

Abstract for “Sources of Growth in the Indian Economy with Specific Reference to Punjab and Haryana States: Evidence from Malmquist Productivity Index Approach”

Dr Amarjit Singh Sethi (Guru Nanak Dev University, India)
Supreet Kaur (Guru Nanak Dev University, India)

The present analytical study, based on regular time series data (for 30 years period from 1980/81 to 2009/10), aims at analyzing sources of output growth in the states of Punjab and Haryana vis-à-vis the overall Indian economy. Specifically, objective of the paper was to examine whether output growth in these economies has been driven primarily by inspiration or perspiration or both. For meeting the objective, output-oriented DEA-based Malmquist Productivity index approach was adopted with Net Domestic Product (as output), and Labour, Capital and Energy (as three inputs). Keeping in view the macroeconomic policy changes adopted by the Indian government in June, 1991, the study span was subdivided into pre-reforms period (from 1980/81 to 1990/91) and post-reforms period (from 1990/91 to 2009/10).

The requisite data (Net State Domestic Product and Net Fixed Capital Stock) for the Indian economy were sourced from various issues of National Accounts Statistics. The data on Net State Domestic Product (NSDP) for Punjab and Haryana states were compiled from various issues of Statistical Abstracts of the corresponding states. However, capital stock series for the two states was generated through perpetual inventory method (Sethi and Kaur, 2012). Data on working force (proxy for labour force) were compiled from various reports of Census of India. Requisite information on electricity consumption (proxy for energy) for the 3 economies was compiled from various reports of Planning Commission of India. Data on domestic product and capital stock available originally in parts with differential base years were duly spliced together so as to get comparable series at 2004-05 constant prices. Aggregations were then made (for each of income, capital stock and working force) in respect of major components viz., Primary, Secondary, Tertiary-1, Tertiary-2, Aggregated Tertiary, and Aggregated Income.

Certain observations were made from the study, such as: (1) During the entire study span, output growth in Haryana state exceeded that in the overall Indian economy, while output growth in Punjab state has lagged behind that of each of the other two economies. Further, output growth has been faster during post-reforms period than during pre-reforms period in all but primary sector; (2) During each of prereforms period, post-reforms period and the overall period, TFP growth was the fastest in respect of Haryana state, followed next by the overall Indian economy. In Punjab, TFP growth turned out to be negative during all the three time spans. In a majority sectors of each of the two states' economies, TFP growth has deteriorated during post-reforms vis-à-vis pre-reforms period. Notably, however, tertiary sector (as also its sub-sectors) of the Indian economy as whole has registered a significant improvement in TFP growth during the reforms period; (3) Poor performance of TFP growth in a majority sectors of Punjab has been due to technical change rather than efficiency change. On the other hand, technical progress (due to innovations, etc.) has acted as a dominant source of productivity gains in Haryana state as well as the overall Indian economy; (4) No significant improvement could be realized in efficiency of a majority sectors in each of three economies; and (5) Decomposition analysis of the sources of growth of output has indicated that in respect of all the major sectors of Punjab, inspiration

component has contributed negatively, whereas perspiration component has contributed positively to output growth. On the other hand, in each of Haryana and the aggregated Indian economy, both inspiration and perspiration components have contributed, in general, positively (primary sector having been the lone exception wherein the contribution of TFP was negative). Nevertheless, growth in factor accumulation has surpassed that in TFP in all the sectors.

Thus, as per the findings, the three economies, in general, and Punjab economy, in particular, need to strive for a productivity-driven economic growth, so as to achieve sustainability in the growth process. Emphasis needs to be placed on diverting huge expenditure incurred on non-developmental activities towards strengthening of R & D activities, and social and physical infrastructure.

Secondly, deterioration in TFP growth in a majority of sectors in each of Punjab and Haryana states during post-reforms period might be taken to indicate that earnest efforts have not been made to implement the reforms measures by the state governments. In the era of ever-increasing competition, we need to identify the areas with a comparative advantage to make our production process effective and efficient. There is an urgent need not only to make a mere accumulation of factor inputs, but also pay a due attention towards qualitative improvements of both inputs and outputs, so as to accelerate TFP growth.

Thirdly, as primary sector has fared quite poorly in all the three economies and during all the periods/ sub-periods; therefore, stringent measures need be adopted for providing resilience to this sector of crucial importance (providing employment to a large chunk of the population), so as to achieve inclusiveness in the growth process. As has been stated by Lewis, "It is not profitable to produce a growing volume of manufacturing unless agriculture production is growing simultaneously. That is why economies, in which agriculture is stagnant, do not show industrial development." Adoption of measures like (a) making higher outlays for rural industrialization, (b) doing away with across-the-board distribution of free electricity and water in agriculture sector, and (c) bringing big farmers under tax net would help in generation of resources required for strengthening rural infrastructure and, thereby making the primary sector of each of the economies under study a sustainable one.