.12 (6)	30.02 (8)	51.74 (8)	105.18(5)	202.07 (5)
Karnataka	-	19.93(4)	82.12(3)	112.92(3)	186.04(2)	315.53(2)
Kerala	-	54.44(1)	117.22(1)	166.58(1)	287.08(1)	601.22(1)
Madhya Pradesh	-	4.04(12)	20.88(11)	33.17(10)	53.96(8)	88.31(11)
Maharashtra	-	2.16(13)	9.19(14)	22.16(14)	28.67(15)	36.56(15)
Orissa	-	24.97(3)	55.03(5)	52.00(7)	98.69(6)	131.10(7)
Punjab	-	-	4.87(15)	22.98(13)	37.89(14)	85.22(12)
Rajasthan	-	9.96(9)	29.82(9)	21.96(15)	45.44(11)	112.29(8)
Tamil Nadu	-	11.94(7)	20.57(12)	24.57(12)	47.46(10)	92.88(10)
Uttar Pradesh	-	9.85(10)	38.79(6)	75.48(4)	115.91(4)	243.64(4)
West Bengal	-	11.02(8)	38.21(7)	45.29(9)	43.95(12)	46.09(13)
All India	-	11.56	38.04	55.69	82.84	148.68

Kendall's Coefficient of Concordance: 240.57^s

(Contd.....)

Co-operative Banks						
Andhra Pradesh	81.94 (11)	151.34 (7)	206.93 (7)	412.13 (4)	454.63 (4)	NA
Assam	84.72 (10)	1.19 (15)	0.79 (15)	0.37 (15)	5.31 (15)	NA
Bihar	56.30 (14)	51.51 (14)	55.87 (14)	102.48 (11)	79.45 (13)	NA
Gujarat	231.52 (3)	269.07 (1)	349.99 (3)	403.27 (5)	367.68 (6)	NA
Haryana	99.54 (8)	206.63 (5)	269.40 (6)	343.40 (7)	647.37 (2)	NA
Karnataka	131.44 (6)	147.71 (8)	186.21 (8)	144.26 (9)	269.58 (8)	NA
Kerala	266.53 (1)	249.16 (3)	412.28 (1)	460.13 (2)	446.49 (5)	NA
Madhya Pradesh	104.10 (7)	94.63 (12)	121.89 (11)	122.48 (10)	177.76 (11)	NA
Maharashtra	239.96 (2)	200.25 (6)	278.01 (4)	413.84 (3)	648.30 (1)	NA
Orissa	64.17 (13)	121.36 (9)	143.81 (10)	87.90 (12)	197.70 (9)	NA
Punjab	196.42 (5)	233.65 (4)	269.94 (5)	345.41 (6)	346.90 (7)	NA
Rajasthan	36.15 (15)	92.30 (13)	116.19 (12)	78.94 (13)	99.45 (12)	NA
Tamil Nadu	197.35 (4)	262.17 (2)	362.40 (2)	536.11 (1)	613.66 (3)	NA
Uttar Pradesh	89.57 (9)	121.32 (10)	150.86 (9)	154.53 (8)	186.56 (10)	NA
West Bengal	68.84 (12)	118.48 (11)	86.14 (13)	76.16 (14)	46.05 (14)	NA
All India	119.94	142.74	181.32	222.05	287.41	NA

Kendall's Coefficient of Concordance: 290.08^s

All Banks Combined (Commercial Banks + RRBs + Co-operatives)						
Andhra Pradesh	190.31 (7)	621.02 (4)	1132.29 (3)	1430.53 (3)	1536.51 (3)	-
Assam	92.55 (12)	70.42 (15)	168.03 (15)	244.45 (15)	241.59 (15)	-
Bihar	77.15 (13)	251.08 (11)	436.33 (11)	586.87 (10)	421.96 (13)	-
Gujarat	332.12 (4)	511.26 (6)	766.00 (7)	897.27 (7)	909.96 (8)	-
Haryana	159.42 (8)	536.19 (5)	820.38 (6)	1037.01 (5)	1257.15 (6)	-
Karnataka	237.37 (6)	483.49 (7)	874.06 (5)	944.97 (6)	1253.09 (7)	-
Kerala	419.56 (1)	958.76 (1)	1642.56 (1)	1980.07 (2)	2224.71 (2)	-
Madhya Pradesh	120.00 (10)	196.20 (14)	307.90 (14)	426.31 (12)	463.56 (12)	-
Maharashtra	361.74 (3)	425.16 (8)	632.57 (8)	866.83 (8)	1317.33 (5)	-
Orissa	70.01 (14)	250.07 (12)	398.94 (12)	342.73 (13)	507.46 (11)	-
Punjab	245.34 (5)	721.79 (3)	1048.96 (4)	1247.44 (4)	1339.71 (4)	-
Rajasthan	52.53 (15)	198.46 (13)	334.72 (13)	325.29 (14)	349.65 (14)	-
Tamil Nadu	402.20 (2)	935.09 (2)	1532.57 (2)	2277.67 (1)	2664.20 (1)	-
Uttar Pradesh	140.06 (9)	331.80 (10)	515.69 (9)	638.52 (9)	561.80 (10)	-
West Bengal	111.70 (11)	344.30 (9)	505.06 (10)	518.81 (11)	636.69 (9)	-
All India	187.91	396.94	642.99	789.27	904.37	-

Kendall's Coefficient of Concordance: 318.30^s

Notes: @ Figures in the brackets indicate ranks; (*) \$ indicates significance at 1% level; # NA indicates data not available.

Source: (1) Reserve Bank of India, Statistical Tables Relating to Banks in India (various years); (2) NABARD, Statistical Statements Relating to Co-operative Movement in India (various years).

Co-operative Banks: Table 5 shows that, at the all-India level, agricultural credit available per hectare of gross cropped area from co-operatives was Rs 119.94 in 1971-72, which increased to Rs 287.41 in 1998-99. In 1998-99, the states that are found to have received relatively higher amounts of agricultural credit per hectare from co-operatives are Maharashtra, Haryana, Tamil Nadu, Andhra Pradesh, Kerala, Punjab, Gujarat and Karnataka. On the other hand, the amount of such credit was relatively low in Assam, West Bengal, Bihar, Rajasthan, Orissa, Madhya Pradesh and Uttar Pradesh.

All Banks Combined: For all institutional agencies taken together, the amount of agricultural credit per hectare at the all-India level increased steadily during our study period. This trend seems true for most of the states as well. The states where the amount of agricultural credit per hectare declined after 1990-91 are Assam, Bihar and Uttar Pradesh. Considering all institutional credit sources together, the value of Kendall's coefficient of concordance turns out statistically significant. This implies that the same pattern of discrimination towards distribution of agricultural credit (per hectare) continued during the period under study. This is also clear from the fact that the amount of agricultural credit per hectare by states like Assam, Rajasthan, Bihar, West Bengal, Orissa, Madhya Pradesh and Uttar Pradesh remained consistently low (as compared to the all-India figures) during our study period.

Summary and Conclusion

The present study reveals that financial reforms policies adopted recently have had a strong negative impact on rural institutional credit in India. The concept of social and development banking adopted after bank nationalisation for strengthening banking infrastructure as well as credit delivery in rural areas was gradually eroded with the introduction of reforms policies. The era of social and development banking witnessed an unprecedented expansion of the banking network in rural areas of India. This is evident from the sizeable reduction in the average population served per rural bank branch. As regards commercial banks, the average rural population served per bank branch in all-India was 83,760 in 1972-73, which declined significantly to 17,920 in 1990-91. This trend seems true for the 15 major states under study as well. The average population served per regional rural bank branch at the all-India level also declined from 1,45,760 to 42,840 during 1980-81 to 1990-91. While each co-operative bank branch, on an average, served 100,340 people in rural areas in 1972-73, the figure gradually decreased to 58,200 in 1990-91.

However, the above trend has reversed since 1991 in as much as the average population served per rural bank branch (of all institutional credit agencies) has started increasing. The continuously declining trend of the average population per bank branch at the all-India level and that in the majority of states till 1990-91, and the increasing trend thereafter, clearly indicates that institutional credit agencies

have been diverting their business from rural areas after the introduction of economic reforms policies in the '90s.

We used the credit-deposit ratio as another indicator for assessing the pattern of rural banking development. We found that, for all institutional credit agencies, the rural credit-deposit ratio displayed a continuously declining trend, particularly after 1991, both at the all-India and state levels. This further displays the reluctance of institutional credit agencies to extend credit supply in rural areas in the post-reforms era.

While examining the performance of institutional credit agencies in supplying credit to rural areas, we specifically looked into their performance in lending to the priority sectors of the economy and also to the agricultural sector. As regards priority sector lending, our study shows that the percentage of total commercial banks' credit flow to the priority sectors of the economy was 19.91 per cent in 1970-71 at the all-India level, which increased steadily to 35.20 per cent in 1985-86. However, in 1995-96, it stood at 25.59 per cent at the all-India level. This declining trend in the percentage of commercial banks' credit to the priority sectors after 1985-86 seems true for all the major states of India, which implies that the concept of priority sector lending has been diluted since the mid-1980s.

As regards the performances of various institutional agencies in supplying credit specifically to the agricultural sector, we found a drastic reduction in the percentage of credit flow to the agricultural sector by all the institutional credit agencies (commercial banks, regional rural banks and co-operatives) both at the all-India and state levels, particularly in the 1990s. At the all-India level, while 15.34 per cent of total commercial banks' credit was distributed to the agricultural sector in 1985-86, it was only 9.54 per cent in 2003-04. For regional rural banks, the percentage of total finance to agriculture to total bank credit declined steadily over the period 1980-81 to 2003-04 at the all-India level, from 67.14 per cent to 47.03 per cent. The percentage of credit supplied to the agricultural sector by co-operative banks was 86.02 per cent in 1970-71, which declined to 35.79 per cent in 1998-99. For all financial institutions taken together, the percentage share of agricultural credit in total bank credit declined from 19.68 per cent to 13.50 per cent at the all-India level during 1970-71 to 1998-99.

There is a clear case of discrimination by all the institutional credit agencies as regards the establishment of rural branches as well as credit delivery to the rural sector in the major states of India. Among the 15 major states, the spread of the rural banking network (i.e. commercial banks, co-operative banks and regional rural banks taken together) seems to be relatively better in the states of Punjab, Maharashtra, Karnataka, Gujarat, Orissa, Madhya Pradesh and Haryana. On the other hand, states that seem to have been neglected in this regard are Kerala, Assam, West Bengal, Bihar, Tamil Nadu and Uttar Pradesh.

As regards the rural credit-deposit ratio, there are inter-state variations for all institutional credit agencies. Among the 15 major states, those with a relatively high rural credit-deposit ratio for all banks taken together in 2003-04 (higher than the all-India figure of 53.85) are Andhra Pradesh, Haryana, Karnataka, Tamil Nadu, Maharashtra, Kerala, Orissa and Rajasthan. On the other hand, Punjab, Madhya Pradesh, Gujarat, Uttar Pradesh, Assam, West Bengal and Bihar had a low rural credit-deposit ratio.

It is found that commercial banks have been following the same discriminatory tactics while advancing credit to priority sectors in various states of India. By and large, states receiving more favour in this regard continued to do so, while the neglected ones remained at the bottom of the ladder throughout the period after bank nationalisation.

Overall, our analysis of state-level secondary data leads to the conclusion that the period following the nationalisation of commercial banks was one of expansion of rural banking, both in terms of development of the rural banking network as well as in terms of credit advances to the priority sectors of the economy, including agriculture. However, this trend got reversed since the introduction of economic reforms policies in 1991. On the basis of all available indicators of banking development (such as rural population per bank branch, rural credit-deposit ratio, credit to the priority sectors/ agriculture, etc.), there is clear deterioration of the performance of institutional credit agencies in rural areas after 1991. Our analysis supports the views of Shetty (1997) and Ramachandran and Swaminathan (2002, 2005) that there has been a reversal of the public policy from the point of view of extending the reach of rural credit to the economically backward areas and vulnerable households after 1991. As a fallout of such a policy shift, rural areas of all the major states have been affected adversely.

Another important finding of our study is that there are some states, viz. West Bengal, Assam, Bihar and Uttar Pradesh which was neglected both in terms of rural banking infrastructure development as well as credit disbursement to the rural areas throughout our study period, while some states, namely, Punjab, Haryana, Andhra Pradesh and Karnataka received better attention. Various other studies also noticed this inter-state disparity in terms of the branch banking network in rural areas and disbursement of rural credit (Basu 1979; Dadibhavi 1988; RBI 2004). On the basis of the levels of agricultural credit per hectare of net sown area as obtain till 1973, Basu (1979) divided the states into two categories: (a) those with a low level of per hectare credit given by commercial banks, and (b) those with a high level of the same. He noticed that states like Assam, Bihar, Madhya Pradesh, Orissa, Rajasthan and West Bengal were in the first category, while Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Haryana, Punjab, Maharashtra and Gujarat fell in the second category. Dadibhavi (1988) used an economic criterion, namely, the share of an individual state in the total net irrigated area to assess the variations in

institutional credit to agriculture. On the basis of this criterion, he found that Assam, Bihar, Rajasthan, Uttar Pradesh, Punjab and West Bengal were credit-deficit states if economic needs of the state are taken into consideration. The 'report of the advisory committee on flow of credit to agriculture and related activities from the banking system' (2004) mentioned that, "there are also significant regional disparities in the disbursement of agriculture credit. The southern region continues to account for the bulk of agriculture credit disbursed, followed by the northern, western and central regions. The share of the North-east continues to remain abysmally low". All these studies along with ours encourage researchers to think deeply on the issue of "why banks discriminate? Or, in other words, why some states/regions are favoured in terms of rural credit disbursement and rural banking development for years, while some others are neglected in this regard?" An in-depth research on this issue will definitely help policy-makers to take concrete corrective steps.

Nonetheless, the prevailing situation with regard to the rural institutional credit market in India shows up an urgent need of expansion of the base of institutional credit for attaining higher agricultural development in the country. A decisive change in the banking policy is extremely essential to ensure increased geographical and functional reach of rural credit institutions and unbiased distribution of rural credit across the states.

Notes

- ¹ The data on cooperative banks are those for central cooperative banks.
- ² The title of the publication, 'Banking Statistics', was changed to 'Basic Statistical Returns of Scheduled Commercial Banks in India' from March 2000.
- ³ Till 1980-81, the RBI was responsible for the publication. From 1981-82, the same is being published by NABARD. The latest available year of this publication is March 1999.
- ⁴ The definition of rural areas (as provided in Banking Statistics) includes all centres with a population of less than 10,000. The classification of banked centres according to different population groups is based on the 1971 census for the years, 1972 to 1985; the 1981 census for the years, 1986 to 1994; and the 1991 census for 1995 onwards.
- ⁵ Commercial banks, as per Banking Statistics, include public sector banks (nationalised banks and the State Bank of India and its subsidiaries), private sector banks, foreign banks and regional rural banks. However, in our study, to provide separate estimates for regional rural banks, we excluded the same from the category of commercial banks.
- ⁶ The formula used to calculate the Kendall Test of Concordance is

$$\text{Sample } \chi^2 = [12\sum R^2 - 3n \{k(n+1)\}^2] / kn(n+1)$$

where R = sum of the ranks assigned to each state in different years; n = number of states that are ranked; and k = number of years assigning ranks.

The decision rule for the concordance test at significance level α is Reject H_0 if Sample χ^2

$> \chi^2_{\alpha, v}$, where $v = n-1$. Thus, large values of Sample χ^2 lead us to conclude that the ranks exhibit a significant level of agreement.

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Promoting Sustainable Agriculture: Experiences from India and Canada

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Abstract

Agriculture growth, driven by Green Revolution, has increased the foodgrains supply, ensuring food security. The next stage, however, faces a serious challenge in terms of sustainability. While developing countries face the problem of sustainability of resource use, the challenge for developed economies is overuse of chemical inputs. These problems have increased awareness about sustainable farming and emphasised the need for moving towards it. Policies have since stressed promoting sustainable agriculture. Organic farming is a variant that is receiving special thrust under these policies. This paper examines the policy initiatives and experiences of promoting organic farming in India and Canada. In fact, the policy initiatives, if any, have emanated mainly from the viewpoint of trade concerns. There are very few studies that have gone into examining the issues of economic viability, institutional support, and market access for organic farming in India and Canada. This paper tries to fill this critical gap by examining these issues in a comparative framework. The analysis, mainly exploratory in nature, is based on the existing literature.

Introduction

Globally the agriculture sector has experienced phenomenal growth since the mid-20th century. The growth, driven by Green Revolution technology¹, has significantly augmented the aggregate supply of foodgrains, ensuring food security to the growing population both in the south and the north. The next stage of agricultural growth, however, faces a serious challenge in terms of sustainability. Problems of resource use and intensification of chemical inputs have led to increasing awareness and a need has been felt in different parts of the world for moving away from the input-intensive agriculture promoted during Green Revolution to sustainable agriculture². While the need for a paradigmatic shift in the growth

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strategy is well recognised, the transition from input-intensive to sustainable farming, however, has to address certain inherent issues, such as (a) its effects on productivity; (b) the increased requirement for labour, skill and other inputs; and (c) its effects on cost and return and, hence, on farm produce prices.

While these issues have received inadequate attention, policies in both the north and the south have led to increased emphasis on sustainable agriculture. Organic farming is a variant receiving special emphasis under these policies. The promotional policies and goals, however, vary across countries, given the basic differences in resources, natural and human. A shift towards sustainable agriculture may reduce overall production in the short and/or medium to long term. As such, this agricultural contraction may cause food security problems in developing countries of the south and reduced agricultural income and exports in developed countries of the north (Shah 2005).

An examination of the different policy imperatives and actual experiences in promoting sustainable agriculture in the countries of the north and the south finds relevance not only in the light of global environmental concerns but also the increasing liberalisation of agricultural trade. A comprehensive examination of all countries' policies in the limited space of this paper would be difficult. As such, the paper examines policy initiatives as well as the experiences in promoting sustainable agriculture, particularly organic farming, in representative countries of the south and the north — India and Canada, respectively. Both these countries have recognised the need for promoting sustainable agriculture in their policy statements. Although policies differ, both the countries are developing organic farming as an approach towards sustainable agriculture, taking into consideration both environmental concerns and the growing global organic produce market. However, various obstacles do visage the adoption of organic farming in each country. For instance, in India, the basic constraints are related to cost of conversion, potential yield reduction and institutional support. In India, the organic-conversion consequences could have serious repercussions for food security, livelihoods of marginal and small farmers as well as labour. The major constraints are similar in Canada. However, the consequences, though still serious for farmer livelihoods, are less grave given the Canadian agro-economic context. Meeting the challenges posed in adopting organic farming involves a change in the pattern of public investment and institutional arrangement. There are very few studies that have gone into examining the issues of economic viability, institutional support and market access for organic farming in India and Canada specifically. This paper examines these issues in a comparative framework.

Objectives

The specific objectives of the study are twofold:

- (i) To examine reasons for and status of sustainable farming practices, in the light of resource base as well as production scenarios, in India and Canada; and
- (ii) To review policy initiatives for promoting sustainable agriculture with a specific focus on organic farming, and identify future challenges.

The paper is based on existing literature and secondary data. The paper is divided into six sections. The next section gives a brief overview of sustainable agriculture focusing on organic farming. Section 3 presents a brief profile of resource base and agricultural production scenario in India and Canada representing south and north, respectively. This is followed in sections 4 and 5 that discuss policy initiatives and challenges for promoting organic farming in these countries. The last section highlights important observations and identifies the need for further research.

Environmental Concerns and Emergence of Sustainable Agriculture in the North and the South

The concerns for shifting towards sustainable agriculture, in general, and organic farming, in particular, have emanated mainly from developed countries in the north. During the post-World War II period, agriculture in the north dramatically intensified, in terms of external inputs such as chemical fertilisers and pesticides. Agricultural intensification has had many negative environmental externalities associated with it – for instance, soil erosion, degradation of soil quality, water and air pollution. Although this intensification was initiated in the north, many of the practices and their associated negative impacts have spread to the south. In order to tackle these problems, environmentally beneficial sustainable agricultural systems have been widely promoted. Sustainable agriculture refers to a wide range of practices; most frequently, these practices focus on soil and moisture conservation, and reduced or no use of chemical inputs.

Among the various approaches to sustainable agriculture, organic farming, which incorporates a holistic set of environmentally beneficial practices including the omission of synthetic chemicals, has received considerable attention. In fact, consumers are increasingly demanding ‘environmentally-friendly’ and healthy food. This preference is being expressed to some extent by an increased demand for organic foods. Such consumer preferences have been well reflected in developed countries. Since the early 1990s, the market for organic produce in the European Union (EU), North America, Japan and other developed countries has grown at rates ranging between 10 and 25 per cent (Willer and Yusefi 2004).

Organic Farming

The organic agriculture movement began in Europe during the early 20th century with Rudolf Steiner in Austria, Lady Eve Balfour and Albert Howard in England and moved to the United States and Japan under the leadership of J I Rodale and Masanobu Fukuoka, respectively. Keeping the main objective of sustainability in agriculture as the maintenance and improvement of the agro-environment, organic farming has been defined in several ways. There are two general classes of organic farming definitions: the first, ideological/philosophical; the second, market-driven institutional.

The ideological and philosophical stance of many of organic farming's early proponents gave rise to a general set of organic principles. Although organic farming is often thought to be simply synonymous with the prohibition of all synthetic fertilisers and pesticides, the term 'organic' is used to refer not to the type of inputs used per se but to the concept of the farm as an organism, in which all the component parts – the soil, minerals, organic matter, micro-organisms, insects, plants, animals and humans – interact to create a coherent whole.

Institutional definitions of organic farming have evolved out of the former in response to the market's need for standardised organic production practices. Owing to market requirements, organic farming, unlike other variants of sustainable agriculture, has emerged as a system with clearly identified legislated as well as voluntary standards and certification procedures. This standardisation has become increasingly important for access to organic markets, domestically and internationally.

The benchmark organic standard is that set by the Codex Alimentarius of the Food and Agriculture Organisation (FAO), which closely follows that of the International Federation of Organic Agricultural Movements (IFOAM) (shown in Box 1) (FAO 2001; IFOAM 2002). IFOAM has been listed by the International Organisation for Standardisation (ISO) as an international standard setting body; thus making IFOAM's standards serve as an international reference.

The guidelines set down by the Codex Alimentarius Commission, considered to be the highest international body on food standards, cover principles of organic production, requirements for crop production and processing practices, labelling, inspection and certification protocols. However, unlike those of IFOAM, they do not cover animal husbandry. The Codex guidelines provide an internationally agreed framework for organic food in international trade. Where a disagreement may occur between countries about the equivalence of organic food, the Codex guidelines can be used as a reference in trade disputes at the WTO level. Most governments define organic farming consistent with the broad definition given by the FAO and IFOAM. These definitions are followed by the national accreditation boards and certifying agencies in the process of certifying organic products.

**Box 1: IFOAM's Standards and Principles of Organic Farming
(IFOAM 2002)**

- *to produce sufficient quantities of high quality food, fibre and other products.*
- *to work compatibly with natural cycles and living systems through the soil, plants and animals in the entire production system.*
- *to recognise the wider social and ecological impact of and within the organic production and processing system.*
- *to maintain and increase long-term fertility and biological activity of soils using locally adapted cultural, biological and mechanical methods as opposed to reliance on inputs.*
- *to maintain and encourage agricultural and natural biodiversity on the farm and surrounds through the use of sustainable production systems and the protection of plant and wildlife habitats.*
- *to maintain and conserve genetic diversity through attention to on-farm management of genetic resources.*
- *to promote the responsible use and conservation of water and all life therein.*
- *to use, as far as possible, renewable resources in production and processing systems and avoid pollution and waste.*
- *to foster local and regional production and distribution.*
- *to create a harmonious balance between crop production and animal husbandry.*
- *to provide living conditions that allow animals to express the basic aspects of their innate behaviour.*
- *to utilise biodegradable, recyclable and recycled packaging materials.*
- *to provide everyone involved in organic farming and processing with a quality of life that satisfies their basic needs, within a safe, secure and healthy working environment.*
- *to support the establishment of an entire production, processing and distribution chain which is both socially just and ecologically responsible.*
- *to recognise the importance of, and protect and learn from, indigenous knowledge and traditional farming systems.*

There are several important questions related to the practice of organic methods, for example, yields and environmental benefits. Many studies have examined the yield potential of organic cultivation. Most of the studies done in Europe or the US suggest a reduction in yield for most crops in comparison to conventional agriculture, particularly in the first two or three years following conversion (for review see, Lotter 2003). However, the specifics are crop and agro-climatically dependent. A survey of about 200 projects in developing countries in which contemporary organic practices were introduced showed increase in average

yield between five and 10 per cent in irrigated crops and 50 and 100 per cent in rainfed crops (Pretty and Hine 2001). Studies have shown that organic farms are less sensitive to climate variability than conventional farms (Welsh 1999; Drinkwater *et al* 1998), and organic cropping reduces the variability in net returns (Helmers *et al* 1986). Since organic farms are generally as profitable as conventional farming and less sensitive to climatic variability, the need for insurance payments can be reduced. In some cases, organic farming has led to reductions in government farm payments (Lampkin *et al* 1999). In terms of environmental sustainability, many studies have also been done taking into consideration a large variety of agro-environmental indicators, such as soil organic matter, soil moisture, soil nutrients and biodiversity. Most indicators suggest that organic farming is less environmentally damaging than conventional farming and improve agro-environmental conditions (for review, see, Lotter 2003).

