Structural Dynamics, Growth and Regional Inequality:
Incidence of Industrial Development in India

Panchanan Das
Government of West Bengal, India

Introduction:

One of the major facts indicating India's economic backwardness until very recently was its slow industrial growth. There has also been strong evidence of deindustrialisation, particularly in the sense of negative employment growth in the registered sector, in most of the states in India during the 1990s and thereafter. But, India experienced faster economic growth, as conventionally measured under neo-liberal reforms. The phase of high economic growth has been accompanied by significant inter-sectoral, inter-regional and the inter-class imbalances. Uneven economic development has been a major contradiction of capitalist development. The more developed regions capture much of the new physical, human, and financial capital, often at the cost of peripheral and rural regions through the process of cumulative causation of Hirschman (1958) and Myrdal (1957). The presence of sunk-capital, particularly in manufacturing, has a significant contribution to regional uneven development within a national boundary. In the process of economic reforms, governments at the regional level have joined in the process of competition to attract more private capital in a badly manner by offering different kinds of tax concessions and other benefits to the capitalists at the cost of social sector development. This paper re-examines the contradiction of capitalist development by analysing growth, structural dynamics and regional inequality with Indian data over the past four decades.

Data:

In analysing the regional growth pattern, we need state level data on domestic product published by the Central Statistical Organisation (CSO). There are some conceptual problems in regional accounts of income and we have to bear them in analysing regional pattern of growth. The inferences drawn from the analysis of this data series have to be considered as the outcome of income generation, not income accrual. The free movement of capital, labour and commodities between the geographical boundaries of states create some problems in defining regional income properly. In the rest of the paper we also utilise data on registered manufacturing provided by the Annual Survey of Industries (ASI) published by the CSO. However, there are problems of both coverage and intertemporal comparability of the ASI data. The ASI distinguishes between the census sector which corresponds to the larger units and the sample sector which consists of units below the size that qualifies a factory as a member of the census sector. The coverage of the factory units in ASI under census sector was changed in 1997-98. It leads to a bias in the results on size distribution, ownership pattern and forms of business organization. As the data in annual series of ASI are constructed from a probability sample, with large firms enumerated every year but smaller firms included according to a sampling probability, the time series constructed from the ASI does not necessarily represent the same firms over time, and year-to year sampling variation can introduce volatility.

Regional inequality:

A major part of the empirical exercise carried out in this study utilises fixed effect panel data model. The Gini coefficient of states' net product (NSDP) and its sectoral components is used as

a measure of regional inequality to examine the role of agriculture, industry and services in bringing about changes in the level of regional inequality. This study observes a significant income gap between richer and poorer states in India. Regional inequality has been the highest in NSDP from manufacturing. In the light of the wide range of evidences portraying regional divergence in per capita real income in India, this paper seeks to shed light on the debate by considering the issue why have certain states performed better than others.

To find out how regional inequality is explained by the inequalities in sectoral incomes, an ARMA (1,0) model with Gini index of NSDP as a dependent variable and the Gini indices of incomes generated from three major sectors is estimated by taking into account the stochastic properties of time series. The AR(1) component describes the dynamics of regional inequality. As the inverse root of the AR polynomial lies inside the unit circle, the ARMA model is stationary. It is revealed that the regional variation in manufacturing output plays a significant role in regional growth differential in states' total income.

Role of manufacturing:
As manufacturing, along with services, is the leading sector in explaining regional growth differentials in India, this study is motivated by the need to analyse the pattern of employment and productivity growth in the registered manufacturing sector of the country. There has been a significant mismatch between employment growth and output growth in industry. The post-reform growth in the registered manufacturing sector has been job destroying. Although labour productivity increased at a considerable rate since the early 1990s, wage rates remained stagnant or falling during this period. The structural change took place in favour of capital by displacing labour, particularly in the post-reform period.

The role of manufacturing in describing regional growth differential is based on the dynamic increasing returns to scale associated with invention and innovation in manufacturing industries. We have estimated the relationship between employment growth and output growth by incorporating the effect of fixed capital. The estimate is based on panel data for 17 major states over 38 years (1971-2008) obtained from the ASI. Although the structural change took place in favour of capital, the output growth in the factory sector is mainly labour driven. The sum of output elasticities is 9.5, implying the presence of substantial increasing returns to scale in the process of growth in registered manufacturing in India

Conclusions:
The growth differentials across the major states were higher for manufacturing than for agriculture and services. The induced growth of labour productivity achieved by means of industrial growth leads to the polarisation of economic growth in some regions with higher proportional shares of manufacturing output in India. As is observed in this study, the structural dynamics of growth in underdeveloped economies like India under neo-liberal capitalism has been significantly different from that of the matured economies of the 20th century capitalism.