Agriculture in India and Canada: A Comparative Profile

Agriculture in India, like many countries of the south, continues to play an important role in economic growth. However, in Canada, like many countries of the north, it represents only a small proportion of the economy. This is demonstrated by the fact that the agriculture sector contributes to about 19 and 1.3 per cent of the Gross Domestic Product (GDP) in India and Canada, respectively.

With over half of the population deriving their livelihood from agriculture, the primary sector is vital in shaping India's economic development (Box 2). Since the late 1960s, major strides in terms of agricultural production and yield have been achieved through the application of Green Revolution inputs and improved cultivation practices. Total foodgrain production increased to over 211 million tonnes in 2001-02 from around 100 million tonnes in 1969-70. To a large extent, the growth in food grain production has been contributed by Green Revolution yield augmenting technologies, which involve more intensive use of irrigation, chemical fertiliser and pesticides. The phenomenal growth in production, of course, has provided food security ending India's dependence on imports and aid, while increasing agricultural exports.

Beside a small contribution to the Canadian GDP, the agricultural sector provides employment to less than five per cent of the population. Notwithstanding its limited impact on the overall economy, the sector remains vital to the rural economy. Since the mid 20th century, agricultural production and yields have steadily increased with synthetic inputs, new seed varieties and improved cultivation practices. From the early 1960s to the late 1990s, agricultural productivity grew, on an average, by about one per cent per annum (Statistics Canada 1999). Agricultural support payments³ encouraged expanded production and increased agricultural export surpluses (OECD 2002).

The comparative picture depicted in Box 2 highlights some important differences between Indian and Canadian agriculture:

- India has about a third as much land area as Canada, while its population is about 30 times larger. The population density of India is thus much higher, i.e., 312 (vs. Canada's 3.1) persons per square km.
- Despite the smaller geographical area, India has both a significantly larger area and proportion of area under cultivation (i.e., 43 per cent); the proportion is less than five per cent in Canada.
- The average farm area is much larger in Canada (i.e., 195 times) than in India. The average land-holding size is 1.4 hectare in India, as compared with 273 hectare in Canada.
- Irrigation capacity differs greatly between the two countries, with India having a much larger proportion of land under irrigation. This is due to significant difference in the pattern of precipitation, which is spread over large number of days during a year in Canada's case versus the length of growing season.
- The average consumption of chemical fertilisers (NPK) and pesticides is similar in India and Canada. This is quite different from the generally observed pattern of input-intensive agricultural practices in developed countries in the north. In that sense, Canada is an important exception as it has in this way succeeded in containing intensification.
- Not surprisingly, therefore, yields of wheat, a major crop in both countries, are similar.
- Yet due to differences in population and cropping patterns, the per capita cereal production is six times higher in Canada than in India, reflecting a difference of over 1,000 kg per person per year.

This comparison highlights some of the glaring differences not only in terms of the magnitude of resource use, but also of chemical inputs. For instance, with a somewhat similar level of NPK use per hectare, the total quantum of fertiliser use in India is more than three times that in Canada. A substantially large proportion of cultivated land in India does not receive any chemical fertiliser, for reasons like lack of timely availability, non-affordability and lack of irrigation facilities. As such, the average NPK use per hectare on fertilised land is likely to be much higher in India than in Canada. This provides some indication that Canada has limited its agricultural intensification. It is in this backdrop that the subsequent analysis of the challenges as well as policy initiatives for promoting sustainable agriculture in India and Canada may have special significance.

Box 2: Agriculture and Natural Resources in India and Canada: A Comparative Profile		
Index	India	Canada
Population ('000,000)	1,027.0	32.0
Land Area (M. ha)	328	909
Density (per sq. km)	312	3.1
Land Use (per cent of Land Area) – Data relate to 2001		
Wooded Area	21.0	44.0
Permanent Grassland	3.3	1.7
Net Sown Area (NSA)	43.0 (141.35 Mha)	3.3 (29.7 Mha)
Gross Sown Area	56.3 (187.91 Mha)	4.0 (36.4 Mha)
Percent of Irrigated Area in NSA	40.5	1.9
Percent of Workers in Agriculture	53.0	2.8
Average Landholding Size (ha)	1.4	273.0
Inputs Use (Data relate to 2001)		
NPK (Total Nitrogen, Phosphate and Potassium Fertiliser) use on NSA ('000 tonnes)	17,300.0	4,300.0
NPK use (kg/ha)	95	104
Pesticide Consumption (tonnes)	107,864	42,000
Pesticide/NSA (kg/ha)	0.8	1.02
Yield (kg/ha) – (India – 2001; Canada - average 1991 to 2001)		
Rice	2,090	-
Wheat	2,770	2,353
Maize/Corn	1,642	6,600
Canola	-	1,641
Soyabean	900	538
Production		
Cereals ('000 tonnes)	212,000	42,000
Cereal per capita (kg/persons)	200	1,312
Oilseeds ('000 tonnes)	33,624	10,800
Agricultural Trade (2001)		
Agricultural Imports ('000,000 USD)	3405.6	11,200
Agricultural Exports ('000,000 USD)	7425.3	17,010
<p><i>Sources:</i> Statistics Canada, OECD, Canadian Commissioner of the Environment and Sustainable Development. Agricultural Statistics, Government of India Compendium of Environment Statistics India, Government of India Economic Survey, Government of India Currency Conversion: 1 CAD = 35.6 Rs; 1 Rs = 0.0228 USD; 1 CAD = 0.81 USD</p>		

India – Policies for Sustainable Agriculture and Organic Farming

The Indian government's policies have always emphasised on foodgrain self-sufficiency, which has not necessarily coincided with agricultural sustainability. The growth of agricultural production and productivity, which had risen significantly during 1970s and 1980s, declined during 1990s⁴. These slowdowns have worsened since 2000; both overall agricultural production and foodgrains production have shown negative growth rates in the 2000-01 to 2002-03 period (GoI 2002). Decline in the growth rates of agricultural production and productivity is a serious issue considering the questions of food security, livelihood and the environment. As such, a critical examination of the approaches for sustainable agricultural development is necessary. This examination must be framed not only by India's ongoing need to ensure food self-sufficiency but also by the consequences of access to international markets.

A. Environmental Challenges in Indian Agriculture

The challenge for Indian agriculture, to put simply, is to increase production, while minimising its environmental impact. This includes conserving and protecting the quality of the resources that determine the performance of agriculture, like land, water and air. Reductions in yield, although determined by many factors, may be partially a consequence of land and water exploitation.

Land degradation⁵ is one major constraint for Indian agriculture. By the early 1980s, approximately 53 per cent (173.6 million hectares) of India's geographical area had been considered degraded according to the Ministry of Agriculture (GoI 2001a); water-logging affected about six per cent of the cultivated area, while alkali and acidic soils both affected about three per cent. The major process of land degradation is soil erosion (due to water and wind erosion), contributing to over 71 per cent of the land degradation (GoI 2001a). Data compiled by the National Remote Sensing Agency (NRSA) indicated that 15 per cent of India's total geographical area comprised degraded cultivatable wasteland⁶ (NRSA 2002). One-third of this land was degraded by human activities, while nearly half was degraded by a combination of human and natural causes (NRSA 2002). Chadha *et al* (2004) found a significant negative relationship between land degradation and foodgrain productivity in both the 1980s and 1990s.

Water is another major constraint for Indian agriculture. Agriculture, through irrigation, accounted for 83 per cent of the total water use in the country during 1990 (Vyas 2003). During Green Revolution, water consumption in agriculture rose sharply as the net irrigated area increased from 31.1 to 54.68 million hectares between 1970-71 and 2000-01, while the area irrigated more than once a year increased from 7.09 million to 20.46 million hectares during the same period. Groundwater, one of India's

major sources for irrigation⁷, is rapidly depleting. The number of dark blocks (taluk or mandals) where groundwater extraction is more than 85 per cent of the availability, increased from 253 to 428 out of over 5,700 blocks between 1984-85 and 1998-99 (GoI 2002). The problem of groundwater depletion has been reported from rainfed states, like Andhra Pradesh, Karnataka, Rajasthan, Madhya Pradesh, Chhattisgarh and Gujarat.

The introduction of modern technology-based agricultural systems, in addition to encouraging increased water usage, meant the application of inputs like chemical fertilisers, chemical pesticides and high-yielding varieties (HYVs). Fertiliser application rose more than fivefold between 1970 and 2002 to 17,360 tonnes. Imbalanced proportioning⁸ of chemical nutrients is a major problem associated with fertiliser application in India. Pesticide consumption increased from 24.32 million tonnes in 1970-71 to 46.2 million tonnes in 1999-2000, with a peak application of 75.42 million tonnes during 1988-89 (CSE 1999). High yielding seed varieties have led to mono-cropping of certain grains reducing farmers' cropping flexibility and reducing agricultural biodiversity.

Although the Indian government has recognised the necessity of managing and conserving resources for agricultural development since the First Five-Year Plan⁹, the measures initiated have been inadequate. For example, the government's efforts have only been able to regenerate 17.28 per cent of the total degraded area (173.6 million hectares; GoI 2001a). India's National Agricultural Policy (NAP) (GoI 2000) has stressed the importance of management and conservation of resources by stating that, 'the policy will seek to promote technically sound, economically viable, environmentally non-degrading and socially acceptable use of the country's natural resources – land, water and genetic endowment – to promote sustainable development of agriculture'. The Central and state governments have initiated several measures to promote sustainable agricultural development. The NAP stated that improving the quality of land and soil, rational utilisation and conservation of water, and sensitising the farming community to environmental concerns would receive high priority (GoI 2000).

The Tenth Five-Year Plan (GoI 2002), for 2002 through 2007, has put emphasis on natural resource management through rainwater harvesting, groundwater recharging measures and controlling groundwater exploitation, watershed development and the treatment of water-logged areas. With regard to the application of agricultural inputs like fertiliser and pesticides, the Plan stated that factors such as imbalanced use of nitrogenous (N), phosphatic (P) and potassic (K) increased deficiency of micro-nutrients and decreased soil organic carbon would be addressed through a holistic agri-environmental approach stressing Integrated Plant Nutrient and Pest Management. Further, the Tenth Plan document recognises organic farming as a 'thrust area' in the sustainable use and management of resources in agriculture.

B. Promoting Organic Farming in India

Realising the challenges facing Indian agriculture, the Central and state governments, non-governmental organisations, civil society groups and concerned individuals are promoting organic farming. Economic and environmental factors have motivated the Indian Government to promote organic farming. Perhaps, its major motivator in encouraging organic farming is to capitalise on the burgeoning global organic market, which was estimated at US\$ 23 billion in 2002¹⁰. The global market for organic products is expected to grow over the medium term from 10 to 30 per cent (Yussefi and Willer 2002, as quoted in Garibay and Jyoti 2003). There is a large gap between the supply and demand of various organic products. This vast market opportunity, combined with high price premiums of organic products over conventional products, has attracted many developing countries, including India, to encourage organic farming.

The Indian Government has initiated various promotional activities, such as setting up a National Institute of Organic Farming in Ghaziabad, Uttar Pradesh in 2003, appointment of accreditation and certifying agencies for organic farm products, developing norms for certifying organic products and providing financial support to implement promotional activities for organic farming.

Many state governments have also encouraged farmers to adopt organic farming by including it as a component in their state agricultural policies. The governments of Maharashtra, Karnataka, Madhya Pradesh, Gujarat, Tamil Nadu and Kerala have included organic farming in their agricultural policies. Karnataka and Maharashtra have provided Rs 20 crore and Rs 10 crore respectively for promoting the organic method, and Uttaranchal and Mizoram have declared themselves “fully organic farming states” (Venkateshwarlu 2004). The Kerala government also has launched a programme and policy for “Organic Sustainability of Kerala” or “Jaivakeralam” to promote and popularise organic farming. The government stated that it would compensate losses during the conversion period, besides extending its support to farmers in certification, organic manure production and marketing (Surendranath 2003).

Apart from state initiatives, many farmers have shifted to organic farming either on their own accord or with the support of NGOs and civil society groups. Farmers’ motivation for shifting from intensive practices to organic practices are many. A survey conducted in Gujarat and Karnataka revealed that three factors influenced farmers’ transition to organic farming: (1) Environmental problems associated with intensive agriculture; (2) Institutional factors, such as NGO intervention; (3) Own initiatives by farmers owing to philosophical influence (Puttaswamaiah 2005).

C. Extent of Indian Organic Area and Production

Currently, the extent of certified organic farming in terms of area and production is small in India. The total area covered by certified organic farms in the country is about 37,050 hectares, which accounts for about 0.03 per cent of the total agricultural area, while the total number of farmers is about 5,147 (Willer and Yussefi 2004). In comparison to the total agricultural production of over 200 million tonnes, the country produced only about 14,000 tonnes of organic food products from about 1,426 certified organic farms (Brook and Bhagat 2004). Many crops are, however, cultivated under organic farming methods in the country (GoI 2001b):

1. Cereals: wheat, paddy, jowar, bajra and maize
2. Pulses: pigeonpea, chickpea, greengram, blackgram and chana
3. Oilseeds: groundnut, castor, mustard and sesame
4. Commodities: cotton and sugarcane, particularly for sugarcandy (gur)
5. Spices: ginger, turmeric, chillies and cumin
6. Plantation crops: tea, coffee and cardamom
7. Fruits: banana, sapota, custard apple and papaya
8. Vegetables: tomato, brinjal, cucurbits, cole crops and leafy vegetables

Although organic in the sense of non-chemical farming is obviously not new in India, in its modern sense it is a recent development. The majority of Indian farmers have not adopted the intensive Green Revolution technologies, particularly in some of the north and northeastern states and in that sense have been described as being 'organic by default' (Brook and Bhagat 2004). This is often because either modern inputs are unaffordable or farmers prefer their traditional methods. Despite the lack of chemicals, however, their methods of farming are not necessarily inherently sustainable. With regard to this point, the IFOAM's Hanoi Declaration stated: 'the Asian history of agriculture spanning thousands of years is in deep connection with cultural and ecological diversity, but the erstwhile colonial rule as well as misdirected policies have undermined this balance' (GoI 2001b). The requirement of strict adherence to the procedures of modern organic farming and certification of the product keeps a large number of "organic by default" Indian farmers outside the brand labelled by modern organic practices.

A few empirical farm-level studies have been done in India to examine the productivity and profitability of organic farming as compared to "organic by default" or input-intensive conventional farming. In terms of cotton cultivation, field trials have been done by the Central Institute for Cotton Research (CICR), Nagpur. The results suggest that during the first one or two years following conversion, yields were much smaller than control group non-organic yields; however, in subsequent years, yields were similar and even higher than non-organic yields (CICR 2000). The CICR report (2000) notes that organic cultivation improved soil health, reduced environmental pollution and the cost of cultivation.

D. Organic Certification and Marketing in India

As organic farming has made only a small dent in Indian agricultural practices in recent years, the market for organic products remains at an evolutionary stage. Organic outlets are sure to be found in major urban centres like Mumbai, Bangalore, Delhi, Chennai, Hyderabad and Ahmedabad. In smaller centres, the coverage is spotty and the market often non-existent.

To be branded “organic”, the produce must go through several procedures from field to market, unlike the traditional produce. These procedures are outlined in the Central government’s norms and standards for certifying organic products, which are equivalent to international standards of the FAO (Codex Alimentarius) for preparation and marketing of organic products.

The Ministry of Commerce has identified six organisations as accreditation agencies of organic products: (1) Agricultural and Processed Food Products Export Development Authority (APEDA), (2) Tea Board, (3) Spices Board, (4) Coconut Development Board, (5) Directorate of Cashew and Cocoa and (6) Coffee Board. These accreditation boards give permission to certifying agencies for organic products, following the prescribed norms. Certification through these boards and agencies has been made compulsory, particularly for the export market, as ‘the Government of India has issued a public notice according to which no certified organic products may be exported unless they are certified by an inspection and certifying agency duly accredited by one of the accreditation agencies designated by the Government of India’ (Garibay and Jyoti 2003). Several certifying agencies function in India.

The growth of organic farming is dependent on market development, both international and domestic. Currently, most of the Indian organic production is sent for export. The domestic market consumes only about 7.5 per cent of the organic production (Garibay and Jyoti 2003). However, it is projected that the domestic organic market will increase by 49 per cent by 2006-07 (1,568 tonnes) over 2002 (1,050 tonnes) (Garibay and Jyoti 2003). India has a comparative advantage over northern countries, in the production of many agricultural products, such as tea, spices, coffee, fruits and vegetables, rice and ayurvedic herbs (Garibay and Jyoti 2003). As such, India has been promoting organic produce for export markets. Particularly since, the demand is higher internationally than in the domestic market. The export market for Indian products is expected to rise by 80 per cent by 2006-07 (21,525 tonnes) over 2002 (11,925 tonnes) (Garibay and Jyoti 2003).

Despite the relatively small domestic demand, organic products can command price premiums in Indian markets. For instance, in Mumbai, the price of organic products has been reported to be almost double the price of conventional agricultural products (Garibay and Jyoti 2003). Internationally, the price premiums for organic products generally range between 30 and 50 per cent (trade level) (Garibay and Jyoti 2003).

Clearly, organic farming in its modern sense is getting a hold in India for both financial and environmental reasons. The growth in the next few years has been projected to be significant – however, there are clearly major challenges facing the Indian organic movement.

E. Challenges for Indian Organic Farming

Organic farming in the Indian context has to resolve several issues at both micro and macro levels. Micro level issues confronting organic farming include economic viability, particularly for small and marginal farmers, marketing etc. For example, one of the greatest barriers for organic farming is the so-called conversion period due to direct and indirect costs. The conversion of a conventional farm to an organic farm requires strict adherence to the rules and standards of production, processing and labelling at prescribed international levels. During the conversion period, all the standards required for certifying a product as ‘organic’ must be fulfilled and verified by a certifying agency. Costs due to things such as information, marketing charges, inspection and certification expenses also increase the cost of organic farming. For instance, fees for inspection and certification can be prohibitively high at Rs 5,000, since this equals the returns from agriculture for many small farmers (Brook and Bhagat 2004). The often reduced yields of organic farming, as compared to conventional farming, particularly during the conversion period before soil nutrients and organic matter are replenished with biofertilisers, are an additional liability to the farmer. Particularly during the conversion period when the products are not certified as organic, and thus, they cannot be sold at the organic market price. Farmers often incur expenditures for things such as farm machinery, bunding, purchase of bio-inputs to augment soil fertility and yield. In addition, various barriers like transaction costs (lack of access to relevant knowledge on cultivation practices, market), mandatory documentation required for inspection and certification, lack of demand in the domestic market and constraints to enter the international market and institutional factors restrict the spread of organic farming (Das 2004).

Macro challenges include the impact, mainly on food security, employment and the environment. The question of food security assumes significance considering potential yield reductions of organic farming vis-à-vis conventional farming, particularly in the two to three year conversion period. Given India’s history of inadequate food production, it is necessary to examine food security related issues, taking into account the large number of marginal and small farmers, before organic farming is promoted en masse. Another macro dimension of promoting organic farming is its impacts on rural employment. Organic farming is expected to increase employment opportunities owing to the requirement of producing various agricultural inputs, like bio-fertilisers and bio-pesticides, using locally available

materials. The scope for increased employment opportunities needs to be assessed at the regional and national level. From the environmental point of view, apprehensions have been raised that organic farming might also lead to unsustainable problems, due to increased land and water use to offset decreases in yield. Considering the Indian case, even in organic practices water conservation must ultimately remain the paramount concern.

Considering the various challenges to the adoption of organic farming, the Working Group on Organic and Bio-dynamic Farming of the Planning Commission (GoI 2001b) suggested examination of some important issues for effective promotion and practice of organic farming and sustainable agriculture. These include the economics of organic crop production, economic and environmental externalities associated with conversion to organic farming, a comparative study of chemical based and organic farming covering social, environmental and economic costs.

Canada – Policies for Sustainable Agriculture and Organic Farming

A. Environmental Challenges in Canadian Agriculture

Concern for the environmental sustainability of Canadian agriculture is not a recent phenomenon. With repetitive droughts during the “Dust Bowl” of the 1930s, it was realised that farm practices could endanger the long-term viability of Canadian agriculture. At that time, the Prairie Farm Rehabilitation Administration was developed to address poor land conditions. Unsurprisingly, agricultural intensification generated environmental costs. In the early 1980s, a report by a Senate Standing Committee on Agriculture (1984) stated that soil degradation needed to be addressed estimating its costs to Canadian Agriculture in hundreds of millions of dollars. In 1990, a joint Federal-Provincial Agricultural Committee dedicated to environmental sustainability reported on agri-environmental concerns such as water contamination, habitat destruction, reduced biodiversity and greenhouse gas emissions. The report suggested implementation of policies to ameliorate growing agri-environmental concerns.

In 1993, the federal department of Agriculture and Agri-Food Canada (AAFC) initiated a programme to measure and monitor environmental indicators sensitive to agricultural practices. The first report took seven years to complete, but the results are to date the most comprehensive enumeration of Canadian agriculture’s environmental impacts (McRae *et al* 2000). The report presented mixed trends suggesting that Canadian agriculture has been moving towards sustainability in some ways, while in others it has been drifting further away.

The increased sustainability in Canadian agriculture between 1981 and 1996 has been largely attributed to the increased usage of environmental farm practices such as conservation tillage¹¹ or no-till¹² farming and reduced summer-

fallow (Huffman 2000). In the Prairies¹³, for instance, the area of cropland under conservation tillage or direct seeding practices increased from 32 to 48 per cent during the 1991 to 1996 period (Huffman 2000). The average number of bare-soil days¹⁴ in Canada dropped by 20 per cent, from 98 to 78 days, between 1981 and 1996 (Huffman 2000). In 1996, less than 15 per cent of Canadian cropland was at risk of water erosion, down from 30 per cent in 1981 (Shelton *et al* 2000), while the proportion of Prairie cropland at risk of wind erosion dropped from 60 to 35 per cent (Padbury and Stushnoff 2000). These improvements did not affect an overall change in the soil-salt balance. Between 1981 and 1996, the proportion of Prairie soil susceptible to salinisation remained the same at about 16 per cent (Eilers *et al* 2000). However, due to the increased adoption of no-till practices, the loss of soil organic carbon from Canadian soils, estimated to be 43 kg/ha in 1990, was projected to reduce to zero by 2000 (Smith *et al* 2000).

Despite the significant reductions in the risk of soil erosion and loss of soil organic carbon, the Commissioner of the Environment and Sustainable Development aptly pointed out that it could still take up to 90 years to bring soil erosion to fully sustainable levels (Gélinas 2001). Due to budget cuts in the mid-1990s, the national soil survey programme was largely dismantled (Gélinas 2001). This will make it difficult to assess the progress of Canadian soils. Agricultural wildlife also was assessed to have benefited from the reduction in the number of bare-soil days. Due to the reduction of summer-fallow, wildlife habitat in most agricultural regions either improved or remained the same – habitat decreased in only a few areas (Neave *et al* 2000). Both improved wildlife habitat and increased crop diversification in the Prairies were considered to have increased biodiversity (Neave *et al* 2000).

Several government policies have been considered successful in leading agriculture towards sustainability (WWFC 2003). Government conservation tillage and crop diversification programmes have benefited soil and biodiversity. Programmes promoting Environmental Farm Plans have engaged thousands of farmers in the particulars of good agri-environmental practices (Koroluk *et al* 2000). Under the Government's Agricultural Policy Framework (AAFC 2003), each farm is to undergo an environmental "farm scan". If the "scan" deems it necessary, an appropriate Environmental Farm Plan will be developed for the farm's particular environmental problems and followed up by Plan implementation and then subsequent follow-up inspections. This ambitious goal could rectify many of the environmental problems associated with Canadian agriculture.

Despite the positive steps that Canadian agriculture has taken in the direction of sustainability, several indicators suggest that in many ways it is increasingly contributing to environmental degradation. Between 1981 and 1996, soils in nine out of 10 provinces had increased nitrogen residues (MacDonald

2000a), and water in many regions had increased nitrogen and phosphorous contamination (MacDonald 2000b; Bolinder *et al* 2000). These trends are consistent with the increased rate of fertiliser consumption during this period in Canada (FAOSTAT data 2004).

Agricultural water usage increased from the early 1980s to the late 1990s by 15 per cent to 3,991 million cubic metres per annum (OECD 2001), accounting for about nine per cent of all water withdrawn in Canada (AAFC 2003). While agricultural energy consumption increased by eight per cent to 360 petajoules between 1981 and 1996 (MacGregor *et al* 2000), agricultural greenhouse gas emissions increased by 3.5 per cent to 86 megatonnes of carbon dioxide equivalent accounting for 13 per cent of all Canadian emissions (Desjardins and Riznek 2000). Nitrogen fertilisers contribute to most of the cropping sector's emissions (12 megatonnes of carbon dioxide equivalency in 1996; Desjardins and Riznek 2000). Livestock waste products are the largest contributor of agriculture's overall emissions (over 35 megatonnes of carbon dioxide equivalent; Desjardins and Riznek 2000).

The environmental impact of the livestock sector is increasing with the number of animals growing and the trend towards large-scale intensive livestock operations. This combination has meant increased risks from waste products over the past two decades. Waste products from these livestock operations are considerable. For example, livestock operations in Ontario and Quebec generate enough manure to equal the sewage from over 100 million people. When waste products are not properly managed, pathogens can contaminate water sources putting local populations at risk. The contamination of drinking water with *E coli* that killed several residents of Walkerton, Ontario, in May 2000 is suspected to be related to livestock manure runoff contaminating groundwater (Miller 2000). Mismanagement of waste products can also result in nitrogen contamination of water and unnecessary greenhouse gas emissions. Moreover, improper storage of wastes results in odours that can be a nuisance to local communities. Although AAFC and Environment Canada have offered financial incentives and promoted good practices to encourage good management of manure, there are still ongoing reports of manure mismanagement.

Although pesticide consumption decreased throughout the 1980s and 1990s, it again increased to the highest levels in this millennium (OECD 2001; OECD 2004). Reports linking overuse of pesticides to "fish kills"¹⁵ in creeks and streams served as a reminder of the continued usage of dangerous levels of pesticides on some crops (FAE 1998; FAE 2003). The increased pesticide usage may be associated with the greater adoption of conservation tillage practices, which use herbicide application for weed control.

The Canadian Commissioner of the Environment and Sustainable Development has pointed out several policy barriers in the move towards sustainability (Gélinas 2001). Canada's goal of increasing its share of global exports

to four per cent is a recipe for increased intensification of agriculture and runs counter to the Department's goal of increasing sustainability of agriculture. In 2003-2004, the total amount (provincial and federal) devoted to farm income support and crop insurance was about 4,000 million Canadian dollars, much larger than that given for environmental programmes which totaled to about 132 million Canadian dollars (AAFC 2004). The funding for agri-environmental programmes has been erratic with funding increasing and decreasing repeatedly since the early 1990s (AAFC 1997, 2001a, 2004). In general, the Department of Agriculture has failed to evaluate the environmental consequences of existing and planned policies and programmes – including the delivery of support payments and crop insurance. Most of its policies directed at environmental stewardship have been voluntary and have not necessarily addressed the most serious agri-environmental problems. Most of the direct support has been through grants rather than comprehensive or targeted programmes and funding. As such, the implementation of improvement programmes has been spotty. While the federal government's most recent Agricultural Policy Framework (APF) sets out ambitious, comprehensive targets – results from this programme have yet to emerge.

B. Promoting Organic Farming in Canada

Organic farming is, to many, the obvious way to mitigate Canada's agri-environmental problems, while providing consumers with the product they seem to want. It has been reported that approximately 75 per cent of Canadian consumers are concerned about chemicals in their food (MacRae 2002), and environmental concerns are a key motivating factor for many organic shoppers (Hartman Group 2000).

Although organic farming has played a role in Canada for over 40 years, it was during the 1990s that consumer interest invigorated the organic market spurring domestic production. The total number of organic farms increased over 150 per cent between 1992 and 2003 (Macey 2004). The main reasons why Canadian farmers have adopted organic practices seem to be similar to what prompted consumers to shift to organic produce. They cite concerns about the effects of chemicals on health and that of conventional farming on soil quality and conservation (Hall and Mogyorody 2001).

C. Extent of Canadian Organic Area and Production

In 2003, some 3,134 certified organic farms totalling 391,000 hectares represented approximately 1.3 per cent of all Canadian farms and about one per cent of crop area (Macey 2004). The organic movement has consisted largely of regional voluntary and civil society groups. However, the Canadian Organic Growers' Association has given the movement a national perspective. The federal government

has encouraged the organic farming sector in Canada through direct support to fund several projects, including the establishment of the Organic Agriculture Centre of Canada for organic research and education.

A comprehensive overview of the Canadian organic industry is problematic since detailed information on production and sales of organic produce is unavailable. Most organic certifying agencies do not collect production or sales information. Although the Canadian Organic Growers' Association tracks the number of certified farms, it does not collect statistics on production area, quantity or value. So at present, it is impossible to accurately determine total organic farm production, organic farm-gate receipts or organic retail receipts. In 2003, estimates suggest that the gross organic farm-gate production totalled to at least 170 million Canadian dollars and retail sales totaled in the neighbourhood of 800 million Canadian dollars (Macey 2004).

Canadian organic farming has made the most significant progress in grain and horticulture production. Ranging from grains to fruits and vegetables, the crop area of organic produce generally represents between 1-2 per cent of the total crop area (Macey 2004). Area cropped, production, and farm-gate receipts are highest for grains. In 2000, the total production of organic grains and oilseeds in Canada was estimated at 140,000 tonnes valued at over 400 to 500 million Canadian dollars (Wasicuna and Harrison 2000). While oilseeds make up 10 to 20 per cent of organic grain production, wheat constitutes about a half of the total produce. (Wasicuna and Harrison 2000).

Animal products lag far behind cropped produce. Organic dairy cattle now make up about 0.05 per cent of all Canadian dairy cattle; however, organic meat production is much less developed (Macey 2004). Organic poultry operations provide almost 0.5 per cent of Canadian egg production (Macey 2004).

A few empirical farm-level studies have been done in Canada to examine the productivity and profitability of organic farming as compared to conventional farming. In terms of foodgrains, one study was done taking data from a small sample of organic farmers ($n = 14$) over a period of five years (Entz *et al* 2001). Organic grain yields, of wheat, barley and oats, averaged about 75 per cent of those on conventional farms. The authors concluded that weeds were a major yield limiting factor, and that in several incidents, organic cropping coincided with insufficient soil-phosphorous (Entz *et al* 2001). Entz and co-authors (1997) noted that without the price premiums, which averaged over 250 Canadian dollars per hectare (making the prices of organic wheat to be greater than that of conventionally grown wheat), organic cropping would have rarely resulted in positive net returns. This study was meant to serve as a baseline for generating a database of organic farm data. Unfortunately, after the completion of the study, most of the farmers were not interested in continuing to participate in developing the database (Entz personal communication). This

underlines the difficulty in gathering reliable and comprehensive data on organic farming, which without the farmers' support is impossible.

D. Organic Certification and Marketing in Canada

In 1999, the Canadian General Standards Board published the National Standard of Canada for Organic Agriculture (CAN/CGSB-32.310-99) that conforms to the regulations outlined by the Codex Alimentarius Commission and was approved by the Standards Council of Canada (SCC). Certifying bodies are now accredited by the SCC the Conseil d'accréditation du Québec, and the Certified Organic Association of British Columbia. Certifying bodies numbered nearly 50 in 2003 (Macey 2004). The costs of certification are at least 400-500 Canadian dollars and depend on the specifics of the farm and certifier (Stoneman 2001). Farmers, particularly fruit and vegetable producers who market their produce directly to the public, may not certify their farms as it is not perceived to provide them any benefit since they enjoy a direct trust-relationship with their clientele.

Organic sales have been growing steadily by as much as 20 per cent per year, according to most estimates (MacRae 2002; Macey 2004). The retail market for organic food in Canada is estimated to be worth 300 to 800 million Canadian dollars. This market represents one per cent of total retail food sales. The Canadian organic market has been developing at a faster rate than Canadian production. Approximately, 80 per cent of organic products sold in Canada are imported, of which, 60 to 90 per cent come from the US. Imports total more than 180 million Canadian dollars, and exports total approximately 63 million Canadian dollars (Macey 2004). While the Canadian conventional agriculture sector is a net exporter, significantly contributing to Canada's trade surplus, the organic sector is a net importer. This rapidly expanding market should be an opportunity for Canadian producers.

Bringing together producers and consumers remains a crucial concern for Canadian organic producers. Although the organic market is underdeveloped, it is becoming more mainstream. For instance, in 2000, 49 per cent of organic purchases were made in mass-market outlets such as supermarkets or drug stores, while 48 per cent were made in specialty stores (AAFC 2001b).

Producers have an array of options in getting their products marketed. The Canadian Wheat Board (CWB) provides a separate channel for organic wheat and barley. For other grains and oilseeds, there are several possibilities. Producers can clean the organic product privately or at a processing facility and sell it privately or through a co-operative market. Alternatively, the producer can deliver the product directly to the end-user where it will be cleaned, graded and purchased. For horticultural goods, given Canada's highly corporatised supermarket sector, it can be difficult for individual farmers or cooperatives to get access to shelf space in large supermarket chains. As a consequence, alternative markets have emerged but

these tend only to work well when the distance between farmers and consumers is small – that is near the large metro centres. Only about three per cent of organic purchases were made at farmers' markets in 2000 (AAFC 2001b). Milk and animal products are marketed through cooperatives in several regions of the country. Organic exports are dominated by grains and flours, followed by processed food and beverages (Macey 2004).

It has been reported that organic consumers are reluctant to pay prices more than 50 per cent higher than those of non-organic products. In many regions, the retail price difference for many products is less than 15 per cent. There are no nationally available figures, but on average, it has been estimated that a standard package of organic foods would cost about 25 per cent more than conventional food (MacRae 2002). However, incentives paid out to farmers might be high; for example, in 2002, the price paid for organic wheat was 75 per cent greater than the price of conventional wheat price, while that for organic flax was 200 per cent more. Yet, premiums are not always offered to organic producers, according to a study examining the payments to farmers who directly market their fruits and vegetables to the public (Parsons 2004). The reasons for this are unclear but the possibilities are that product quality problems (aesthetics particularly, such as blemishes on fruits or vegetables) might force organic producers to reduce their prices since consumers may prefer perceived freshness and product aesthetics (Parsons 2004). This seems to be a particularity for horticultural produce, although detailed studies have not been conducted for other products. Forecasting organic farming's future profitability will require an analysis of the volatility in the incentives associated with organic commodities.

E. Challenges for Canadian Organic Farming

Before farmers can fully capitalise on organic market opportunities, many barriers must be overcome. The barriers are present both for conventional farmers wishing to convert to organic farming and for those who are already into it. Conventional producers are reluctant to convert to organic farming for several reasons. There is a general reduction in production capacity with organic farming. The productivity depends on the crop, cropping-rotation, livestock and many other variables. Organic wheat under Canadian Prairie conditions is typically expected to be 25 per cent less productive than conventional wheat, whereas oilseeds may be 40 per cent less productive, and livestock or milk production may be 10 to 20 per cent less productive (Entz 2001; AAFC 2002; MacRae 2002). The reduced productivity is generally most pronounced during the so-called conversion period. During this conversion period (2-3 years), certified "organic" price premiums are not granted, making farmers doubly reluctant to convert. Other production concerns involve the increased need for labour and green manure crops, both of which may

reduce organic farming's profitability. Other concerns associated with organic production often revolve around marketing issues. Some of the market obstacles include difficulties in producers finding buyers, difficulties in obtaining "organic" inputs, such as biofertilisers and biopesticides, varying price incentives, under-compensation due to cheaper imports and lack of organic processors and handlers. Governments elsewhere, including the US and Europe, have actively participated in the evolution of the organic sector. In comparison, Canada has inadequately supported the Canadian organic sector. For example, in contrast to the US and other countries, there are no incentives currently available to farmers for conversion to organic farming. More Canadian funding will be required to catapult the Canadian organic sector to the same level as that of many European countries and the US. Organic farming in Canada poses an opportunity to solve two problems: the agri-environmental burden and shrinking farm and, particularly, small-farm incomes. The practices inherent to organic farming reduce environmental load, and the products derived from organic farming are increasingly demanded in the marketplace. The price premiums consumers are willing to pay for a product they perceive as healthier, tastier and more environmentally friendly and that has proven to make organic farming economically viable.

The Canadian government has a few policies directed towards organic farming – increased governmental emphasis would aid in overcoming the organic-conversion barriers for interested conventional farmers. Several measures could rectify some of these issues. Conversion insurance programmes have been used in other countries. These support the potential depressed earnings, or income 'gap', during the transition to organic farming. Financial incentives could be provided for mentoring and training payments to existing farmers, who often provide logistical support to transitional farmers. More advisory services need to be established to help both farmers and organic processors with quality assurance. Existing extension and research organisations should focus part of their efforts on organic agriculture. Without a further increase in conversion, Canada will remain a large importer of organic produce – missing out on an economic and environmental opportunity.

Way Forward

The trajectory of Indian agriculture and its associated environmental problems has brought about recognition that future agricultural growth and productivity will have to occur simultaneously with environmental sustainability. The environmental challenges, especially in terms of land degradation and groundwater depletion, water-logging and excessive use of chemical inputs are posing problems for the future of Indian agriculture. To address the problems, policies have laid emphasis on promoting sustainable agriculture, including organic farming. Differential approaches and policy instruments, however, will be required

to address these problems. The shift from input-intensive to sustainable, particularly, organic farming is a difficult task as it involves a number of policy measures dealing with a variety of issues ranging from the transfer of information and technology to the development of markets. Another difficult task, and perhaps more difficult, relates to marginal and small farmers – a section that comprises a substantial part of Indian agriculture. Although these marginal and small farmers have been considered organic by ‘default’, severe resource constraints make a shift to the modern sense of organic farming prohibitive. Against this, the experience with respect to sustainable farming in Canada provides an example how timely recognition of a crisis and proactive policy responses can minimise the negative environmental implications of input intensive agriculture. In the case of soil erosion, policies promoting sustainable practices have done much to reduce the rate of degradation. Despite some positive steps towards limiting unsustainability, there is still much room for environmental stewardship in Canadian agriculture. In this respect, the expanding organic farming sector could significantly augment the sustainability of Canadian farming, while at the same time allow farmers to address a domestic organic supply deficit. However, policies must devote more incentives to overcome some of the financing constraints associated with the adoption of organic farming. The Canadian experiences, in terms of general agricultural sustainability, offer a few examples of good programmes that have provided farmers with information and incentives to minimise environmentally damaging practices that may be creatively adapted to the Indian scenario such as Environmental Farm Planning. Although it is not easy to draw obvious parallels between two such different countries, several concerns relating to sustainable agriculture and, particularly, the adoption of organic farming are common to both the countries. Micro issues, such as economic viability and uncertain outcomes with respect to farmer livelihoods, are common in both the countries. Of course in India, the potential consequences of such issues in terms of food security and entitlement are far more profound. The limited evidence from both India and Canada suggests that organic farming yields may be sufficient for the viability of this sector – particularly when parallel organic marketing channels are properly developed which provide price premiums to farmers. However, given the limited evidences in both the countries, much research remains to be done. In India, the shift to ‘modern organic’ agriculture, which tends to minimise yield variations in the face of climate fluctuations, may hold future promise for both drought-prone marginal and small and input-intensive farmers.

Thus, certain common challenges exist. Policy makers, research and extension systems as well as civil society organisations in both the countries need to pay immediate attention to agri-environmental issues, such as soil degradation and, in India’s case, water depletion.

Notes

- ¹ Green Revolution technology includes chemical fertilisers and pesticides along with high-yielding seed varieties and other modern cultivation practices; these were heavily promoted during the 1960s and 1970s.
- ² Sustainable agriculture refers to agricultural systems that maintain long-term economic, social and environmental viability. As such, the agricultural sustainability encompasses more than the agro-ecosystem's ability to maintain productivity and also includes economic valuations, legal and social framework as well as environmental accounting and monitoring.
- ³ Support payments, as according to the OECD's Producer Support Estimate, accounted for approximately 30 per cent of the value of agricultural production in the early 1990s – it was reduced to approximately 20 per cent by 2002 (OECD 2002).
- ⁴ The overall growth rate of crop production declined from 3.19 per cent per annum during 1980s (1980-81 to 1989-90) to 2.28 per cent per annum during 1990s (1990-91 to 1999-00), while yield growth decreased from 2.56 per cent per annum to 1.31 per cent per annum. In terms of food grain production, the production growth rate of foodgrains declined to 1.94 per cent per annum during the 1990s from 2.85 per annum in 1980s.
- ⁵ Land degradation generally refers to a reduction in the productivity and complexity of any type of terrestrial ecosystem. The degradation is a result of compromised soil quality usually due to erosion, the deterioration of the chemical, physical and biological soil properties and/or long-term loss of natural vegetation. The processes leading to degradation can be, and often are, a direct result of human activities.
- ⁶ Wasteland is considered under-utilised degraded land deteriorating due to poor management or natural causes that could be brought under vegetative cover with reasonable effort (NRSA 2002).
- ⁷ In recent years, groundwater has provided about 55 per cent of irrigation water versus 38 per cent in 1970-71 (Vyas 2003).
- ⁸ The desirable ratio of nitrogenous, phosphatic and potassic fertilisers is 4:2:1, respectively, but the actual application during 2001-02 was 6.69:2.59:1.0 (GoI 2002).
- ⁹ Soil and Water Conservation Programmes were initiated during the First Plan period and they have been progressively intensified over the successive Plan periods. During the First and Second Plan periods, soil conservation works mainly constituted of contour bunding and some afforestation of denuded areas. During the Third and Fourth Plan, a centrally-sponsored scheme of soil conservation in catchments of 21 river valley projects was undertaken. From the Fifth Plan onwards, soil and water conservation programmes were taken using a watershed approach. Other measures include the setting up of the All India Soil and Land Use Survey Organisation and State Land Use Boards to take an overall view of land use and conservation problems. The Seventh Plan besides continuing the

previous initiatives, laid emphasis on reclamation of alkali soils, control of shifting cultivation and maintenance of the works already completed. Realising the necessity of community involvement, the Eighth Plan encouraged the participation of people and voluntary organisations in soil conservation measures. The Eighth Plan also stressed the requirement of Integrated Pest Management (IPM) for controlling pests by using less chemical pesticides to reduce environmental pollution.

- ¹⁰ Over 93 per cent of the market was in the EU and US – where growth was 8 and 12 per cent respectively in 2002; Willer and Youssefi 2004.
- ¹¹ Conservation tillage refers to tilling practices that reduce soil erosion. More formally defined as a tillage-and-planting combination that leaves at least 30 per cent cover of crop residue on the soil surface to reduce erosion.
- ¹² No-till or zero-tillage eliminates soil tilling after harvest and the subsequent crop is planted directly into the soil – often using a special planter.
- ¹³ The Prairies refers to the agricultural land in the so-called Prairie provinces of Manitoba, Saskatchewan and Alberta. The Prairies are a swath of grassland and aspen parkland that ranges from the Rocky Mountains to the Canadian Shield east of Lake Winnipeg. This ecozone is characterised by a relatively flat topography and semi-arid climate. Farmland makes up 90 per cent of this area, and this farmland makes up two-thirds of all Canadian farmland.
- ¹⁴ Bare-soil day refers to a day's equivalent or two half-days, for example, in which the soil is not covered by crop or crop residue and thus fully exposed to the forces of erosion.
- ¹⁵ Fish kills refer to unusual en masse fish mortality localised to a certain body of water. Fish kills have often been associated with water contamination by pesticides or nutrients. Nutrient contamination is an indirect cause of fish death usually in response to reduced water oxygen levels due to excessive aquatic plant growth.

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India's Trade with SAARC in the Age of Globalisation

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Abstract

It is believed that the main objective of SAARC is to develop economic cooperation among member-countries through expanding intra-regional trade. India is one of the biggest partners of SAARC. This paper focuses on the magnitude of trade between India and the other member-countries of SAARC, and the factors obstructing trade flows in the South-Asian region during the 'post-liberalisation, privatisation and globalisation (LPG)' period.

Introduction

At the beginning of the 1990s, South Asian countries aimed at integrating themselves with the world economy by adopting unilateral trade policy reforms. Keeping this objective in mind, seven South Asian countries, namely Bhutan, Bangladesh, India, Maldives, Sri Lanka, Pakistan and Nepal, formed the South Asian Association for Regional Cooperation (SAARC) in 1985. But the globalisation process, the important parameters of which are to reduce trade barriers so as to permit free flow of goods across national frontiers, free flow of technology, labour, capital etc. among nation-states, has motivated SAARC member-countries to add a new dimension in their thinking for balanced economic development in the South Asian region. This is a region where more than 20 per cent of the world population lives but it accounts for only 1.5 per cent of world GDP and only one per cent of world trade (Nihal 2005). In its initial years of formation, the SAARC agenda did not cover the core issues to consolidate the gains for economic development like trade and investment of the member-countries. In 1995, SAARC took a major initiative to strengthen economic cooperation among the member-countries with enduring features by establishing South Asian Preferential Trading Arrangement (SAPTA). Under the aegis of SAPTA, it was emphasised by the member-countries that a number of measures were to be taken up for trade enhancement, which include elimination of both the tariff and non-tariff barriers (Krueger 1993). If necessary, this policy may be adopted on a product-by-product basis including across-broad tariff reductions, depending on the circumstances prevailing in SAARC, in particular, and world trade, in general. Apart from this, special safeguards should also be taken up in order to build up the balanced economic base among the member-

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countries of SAARC so that an underdeveloped economy may be converted into a developed one like the European Economic Community (EEC), which has joined France and Germany to form a tight economic union (Michael C 2006). India, the largest economy in SAARC, can play an important role for the balanced economic development in this region. By setting up a free trade relationship with other weaker member-countries of SAARC, India emphasised its commitment to economic development in the South Asian region. On one hand, it will secure a wider economic space to reap benefits for the millions of consumers of the member-countries to obtain goods at lower prices to improve the quality of their lives as per their hopes and aspirations. On the other hand, it will work as a driving force to broaden its engagement with a firm determination to reduce unofficial trade among the member-countries, which will offer opportunities to accelerate income by preventing the major revenue loss of the member-countries due to illegitimate trade.

Consequently, the question whether there has been any significant increase in intra-regional trade so far becomes pertinent. In this context, the present paper is an endeavour to make an analysis of and discussion on the emerging trends and issues of trade between India and the other member-countries of SAARC during the “post-liberalisation, privatisation and globalisation (LPG)” period.

Organisation of the paper is as follows: Trade flow between India and the other SAARC member-countries in the post-LPG regime between 1996 and 2003 is the subject matter of section II. Factors influencing trade within SAARC are discussed in section III. Section IV deals with the summary and concluding remarks on the article.

However, before taking up the main study, it calls for a conceptual analysis of the term, ‘Liberalisation, Privatisation and Globalisation’ (LPG). The LPG model of development was introduced in India by the then finance minister, Dr Manmohan Singh, in 1991 with an objective to charter a strategy of imposing emphasis on liberalisation, privatisation and globalisation of trade, industry and commerce. The principal features of this model may be outlined as follows:

1. It encourages the private sector to set up industrial units without facing complicated procedures that delay the process of investment. In addition to this, the LPG model emphasises the openness of the public sector for investment by private investors.
2. It envisages a much larger quantum of foreign direct investment to supplement the growth of the economy.
3. It aims at open-door policies to encourage other countries to export more and to facilitate the import of technology and other allied tools and reduction in import duties and other barriers.

Echoing the above basic features of the LPG model, we have concluded that the basic aim of the model is to reduce the role of the state significantly and to

open up the economy to market forces both internal and external. The LPG model is the prescription of the IMF-World Bank, which is being followed by different regional blocks and different countries individually for their economic stability and structural adjustment. It is argued that the LPG model follows the East Asian Miracle which was demonstrated by Japan, South Korea, Taiwan, etc. Although India has a large domestic market, broad-based industrial and infrastructural sectors, an abundant supply of cheap labour, a huge pool of educated and trained manpower and adequate natural resources to attain competitiveness, the country remains far behind many other Asian countries. Thus, in order to attain international competitiveness, India entered into a strategic alliance with its neighbouring countries. The rationale behind the formation of SAARC is to go with the principle of LPG to accelerate regional cooperation among South Asian countries in economic, cultural and political fields through all possible means and mechanisms.

Trade Flows between India and other SAARC Countries in the Post-Reform Period

In order to examine how India's trade balance with SAARC countries on official and unofficial account alters the implementation of SAFTA, we begin with the magnitude of official trade flows and then try to examine the relationship between official and unofficial trade. However, data on unofficial trade included in this study are based on a survey report prior to 1995. It has to be kept in mind that unofficial trade data for different SAARC countries have been prepared at different points of time. We pointed out the nature of informal trade in a particular year and focused its relationships with the formal trade of that year.

Table 1: India's Total Exports, Imports and Trade Deficits (US \$ million)

Year	Exports	Imports	Trade Deficit
1990-91	18,145	24,072	-5,927
1994-95	26,330 (45.11)	38,654 (60.58)	-2,324
1996-97	33,470 (27.12)	39,133 (1.24)	-5,663
1997-98	34,785 (3.93)	41,485 (6.01)	-6,700
1998-99	33,219 (4.50)	42,389 (2.18)	-9,170
1999-00	36,822 (10.85)	49,738 (17.34)	-12,915
2000-01	44,560 (21.01)	50,537 (1.61)	-5,977
2001-02	43,827 (-1.64)	51,414 (1.74)	-7,587
2002-03*	52,720 (20.29)	61,412 (19.45)	-8,692

*Provisional

(Figures in parentheses indicate annual growth rate)

Source: www.commerce.nic.in. (Accessed on September 7, December 1 and 22, 2005)

Post-mortem of the data presented in Table 1 reveals that both the volume of import and export trade of goods show an increasing trend to a remarkable extent during the period 1991-2003. The volume of exports from India, which was US\$ 18,145 million in 1991, increased to US\$ 38,114.6 million in 2003. Similarly, the volume of imports, which was US\$ 24,072 million in 1991, increased to US\$ 43,882.3 million in 2003. The table highlights that both import and export increased to a remarkable extent during the period under reference, although the volume of import increased faster than that of export. As a result, trade deficits increased in India during the study period. Trade deficits, which were US\$ 2,324 million in 1995, increased to US\$ 12,848 million in 2000, and again in 2003, it came down to US\$ 5,767.43 million. An inference that can be drawn from the analysis of data in Table 1 is that the increasing trade deficit was the reason for increasing demand for petroleum products in the domestic market and the failure of Indian traders to capture the western market in a big way after the opening of the Indian economy.

From the perspective of Indian trade performance in general, the paper attempts to look at India's trade relationship with other SAARC member-countries to explore the country's position among others regarding the implementation of SAPTA. From Table 2, it is clear that the volume of formal export from India to Bangladesh ranged from US\$ 868.96 million in 1997 to US\$ 1,176.00 million in 2003, and its growth rate ranged from -36.09 per cent to 46.95 per cent during the study period. In case of formal import, it registered a slight variation within the study period, which ranged from US\$ 50.81 million to US\$ 80.51 million, and its growth rate varied between -26.57 per cent and 25.24 per cent. The overall (official) export to Bangladesh as a share of India's total export has remained above two per cent throughout the period, except 1999-2000, when the share of import was less than one per cent. As a result, India's formal trade with Bangladesh showed a favourable balance during the period under reference. In this connection, a field survey conducted (Choudhari 1995) on 18 prominent smuggling centres in India and Bangladesh border area becomes significant. It was based on the "Delphi" technique, which was used to gather and process the opinion of people concerned to estimate the trend of informal trade volume between these two countries. It is estimated that the volume of informal trade and its balance in 1992-1993 was US\$ 313 million and US\$ 285 million, respectively, while in the same year, formal trade and its balance with Bangladesh was US\$ 356.9 million and US\$ 341.2 million, respectively. Thus, it may be said that the magnitude of informal trade between India and Bangladesh and its trade surplus are roughly same as that of formal trade. Goods of different kinds are included in the list of formal and informal trade between India and Bangladesh. Information gathered from different field visits along the Indo-Bangladesh border revealed that more than 60 per cent of the informal export from India comprises food, live animals, textiles, bicycles, cosmetics, plastic items, razors,

blades, medicines and kerosene. On the other hand, the informal import of goods from Bangladesh comprises fabrics, spices and Hilsa fish, calculators, rechargeable emergency lights, VCRs and VCPs. The import duty on these goods in India is very high. As a result, the unofficial channel is used to evade tariffs. An interesting point in this connection is that electronic goods, which informally entered India, are not manufactured in Bangladesh and come from some other country. Similarly, official exports to Bangladesh comprise industrial goods, while official imports from Bangladesh consist of crude raw materials, fertilisers, etc.

Table 2: India's Merchandise Trade with Bangladesh from 1996-97 to 2002-03 (US\$ million)

Sl. No.	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03
1. Export	868.96	786.46	995.64	636.31	935.04	1002.18	1176.00
2. Annual Growth (%)	—	-9.49	26.59	-36.09	46.95	7.18	17.34
3. % Share in India's Total Export	2.59	2.26	3.00	1.73	2.10	2.29	2.23
4. Import	62.23	50.81	62.40	78.15	80.51	59.12	62.05
5. Annual Growth (%)	—	-18.34	22.81	25.24	3.01	-26.57	4.96
6. % Share in India's Total Import	0.159	0.1225	0.15	0.16	0.16	0.11	0.10
7. Trade Balance	806.63	735.65	933.24	558.15	854.54	943.06	1,113.95

Source: www.commerce.nic.in. (Accessed on September 7, December 1 and 22, 2005)

Now let us look to Maldives, the smallest member-country of SAARC. The pattern of India's official trade with Maldives follows a different pattern. Table 3 shows that the export from India to Maldives in absolute terms increased with a fluctuating trend in the range of US\$ 7.30 million to US\$ 31.59 million during the study period. Consequently, the growth rate of export was also not so noteworthy which shows negative signs in three years — 1998, 1999 and 2000 — out of the seven-year study period. Similarly, the trend of official import from Maldives was also not so encouraging. It varied from US\$ 0.05 to US\$ 0.40 million. Table 3 reveals that the share of exports to Maldives from India and the share of imports from Maldives to India form a negligible part of India's total export and import trade respectively. As a result, India's trade balance with Maldives was favourable during the period under reference.

Table 3: India's Merchandise Trade with Maldives from 1996-97 to 2001-03
(US\$ million)

S1. No.	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03
1. Export	10.36	8.74	8.38	7.30	24.61	26.88	31.59
2. Annual Growth (%)	—	-15.72	-4.11	-12.84	237.10	9.20	17.35
3. % Share in India's Total Export	0.0310	0.0251	0.03	0.02	0.06	0.06	0.06
4. Imports	0.17	0.24	0.05	0.40	0.19	0.40	0.33
5. Annual Growth (%)	—	39.10	-79.16	671.33	-52.5	108.73	-16.00
6. % Share in India's Total Import	0.0004	0.0006	0.00	0.00	0.00	0.00	0.00
7. Trade Balance	10.19	8.50	8.32	6.90	24.42	26.48	31.25

Source: www.commerce.nic.in. (Accessed on September 7, December 1 and 22, 2005)

Bhutan enjoys a close relationship with India. Indian exports to Bhutan include yarn, rice, sugar, aluminium, spirits, beverages, residual chemical products, etc., while goods imported from Bhutan include wood products and inorganic chemicals. Of these, yarn, rice, sugar and aluminium come under the unofficial exports category, while goods of unofficial import from Bhutan are negligible. Table 4 provides an insight into the official trade between India and Bhutan. It is evidenced from the table that the volume of official export from India registered a highly fluctuating trend during the study period. From 1997 to 2000, it showed a decreasing trend of US\$ 21.98 million to US\$ 1.08 million, while from 2001 to 2003, it increased by US \$ 7.60 million to US \$ 39.05 million. The table also shows that in almost all the years under study, the volume of official export to Bhutan from India showed a negative growth rate with many ups and downs. Similarly, India's official import from Bhutan ranged between US\$ 6.13 million and US\$ 33.37 million, and its growth rate was better than what was recorded for export. The trend in exports showed a positive sign in four years out of the seven-year period under reference.

In this context, India's foreign trade with Bhutan is not so noteworthy. It is also highlighted in the above table that both the share of export and import with Bhutan varied between 0.00 per cent and 0.06 per cent of the total export and import trade of India during the study period. India's yearly trend of official import from Bhutan was higher than that of export. As a result, India's formal trade balance with Bhutan was unfavourable in five years out of the seven-year study period. On the other hand, study on the unofficial trade between India and Bhutan (Rao, Baruah and Das 1997) reveals that in 1993-1994, the volume of unofficial export from India was US\$ 31.3 million, while the volume of import was only US\$ 1.2 million. In the same year, Commodity Trade Statistics for Bhutan revealed that in 1993-1994 on

official account export from India to Bhutan was US\$ 7 million, while import was US\$ 3 million. It indicates that almost all of the unofficial trade with Bhutan was one-way, i.e., the lion's share of the unofficial trade was in the form of export. As a result, India's unofficial trade with Bhutan shows a favourable balance from India's perspective.

Table 4: India's Merchandise Trade with Bhutan from 1996-97 to 2002-03
(US\$ million)

Sl. No.	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03
1. Export	21.98	13.33	9.56	7.57	1.08	7.60	39.05
2. Annual Growth (%)	—	-39.37	-28.28	-20.78	-85.78	605.38	413.89
3. % Share in India's Total Export	0.065	0.038	0.03	0.02	0.00	0.02	0.07
4. Imports	33.37	13.44	6.13	18.01	21.09	23.92	32.15
5. Annual Growth (%)	—	-60.22	-54.38	194.00	17.08	13.42	34.41
6. % Share in India's Total Import	0.086	0.032	0.01	0.04	0.04	0.05	0.05
7. Trade Balance	-11.8	-0.11	3.43	-10.44	-20.01	-16.32	6.89

Source: www.commerce.nic.in. (Accessed on September 7, December 1 and 22, 2005)

Now let us examine the trade relationship between India and Pakistan. Table 5 reveals that India's formal trade with Pakistan was highly fluctuating during the study period. The volume of formal export, which was US\$ 157.22 million in 1997, came down to US\$ 92.95 million in 2000, and again went up to US\$ 186.83 million in 2001 and US\$ 203.16 million in 2003. Out of the seven-year period under study, the formal export trade with Pakistan varied between 0.25 and 0.42 per cent of the total exports from India. Formal imports from Pakistan also featured a similar fluctuating trend, which varied between US\$ 36.16 million and US\$ 214.45 million. The growth rate also varied between 68.19 and 382.45 per cent during the study period. The percentage share of formal import from Pakistan and formal export to Pakistan varied between 0.07 and 0.51 per cent of India's total import and export trade respectively during the study period. This share is higher than India's share of formal import and formal export with Bhutan and Maldives. As a result, in all the years under study, except in 1999, India had trade surplus with Pakistan. The goods which are exported to Pakistan, both on official and unofficial account, comprise alcoholic beverages, chemical products, steel utensils, machinery, food items, iron ore and vegetables, while imports from Pakistan consist of food items, synthetic fibres, chemical products, sugar and dry fruits. Of these, alcoholic beverages, chemical products, steel utensils and machinery are exported through the unofficial

channel, and food items, synthetic fibres and chemical products are imported from Pakistan unofficially. As far as statistics on unofficial trade between India and Pakistan is concerned, it is quite scanty. Nevertheless, the Pakistani government's estimation reveals that goods worth US\$ 1 billion are smuggled every year across the India-Pakistan border and another US\$ 1 billion worth goods are traded through Dubai, CIS countries and Afghanistan (*The Economist*, January, 1996). Thus the total volume of unofficial trade with Pakistan accounts for US\$ 2 billion.

Table 5: India's Merchandise Trade with Pakistan from 1996-97 to 2002-03 (US\$ million)

Sl. No.	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03
1. Export	157.22	143.15	106.10	92.95	186.83	144.01	206.16
2. Annual Growth (%)	—	-8.95	-25.88	-12.40	101.10	-22.92	43.16
3. % Share in India's Total Export	0.35	0.33	0.32	0.25	0.42	0.33	0.39
4. Imports	36.16	44.45	214.45	68.21	64.03	64.76	44.85
5. Annual Growth (%)	—	22.93	382.45	-68.19	-6.14	1.14	-30.74
6. % Share in India's Total Import	0.0924	0.1071	0.51	0.14	0.13	0.13	0.07
7. Trade Balance	121.06	98.70	-108.35	24.73	122.81	79.25	161.31

Source: www.commerce.nic.in. (Accessed on September 7, December 1 and 22, 2005)

India's formal trade with Nepal is similar to that of Bhutan and Pakistan, where it was characterised with fluctuations during the period 1997–2003, as mentioned in Table 6. India's export trade with Nepal, which was US\$ 350.36 million in 1997, reached US\$ 350.36 million in 2003 with some amount of ups and downs. Similarly, import from Nepal, which was US\$ 64.07 million in 1997, increased to as high as US\$ 281.76 million in 2003. During this period, the growth rate of the import trade with Nepal varied between 30.23 per cent and 52.22 per cent, except in 2003 when it was in negatives. Further, India's import trade with Nepal has grown up faster than the export trade during the study period. As a result, Table 6 shows a negative trade balance for India in four years, from 1999 to 2002 out of the seven years under study. Goods exported to Nepal comprise of live cattle, rice, medicine, equipment, machinery and building materials, while imports consist of food items, textile fabrics, consumer goods and goods from a third country. Incidentally a study (Muni 1992) gives a conception of the trend of India's informal trade with Nepal. According to it, in 1994, India's formal trade with Nepal was US\$ 62.6 million, while informal trade was US\$ 626 million. It indicates that India's informal trade with Nepal is remarkably higher than formal trade. It is also believed that informal trade

with Nepal is a one-way process, i.e., from Nepal to India. As a result, India has a trade deficit with Nepal.

Table 6: India's Merchandise Trade with Nepal from 1996-97 to 2002-03
(US\$ million)

Sl. No.	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03
1. Export	165.72	170.05	122.41	151.23	140.84	214.46	350.36
2. Annual Growth (%)	—	2.61	-28.02	23.54	-6.87	52.28	63.37
3. % Share in India's Total Export	0.4951	0.4889	0.37	0.41	0.32	0.49	0.66
4. Imports	64.07	95.16	144.85	188.63	255.08	355.94	281.76
5. Annual Growth (%)	—	48.51	52.22	30.23	35.23	39.54	-20.84
6. % Share in India's Total Import	0.1637	0.2294	0.34	0.38	0.50	0.69	0.46
7. Trade Balance	101.65	74.89	-22.44	-47.40	-114.24	-141.48	6.89

Source: www.commerce.nic.in. (Accessed on September 7, December 1 and 22, 2005)

The pattern of India's formal and informal trade with Sri Lanka follows a different pattern. India's official foreign trade with Sri Lanka features trade surplus, like with Bangladesh. Products exported to Sri Lanka from India comprise a variety of manufactured goods, motor vehicles and food items, while imports from Sri Lanka consist of primary products and non-traditional goods (mainly, consumer durables). Of these, unofficial exports to Sri Lanka comprise sarees, sarongs and stainless steel utensils, while unofficial imports include largely non-traditional goods (mainly, consumer durables). Table 7 shows the data relating to India's official import, export and trade balance with Sri Lanka during the study period, 1996-2003. The table reveals that India's official export and import with Sri Lanka featured a fluctuating trend during the period under study. In comparison to the volume of export trade, India's import from Sri Lanka was highly negligible. As a result, the trade balance with Sri Lanka was favourable for India during the study period. On the other hand, unofficial trade with Sri Lanka (Sarvanathan 1994), which is carried out both by air and sea, reveals that the contraband trade between India and Sri Lanka is a two-way process. Of the contraband trade, more than 60 per cent is carried out by air and the rest by sea. A number of boats ply between India and Sri Lanka every day for this purpose. The study reveals that in 1991, unofficial export to Sri Lanka from India was US\$ 142.8 million and import was US\$ 121.0 million, while in the same year, official export to Sri Lanka was US\$ 174.5 million and import from Sri Lanka was US\$ 11.5 million. Ultimately, the informal trade with Sri Lanka was more or less balanced but formal trade showed surplus in favour of India.

**Table 7: India's Merchandise Trade with Sri Lanka from 1996-97 to 2002-03
(US\$ million)**

Sl. No.	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03
1. Export	477.41	489.23	437	499.27	640.14	630.89	920.98
2. Annual Growth (%)	——	2.48	-10.65	14.22	28.22	-1.45	45.98
3. % Share in India's Total Export	1.4264	1.4064	1.32	1.36	1.44	1.44	1.75
4. Imports	42.84	30.21	37.68	44.23	45.01	67.38	90.83
5. Annual Growth (%)	——	-29.49	24.73	17.40	1.75	49.71	34.80
6. % Share in India's Total Import	0.1095	0.0728	0.09	0.09	0.09	0.13	0.15
7. Trade Balance	434.57	459.02	399.45	455.04	595.14	563.51	830.16

Source: www.commerce.nic.in. (Accessed on September 7, December 1 and 22, 2005)

What appears from the above analysis is that India's foreign trade suffered a deficit of a high magnitude during the study period, 1991 to 2003. But surprisingly, almost in all the years under study, India's trade balance with all the SAARC member-countries, except a few, registered a surplus of a high magnitude. The study also shows that export from India to the member-countries remarkably increased during the study period. There are two reasons behind this: the unilateral trade reform policies and the policies of increased devaluation of the exchange rate adopted by the government of India. Moreover, it is proved from the analysis that most of the unofficial imports into India from the member-countries comprise goods of a third country.

All the SAARC countries are not on the same economic platform. For example, one cannot draw a parallel between the economic strength of Nepal, Bhutan or Maldives and India. So, going by the objectives of SAARC, it needs to endorse the priorities of action to promote economic co-operation among the member-countries and help to economically strengthen a weaker country. Table 8 reveals the trade-GDP ratio of SAARC member-countries to assess the effect commercial activities among them have had in their economy. It is seen that the trade-GDP ratio increased substantially in almost all the member-countries over the years. In the case of Bangladesh, the trade-GDP ratio, which was 17.22 per cent in 1992, increased to 28.44 per cent in 1998. In India, the trade-GDP ratio went up from 16.13 per cent in 1992 to 20.92 per cent in 1998. During this period, Nepal witnessed a growth of 29.82 per cent to 42.90 per cent. Similarly, in Sri Lanka, it increased from 58.94 per cent in 1992, to 71.14 per cent in 1998. In Pakistan, the ratio decreased from 38.53 per cent in 1992 to 33.75 per cent in 1998. The trend of rising trade-GDP ratio among the member-countries is visible from an analysis of the data in Table 8. As a result, all member-

countries except Pakistan, are enjoying economic benefits from the intra-regional trade.

Table 8: Proportion of Trade in GDP of SAARC Economies

Countries	1990-92	1996-98
Bangladesh	17.22	28.44
India	16.13	20.92
Nepal	29.82	42.90
Pakistan	38.53	33.75
Sri Lanka	58.94	71.74

Source: <http://www.blake.Montclair.edu>. (Accessed on May 2, 2004)

Factors Influencing Trade within SAARC Countries

A regional trading block, created by SAARC to promote effective cooperation at all levels as per its charter, can play an important role in the economic growth and development of the member-countries. In a recent initiative, member-countries of SAARC decided to start the process of transforming SAPTA into SAFTA from January 1, 2006 with an objective to fully implement it between 2009 and 2013 (Nihal 2005). SAFTA was formed to provide opportunities for achieving economic integration in the South Asian region by eliminating the influence of some factors, whether within the realm of SAPTA or SAFTA. Tariff and non-tariff barriers are considered as SAFTA-related factors, while tax structures and transportation costs are considered non-SAFTA related factors.

The imposition of high tariffs on goods pushes traders into the informal channels where they can evade tariffs. Table 9 presents data in the form of percentage of tariff on the value of both primary and manufacturing goods traded by SAARC member-countries. The table shows that tariffs on both primary and manufacturing goods were high in India, Bangladesh and Pakistan. In fact, Bangladesh had the highest tariff on primary goods (73 per cent) and on manufacturing goods (85 per cent), which was followed by Pakistan with 54 per cent for primary goods and 64 per cent for manufacturing goods. India's tariff on primary goods was at 45 per cent and on manufacturing goods 56 per cent. As a result, informal trade flourished within the SAARC region.

A movement from the South Asian Preferential Trade Arrangement (SAPTA) to the South Asian Free Trade Agreement (SAFTA) would mark an important milestone on the road to a South Asian Economic Union, to move gradually to a zero tariff zone from informal trade due to high tariff. India has already signed on free trade agreement with Bhutan, Nepal and Sri Lanka in order to capitalise on the opportunities of free trade for economic development in the region (Pulack, February, 2006). As a result, a large part of informal trade seems to be converting into a formal one.

Table 9: Trade Policy Indicators Early: 1990s

Tariff – Unweighted Average (per cent)		
South Asia	Primary	Manufactures
India	45	56
Pakistan	54	64
Bangladesh	73	85
Sri Lanka	27	26
Nepal	9	19

Source: World Bank (1997): *South Asia's Integration into World Economy*, Washington.

Similarly, the obstruction in the flow of intra-SAARC trade is not only due to the imposition of higher tariffs alone, but also due to the presence of non-tariff barriers, particularly in the form of quantitative restrictions. Table 10 shows how in the early 1990s both India and Bangladesh had the highest non-tariff barrier coverage ratio for primary and manufacturing goods. The table reveals that India had a non-tariff barrier coverage ratio of 72 per cent and 59 per cent on primary and manufacturing goods, respectively. At the same time, Bangladesh had a non-tariff barrier coverage ratio of 55 per cent and 47 per cent on primary and manufacturing goods, respectively. The SAARC member-countries gradually moving towards SAFTA would imply a removal of quantitative restriction on non-tariff barriers.

On August 1, 1998 India, the largest economy in SAARC, unilaterally removed quantitative restrictions on import trade from other SAARC countries, like Bangladesh, Sri Lanka, Nepal, Bhutan, Pakistan and Maldives, for enhancing intra-regional trade complying with the rules of origin principles in the SAARC agreement (Taneja 2001). The country most benefited by this move was Sri Lanka. It has been estimated that on account of the removal of quantitative restrictions (QRs) on 2,000 items by India, in value terms the non-tariff barriers (NTBs) coverage ratio of Sri Lanka has come down to 24.08 per cent, which is followed by Nepal with a coverage ratio of 10.5 per cent. Of course, Pakistan and Bhutan have also equally benefited from the unilateral removal of QRs on goods by India.

Table 10: Trade Policy Indicators (Early 1990s)

Non-Tariff Measures Coverage (per cent)		
South Asia	Primary	Manufactures
India	72	59
Pakistan	7	17
Bangladesh	55	47
Sri Lanka	3	4
Nepal	1	1

Source: World Bank (1997): *South Asia's Integration into World Economy*, Washington.

Tax structures are a non-SAFTA related factor and it differs to quite an extent among the member-countries. So, only abandoning tariff and non-tariff barriers on trade without introducing a uniform tax structure within all the member-countries will not stop informal trade. In this connection, Nepal is a good example. The indirect tax rate in Nepal is remarkably low (Lama 1999). As a result, liberal fiscal policies in Nepal, and the high demand of its industrial goods in India attract industrialists to launch operations there. At the same time, the liberalised Indo-Nepal trade treaty also encourages Indian investors to open industries in Nepal and share the advantage of earning more profit by paying less tariff and domestic tax to the government of Nepal.

Sometimes the government's policy of reservation on the production of goods may encourage informal trade. In India, the government has reservation on the production of 800 items for the small-scale sector. Thus, firms that are producing these items in India cannot create new capacity beyond the labels that are established at the time of policy implementation. As a result, they establish their new setups in Nepal and Sri Lanka. Data on 61 Indian joint ventures in Nepal reveal that 27 per cent were producing items reserved for the small-scale sector in India (Taneja 1998). Thus, these goods produced in Nepal can be freely exported to India. This point indicates that there is a close relationship between the investment pattern, domestic policies and informal trade.

Transportation costs for regional trade is high in South-Asian countries because of high inland transport cost, inefficiencies at ports and shippings and restrictive transport and security procedures. For example, trading activities between India and Bhutan experience major hurdles on account of temporary blockage of roads due to landslides. Similarly, because of the geographical condition of Nepal, building and maintenance of roads in Nepal is very expensive and difficult. As a result, the freight and insurance cost for exporting goods to Nepal is high. The freight and insurance charged in developing countries is six per cent on the value of exporting goods, while in Nepal it is 11 per cent (UNCTAD 1995). As a result, in most of the cases, goods are exported to Nepal by the informal channel, which causes a revenue loss for the concerned countries.

Conclusion

The core issues in this paper have been to evaluate the trend of formal and informal trade between India and other SAARC member-countries during the LPG period. However, on the official account, India has trade surplus with Bangladesh, Maldives, Pakistan, Sri Lanka and trade deficits with Bhutan and Nepal. On unofficial account, India has trade surplus with Bangladesh, Bhutan, Pakistan and Sri Lanka and trade deficit with Nepal. It can be said that India has a balanced trade with its SAARC partners. To arrest revenue loss from informal trade and bring

about a change in the trade balance among the SAARC member-countries, statesmen of the countries concerned have to rethink on factors like tariff and non-tariff barriers, high transportation costs, uniformity of the domestic tax structures and high transaction cost of trade.

Political rows between the member-countries sometimes disturb trade relationships. For example, Islamic parties who are partners in the ruling coalition in Bangladesh consider it their holy duty to oppose Indian investment in Bangladesh for political gain or due to the unresolved issue of sharing of the Ganga water. These have created political misunderstanding between India and Bangladesh. Similarly, foreign terrorist activities, the Kashmir problem and infiltration have been disturbing the trade relationship between India and Pakistan. So, the creation of a healthy bilateral political relationship between India and the other member-countries of SAARC is the precondition for the creation of good trade relationships.

In the globalised economy, Free Trade Area (FTA) agreements like ASEAN (comprising Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand, Cambodia, Laos, Myanmar and Vietnam), NAFTA (embracing the United States, Mexico and Canada), EU (comprising France, Germany, Italy, the United Kingdom, Spain, Belgium, Greece, the Netherlands, Portugal, Austria, Sweden, Finland, Ireland and Luxembourg) and CIS (Russia, Azerbaijan, Belarus, Kazakhtan, Ukraine and Uzbekistan) are considered attractive tools for offering market access through lower tariff, credit lines, facilities to avoid double taxation and provisions for making investments in participating nations. SAFTA started functioning on January 1, 2006 (Dhaka Declaration 2005), with an aim to increase the present level of intra-regional trade from \$ 6 billion to \$ 9.6 billion (Ghatak, February 25, 2006), provided that tariff should be completely eliminated. According to the Associated Chamber of Commerce and Industry of India, the implementation of SAFTA will boost India's trade from its present level of Rs 25,000 crore to Rs 50,000 crore by 2010 (*The Hindu Business Line*, January, 2006). SAFTA is currently focussed on the trading of goods and overlooking trading in services which may contribute to 40-50 per cent of GDP (Michael Carter 2006). So, the agenda of SAFTA is to cover the service trade in the intra-regional trade. It is interesting to note that there is a rapidly increasing demand within the SAARC member-countries to free up the trade in services like tourism, health, education, etc. Only in India, do 32 per cent of the total exports belong to the services trade (Michael Carter 2006).

The benefits derived from the implementation of SAFTA should be seen to be equitably shared by both the economically strong and poor member-countries. Economically backward countries that are highly dependent on trade revenue may suffer a lot from trade liberalisation. So, it would be a wise decision on the part of SAARC member-countries to establish a Trade Compensation Fund to compensate economically backward, smaller member-countries for their loss of trade revenue

with the implementation of SAFTA. Being the largest economy in the SAARC region, India should come forward with proper suggestions to make a balanced economic zone in South Asia. Speaking at a seminar at the 13th SAARC Summit in Dhaka, the Indian Foreign Secretary rightly commented, "The biggest effort has to come from our country. India, the largest economy in the region witnessing rapid economic growth, can be looked upon as an economy in whose prosperity there can be stakes for everyone. It is, therefore, important for the country to factor in benefits for the neighbouring countries." (*The Hindu Business Line*, December 2005).

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Socio-Economic Mobility through Sericulture

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Abstract

Sericulture being a labour-intensive and income-generative agro-industry, it has been instrumental in bringing about socio-economic mobility among different sections of society and assuming increasing significance in the rural development paradigm in the past few decades. The present paper, based on intensive studies in some of the sericulture villages in Tamil Nadu, looks into the concept of socio-economic mobility and identifies the groups undergoing mobility in the context of sericulture. The paper also specifically examines the extent of socio-economic mobility among the three disadvantaged categories in the rural context, based on class, caste and gender, exploring the social relevance of sericulture in the process of rural development, with an emphasis on the need to identify the appropriate interventions and strategic approaches in making sericulture one of the sustainable forces of rural development in India.

Introduction

Agro-industries have been playing a major role in the development agenda of India in the post-Independence era. Sericulture, as an agro-industry, has been gaining momentum in the past few decades for its labour-intensive and income-generative nature. The employment potentiality and the profitability of sericulture have been well established by many studies (e.g., Acharya 1993; Hanumappa 1986; Rajapurohit and Govindaraju 1986). Poor, women, landless labourers and the scheduled communities are considered to be the main producers of silk, an aspect that is seen to be appealing to both the government and NGOs — Indian and international, and small and large — seeking to use silk production for the benefit of such people (Shekhar and Kumar 1991, as referred by Charsley 1998). However, while its impact on rural society and its contribution to the socio-economic mobility of rural people is well recognised, not all sections of villagers have equal opportunities to take up sericulture nor is its impact on socio-economic mobility across different sections uniform.

The present paper takes a look at the nature of socio-economic mobility and its varying manifestations, due to the intervention of sericulture, on different sections of the people, in general, and on the weaker sections, in particular. The

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paper focuses on the three disadvantaged categories on the basis of class, caste and gender to understand the equity objectives and the social relevance of sericulture for rural development. The paper concludes that with appropriate interventions and strategic approaches, sericulture enterprise would go a long way in serving as a sustainable force of rural development in India.

Socio-Economic Mobility

Social mobility is said to be related to the identification of the status of a person (Ram 2003). It necessarily implies recognition of one's acquired status in the social hierarchy. On the other hand, socio-economic mobility is a wider term, which could be discerned in terms of mobility in labour status, economic status and social status. The labour status could be determined by the nature of one's disposition to wage labour. The economic status could be discerned from the nature of economic freedom one enjoys and one's standard of living. The social status is manifested from the nature and intensity of one's interaction and from the extent of one's standing in the wider society. On the whole, socio-economic mobility manifests itself at different levels, ultimately getting translated into better living standards, improved quality of life and wider social recognition.

With concerted and continuous attempts, since the beginning of 1990s, coinciding with the implementation of the National Sericulture Project, to reach out to the weaker sections of society, it has been observed that sericulture, as an agro-industry, has facilitated in enhancing social identity and in achieving a significant degree of socio-economic mobility (Gregory 2003 and 2006). In this context, it would be appropriate to examine the process of socio-economic mobility through different levels namely, labour status, economic status and social status, and identify the different sections involved and the extent of their mobility in the process.

Labour Status: In a village context, one of the key determinants of one's status, besides caste and economic standing, is whether or not the members of a household are engaged in wage labour, as one's disposition to wage labour could vary from one extreme to another, leading to differential labour status. Thus, at one extreme, there are households which totally depend on wage labour for a livelihood, while on the other extreme, there are also households, which are entirely dependent on hired labour for agriculture operations. There can be varying categories falling in between, as if in a continuum. For instance, there are households which neither hire labourers nor engage themselves in wage labour. Such households carry out their land-based operations, whether it is agriculture or sericulture or both, by using family labour alone.

There are also other households which get the work done with their members engaging in exchange labour. In this way, the households are able to meet the extra labour requirements through mutual support by neither engaging any

wage labour nor reducing themselves to the status of wage labour. There are also households which make various combinations of differential labour dispositions. For instance, it is not uncommon to come across households who hire out or hire in part of the labour, or supplement family labour with exchange labour, etc. In certain cases, it may not be uncommon to come across households who might have been forced to resort to exchange labour during times of labour scarcity. They may hire a wage labourer, if available, to represent them in exchange of their labour. In this way, they uphold their status without reducing themselves to the status of hiring out their labour even if it is only exchange labour. All these realities bring out the differential manifestations of one's labour status. Those who solely manage with family labour and those who go for exchange labour fall at successive stages in the labour-continuum, representing the path of mobility in labour status.

Wage labourers normally belong to landless categories or to the marginal or small land-holding categories. In the case of the latter two categories, they engage in wage labour, especially when they are left with inadequate irrigation resources. How could sericulture bring mobility to these labour classes? The new opportunity, in the form of sericulture, is seen facilitating some households, especially of the small and marginal land-holding categories, to become free from the wage labour status. This is possible while they fruitfully make use of their labour in self-dependent enterprise with a minimum level of disguised employment.

As for the landless labour categories, the higher and intensive labour requirements in sericulture, especially in certain stages of its operation, naturally open up greater labour opportunities. Its dependence on wage labour is very much apparent, especially in the context of less availability of family labour, mainly due to the predominance of nuclear families (Gregory 1994c). Moreover, with its skilful nature, particularly with reference to some of its activities, economic implications and wider interactional potential, the very act of involving in sericulture assumes a kind of status among labourers, though only in a relative sense. As there are multiple labour types prevalent in rural areas, sericulture makes the best use of the labour types that provide labour assurance to sericulturists (*ibid.* 371). The status of labourers is naturally enhanced after they become skilled in sericulture.

Mobility also occurs in wage-labour families, especially among marginal land-holders who were earlier involved in wage labour and are now into sericulture, thus improving their labour status. This happens eventually, initially by reducing their dependency on wage labour, and in the course of time, by totally freeing themselves from wage labour. At a later stage, they even engage wage labour to meet their own excess labour requirements, as they start consolidating their gain in sericulture. There are many cases from the marginal and small categories in every sericulture area that have experienced mobility in the labour status, after successfully adopting sericulture. Mobility in labour status makes a world of difference, paving the way for higher levels of mobility.

Economic Status: While the labour status itself is an indicator of one's economic status, the latter is further manifested in the forms of freedom from indebtedness and attainment of self-sufficiency, access to resources, better living conditions, saving and investment, and asset accumulation, corresponding relatively at successive stages of their mobility.

In rural India, indebtedness is still a significant phenomenon, which is, many a times, the sole factor in forcing someone, for instance, to get engaged in contract labour, and which could be a clear manifestation of one's lack of economic freedom. Freedom from this bondage definitely goes a long way in enhancing one's status in society. It is also one of the significant indicators in the process of one's mobility status, which could be regarded as an important step, on the road to economic mobility. Consequently, it creates self-confidence, and provides the necessary economic base to the person concerned to be able to stand on one's own feet. This is evident from the cases of some of the former contract labourers, belonging to the scheduled caste community, who have later successfully taken up sericulture on lease with the help of their former patrons, become free from all bondage, and gained confidence to stand on one's own feet.

Having attained basic economic freedom, such individuals climb up the ladder further with confidence, by improving their living conditions, and accruing and consolidating one's assets that would enhance one's social standing. Sometimes, it finds expression by way of increasing the land potentiality by tapping the irrigation capacity to its maximum. It is also expressed through acquiring lands, expanding the existing enterprises, accruing gold ornaments, lending money, or investing in savings and financial enterprises. There is simultaneously a change in their dress pattern and food habits. The dwelling place undergoes change to befit the new status. The living standard improves with the acquisition of consumer durables and prestige goods. It is not uncommon for sericulturists in villages to own two-wheelers and television sets, considered a luxury even during the mid-'90s, by rural standards. There are quite a few cases in different clusters of sericulturists having constructed decent houses.

All these depend on the individual's extent of economic ability and priorities. Mobility to this extent ensures one access to many of the resources. The forces of production come within one's reach, as one begins to occupy a competitive position in the relations of production. This further allows the person to have greater access to knowledge and information.

Social Status: Once a person, who had been suffering from a poor social identity due to social and economic hardships, is already on the ladder of mobility with higher labour and increasing economic status, the first step such a person achieves personally is self-confidence with self-realisation. When one acquires the resource capability and self-confidence to lead a modest living, the person makes further

attempts to improve the social identity by displaying the ability to expand the social networks and interaction, and asserting his/her social existence. While this assertion brings better recognition and freedom within the family, society too begins to give better recognition to his/her social standing. This is very much evident in the case of those, who have been highly successful in sericulture. Senior government officials would occasionally visit sericulture villages in department vehicles during the implementation of the National Sericulture Project (NSP) in the early '90s. The extension staff would sometimes insist on them visiting the sericulturists of different hamlets that come under their jurisdiction. The sole reason for this was that it gave recognition to the existing sericulturists and a motivation for potential ones.

Prospective Groups of Mobility

Not all sections of people in a village have equal opportunities to adopt sericulture. Nevertheless, in the rural context, sericulture could become beneficial not merely to those who adopt it but also to those who benefit out of it even indirectly, as in the case of labourers. Regarding the employment prospects of sericulture for the rural population, Sinha (1989: 158) says that about 90 per cent of the employment in sericulture goes either to the landless and marginal farming families that hire out their labour, or to sericulture families. This is because, as he claims, silk production activities are all in the informal sector. Even though sericulture is accessible to all sections of rural society, the nature of its adoption, and the extent to which it has been beneficial and its impact, vary across different sections. Charsely (1982: 94-9) conceives two categories of people, one category who considers sericulture a 'practice' and the other who consider it a 'business'.

Based on the resources and returns, sericulturists themselves could be seen as belonging to either 'subsistent', 'intermediate' or 'affluent' categories. Those who belong to the 'subsistent' category, practice sericulture on a small scale, with minimum resources and live largely on that income. The intermediate category has relatively better access to resources, and, even if they cultivate other crops, their main attention is on sericulture. For them, the income from sericulture means a lot, in terms of a decent living. For the affluent category of sericulturists, sericulture is perceived only as a commercial enterprise, similar to the cultivation of any cash crop on a large scale. The first and the last categories approximately correspond to marginal and large farmers respectively. Small and medium farmers may correspond to the middle category or even the first and the third categories respectively, depending on their extent of irrigational and other material resources.

Sericulturists could also be categorised as 'clientele', 'progressive' and 'capitalist', based on the scale of operation, intensity of involvement and motivational factors. Capitalist sericulturists are those who adopt sericulture on a large scale, on commercial terms, making use of the resources to maximum advantage. Progressive sericulturists take it up on a moderate scale and do it successfully.

Clientele sericulturists practice sericulture on a smaller scale and look for models and guidance mostly from the progressive counterparts. As is the case with the earlier categorisation, here too, it can be seen that marginal and small farmers generally fall in the clientele category; medium farmers in the progressive category; and the large ones in the capitalist category. However, it is not uncommon to find some of these categories overlapping with each other, as for instance, small farmers in one of the sericulture clusters were found to be manifesting the characteristics of progressive sericulturists, mainly due to their greater access to irrigation. All these categories of farmers are found in each sericulture area.

From the point of view of mobility, the first two groups of sericulturists in both the categories, namely subsistent and intermediate, and clientele and progressive need greater attention. In more than one way, the respective groups in each categorisation correspond with each other and both these groups attribute their mobility to sericulture. The progressives, who also correspond to intermediates, constitute a separate category of their own, in terms of reaping the maximum benefits from sericulture.

Progressive Sericulturists

Progressive sericulturists are those who readily accept the advanced packages of technology, are innovative in their adoption, excel in their performance, and serve as models and prototypes for other sericulturists. For the same reason, they have greater access to government officials and the extension network. In a way, the relationship between progressive sericulturists and the extension network is mutually reinforcing in terms of the advantages and benefits accrued to their respective positions. This is in spite of the fact that the need for extension service is minimal for established and progressive sericulturists (Gregory 1993).

According to Keesing (1990), 'progressives are likely to be those who have the greatest access to resources and power, and who can use them to expand and capitalise on their position of advantage'. In his opinion, it is these progressives, 'who seize on green revolution technology, avail themselves of loans, and make themselves agents and brokers of change to the community'. Sericulture, however, has proved that even the marginal-resource categories, with due motivation and sincere striving, could climb up in the ladder, and become progressive sericulturists themselves, though the most likely group to become progressives are the medium categories. When someone proves to be a progressive sericulturist, notwithstanding one's land-holding status, one naturally begins to have greater access to officials and the extension network. He/she also shows consistent performance and considerable economic and social mobility. Most of the progressive sericulturists have been long-time sericulturists, with an experience of more than 10 years. Their performance in sericulture has brought them reputation and respect within the village. They also become the carriers of some of the urban features to villages.

However, as progressive sericulturists gain experience and stability, they gradually turn into 'gentleman sericulturists', reducing their direct involvement in sericulture and increase the use of hired or contract labour, nevertheless under their direct supervision. In such cases, the participation of women members of the family is also reduced, though not totally. Even this is seen as a manifestation of mobility. As a step further, they either turn into capitalist sericulturists or give it up entirely to plunge into some other lucrative business.

Class-based Mobility: The Poor

For Mencher (1978), economic development is 'a process of steady rise in the material conditions of living of the vast majority of the population, instead of the rise confined to only one sector'. She continues to say that 'Indian villages are still populated with weaker sections who hardly gain anything from most of the development programmes'. In the present context, the concern of mobility then becomes more relevant and significant for three disadvantaged categories, one based on class, another on caste and the third on gender. It would be worth understanding the role of sericulture in the process of mobility of these categories and its social relevance for rural society.

The term 'poor' basically refers to the economically vulnerable section of society. Within these strata, there could be varying categories depending on the level of accessibility to property and resources. In a village context, the poor mostly comprise agricultural wage labourers most of whom are landless and marginal, and small land-holders (Gregory 2000). How could sericulture become relevant to them? What role does or can sericulture play in facilitating social mobility, and thereby enhancing their social identity? Sericulture could become relevant to the poor either directly when they become sericulturists, or indirectly, by involving themselves in sericulture as lessees, shareholders or wage labourers.

More than half of the sericulturists in most of the studied sericulture villages in Tamil Nadu belong to the marginal and small land-holding categories. How have they fared in their social mobility? There is little doubt that sericulture has been an asset for the poor (Charsley 1998). The impact of sericulture is definitely manifested among the marginal and small land-holding categories, especially with the initial benefits of improving their labour status and stabilising their economic life, but with varying degrees, depending on their extent of resource accessibility. Quite a few of those who earlier depended on wage labour to supplement their agriculture income have become free from the status of wage labour and have moved up to the level of engaging wage labour. This, in their opinion, has reduced the strain of hard work and the 'patronial' dependency on the one hand, and enhanced their social standing on the other. Many of them have also improved their living standard in terms of food habits, dress pattern, etc., indicating their social mobility. Given the opportunity and basic resource-accessibility, it is this group

that has the highest motivation and commitment in exacting the maximum returns from sericulture. In other words, those who have limited irrigated land and adopt a greater portion of it for sericulture tend to involve themselves more in the activity and reap good results.

However, the adoption of sericulture by marginal farmers is proportionately less as compared to the higher land-holding categories. This is mainly due to certain limitations that they face as the following:

1. Lack of suitable soil for mulberry cultivation;
2. Lack of or limited source of irrigation;
3. Lack of adequate space for rearing;
4. Lack of capital for initial investment to establish the mulberry garden and the rearing infrastructure;
5. Lack of access to or of timely availability of credit;
6. Lack of access to information and knowledge; and
7. Lack of alternative sources of subsistence in case of crop failure.

Thus, those who face constraints are not much different from the landless categories, except in their accessibility to land. Can sericulture make any difference in their lives? They cannot directly benefit from sericulture as they face the above constraints. The other alternatives are that either they be extended external help to overcome some of these constraints or they have to go for land-lease or share-crop.

There are a few who have gone for sericulture after tapping their irrigation potentiality either through their own resources or through external credits mostly of government agencies, and benefited from it. Sericulture is seen as a high-risk enterprise involving many uncertainties (Charsely 1982: 96-97; Gregory 1994b: 157). Considering this factor, farmers with poor resources lack the self-confidence to go for a lease-in arrangement. Instead, they would prefer to work as wage labour as they are sure of at least some income. In spite of this, a few have adopted sericulture through lease-lands or share-cropping, which, in turn, have helped them in achieving certain levels of socio-economic mobility. There are very few, however, who come forward to lease out their lands, and that too only because of other compulsions or no other alternatives. For instance, some of them have leased out their lands after they themselves had unsuccessfully attempted it earlier, and now find leasing out the only alternative to retain their mulberry. Some of those who have leased out their lands have done so only to those who, they think, can do sericulture well. There are a few others, who have leased out their mulberry land on a yearly basis either to their own relatives or to a former labour client. There are some others, especially of the larger land-holding categories who want to benefit from sericulture on the strength of the material resources available with them. Their entire labour resource is external. They prefer to go for share-crop for the obvious reason that the labour-commitment is more in such arrangement than otherwise, as

labourers themselves have a share in the returns. However, there are not many instances of such cases.

As for landless labourers, sericulturists are able to make use of the differential labour types to sustain in sericulture (Gregory 1994c). Sericulture has been an attractive enterprise for labourers and some of the labour types, like contract labourers, are well used by most of the established sericulturists because of their labour assurance and work commitment. But now they do not like to continue any more in their present status but for their financial compulsions. In spite of their skill in sericulture, it is the economic constraints that come in their way of taking up sericulture. There are a few cases of former sericulture-based regular contract labourers, who have now taken up sericulture on leased land and do fairly well. This probably indicates that if only the financial constraints and the basic infrastructure are taken care of, could this group become the right target for sericulture development among the weakest of the weaker sections. However, though it may show some way out to overcome some of the constraints, neither the accessibility to such solutions is readily available nor the solutions themselves are sustainable unless accompanied by a focused approach and adequate institutional support.

State sericulture departments, including that of Tamil Nadu, have been evolving certain schemes to extend viable support to the weaker sections, especially the scheduled castes. One such scheme envisaged the intervention of NGOs to take sericulture to the poor. This was with the objective of making sericulture an effective alternative source of income for the poor. However, this did not produce the intended results, as there were many constraints and shortcomings in the process of implementation (Gregory *et al.*, 1996). In the rural scenario, a majority of the poorer sections, most of whom are also landless, generally belong to the scheduled castes. Hence, they do require special attention and a selective approach.

Caste-based Mobility: The Scheduled Castes

Scheduled castes, though constitutionally present a single category and stand apart as one group in the minds of the non-scheduled castes, in reality they do not form a homogenous entity. The different sub-castes maintain a social distance with one another, and generally those at a higher stratum are relatively better off than those at a lower level. It is reflected even in the nature of their participation and performance in sericulture. This has to be seen especially in the context of special programmes, incorporating special incentives and credit subsidies, formulated by the Departments of Sericulture for the participation of those from the scheduled castes.

The participation of the scheduled castes in sericulture is very meagre as most of them have to face many of those constraints outlined earlier, with the major constraint being the lack of access to land. Nevertheless, a few of them have taken it up. Their performance, however, is not satisfactory, except in a few cases. Those

who are relatively more successful than their other kin would have worked at a non-SC sericulturist farm as a permanent contract labourer earlier. They also continue to have a working interaction with their former patrons, even after getting into sericulture on their own.

In one of the villages, there were seven SC sericulturists who had taken it up under a special scheme for scheduled caste sericulturists. Unfortunately, six of them had given it up within a year or so, while the only survivor had been a former permanent contract labourer attached to a sericulture household and primary involved in sericulture activities. All the SC drop-outs in the village belong to a sub-caste, which is among the higher sub-castes of SCs. All the drop-outs possess cultivable and irrigated lands but do not have any prior experience in sericulture. Moreover, the drop-outs neither had an intentional motivation, nor did they possess adequate capability to take up sericulture. Land being the major requirement for sericulture, they were persuaded to take up sericulture by extension officials only to meet their target of identifying SC sericulturists. They, in turn, took up sericulture mainly with the lure of subsidised credit and other material benefits.

In contrast, the only surviving sericulturist belongs to another sub-caste, positioned at the lower strata among SCs. He has no land but has long years of sericulture experience as a contract labourer. He took it up on his own and continues to have a working relationship with his former patron while he, in turn, extends labour support, whenever his former patron faces a crisis. He works on leased land and has been largely successful. Such cases are not uncommon in different sericulture villages.

In general, inadequate preparation, poor motivation and lack of proper infrastructure have resulted in poor returns. In addition, the promised credit is too meagre and reaches too late to the beneficiaries, who, having already lost a few crops, are just waiting to accrue the entire amount of credit, only to give up sericulture after that.

In the opinion of non-SC sericulturists, SCs are not able to cope with the labour-intensive nature of sericulture which brings with it work ethics like strong motivation, total commitment and the ability to take risks. Such a view could be based on selective perception and pre-conceived notions, and it could even be true of some of non-SC sericulturists. It has been noted that some SC sericulturists at times take up wage labour even at the cost of their own rearing. They consider the money they earn through daily wage more valuable than what comes through sericulture after a month or so. As Keesing (1990: 59) remarks, 'what presents itself as tradition-boundness and superstition in the eyes of the development administrator is likely to be a grim realism, given the economic situation of less advantaged villagers'.

The few SC sericulturists who have sustained for long realise that they have achieved a better status today than earlier. Moreover, they enjoy a better

social identity than their non-sericulture kin. There is also greater social interaction and exposure, and more confidence in themselves and their ability. Nevertheless, barring a few exceptions, they are not at their best in garnishing the maximum utilisation of the enterprise. This is because they still possess certain external handicaps, pertaining to their access to infrastructure, and internal handicaps, concerning self-perception and the attitude of others towards them. There is no dispute over the relevance of sericulture for the scheduled castes. Their initiation into sericulture, however, requires considerable preparation, adequate attention and appropriate follow-up action. This is much more pertinent since there is a great amount of pessimism and bias, especially at the lower functionaries and among non-SCs, in bringing SCs into the sericulture fold.

Gender-based Mobility: Women

Involving women in development plans and programmes is essential both for increasing the effectiveness of development projects in rural areas and for achieving equity within the household. Women's involvement in sericulture is double-fold, namely, for the development of the industry, and for increasing the status of women. How far this objective has been realised as for sericulture is concerned?

Sericulture being a household activity, the involvement of family labour and the contribution of women in carrying out the sericulture activity is widely accepted and recognised (Acharya 1994; Gregory 1994a; Karanth 1995: 112). The evidence from the different sericulture villages in Tamil Nadu has clearly demonstrated that sericulture involves more female labour than male. The question is how skilled they are and how crucial their activities are in the perception of the sericulturists. Looking at the division of labour in sericulture, their activities in sericulture are hardly considered highly skilled. Moreover, the female part of the family labour is relatively lower than that of men. Further, female labour continues to be cheaper in the rural labour market, while the value of male labour is sometimes even three-fold, irrespective of the work. Hence, hired female labour becomes handy for filling in the female labour gap of sericulture within the family.

There have been efforts to make women become proficient with sericulture so that they could manage the entire sericulture activity on their own. The intended objective of such efforts has also been to expose women to a productive employment, which would in turn reflect in their status and position in the family and society. Such efforts do not always achieve the intended results due to some internal contradictions and inherent limitations. In sericulture households, while the involvement of women in sericulture is highly noticed, the extent of their involvement varies. For instance, the extent of involvement of family female labour in sericulture is related to the number of women available within the family, and also on their relationship with the main sericulturists, who, in most instances, happen to

be male (Gregory 1994a). With the higher tendency of adopting sericulture among nuclear families, and with household chores continuing to be the sole responsibility of women, it would be highly demanding on women, especially in nuclear families and where there is only one adult woman in the family, as their involvement in sericulture becomes an addition to their involvement in household and agriculture activities. For this reason, the propositions for their greater involvement in sericulture, especially as main sericulturists, sometimes are set aside by women themselves as they would be overloaded with work. For the same reason, they do not want to know more about sericulture and even consciously decide not to take an active role in it. This is not only for the higher workload, but also for the fear of the risk involved in it, and of losing their men's longer presence within the household premises, at least under the pretext of sericulture.

As for the status mobility, the situation is varied. No drastic change is visible among women in the context of sericulture. This is mainly because the hold of economic factors is still in the hands of men. It is to be pointed out, however, that the value of family female labour is more realised in sericulture than in traditional agriculture. For this reason, women who show greater inclination to shoulder the responsibility of sericulture get recognition, which is reflected in the interactional relationship and in making crucial decisions. On the other hand, there are also cases of the opposite reaction where the husband does not see enough support coming from his wife, even if the poor sericulture participation is for health reasons. The situation is aggravated when the husband is also a witness to the greater involvement of family women in sericulture in the households of his brothers. As could be discerned from such an analysis, as the nature and intensity of participation and involvement of women in sericulture vary, the same is reflected in their status and recognition (Gregory 1994a).

Conclusion

The above analysis brings out the differential levels of manifestation of socio-economic mobility among different sections of rural people who have adopted or are associated with sericulture. The impact of sericulture, with a high degree of change in living conditions, has been highly evident among progressive sericulturists, who mostly, but not always, belong to the medium land-holder category. The marginal and small land-holding categories, too, experience the impact of sericulture and have been on the path of socio-economic mobility by improving their labour status and stabilising their economic life.

The rural poor, mainly comprising landless labourers and marginal land-holders, reap the benefits of sericulture, though marginally, either directly by adopting sericulture, if equipped with the necessary resources, or indirectly by involving themselves as lessees, shareholders or labourers in sericulture. A majority of marginal land-holding sericulturists, who had earlier depended upon wage labour

to supplement their agriculture income, have even moved up to the level of hiring wage labour, after the successful adoption of sericulture. However, the lower proportion of marginal farmers as sericulturists, as compared to that of higher land-owning classes, is mainly found to be due to certain resource constraints, which put most of them at the same disadvantaged position as of the landless, except for their access to land. The poor participation of the scheduled castes in sericulture is also due to similar constraints as that of the poor, in addition to other handicaps like low self-confidence and self-esteem, born out of the social stigma that they suffer. Among all of them, whoever is able to adopt sericulture and relatively sustain in it for a considerable period do manifest a better living status and social identity than non-sericulturists among them. With regard to women, though female labour requirement is more in sericulture, their activities in sericulture are hardly perceived to be highly-skilled. Nevertheless, the value of family female labour is more realised in sericulture than in traditional agriculture, while those who shoulder the sericulture responsibility naturally get recognition that is reflected in crucial decision making. Thus, sericulture, as an agro-industry, undoubtedly proves to be a viable strategy of rural development with equity objectives, with varying impact and implications for different sections of the society in general, and the weaker sections, in particular. Appropriate interventions and strategic approaches would go a long way in converting this strategy as one of the sustainable forces of rural development in India.

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Inter-state Growth Inequalities in India: Pre- and Post-reform Period

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Abstract

Regional disparities continue to haunt the policy makers worldwide as well as India. In fact, at certain times, the issue has become explosive warranting immediate attention from the policy makers. A number of attempts have been made by the government as well as individual researchers to understand the study of regional dynamics. The present study is another such attempt that tries to analyse the regional disparities in India before and after the reforms. The investment pattern – governments, financial institutions and Foreign Direct Investment (FDI) has been found to be perpetuating regional disparities. This has influenced and been influenced by the level of infrastructure development across the state, which in turn follows the general development pattern. Given such a scenario, the study recommends for a continued additional support to the backward regions to bring them on par with, at least, the average rate of growth.

Introduction

Regional inequality continues to be a matter of grave concern among policy makers and researchers. The federal structure of polity and recently emerging coalition politics with regional parties having a strong influence on policy making, which necessitates studies exploring the nature and extent of regional imbalances. A plethora of studies have analysed the levels, trends and causes of such inequalities in India (see, among others, Das and Barua 1996; Ghosh, Marjit and Neogi 1998; Rao *et al* 1999; Dasgupta *et al* 2000; Ric Shand and Bhide 2000; Nagaraj, Varadouski and Veganzones 2000; Kalirajan and Takihiro 2002; Shetty 2003; Bhattacharya and Shaktivel 2004).

Doubling the rate of growth of any region is not an easy task. Although the simplest growth models focus on investment as the critical determinant of growth, the efficiency of resource use is as equally important as the level of investment. Efficiency, in turn, depends upon many factors such as the availability

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and quality of infrastructure, the economic policy environment, the level of human resource development and the quality of governance. Ideally, the observed differences in growth across states could be explained in terms of differences in these and other causal factors. Based on such an analysis, the critical areas in each state where policy can stimulate the determinants of growth or help to remove the constraints which impede growth can be identified. Not enough work has been done in this area at the level of individual states, but some broad generalisations can be made with respect to: i) investment and growth, and ii) the level of infrastructure and growth.

In India, resource flows through the Finance Commission and Planning Commission account for a substantial share of a state's resources and these affect growth rates. However, an important aspect of the devolution of central tax revenues under Finance Commission dispensation is that it has an in-built bias in favour of fiscally weak states. Further, the distribution of plan assistance to the states administered by the Planning Commission also has in-built bias in favour of backward states. In fact, these transfers are found to be progressive in reducing regional disparities (Rao 2000). An attempt is made here to analyse the investment pattern in a state and its impact on regional disparities.

The present paper attempts to estimate the levels and trends in regional inequalities for the major 17 states of India for the 20-year period — 1980-81 to 2000-01. The Per Capita Net State Domestic Product (PCNSDP) is the major indicator of regional inequalities. The secondary data has been taken from standard publications. The paper is organised as follows: the next section discusses the method of obtaining comparable data series; the third section deals with the nature of regional imbalances across the major states of India in terms of levels and growth of PCNSDP; the fourth section analyses the investment flow – plan, private and FDI – across the states and its impact on regional disparities; the fifth section compares the infrastructure development across the states and its impact on regional inequality; the sixth section undertakes regression analysis of determinants of inter-state disparities; and in the final section the paper is summarised and a few policy conclusions are offered.

Adjustment of Income Data and Methodology

The CSO has revised the base year from 1980-81 to 1993-94 and the new system of national accounting is being used. Hence the earlier studies on the issue, viz., Dholakia 1985; Marjit and Mitra 1996; Dasgupta *et al* 2000, among others, cannot be used for comparisons. But, any comparison in income levels and growth rates, based on the two series (1980-81 base series up to 1992-93 and 19993-94 base series there on wards), does not yield the correct trends (Bhattacharya and Sakthivel 2004). Therefore, before analysing the level and trends in income disparities a

comparable income series with a single base year needs to be evolved. Whereas the CSO has published national accounts data for earlier years with the new base year (CSO 2001), to develop the same at the state level, an elaborate exercise was carried out.

Firstly, considering the SDP for 1993-94 (1980-81 series) as 100, the index of SDP was worked out backwards till 1980-81, for all states and sectors. And in the second step, the same indices were applied to the 1993-94 SDP of the new series – sectoral as well as state-wise. Thus, a new revised series of SDP with 1993-94 as the base year was worked out and linked to the series published by the CSO for later years, making the series comparable from 1980-81 to 2000-01. Implicitly, by assumption, sectoral composition, sectoral growth and the weighting pattern of the new series is applied to the old series. Further, mid-year population estimates were used to compute per capita SDP. However, the methodology is not completely foolproof as it blindly assigns weights and prices of the new series to the old one. Moreover the limitations of the SDP data, as have been documented in the literature, (see *inter alia*, Bhattacharya and Sakthivel 2004) are left unaddressed. These weaknesses of the data limit the exactness of the analysis. Nonetheless, it is advancement over the earlier studies. The other data are collected from the publications of the Central Statistical Organisation, CMIE and other government agencies.

Nature and Extent of Regional Inequality in India

The data presented in Table 1 exhibits that the overall growth has been quite impressive and has accelerated in the recent years. However, barring a few exceptions like Haryana in the developed category and Rajasthan in the backward category, the growth rates in NSDP are such as to perpetuate inter-state disparities. As observed, the CV of growth rates has increased. More so, reforms seem to have favoured better off regions which is also reflected in the deceleration of growth in all the low-income states except Madhya Pradesh and Jammu and Kashmir. An interesting observation is the deceleration in the growth of Punjab and Haryana, which might be due to the higher share of agriculture in their NSDPs.

The data in Table 1 also reveal that on an average PCI has grown at less than three per cent per annum for the period 1980-81 to 2000-01. The growth of PCNSDP, too, has accelerated from 2.56 per cent per annum in the first decade to 3.25 per cent per annum in the second decade. For the 21-year period, Tamil Nadu records the highest growth rate of 4.74 per cent per annum, followed by Karnataka (4.27 per cent). Other states to record higher growth are Gujarat (3.86 per cent), Rajasthan and Kerala (3.77 per cent each), Himachal Pradesh and West Bengal (3.52 per cent each), Haryana (3.27 per cent) and Punjab (2.87 per cent). On the other hand, PCNSDP of Bihar, Jammu and Kashmir and Assam did not grow even at one

Table 1: Growth Rates in NSDP and PCNSDP
(At constant 1993-94 prices, per cent per annum)

States\ Period	Growth of NSDP			Levels of PCNSDP (Rs)			Growth Rates of PCNSDP		
	1980-81	1991-92	1980-81	1980-81	1990-91	2000-2001	1980-81	1991-92	1980-81
	to	to	to				to	to	to
1990-91	2000-2001	2000-2001	1990-91	2000-2001	2000-2001	1990-91	2000-2001	2000-2001	
Andhra Pradesh	4.25	5.48	4.62	5470	7050	9982	1.93	3.99	2.68
Assam	3.32	2.00	2.96	4611	5543	5867	1.14	0.34	0.90
Bihar	4.77	3.18	2.79	3363	4391	4087	2.59	0.81	0.59
Gujarat	4.87	6.65	5.80	6607	9022	12975	2.88	4.83	3.86
Haryana	6.55	5.15	5.66	7549	11175	14331	4.01	3.07	3.27
Himachal Pradesh	4.88	6.29	5.40	5760	7578	10942	2.96	4.53	3.52
Jammu and Kashmir	2.16	4.50	3.36	6518	6557	7383	-0.36	1.67	0.60
Karnataka	5.20	7.40	6.15	5004	6709	11902	3.12	5.64	4.27
Kerala	3.15	5.89	5.10	5635	6786	10627	1.71	4.69	3.77
Madhya Pradesh	4.18	4.51	4.44	4260	5376	5760	1.80	2.78	2.34
Maharashtra	5.98	6.19	6.61	8754	12396	18166	3.53	2.34	3.01
Orissa	3.95	2.78	3.12	4066	4282	5187	2.14	1.39	1.43
Punjab	5.38	4.89	4.81	8450	11785	15390	3.46	2.95	2.87
Rajasthan	6.57	6.56	6.32	4284	6812	7937	3.94	3.87	3.77
Tamil Nadu	5.33	6.16	6.06	5298	7911	12779	3.76	5.11	4.74
Uttar Pradesh	4.95	3.81	4.17	3817	4936	5770	2.52	2.04	2.21
West Bengal	4.59	6.97	5.61	4984	6028	9778	2.33	5.17	3.52
All India	5.52	6.31	5.68	5352	7321	10254	3.79	4.22	3.46
Average	4.71	5.20	4.88	5555	7314	9933	2.56	3.25	2.79
CV (%) 17 states	24.68	29.91	25.43	28.32	33.76	40.43	44.05	50.48	45.78

Source: Computed from CSO, Various issues.

per cent during the same period. While Orissa recorded 1.43 per cent growth in its PCNSDP, Uttar Pradesh (2.21 per cent), Madhya Pradesh (2.34 per cent) and Andhra Pradesh (2.68 per cent) did not grow even at the average growth rate.

It should be observed across the decades that nine states, viz., Andhra Pradesh, Gujarat, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu and West Bengal improved their growth in PCNSDP during 1991-92 to 2000-01, as compared to 1980-81 to 1990-91. However, the acceleration in Jammu and Kashmir is insignificant and had experienced negative growth in the first decade.

In the first decade, the nine states of Bihar, Gujarat, Haryana, Himachal Pradesh, Karnataka, Maharashtra, Punjab, Rajasthan and Tamil Nadu recorded higher than average growth in PCNSDP. But in the second decade due to reduced growth in NSDP, states like Bihar, Haryana and Punjab experienced lower than average growth in PCNSDP. Jammu and Kashmir, Madhya Pradesh and Maharashtra, although experienced acceleration in NSDP, it was not enough to overcome the growth in population, hence the PCNSDP of these states increased at lower than the average level of growth. Assam, Bihar, Orissa and Uttar Pradesh have witnessed deceleration in PCNSDP growth owing to decelerated growth in NSDP and, perhaps, higher growth in population. Thus, it seems that Gujarat, Karnataka, Rajasthan and Tamil Nadu have surged ahead in terms of income growth; while Punjab, Haryana and Maharashtra have lagged a little behind. The recovery of Andhra Pradesh, Kerala and West Bengal is clearly observed. The poorer states have not only grown slowly but have decelerated too. In fact, the CV of growth rates increased from 43.94 per cent in 1980s to 50.43 per cent in 1990s. These trends point to the divergence of state incomes in the post-reform decades. Thus, the regional NSDP incomes have been diverging and the process has continued unabated in the reform period.

The nature of trends in inequalities is summarised in Table 2. While there has been no change in the absolute number of states with higher than the mean level of PCNSDP or higher than the mean growth of it, the relative positions have changed overtime. Gujarat, Himachal Pradesh and Tamil Nadu have performed consistently by staying well above the mean rate of growth. On the other hand, Assam, Bihar, Jammu and Kashmir, Madhya Pradesh, Orissa and Uttar Pradesh have continued to remain in the lower rungs of the development ladder. In the pre-reform period, Haryana recorded lower rates of growth despite having higher than mean PCNSDP. In fact, Jammu and Kashmir, which too had higher PCNSDP, recorded negative growth and during the post-reform period slipped down to the fourth quadrant to belong to states with low income and growing at slow rates. Bihar, which grew at higher rates despite having lower income in the first decade, also joined with these states. Maharashtra and Punjab grew at slower rates in the second decade, unlike in the first decade during which their growth rates were above the

Table 2: Cross-classification of States According to Base Level PCNSDP and Rates of Growth in PCNSDP

Description		States with higher and lower than mean growth in PCNSDP between 1980-81 and 1990-91	
		High (8)	Low (9)
States with Higher and Lower than Average PCNSDP in 1980-81	High (7)	Gujarat, Punjab, Himachal Pradesh, Maharashtra, Tamil Nadu (5)	Haryana, Jammu and Kashmir* (2)
	Low (10)	Bihar, Karnataka, Rajasthan (3)	Andhra Pradesh, Assam, Kerala, Madhya Pradesh, Orissa, Uttar Pradesh, West Bengal (7)
Description		States with higher and lower than mean growth in PCNSDP between 1990-91 and 2000-01	
		High (8)	Low (9)
States with Higher and Lower than Average PCNSDP in 1991-92	High (7)	Gujarat, Karnataka, Himachal Pradesh, Tamil Nadu (4)	Haryana, Maharashtra, Punjab (3)
	Low (10)	Andhra Pradesh, Kerala, Rajasthan, West Bengal (4)	Assam, Bihar, Jammu and Kashmir, Madhya Pradesh, Orissa, Uttar Pradesh (6)

Note: * Jammu and Kashmir recorded negative growth.

Source: Table 1.

mean level. While Karnataka moved to high income–high growth states in the second decade, Andhra Pradesh and West Bengal became low income–high growth states. Rajasthan continued to record a higher growth rate despite having low income during both the decades. Thus, whereas Gujarat, Himachal Pradesh and Tamil Nadu enjoy the ‘high income, high growth’ status throughout; Assam, Bihar, Madhya Pradesh, Orissa and Uttar Pradesh remain in the ‘low income, low growth’ category. This undoubtedly points towards widening of inequalities in the country over a period of time.

However, the rank correlation coefficient between base year PCNSDP ranks and consequent decadal PCNSDP growth rate ranks work out to be 0.62 and 0.53 respectively for the first and second decade, both of which are significant. However, the association is getting weakened overtime. Thus, if the same trends continue, some of the top states might lose their position to some middle-level states. What is intriguing is the consistency in backwardness of the lagging regions like Assam, Bihar, Orissa, Madhya Pradesh and Uttar Pradesh. This raises the question of investment flow and infrastructure development in these states.

Investment and Growth

A. State Plan Expenditure: Though difference in the rate of investment is one of the critical determinants of growth, there is no reliable information on the total level of investment in individual states. In the absence of state level data on investment, attention is focused on the size of state plans. Although plan expenditure is not the same thing as investment, state plan expenditure is viewed as an important indicator of the level of investment activity in a state (Ahluwalia 2000). Therefore, an attempt is made to examine trends in plan expenditure in relation to NSDP since 1980s.

Table 3 presents plan expenditure as a percentage of NSDP; averaged for the study period, as well as per capita plan expenditure. For the 17 states, the percentage of state plan expenditure declined from an average of 8.9 per cent in 1980s to 7.0 per cent in the 1990s. This decline of 1.9 percentage points in the state plan expenditure does not reflect the actual decline in real investment as the revenue component of the expenditure has increased. The decline, therefore, may be of even higher magnitude. The reduction in the plan outlay as percentage of NSDP over the 20-year period works out to be 21.3 per cent. Considering this as the benchmark, Punjab, Haryana, Bihar, Madhya Pradesh, Uttar Pradesh, Maharashtra, Gujarat and Kerala record a higher decline, and Rajasthan by almost the benchmark value. Interestingly, excepting Rajasthan and Gujarat, the above states experienced deceleration in income growth rates during the two decades.

There is considerable variation across the states in these ratios of plan expenditure and such a variation has increased during the second decade compared with the first (CV being 44 per cent and 54 per cent respectively during the first and

Table 3: Factors Determining Inter State Disparities

States	Plan Expenditure as % NSDP Average (Current Prices) ¹			Per Capita Plan Expenditure ¹ (Rs)			Per Capita Credit of Scheduled Commercial Banks ² (Rs)			Per Capita Assistance Disbursed by All India Financial Institutions ³			Composite Infrastructure Indices ⁴			Average Percentage share in FDI Approvals ⁵		Per Capita FDI Approval ⁵ (Rs)	
	1980-81 to 1990-91	1991-92 to 2000-01	1980-81 to 2000-01	1980-81	1990-91	2000-01	1980-81	1990-91	2000-01	1980-81	1990-91	2000-01	1980-81	1990-91	2000-01	1991 to 2001	1991	2001	
Andhra Pradesh	7.23	5.91	6.6	97	258	1049	221	1180	4651	19	155	490	4.38	4.69	5.06	5.96	0.31	67.9	
Assam	8.6	7.38	8.02	122	324	758	97	673	1426	3	35	87	2.59	3.30	3.02	0.00	0.00	0.00	
Bihar	8.04	5.16	6.67	69	231	324	95	384	957	5	14	30	2.82	3.12	2.99	0.50	0.00	2.88	
Gujarat	7.42	5.5	6.5	154	431	1443	370	1569	6057	53	366	1043	7.00	7.15	6.90	12.72	2.30	1222.62	
Haryana	7.66	4.86	6.33	189	426	1123	427	1603	5375	26	207	851	6.44	6.22	6.25	2.12	0.73	100.87	
Himachal Pradesh	18.9	16.41	17.72	293	848	3282	113	915	3122	22	155	1188	4.25	4.71	5.46	1.85	0.00	2.35	
Jammu and Kashmir	19.02	17.01	18.06	268	1003	1723	131	689	3307	26	67	274	4.01	3.92	3.16	0.00	0.00	0.00	
Karnataka	7.8	6.27	7.08	105	367	1151	352	1609	6450	36	150	999	5.76	5.57	5.37	10.16	0.38	246.43	
Kerala	6.68	5.23	5.99	107	262	866	307	1440	5768	20	82	327	6.80	6.10	6.85	1.19	0.99	59.21	
Madhya Pradesh	9.29	5.98	7.72	113	271	517	100	699	1979	8	85	191	2.69	3.76	4.48	4.93	1.04	4.51	
Maharashtra	5.9	4.12	5.05	143	448	934	684	2768	17957	65	354	2466	7.08	6.52	5.39	26.55	1.52	593.40	
Orissa	10.17	9.39	9.8	126	428	842	78	704	1738	16	102	293	3.10	3.83	3.90	4.74	0.75	29.22	
Punjab	6.57	3.98	5.34	147	550	756	617	2013	7713	36	199	863	10.50	9.55	9.24	1.18	0.00	6.78	
Rajasthan	9.13	7.23	8.23	117	305	699	148	666	2446	26	107	325	3.86	3.80	4.27	1.84	1.83	9.90	
Tamil Nadu	6.33	5.52	5.94	71	261	839	362	1965	9224	33	185	811	6.95	6.18	6.39	12.29	0.52	193.72	
Uttar Pradesh	8.08	5.45	6.83	97	275	490	125	566	1658	11	70	163	3.75	3.83	3.67	5.78	2.25	35.76	
West Bengal	4.73	3.86	4.32	80	222	853	373	1256	3690	22	71	481	4.24	3.95	3.81	8.18	4.98	38.93	
Average	8.92	7.02	8.01	135	406	1038	271	1218	4913	25	141	640	5.07	5.07	5.07	6.00	1.00	154	
CV (%)	43.6	53.85	47.64	45	52	63	69	53	84	65	70	93	42.11	33.64	33.25	115	124	203	

Source: 1) Computed from RBI State Finances, 2004; 2) CMIE Profiles of Districts October 2000 and CMIE Money and Banking Statistics; 3) Computed from IDBI Report on Development Banking in India 1989-90, 1992-93 and 2002-03; 4) Computed from CMIE Profiles of Districts October 2000 and CMIE Infrastructure December 1998 and March 2004; 5) Secretariat of Industrial Assistance (SIA) Annual Issue 1998, 2000 and 2002.

second decades). Moreover, there is no relationship between the state plan expenditure as a percentage of GDP and growth performance. During 1980s, Jammu and Kashmir and Orissa achieved low growth rates but had high ratios of plan expenditure as a percentage of GDP. Haryana, Maharashtra and Punjab had a low plan expenditure ratio, though they achieved high rates of growth. Even in the 1990s, high growth states like Gujarat, Karnataka, Maharashtra, Tamil Nadu and West Bengal had a low ratio of plan expenditure to GDP, whereas high ratio of plan expenditure to GDP was observed in low growth states like Assam, Orissa and Uttar Pradesh.

Figures on per capita plan outlay present an interesting pattern. Gujarat, Haryana, Himachal Pradesh and Jammu and Kashmir report higher per capita plan outlay than the average of 17 states for all the three years; Punjab reported the same for 1980-81 and 1990-91 only, and Andhra Pradesh and Karnataka for 2000-01 only. In 2000-01, Himachal Pradesh had the highest per capita plan outlay followed by Jammu and Kashmir, Gujarat, Karnataka, Haryana and Andhra Pradesh. Although this does not reveal any pattern, a look at the percentage change in the per capita plan outlay does. The percentage increase in per capita plan outlay works out to be 669 per cent between 1980-81 and 2000-01. For the same period, Tamil Nadu, Himachal Pradesh, Karnataka, Andhra Pradesh, West Bengal, Gujarat and Kerala – in that order – report higher percentage increase in their respective per capita plan outlay than that for the average. Obviously, these states have recorded considerable acceleration in their PCSDP growth. Thus, it may be noted that income growth rates are positively associated with the size and extent of plan expenditure.

B. Pattern of Private Investment: Since the gross fixed investment at the national level comes from the private sector, with private corporate investment accounting for 38 per cent of the total and private household investment about 33 per cent, the study of private investment in the states assumes crucial importance.

The less performing states suffer from obvious handicaps, such as good infrastructure, especially in power, transport and communications in attracting private investment. They also suffer from lower levels of savings due to their lower levels of per capita income. The position of poor states is further complicated by the fact that an efficient financial system will redirect financial savings towards the better performing faster growing states. The credit deployment by commercial banks is one source of private investment. Although lending by commercial banks is not solely for investment purposes, we do consider the per capita advances by them as an indicator of the extent of private investment in the selected states. It also indirectly reflects the overall investment climate in a state. The necessary information is furnished in Table 3. The figures show that the average per capita bank credit has increased from Rs 271 in 1980-81 to Rs 1,218 and further to Rs 4,913 in 2000-01. The CV of it though declining, continues to be very high. The per capita Bank Credit is

found to be higher in relatively advanced states throughout the study period. On the other hand, the backward states of Bihar, Uttar Pradesh, Rajasthan, Assam, Jammu and Kashmir and Orissa report consistently lower per capita bank credit.

Apart from the above, indeed there has been an element of competition among states for attracting private investment, both domestic and foreign. Some of the states have been offering various tax concessions and other special facilities to new investors on a competitive basis. Table 3 presents assistance by all Indian development financial institutions in 1980s and 1990s. It is clear from the table that there is a large variation in the advances provided by development finance institutions in 1980s and 1990s. The group of backward states, i.e, Bihar, Assam, Jammu and Kashmir, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh had low per capita assistance, whereas advanced states like Maharashtra, Gujarat and Haryana had the highest per capita assistance in all periods. Thus, development finance flows predominantly to developed states.

C. FDI and GROWTH: The above analysis is indicative that domestic capital moves to higher income states where it can be more effectively used. What about the movement of Foreign Direct Investment (FDI) Has it followed the same pattern? Whenever FDI flows in, it comes with new technology, labour and skills, thereby contributing to growth. The state-wise FDI approvals data is available only from 1991 and the average per cent share of FDI approvals for 1991 to 2001 and per capita FDI approvals is presented in Table 3.

The data reveals that the advanced states like Maharashtra, Gujarat, Tamil Nadu and Karnataka shared larger FDI inflows in the 1990s. No FDI flow is observed into the states of Assam and Jammu and Kashmir causing a wide variation in FDI flows across the states. Thus FDI is flowing more into developed states and, hence, causing disparity in regional development in the country.

Level of Infrastructure Development and Growth

It is generally agreed that rapid industrial growth depends critically upon the availability of infrastructure support in the form of electric power, road and rail transportation and telecommunications. Good infrastructure not only increases the productivity of existing factors of production and, therefore, helps growth; it also helps in attracting more investment that can be expected to increase the growth further. Although all states suffer from infrastructural bottlenecks, the less developed states definitely lag behind.

The Composite Index of Infrastructure has been constructed using the principal component method for all the states. The variables included in the index are: percentage of villages electrified, road length per 100 square km, rail length per 100 square km, post offices per lakh population, telephones per 100 persons,

registered vehicles per lakh population, bank branches per lakh population, per capita electricity consumption (kwh) and net irrigated area as per cent of net sown area. The composite indices for the three years are given in Table 3. The results show that Punjab has the highest level of infrastructure development, followed by Gujarat, Kerala, Tamil Nadu, Haryana and Maharashtra. The poor states like Assam, Bihar, Jammu and Kashmir, Orissa, Uttar Pradesh, Rajasthan and West Bengal had low level of infrastructure development. This is true for all study years. Thus, the results clearly indicate that these backward states require considerable investment in infrastructure.

Determinants of Disparities: Regression Analysis

The present section attempts to quantify the impact of the above factors on regional economic development. Initially, the two variable regression results are analysed, followed by a multi-variate analysis. The fitted OLS single equation model results, as presented in Table 4, reveals that per capita plan expenditure is significant for 1980-81 but not so for 1990-91 and 2000-01. Infrastructure development and credit deployment by commercial banks as well as assistance by All India Financial Institutions individually emerge as the most influencing factors of regional development as their coefficients and R^2 values are significant at one per cent level. Although the beta coefficients of FDI approvals bear positive signs for 1990-91 and 2000-01, they are not statistically significant.

Further, when PCNSDP growth rates for the entire period of study was correlated with plan expenditure, per capita credit by SCBs and AFI for 1980-81, all variables turned out positive and significant at the five per cent level, except plan expenditure. This also strengthens the earlier discussed relations.

However, to study the influence of all the factors simultaneously on PCNSDP, multiple regressions were run using cross-section data for the periods 1980-81, 1990-91 and 2000-01. After solving the problem of multi-colinearity, the equations as given below were estimated employing least squares method:

Regression Equations for 1980-81

$$PCNSDP = \alpha + \beta_1 PLNEXP + \beta_2 INFRA + u \quad \dots (1)$$

$$PCNSDP = \alpha + \beta_1 PLNEXP + \beta_2 SCBCR + u \quad \dots (2)$$

$$PCNSDP = \alpha + \beta_1 PLNEXP + \beta_2 AIFI + u \quad \dots (3)$$

Regression Equations for 1990-91

$$PCNSDP = \alpha + \beta_1 PLNEXP + \beta_2 INFRA + \beta_3 FDI + u \quad \dots (1)$$

$$PCNSDP = \alpha + \beta_1 PLNEXP + \beta_2 SCBCR + \beta_3 FDI + u \quad \dots (2)$$

$$PCNSDP = \alpha + \beta_1 PLNEXP + \beta_2 AIFI + \beta_3 FDI + u \quad \dots (3)$$

Regression Equations for 2000-01

$$PCNSDP = \alpha + \beta_1 PLNEXP + \beta_2 INFRA + \beta_3 AIFI + \beta_4 FDI + u \quad \dots (1)$$

$$PCNSDP = \alpha + \beta_1 PLNEXP + \beta_2 INFRA + \beta_3 SCBCR + \beta_4 FDI + u \quad \dots (2)$$

Table 4: Regressions Results of Two Variables for Factors Determining Inter State Disparities for 1980-81, 1990-91 and 2000-01 (Dependent Variable=PCNSDP)

Independent Variables	1980-81		1990-91		2000-01	
	á	â	á	â	á	â
PLANEXP	1290.49	3.711	4.66	1.531	13787.76	2.387
		(2.27)		(0.89)		(1.13)
		R ² =0.257		R ² =0.050		R ² =0.079
INFRA	963.37	163.35**	1586.86	730.16**	1731.12	2866.18**
		(4.30)		(5.95)		(6.21)
		R ² =0.608**		R ² =0.641**		R ² =0.721**
SCBCRE	1274.22	1.91**	3049.35	1.84	11197.35	1.03**
		(4.82)		(4.27)		(4.32)
		R ² =0.608**		R ² =0.549**		R ² =0.558**
AIFI	1306.88	19.35	3722.20	11.07	11896.95	6.82
		(3.64)		(4.27)		(3.93)
		R ² =0.470*		R ² =0.549**		R ² =0.508**
FDI			5270.87	17.72	15286.05	6.37
				(0.05)		(1.44)
				R ² =0.002		R ² =0.123

Note: 1) **Significant at 1% level; * Significant at 5% level

The figures in bracket are 't' values of co-efficients.

2) á=constant; â= Coefficient of the variable.

3) PLNEXP=Per Capita Plan Expenditure;

INFRA=Infrastructure Index;

REVDEF=Per Capita Revenue Deficit;

SCBCRE=Per capita Credit by Scheduled Commercial banks;

AIFI=Per Capita Assistance Disbursed by All India Financial Institutions;

and FDI=Per capita FDI Approvals.

The results of the multiple regression exercises presented in Table 5 reveal that initially plan expenditure was a significant variable in determining the level of regional development. During 1980-81, in all the three models, plan expenditure turns out to be a common significant factor. The chosen regression models for all the periods have a good fit. The co-efficient of the infrastructure index is positive

Table 5: Multiple Regression Analysis of Factors Determining Inter State Disparities for 1980-81, 1990-91 and 2000-01 (Dependent Variable=PCNSDP)

Independent Variables	1980-81			1990-91			2000-01	
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)
á	534.71	700.53	968.58	939.39	2300.35	3443.68	1880.65	1118.12
PLNEXP	3.39** (3.77)	4.07** (7.21)	2.88* (2.34)	1.18 (1.12)	1.70 (1.51)	0.80 (0.58)	0.33* (0.33)	1.66* (2.05)
INFRA	154.45** (5.96)			724.04** (5.72)			2285.27** (5.69)	2064.12** (5.48)
SCBCR		1.99** (10.53)			1.83** (5.22)			0.66** (4.03)
AIFI			17.29** (3.65)		10.84 (3.86)	4.47** (3.26)		
FDI				189.18 (1.06)	57.13 (0.17)	-13.71 (-0.05)	-2.59 (-1.11)	-2.13 (-1.07)
R ²	0.790**	0.917**	0.619**	0.738**	0.697**	0.564**	0.868**	0.894**
Adj.R ²	0.760	0.905	0.565	0.677	0.627	0.463	0.824	0.859
F	26.33	77.12	11.39	12.20	9.965	5.595	19.73	25.36

Note: **Significant at 1% level; *Significant at 5% level

The figures in bracket are 't' values of co-efficients and á=Constant

and significant at one per cent level for all the three periods. Credit deployment either by Scheduled Commercial Banks or All India Financial Institutions also emerges to be a significant determinant of regional development in all the three periods. Thus, it seems that investment, public as well as private, moved in tandem and coupled with the level of infrastructure development, affected the pattern of regional development.

Conclusion

We have made an attempt in this paper to explain the observed variations in growth across states in terms of differences in the levels of investments, infrastructure development and state financial positions. The evidences indicate that there is a strong correlation between the growth of a state, plan expenditure and the growth rate of SDP. However, it must be remembered that the investment component of state plans, on an average, accounts for a small per cent (12-14 per cent) of total investment. But the percentage increase in plan expenditure has been positively associated with acceleration in the per capita income of the states. On the other hand, it is found that the pattern of private investment, indicated by per capita credit, of commercial banks was much more favourable to advanced states in the study period. The development finance, too, flowed in a larger measure to developed states. Added to this, FDI is flowing to more developed states and, hence, is causing widening disparities in development across the country. The variation in infrastructure development is found to have declined in 1990s as compared to 1980s. The poorer states like Assam, Bihar, Jammu and Kashmir, Orissa, Uttar Pradesh, Rajasthan and West Bengal had low levels of infrastructure facilities as compared to those available in rich states like Gujarat, Kerala, Tamil Nadu, Haryana and Maharashtra. Thus, the results clearly indicate that considerable investment in infrastructure, especially in the backward states, is required. Most of the infrastructure development needed in these states will have to be met through public investment, as the scope for private investment in infrastructure is limited. However, it is essential for all the states to improve their financial position for releasing more funds for financing infrastructure development.

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Book Reviews

H S Shylendra and Uma Rani (eds). *Diversification and Sustainable Rural Livelihood*. New Delhi: Concept Publishing Company. 2005. Pp 208. Rs 300.

This book is a good example of the emerging wider perspective on poverty, looking beyond poverty line measurement and changes in poverty. Its focus is on sustainable rural livelihood,, investigating the extent to which the prevailing processes of diversification in rural areas help in achieving this objective. The area selected for investigation is the semi-arid region in Gujarat. Given the formidable barriers to development of agriculture in such areas, rural people, especially the poor, are driven to seek livelihood outside agriculture and, often, outside their villages in near or distant urban centres. Casual unskilled labour is all that they can hope to get at these centres. The pressure/incentive for diversification also operates at the level of better-off sections of the rural population. They gain in the process owing to their better endowments in terms of education, skills and economic status. These processes operate in most rural areas besides semi-arid areas but it is reasonable to expect that they would stand out more clearly with all their linkages and complexities in semi-arid villages. The study reported in the book is based on an in-depth investigation in three villages in Gujarat — two backward tribal villages inhabited by bhils and one non-tribal multi-caste village; all the three villages are located in the semi-arid zone in the state.

The concept of livelihood used in the book is a comprehensive concept including all the major dimensions, besides poverty reduction, like long-term sustainability, living conditions at the place of work and distress suffered by the poor owing to loss of dignity and self-respect. Consistent with this broader concept, the study has been innovative in its choice of methodology which the authors describe thus: “A mix of research tools ...consisting of questionnaire based sample survey of households, Participatory Rural Appraisal (PRA) tools, in-depth case studies and informal focus group discussions... all the major issues of the study have been examined by interacting wherever possible both with the male and female members” (page 28). The survey also covered migrants at their place of work to get a first-hand view of their post-migration situation and problems.

The principal finding of the study which needs to be highlighted is that migration is for the most part distressing for the poor. It is a little misleading to call migration of the poor as diversification. Immiserisation would be a more appropriate word to describe it. Pushed out of agriculture owing to poverty, they end up in urban squalor which in a way is far more degrading than their village milieu. A tribal household worked, on an average, for 374 days in a year (husband and wife) as casual unskilled labourers. The authors have done a commendable job in bringing

out in stark details the human degradation caused by hardcore poverty. However, they also point out how the rural poor, led by an NGO, have brought about substantial improvement in local resources in one of the sample villages demonstrating a strategy with wide applicability in semi-arid areas to remove poverty. A number of similar villages all over the country — for example, Ralegaon Siddhi in Maharashtra — demonstrate that where the crucial factor of local leadership exists the rural poor are quite capable of coming together to develop the community and its resources. The country is about to launch an employment guarantee programme with a key role being assigned to the Panchayati Raj Institutions (PRIs). This may be a path full of potholes but if the policymaker pursues it with determination learning from experiences — both successes and failures —, there is a good chance of making it a viable strategy for rural development focused on the poor.

This does not mean that the external sources of employment would cease to be important for the rural poor. It is likely that development of local resources and modernisation of agriculture would not absorb all the available labour, and the pressure on the poor would remain to migrate though its intensity might diminish. The clue provided by the book is that those with education, skills and assets are in a better position to benefit from migration than unskilled labourers. Hence, social sector programmes to improve the human development status of the poor would need high priority and offer adequate allocations. Given the emerging scenario of urbanisation and growing rural-urban linkages, the flow of rural poor towards urban centres would continue. But the poor would be in a position to get more secure and rewarding occupations than unskilled labour. However, they would still be unorganised and located in the informal sector. In these respects, they would be similar to the migrants portrayed in the book under review. The measures now being contemplated to provide social security cover to unorganised workers would be critical in making migration a development-oriented alternative to agriculture for the rural poor. It would also be important to improve the infrastructure and living conditions in smaller urban places to help them emerge as dispersed growth centres with a diversified mix of secondary and tertiary activities. A clear implication of the book under review is that unchecked distress-induced migration of the rural poor from backward areas would pose a serious threat to the growth and development of the Indian economy. While the policymaker could not be unaware of this threat, carefully designed researches, like the one reported in this book, could go some way in putting pressure on the policymaker to counter the threat with a matching sense of urgency and concern for the rural poor and their environs.

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Kartik C Roy and Jorn Sideras (eds). *Institutions, Globalisation and Empowerment*. Northampton, MA: Edward Elgar Publishing. 2006. Pp 344.

Kartik Roy of the University of Queensland, Australia, and Jorn Sideras of the Centre for International and Political Economy Research, Greece, have edited a volume which examines the interconnectedness between institutions, globalisation and empowerment. While their assumption that the ultimate objective of development in all countries is to empower people is acceptable, their conclusion that globalisation has, in fact been helping society and the state to incorporate some changes in their social institutions to carry forward the agenda for development with renewed vigour (p.13) is clearly debatable.

In their introductory essay, 'Institutions, Globalisation and Empowerment: An overview of Issues', the editors affirm that since the 1990s, the crucial role played by institutions in the process of economic development and in explaining global differences in the outcome of development have attracted the attention of academics, policy makers and international financial institutions (p.3). Clearly, such important issues did engage the attention of scholars and policy makers earlier too. Discourses on these very issues during the Cold War era resulted in protagonists on both sides of the ideological divide taking up and advocating their own positions.

Roy and Sideras begin by looking at what has constituted the stimuli for economic development from the 1950s to the 1980s and argue that since the 1990s, the focus everywhere has shifted to enhancing economic management through a greater play of market forces within and between countries. Whether international capital really flows freely or on the basis of certain conditions the recipient nation has to comply with, is too well known to be recounted here. Roy and Sideras also make a somewhat sweeping generalisation that a consensus now exists that if resources and policies are to be effective in achieving the desired outcome of economic development, it is essential that the plethora of institutions that exists in a country are conducive (read as conducive to globalisation and liberalisation) to the objectives to be achieved. There is an over emphasis on institutions to the neglect of the quality and commitment of people - leaders and civil servants - who are in charge of policy formulation and implementation. The short point is: institutions per se do not ensure economic development; there are other important actors who play their role in economic development.

Roy and Sideras go on to describe what institutions mean and in support of their writing cite World Bank reports to point to the growth and poverty reduction linkage. Empowerment is described as income distribution, freedom of choice and action to shape one's own life. The authors ignore the issues of equity, social justice and socio-cultural values which also drive a nation towards empowerment of its people.

The editors further argue that globalisation has provided opportunities to developing countries to integrate themselves with the world economy and that it has resulted in poverty reduction in many parts of the developing world. In support of their conclusion, they cite Dollar and Krray's World Bank Report (2001) which is, however, dated. To be fair to them, the editors do touch up on Latin American experiences, but they wriggle out of the main issues regarding the negative consequences of globalisation on third world countries by coming up with invidious explanations that Latin America adopted the big bang approach to globalisation, whereas South East Asia, China and India adopted a gradualist approach. In any case, the editors should have widened their canvas to look at the disastrous consequences of globalisation on rural and cottage industries in countries like India with many of them being virtually closed down rendering people working in those industries poorer and, in the process, disempowered. The editors should have also been alive to the wider picture of the negative impact of globalisation on local cultures, societal harmony and values, and the resultant trend towards criminalisation of societies in many parts of the developing world.

In the section on concepts, Dani Rodrik argues interestingly that international financial institutions (IFIs) have a strong bias towards the neo-liberal model. He refers to the case of South Korea being forced to accept IMF conditionalities and asked to re-mould its economy to go with the image of a Washington economist's idea of a free market economy (p. 49). This model, argues Rodrik, forecloses some development strategies that have worked in the past and others that could work in the future. His conclusion that an approach that presumes the superiority of a market model of a capitalist economy restricts the range of institutional variations that market economies can and do admit (p.51) is indeed instructive. He stresses the importance of local knowledge and experimentation over accepting the best practice blueprints under pressure.

The essay by Viktor Vanberg examines the relationship between democratic processes and competition among what he calls jurisdictions. He looks at democratic polities as cooperatives or joint enterprises for the common benefit of citizens and examines the effects of competing jurisdictions to implement the common interests of all citizens and to prevent the government from carrying out projects that conflict with the interests of some or all of its citizens. But he misses the point that competition among jurisdictions is often unequal with governments invariably siding with the powerful and, in the process, not ensuring citizens' sovereignty which is their proclaimed goal.

Part III of the volume is about empirical evidences with essays looking at the contradictory implications of globalisation with references to countries like the USA, Australia, Germany, Kenya, India, Saudi Arabia, China – Hong Kong and Taiwan.

The essay on Kenya reveals how globalisation has adversely affected women, despite the fact that they produce three-quarters of the region's basic foodstuff. As for Saudi Arabia, the author says that unless royal family members become ordinary citizens, equal to all others under law, liberalisation will neither be successful nor useful.

Regarding India, Kartik Roy argues that the ideology of seclusion, embodying social customs and traditions have imposed gender-based discrimination on women. He hopes that globalisation will lessen the ideology of seclusion and facilitate the empowerment of rural women. The case studies have to a great extent exposed the myth the volume as a whole wants to project that the impact of institutional reforms and globalisation on poverty alleviation and empowerment in developing countries have been profound and that international economic integration has promoted growth, resulting in increased income to the poor and maximised human welfare. The editors' bottom line is: countries will continue to enjoy benefits from globalisation as long as goods are traded relatively freely in the globalised world economy (p. 335).

Nearly one and a half decades of globalisation and liberalisation and the writings that have emerged from many of the former top ranking officials of the World Bank, not to speak of the writings of left intellectuals, clearly demonstrate the imperative for a global vision and dialogue about the road that developed and developing countries, more so the developing world, have to traverse in the years and decades to come. Propagandist and dogmatic postures and prescriptions of globalisers have to be replaced by objective thinking guided by local/country specific requirements.

The editors of this volume nonetheless deserve our wholesome appreciation for choosing so many diverse case studies under one cover. Needless to say, the book deserves to be read by policy makers, academics and civil society groups throughout the world.

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Mohan Rao. *From Population Control to Reproductive Health — Malthusian Arithmetic*. New Delhi: Sage Publications. 2004. Pp 288. Rs 380.

The debate on the implications of rapid population growth on resources has a long and rich history. There were mainly two opposing views on the underlying linkages between population growth and economic development; one on the adverse

consequences of rapid population growth and the other on its beneficial impact. India being the second most populous country in the world, this debate has been in the forefront for a long time. Yet there had not been any recent study on the debate on population growth and development particularly focusing on India. This book fills this gap by a systematic and careful review and a critical assessment of the evolution of population policies and debate in India. Nevertheless, there has been a general perception on the negative implications of continued population growth in the country. Thus controlling population growth is considered as a necessary pre-condition for improving the living condition of the poor.

The purpose of this book is to powerfully convince the reader that the population policies being followed in India from time to time is completely faulty and that there is an urgent need to change the views on population both at the policy makers level as well as that of the academic community. The book is written from a public health perspective and has put forward a developmental alternative for solving the population problem in the country.

The six chapters in the book are well integrated and rich in both theoretical debates and empirical examples picked up from across Indian states. It covers the thinking on population in pre-independence India and discusses the politics behind the formulation of the National Population Policy - 2000. It also questions the argument that there is a 'paradigm shift' in the approach to population issues in India with the introduction of reproductive health strategies.

The Neo-Malthusian Approach to Population Issues

According to the author, the family planning programme in India has quite failed to take off due to some fundamental problems in the approach. The dominant view on the population control strategy in the country is neo-Malthusian. The neo-Malthusian approach considers poverty as the result of rapid population growth in developing countries. The only solution they have found to overcome this menace is the adoption of modern contraceptive technology. This imperialist anxiety towards population growth has been the dominant force in the formulation of the population policy in India for several decades.

According to Rao, there is a serious conceptual, methodological and empirical problem with the neo-Malthusian approach. Surprisingly, however, although Rao was very vocal in his criticism against the Malthusian and neo-Malthusian frame, he did not touch upon the Revisionist perspective which gives a balanced view between the two extremes. But the book borrows selectively from many Revisionist writers to put forth the points on the lacunae in the neo-Malthusian argument. Rao questions the important underpinning of the neo-Malthusian argument that population growth eats into finite resources. He cites several examples from many countries to prove that population growth has negligible impact on

poverty and per-capita income. He maintains that the Malthusian and neo-Malthusian approaches offer an excessively simplistic understanding of the complex relationship between resources and population.

The Reproductive Health Approach

The family planning approach having failed to deliver, an easy way out for policy makers was to propagate a paradigm shift in the policies by announcing the reproductive health approach. Rao argues that the approach itself is faulty for developing countries like India. Even in the Cairo International Conference on Population and Development (ICPD), the reproductive choice referred to the plethora of contraceptive devices that a free woman is supposed to be empowered to choose from. Thus reproductive rights are merely relegated to the choice of contraception. It was divested completely of other important rights such as the right to food, employment, water, healthcare and security of a child's life. This, according to the author, is a marriage between western liberal feminists and neo-Malthusians at Cairo. Rao also questions the reproductive health approach epidemiologically. By citing examples from different studies, he argues that the reproductive ill-health load represents only a negligible proportion of the total ill-health load of women in India. Thus the approach is epidemiologically seriously misplaced. It is true that the current emphasis on the reproductive health approach is substantially donor driven and not based on the reality of disease burden in the country.

Finally, the central message in the book is that the Indian family planning programme and the entire population policy still heavily depend upon the neo-Malthusian approach to population issues. Targets, incentives, disincentives, sterilisations camps, etc are all inbuilt in various measures undertaken by state governments in India to control population. According to Rao, contraception is a right of an individual. 'It is a right as much as and closely imbricated with, a right to health, a right to development, a right to security of our lives and our children's lives and indeed a right to hope for the future'.

The book, thus, makes a passionate appeal to change the priorities in population control in the country. This book will be a useful guide not only for scholars but even for a layman concerned with developmental issues in India. But I am doubtful if policy makers will pay attention to its appeal as most of it would be an unpleasant essay as far as they are concerned.

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Ranjita Mohanty and Rajesh Tandon (eds). *Participatory Citizenship: Identity, Exclusion, Inclusion*. New Delhi: Sage Publications. 2006. Pp 249. Rs 550. (Hardbound).

The past one or two decades signalled the arrival of identity politics in intellectual discourses in India. Questions are often raised as to whether “class politics” in the midst of increasing importance to identity politics has either come to an end or been sidelined, including the relevance of materialist interpretation in the discourse. What added strength to identity politics is the desire for “recognition”. Otherwise it will turn into another form of what Charles Taylor calls “oppression”. At present, identity politics has gone beyond the stereotypes of communities to include the issues of citizenship, exclusion and inclusion and the responsibility of the corporate sector. What is most important is the fact that now identity politics brings in the issues of those who have been either treated as “historical categories” or as “subaltern to the core”, particularly the Nomads.

This particular volume, an outcome of a conference in 2003, contains nine scholarly articles, which is broadly divided into two sections. The editors of the book, Ranjita Mohanty and Rajesh Tandon, provide an excellent introduction to the theme.

Contextualising the debate in the post-colonial democratic set-up, the book unveils the fact that identity politics is not the construct of the state alone but also a reaction or response to historical subjugation. In the case of the former, the Constitution has not only created spaces but also enabled social categories to claim and appropriate political spaces. That does not mean the enabling process has created an equal citizenship or equal identities. At the same time, the process has also excluded different categories both from the political domain as well as the domain of citizenship.

T K Oomen dismisses the stereotypes of citizenship and identities. He visualises citizenship both at the national and global level. However, what is important is the way the nation state in the name of citizenship erases multiple identities. It is true at the same time that it is not an easy task to erase particular identities. Double identities and citizenship can co-exist, though one cannot overlook the growing severity of conflict, which translates into different forms. Understanding these forms, whether as caste, region or ethnicity, is essential. At the same time one needs to understand why conflict arises — this is where one can introduce the new paradigms to understand identity politics. Identity politics cannot simply be reduced to the question of citizenship alone but also to the larger issues of “conflict” and “resistance”. Although T K Oomen and others in this volume have not addressed the issues of conflict vigorously, one cannot overlook the undercurrents of tension in the essays.

Nonetheless, there are other issues that the volume addresses; an important one being the development paradigm and citizen participation. In the context of the changing paradigm of development, the notion of participation has equally undergone change — from mere receivers/users to “stake-holders”. John Gaventas’ (p.51-67) argument that in the development paradigm participation is now translating into exercising rights as citizens has its own problem, that not all citizens can participate equally. There are times when participation is “decided”, “defined”, or “regulated”. It is here that citizenship comes under scrutiny — is citizenship confined to those whose identities are recognised? Or is it to those who are “citizens”? How powerful are those who participate as citizens?

Nonetheless, John Gaventas’ argument comes closer to the argument of Peter Newell (p.129-149), although they differ in the final analysis. The former analysed the way the corporate sector uses different means to avoid citizen participation to bring validity to its action.

Ranjita Mohanty’s wonderful article brings in two important issues: public sphere and democratic citizenship, and recreating identities by the state. The most important is the fact that identities are created as citizen’s participation translates into reality through state-created institutions. This obviously means that even in the case of a retreating state, the importance of the state has not reduced. These particular arguments are apparent in the subsequent scholarly articles of Manju Agrawal (p.150-178), Mariam Sanu George (p.179-199) and Dikshit Sinha (p.200-236). However, citizen’s participation, including identity politics, received further fillip with the involvement of civil society activism, including New Social Movement. Ranjita Mohanty never uses the term “newness” during the discourse on social movement, though the concept is apparent. Nonetheless, it is true that state-created institutions such as the Panchayats have given a voice to the marginalised: to raise their issues, to make their presence felt, to contest claims, etc. This does not mean that there has been a complete “paradigm shift” towards those who raise their voice. Even the intervention of civil society, be it in the case of Narmada (Mandakini Pant: 150-170), Kudumbashree or Mahila Samakya Sangha, has not completed the paradigm shift. Their continued struggle for space, both at the political and cultural levels, reflects this. A further probe into such issues in the volume would have made the scholarly arguments much more convincing and appealing.

However, the collection of scholarly essays/articles is a testimony to the growing importance of the study in identity politics. One of the major contributions of this volume is the fact that it analyses the binary process taking place simultaneously in India: enabling and endangering citizenship. Further, while analysing identity politics it brings in what Arjun Appadurai once called “unlisted categories” to the mainstream discourse. This volume contains serious works of civil society activists, scholars and practitioners. No wonder then this volume

would be of much help to scholars and activists, including policy makers, to understand the shifting/incomplete paradigm of identity politics.

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Femida Handy, Meenaz Kassam, Suzanne Feeney and Bhagyashree Ranade. *Grass-roots NGOs by Women for Women*. New Delhi: Sage Publications. 2006. Pp 236 Rs 320.

The book, *Grass-roots NGOs by Women for Women*, is about grass roots NGOs initiated by women, working on women's issues. The book is the contribution of four authors, coming from four different disciplines and balancing western view and life in India. The book is based on over five years' study of NGOs founded by women in the city of Pune, Maharashtra.

The book is organised in three main chapters, apart from the introduction and conclusions. Each chapter contains an introduction, review of literature, empirical findings and conclusions based on the study. Case studies of some of these NGOs have been presented as narratives in each chapter.

The first chapter, *Women Entrepreneurs: Who are they?*, looks at the background of the founders of these NGOs and the factors that motivated them to enter into the not-for-profit sector. The literature review presented in this chapter looks into studies on non-profit entrepreneurship, women entrepreneurs in the for-profit sector in industrialised countries and less industrialised countries, and women's style of leadership as entrepreneurs. The review is followed by the findings. A non-profit entrepreneur has been defined as a self-motivated and innovative leader who starts a non-profit enterprise. A comparison has been made between the not-for-profit and for-profit sectors. According to the authors, both kinds of enterprises are the result of the entrepreneur's innovation, leadership, imagination, efforts and ability. The literature also says that start-up financial capital is generally a barrier to start a for-profit enterprise. In the case of a not-for-profit enterprise, the constraint is in the form of social capital, or volunteers and donations. An NGO entrepreneur has to have access to resources that are initially dependent on personal, family and social connections. Family members influence and support the woman's decision in both the cases.

Inter-disciplinary literature on the cultural aspects of entrepreneurship in the for-profit sector shows that caste, cultural factors, morals, norms and values play an important role.

The 20 organisations studied are five to 35 years' old and the average age of the founder is 38 years which is past the child-bearing age in the Indian context

and many are supported by their extended family. The marital status and childcare responsibilities didn't affect the women's decision.

The majority are from upper middle to middle income groups and they started the organisation with meagre financial resources. Volunteers' labour is the important capital investment, besides the network of neighbours, friends, etc. The majority (13) are post-graduates with previous work experience as social workers/volunteers/professionals. All these women are feminists and are motivated by the need to serve others, particularly women, as they feel that mainstream institutions failed in addressing these issues. Most of them have had parents who were involved in voluntary work. According to them, founding an NGO is a process of self-actualisation. All the women see themselves as agents of changes.

Founding an NGO with a mission congruent to their feminist beliefs give the entrepreneurs a high personal pay-off, a finding repeatedly mentioned in the non-profit literature.

These entrepreneurs are risk takers. It is not a financial risk, but a risk that can result in social repercussions when women fight against historically ingrained social norms. They are also ambitious. Women see their role as a special kind of "mothering" which extends to the communities.

The narrative of Sindhutai clearly shows that it is possible to develop entrepreneurs from every class and caste and social strata, even among those without education or financial means. The more important factors are inner resources, the commitment to serve others, strong perseverance in the face of insurmountable odds to succeed. The other story is about Medha Samant, who founded Annapurna. A complete contrast to Sindhutai, Medha has all the typical characteristics of an entrepreneur. She is educated, comes from the voluntary services background and enjoys a lot of external support. According to the authors, both the entrepreneurs share common 'internal resources', like a strong spirit, the capability of mobilising resources, strong innovative skills, the capability to take risks, self-confidence, compassion for the oppressed and the ability to recognise and use their personal power.

The second chapter discusses the relevance of the feminist ideology and is appropriately titled, *Organisational Structure: Does a Feminist Ideology Matter?* It presents a detailed review of the literature about organisational structure and the social service delivery mechanism of NGOs. It also explores how a feminist ideology influences the type, number and the nature of services offered by feminist organisations. But the authors couldn't conclude whether the nature of services influence the organisational structure or vice versa. The authors use Boardt's classification of organisations into Bureaucracies, Professionals, Collective Pragmatics and Collectivists based on several dimensions. Several researches have also examined the literature on gender differences among founders of for-profit

enterprises. Some of them have shown that women provide more progressive employee benefits and have greater sensitivity to the challenges of balancing a family and career.

Based on interviews conducted over a period of five years to track the changes in scope and depth of services, size and funding and organisational structures, the authors classified five organisations as Pure Bureaucracies, four as Collectivists and 11 as Hybrids.

The study showed that the NGOs which scored low on dimensions such as formal decision criteria, classification, differentiation and formal structure are highly efficient and have managed very well despite their informal structures.

The belief that women-run organisations promoting social justice do not develop bureaucratic structures has been disproved. Among the NGOs studied, there are more bureaucracies and hybrids than collectivists. It has been established that sources of revenue and foreign funding are important factors that influence the organisational structure. There appears to be a trade-off between collectivism and the size of the organisation. A comparison of sample NGOs with those found in Boardt's (1997) study of NGOs in New York revealed that though there are differences in culture, there are similarities in terms of a positive relationship between the age of the institution and bureaucratisation.

The study showed that feminists can operate organisations with bureaucratic structures without compromising their feminist beliefs. Many feminist founders have managed to retain many of the collective characteristics in their organisations either in their original form or by adopting minimal bureaucratic features which were named as 'hybrids'. As the organisation grows in size and the complexity of services offered increases, bureaucratic features creep in. The study showed that the founders stuck to their feminist principles in spite of the need to be pragmatic.

The chapter presents the story of Nari Samata Manch (NSM) and Swadhara in narratives. The story of NSM shows how an organisation transforms into a bureaucracy, a move that is looked upon as instrumental in... (have to say 'instrumental in doing something'). According to the founders, the new structures support and improve their efficiency and are not inconsistent with its feminist and collective ideology.

The story of Swadhara is about inter-generational conflicts and the challenges that founders face when the organisation grows too big. In this case, the challenge is not about financial matters, but sustaining the ideology of the founders.

Case studies of NSM and Swadhara show how it is possible to maintain a non-hierarchical organisational structure despite increasing demands for it. These NGOs successfully evolved programmes suitable to the needs of grass roots women

who are always multi-tasking (in what context do they multi-task should be elaborated here. Not clear why it is mentioned). This is done by involving them in programme formulation. This also shows how Self Help Groups (SHG) can become an effective tool for political empowerment apart from providing access to credit.

The third chapter deals with the impact these organisations have on the lives of women and is titled, *Social Impact: What Makes for Success?* The chapter also examines the natural evolutionary process of successful NGOs to understand the context of their choice of programmes and services and what contributes to their success. It also studies if the organisations led by women for women respond to the needs of women and the role they play in building the capacities of poor women and empowering them. After a comprehensive review of literature on measuring the impact of these NGOs, the authors adopt a framework which incorporates the issues of scaling, generational activity, vertical integration and some traditional measures of size and scope. The study shows 'vertical integration' in the NGOs exhibit high levels of social impact. The type of funding received plays an important role in scaling up. It has been shown that women-led NGOs adopt a paradigm that encourages participation at the ground level. The strategy of Chaitanya, founded by Sudha Kothari, demonstrates a win-win relationship for organisations by networking. Chaitanya is not so much about delivering direct services to clients as about acting as a catalyst, connector, facilitator, teacher, promoter and supporter of NGOs that provide such services. Another NGO, Samvad, was founded to promote peace and harmony. The authors maintain NGOs are important engines for development initiatives.

The book throws light on grass roots NGOs founded by women. It has made a significant contribution in two important areas: one, in understanding the factors that motivate women entrepreneurs to take up non-profit enterprises; second, the narration of successful strategies to be adopted under scarce resources and growing needs. All the entrepreneurs strongly believe in the feminist ideology and are motivated by their inner urge to reduce gender differences in society. The other contributing factors are higher education, prior work experience, a supportive family system, family role models and social capital. It also presents the impact of the increase in the size of an NGO on its structure. Research has shown that though some of the NGOs transformed into bureaucracies, it was not done at the expense of their feminist philosophy. They retained the features of collectivism. Therefore, the authors named them 'hybrids'.

The other important observation in the book, an outcome of over five years' research, is that gender perspective gives rise to high impact NGOs.

The authors are aware of the limitations of this study as it is limited only to a particular geographical area and are cautious in interpreting them. The authors have made a few recommendations based on the study. According to them, tax

subsidies are to be provided to NGOs for encouraging them to take up services and act as alternative providers of public services.

For donors and the government, the authors suggest that more and more women be encouraged into volunteering at the early stages so that they can establish successful NGOs later. For NGOs, the authors suggest that they seek out women in rural areas who have the potential to become leaders.

The book illustrates models for building successful organisations for promoting gender equity.

It has an excellent review of literature and for those who are involved in academics or action research on NGOs, it is a treasure of knowledge.

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Govinda Chandra Rath. *Tribal Development in India: The Contemporary Debate*. New Delhi: Sage Publications. 2006. Pp 340. \$ 34.95.

India has the largest concentration of tribal people (84.3 million) in the world, except perhaps Africa. Scheduled Tribes, popularly known as *Adivasi* or *Vanavasi*, constitute a distinct administrative and political category created under Article 342 of the Constitution of India. However, the Constitution has not laid down any sociological criteria or specification of communities as Scheduled Tribes. While for some it is an administrative category created during the colonial period, for many others it is a sociological category defined on the basis of its structural, attributional and functional features. Scheduled Tribes constitute about eight per cent of the Indian population with their largest concentration (23.22 per cent) in undivided Madhya Pradesh. They are spread across all the states except Punjab and Haryana and all the Union Territories except Chandigarh, Delhi and Pondicherry. They live in all the climatic zones and are divided into four racial categories. The total number of tribal communities in the country, including the segments, is 461. In spite of the fact that about 94 per cent of tribals lives in villages, the majority of them are closer to Hinduism, most of them are non-vegetarian and live in nuclear families. They are heterogeneous in terms of their occupation and economic status, language, food habit, style of dressing, leadership pattern, style of worship and other forms of socio-cultural practices.

In spite of the protection given to the tribal population by the Constitution of India, benefits under Five-Year Plans, promotional institutions, Panchayats (Extension to the Scheduled Areas) Act 1996 (PESA) etc, tribals remain the most

backward ethnic group. They suffer from various deprivations leading to poor health and educational outcomes, impaired and poor access to facilities, generally low average standards of living and remote habitations. The Draft National Tribal Policy, July 2006, seeks to address issues such as the low HDI among tribes, poor infrastructure in tribal areas, diminishing control over the natural resource base, persistent threats of eviction from their habitat, exclusion from mainstream society, unequal distribution of wealth and opportunities and non-empowerment.

The book under review is a compilation of 13 research papers encompassing similar issues in tribal identity, centralised planning, displacement, movements for autonomy, right to resources and trends in social development. In the introductory part, the editor tries to contextualise the above issues in terms of a global perspective on the emerging concern for the rights of indigenous people (with whom tribes of India are identified as the most backward, exploited and deprived ethnic group). It is accomplished through a descriptive and analytical presentation on the socio-economic dimension of tribal life/living (geographic distribution, programmes under Five-Year Plans, state-sponsored promotional institutions, land holding, income and expenditure pattern etc). An analysis of the trends in tribal development before the 1990s and during the reforms period is logically tied to a critical reflection on the welfare model of development in the age of globalisation. During the pre-1990s, the ideal form of tribal development is more appropriately conceptualised as non-industrial but pro-local, that makes use of local resources and environment for sustainable livelihood. To capture the direction of tribal development in the pre-1990s (characterised as positive, negative and suggestive), three relevant schemes have been evaluated.

Section 1 of the book, 'Approaches to Tribal Development: A Re-examination', analyses the crisis of the welfare model under centralised planning, shaped by Pandit Nehru and Shri Elwin. An analysis of gender dimensions of development-induced tribal displacement/deprivation in the past five decades (to the extent of 40 per cent, in terms of loss of control over natural resources, common property rights and CPR-based social/family support and status of women), supplements the thesis of crisis of the welfare model. Erosion of the status of women is further compounded by the collapse/mismatch of the rehabilitation process that upsets the traditional decision-making structures.

The fact that tribes still maintain that political autonomy would be an effective means to achieve development is highlighted in two papers under Section 2, 'Tribal Autonomy Movements'. However, this part would have been more enriched had there been a critical review of PESA 1996, along with the presentation of the rationale of ethno-regionalism (the desire for ethnic sovereignty and elimination of outsiders from the control over local resources). An 'ethno-development model' (control of ethnic groups over natural resources and use of indigenous techniques

to promote development) has been proposed that conceives economic resources and decision-making as two sides of the same coin.

Against the background of formation of states in tribal areas and increasing peasantisation/subordination of the tribal economy, the papers in Section 3, 'Struggles for Rights to Resources', deal with the struggles of the tribes against alienation from land. Cases of tribal inertia, protest against the State and situations calling for intervention of a third agent (like NGOs and social activists) explore the dimensions of tribal reactions to land alienation that downgraded their position into agricultural labourers. According to the study on the tribal situation in Kerala, for example, issues of land alienation and access to forest resources have over the years been sidelined which, perhaps, could be solved through the application of PESA.

The availability and access to education, health and opportunities in governance hold the key to participatory development and better living. Deprivation of these opportunities is both the causes and consequences of under-development, which is particularly true in the case of tribals. Instead of a statistics-centred approach to tribal deprivation/development, the first paper adopts a narrative account of the activities of both government and NGOs and their impact on tribal development. The next two papers in the last section, 'Development and Social Opportunities', present critical perspectives on the status of tribal education and health; the former evaluates the impact of DPEP in the tribal belt of Orissa and the latter signifies a departure from the conventional bio-medical approach, and applies the economic and political paradigm to health studies. The last chapter, focusing on primitive tribes, narrates the positive impact of the development programmes of Car Nicobar islands on the tribal population of the area in terms of crop diversification and access to expanding urban markets. However, it is held that the introduction of modern education and new employment has weakened traditional equality at household and community levels, which calls for decentralisation of opportunities.

On the whole, the volume depicts the broad concern that mainstream and welfare models have brought only limited benefits to tribals, despite the fact that they are marginally better off now than during the pre-independence days. Though internal factors like corruption in the state machinery and external factors like globalisation place constraints on the policy frame and momentum of tribal development, the welfare model continues to be worth pursuing. The volume, however, leaves some gap in its frame encompassing the contemporary debate on tribal development. First, though there is an emphatic reference to the new model based on the empowerment of 'grama sabha' in terms of control over natural resources, as envisioned in PESA, 1996, the status of tribal grama sabha is not captured in any way. Second, in spite of the emerging international concern on the human rights of indigenous people and the need to protect, preserve and

commercialise their traditional wisdom (in agriculture, natural resource management, healthcare and handicrafts), the volume lacks that perspective. However, in spite of the above limitations, the volume offers an enriched understanding of tribal issues, development perspectives and the challenges ahead that makes it highly useful to academics, development practitioners, policy makers as well as the increasing number of tribal activists.

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Books at a Glance

R Govinda and Rashmi Diwan (eds). *Community Participation and Empowerment in Primary Education*. New Delhi: Sage Publications. 2003. Pp 255. Rs 295.

Within the context of decentralisation and reform that is under way in the field of school education in India, community participation and empowerment assumes crucial significance for realising the goal of 'Education For All (EFA)'. The present volume is a timely addition to the otherwise sparse literature we have on the subject of educational decentralisation. In all, the book has 10 articles covering the diverse spectrum of educational decentralisation. The editors in the introductory article underscore the need for understanding the interface between the structural dynamics, the institutional mechanisms within the education system and the community empowerment outside the school system which have been influencing the development of primary education.

Michael Tharakan's article provides some interesting insights into Kerala's approach to community participation through people's planning campaign involving a wide range of educational experiments. With education becoming a contentious issue in Kerala, the author emphasises the need for a strong movement to address basic problems of the education system in the state within the framework of public intervention based on community participation. Ramachandran, while discussing the experiences of community mobilisation through two major interventions — namely the Shiksha Karmi (SK) and the Lok Jumbish (LJ) — raises some pertinent questions relating to the sustainability of these interventions which are cumbersome and resource-intensive and highlights the challenges in terms of the hostile environment for community participation. Sadhana Saxena's article discusses the place and role of community participation in the context of policy and its articulation in actual practice in the Total Literacy Campaign, theoretical underpinnings of community and participation and parameters of community participation in the third section. The author argues for deconstructing the concept of community participation in the context of the complex relationship between caste, class, religion, region and ethnicity.

Anjali Noronha's article discusses some positive outcomes of the state's ingenious decentralisation efforts, like the Shiksha Karmi and the Education Guarantee Scheme, in enhancing access to primary education. While voicing concern for enhancing the people's and the teacher's capacities for better management and quality improvement to take this movement forward, the author cautions that replacing cost-effective alternatives with low-cost alternatives will only result in further deterioration of the educational quality. Kantha and Narain depict the scenario of community mobilisation in Bihar from a historical perspective. Dwelling on the context in which the most recent educational interventions have been launched to mobilise community addresses, they point out some key issues such as conflicts in

new power structure, internal conflicts, new rivalries, voluntarism in community participation etc.

Shanta Mohan *et al* describe experiences of Karnataka with respect to various approaches to community participation in primary education and raises issues relating to sustainability of participation when the same is engineered through external mechanism or NGO initiatives. It is not clear why the authors have chosen to discuss TIPP-II, which has no focus on primary education whatsoever. Raina's article highlights the comparative merit in the policy initiatives of the watershed development in terms of its leaning towards the empirical knowledge in the local context, as against that of school education which lacks understanding and sensitivity to build in local knowledge and experience in the teaching-learning process. The last two chapters by Govinda attempt to capture the complex dynamics that are under way in educational decentralisation and the need for enhancing capacities of the community for effective participation.

Premilla D'Cruz. *In Sickness and in Health: The Family Experience of HIV/AIDS in India*. Kolkata: Stree. Pp 112. Rs 185.

Acquired Immune Deficiency Syndrome (AIDS) is one of the major challenges for the world in coming decades. Despite the anti-AIDS efforts the world over, about 40 million people are living with the virus and propelling it to new areas. This disease will certainly take a heavy toll of lives due to its nature and the social stigma surrounding it. Unfortunately, its impact span is not restricted to lives alone; it shatters the social fabric and economic structure of the families.

The book investigates the hypothesis that the impact of AIDS is more on the family than on the victim *per se*. In this painstaking work, a part of her M Phil dissertation at the Tata Institute of Social Sciences, Mumbai, the author focuses on the future of the families in which an HIV patient is diagnosed. Available literature on the subject shows that this chronic illness affects the social-economic trajectory of the family and the reality is devastating. Rolland described the experience of involved families in an earlier theoretical work and the author follows that model to capture the complexities of the experience covering numerous aspects in the social and economic structure. Interviews with the AIDS patients and families taken by the author are touching. The author carefully records their feelings about the family care, changes in structure, coping strategies of the family and their movement in life. The author immerses herself in the data and transcribes the interviews that lead to the hypothesis through the pages of the book. It is unfortunate that the worst sufferers in the entire process are children, family and the wives of the victims.

The author has clearly mapped out the inner sphere of the family relations as well as the outer orbit of the economic and social activities of the victims. The complex psychological features and their socio-economics have been very articulately brought out. While offering a few interesting recommendations, the

author does not absolve the private sector from its social responsibility of rehabilitation. After all, AIDS came to the country through a passport holder who travelled abroad, caught the infection and brought it home. And during those days, those who travelled abroad belonged to a particular class. The book serves as an eye-opener to the common man and as a starting point for those who are investigating the future of the mankind.

**Renana Jhabwala, Ratna M Sudarshan and Jeemol Unni (eds).
Informal Economy Centrestage: New Structure of Employment.
New Delhi: Sage Publications. 2003. Pp 290. Rs 495.**

The service sector in India has been and will continue in the coming decades to be the main contributor to growth. And the informal sector has a great role in this expansion of the service sector as well as in manufacturing. It will also be the main employment-generating sector, with above 60 per cent share in the National Income (CSO estimate). For years, many dimensions of the informal sector have remained under-explored mainly due to the nature of the sector itself. This book is a welcome addition to the scanty literature available on this issue. It primarily focuses on the measurements in the informal sector; at the same time, the editors desist from claiming any final word on the methodology or on the results of the researches, and hence prefer to keep it open-ended. The book engages a research process in which the contributors have handled various aspects of the informal economy. It starts with the authors' meeting the SEWA activists. Even though one cannot claim that the eight chapters cover the entire span of the informal sector in the country, the book still really touches the core.

The book begins relating theoretical discussion to the empirical ground truths. The first chapter discusses this imaginary tension between theory and empirical assessment and the role of informality in economic growth. The subsequent chapters deal with various aspects including productive work, self-employment and wage employment, creation of value addition etc. The excellence of analytical prowess of authors like Renana Jhabwala, Jeemol Unni, Ratna Sudarshan, N Lalitha, Anushree Sinha and many others is reflected in this study. Though each chapter assumes various dimensions independently, as a whole they revolve around the fulcrum of the informal sector's contribution to the economy. The book also focuses on some unexplored issues like the gender aspect of informality in its content.

In conclusion, the editors underscore the prime role of the private sector, financial policies and capacity building as the building blocks that will need policy attention. They make it very clear that this sector will play a crucial role in the process of future economic development and therefore cannot be brushed aside too informally.

Jog, K P (ed). *Perceptions on Kautilya Arthashastra*. Mumbai: Popular Prakashan. 1999. Pp 216. Rs 250.

Kautilya's treatise on the theory of political administration provides certain unique principles. These are dynamic in their theoretical context, but static in their assumptions about state and society. *Arthashastra* is like a multi-faceted hyper-plane; it explores the political administration in the context of the king and the kingdom. Many scholars feel Kautilya's treatise on the art of state neglects ethics and compare that with Machiavelli's *Prince*.

This small monograph, edited by an eminent scholar Prof K P Jog, is a commemoration volume to mark Prof R P Kangle's birth centenary. Those who have read *Chanakya Niti* through Prof Kangle's critical works on Kautilya would remember the exuberant writings of this great indologist. The interpretation of *Arthashastra* by Prof Kangle, known for his clarity of understanding and precise translation capability, was beyond reproach. Prof Jog brought together authors of high reputation in the field of *Arthashastra*. The volume includes Kautilya's theory of diplomacy and the interpretations of *Kanikaniti*. Many may not know that Kautilya did not deal directly with state finances but rather focused on the *Craft of State Administration* and reached finances through that route. Therefore, *Rajadharma* and *Dandaniti* are very essential and much-quoted components of Kautilya's *Arthashastra*.

Management of administration as a science had its beginning in this famous treatise and the nuances of administrative management are elaborated through *Rajadharma*. The monograph also provides excellent readings on the social philosophy of Kautilya and explores some of the concepts seemingly of recent origin, like *Lokasangraha*, people's sovereignty, and, above all, the issue of gender. To those who interpret Kautilya as a philosopher and craftsman of state administration, these concepts are refreshing. In the true tradition of Kautilya, this book should also raise sufficient controversies, and, therefore, one must traverse through it. It serves as a good reference volume and clears many popular misunderstandings about the original monumental work.

Malcolm Harper. *Public Services through Private Enterprise: Micro-privatisation for Improved Delivery*. New Delhi: Sage Publications. 2000. Pp 370. Rs 450.

The process of privatisation is gathering strong support that is reflected through policy changes as well as consumer preferences. Expressions are very clear about the entry of the private sector into public services. The pathetic condition of public services in most of the rural areas across the developing world is well known. At the same time, we have some good experience of the private sector and, therefore, the thinking about privatisation of public services has become quite

strong. This book addresses the issue of micro-privatisation and presents experience through various case studies in the management of public services. Malcolm Harper has collected very interesting case studies on micro-privatisation and presented them in a systematic manner. These 24 real-life case studies in private management of public services across the countries include education, health, food distribution, irrigation, market management, hydro-power management, agriculture and urban services.

The process of micro-privatisation is justified on the grounds of management difficulties, social and physical outreach and lack of money for investment. The benefits of micro-privatisation are highlighted; at the same time, the book also clearly brings out the role of public providers of the services as against the private providers. However, the comparison remains only in the background and does not have an empirical backup. The case studies very lucidly bring out the process of micro-privatisation. One must, however, bear in mind the private operators' interest in covering the poorer areas and the sustenance of their operations over time. The services described in the case studies undoubtedly have a great relevance in ensuring better quality of life, but initiatives of this type should start from the bottom. No micro-privatisation initiative should wait for the approval of the public authorities and official pronouncements or for sanctions from the state. This issue is highlighted in the penultimate chapter. The book would be quite useful to those interested in reading the footprints of privatisation in public services in India and elsewhere.

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