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Title of the Paper: India's Economic Growth: Accumulation or Productivity

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Abstract

Asian economic growth in the context of the so-called East Asian miracle in the 1970s and 1980s has been widely debated in the literature.[1] The debate was mostly about the relative roles of factor accumulation and productivity growth. Economists now pay much attention to the recent awakening of Asia's two dormant giants, India and China, particularly in the 1990s. However, the growth experience of India has been different from many other economies of East Asia as well as Southeast Asia.[2] Further, there is hardly any significant industry/sector level productivity analysis in a unified framework covering the entire Indian economy.[3] This conspicuous lack of a comprehensive analysis of India's economic growth was mainly due to the non-availability of relevant data to do a meaningful growth accounting exercise. For instance, a recent study by Panagaria (2008) even opted to use only GDP growth rates to understand the dynamics of Indian economy, due to lack of appropriate data.

The present paper is an attempt to understand the sources of Indian growth experience for the period 1980-2005 using a newly developed INDIA KLEMS database. In particular, it examines the relative contributions of factor accumulation and productivity growth in various sectors of the Indian economy. A sectoral perspective gains significance in the context of major reforms in economic policies witnessed across all the major sectors in the past two decades. For instance, the introduction of market friendly policies in the early 1990s was expected to make the economy more efficient and competitive. In addition, there has been significant structural transformation in the economy during the past decade. Evidences suggest a high and increasing share of service sector GDP. Past evidences also shows significant heterogeneity in productivity growth across industries.

In order to decompose output growth into contributions of inputs and factor productivity, we develop an INDIA KLEMS database, in line of EU KLEMS using statistical information available with the Central Statistical Organization (CSO), India. This new dataset includes labor and capital accounts, measured using Jorgenson's methodology. Labor input is measured as total hours worked and labor composition, where the latter is measured after weighting different types of employment by their

[1] See Young (1992), Kim and Lau (1994) and Collins and Bosworth (1997) among others.

[2] Unlike much of East Asia, India has neither an achieved high growth rate nor undergone prolonged periods of stagnation or decline.(Panagariya, 2008)

[3] But it is worthwhile to note that the literature on productivity measurement and analysis for the organized manufacturing sector (Ahluwalia, 1991; Goldar, 1986; Balakrishnan and Pushpangadan, 1994; Das, 2001, Banga and Goldar, 2004 and Trivedi, 2004), and agriculture (Dholakia and Dholakia, 1992; Krishna, 2007) in India is reasonably extensive. Also a few recent studies for the aggregate Indian economy covering the pre-reform and post reform periods have appeared (See Krishna, 2007 for a review of these studies). A new study by Bosworth and Collins (2008) of productivity growth in the three broad sectors, namely, Primary, Industry and Services of Indian economy is a useful contribution. However, this study is confined only to the main sub-sectors of the economy and also suffers from many data limitations

wage shares. Similarly capital input is measured as capital services, taking account of heterogeneity in various assets, such as ICT and non-ICT. In constructing this database we exploit various data sources, such as national accounts, input-output tables, and household employment surveys. The INDIA KLEMS dataset is part of the ongoing World KLEMS database, which contains Latin America, China and Russia.

References

Ahluwalia, I. J (1991), *Productivity and Growth in Indian Manufacturing*, New Delhi: Oxford.

Balakrishnan, P. and K. Pushpangadan (1994), "Total Factor Productivity Growth in Manufacturing Industry", *Economic and Political Weekly*, 30(9), 462-464.

Banga, R. and B.N. Goldar (2004), "Contribution of Services to Output Growth and Productivity in Indian Manufacturing: Pre and Post Reform", Working Paper No.139, ICRIER. New Delhi, India.

Bosworth, B and S. M. Collins (2008), Accounting for growth: Comparing China and India, *The Journal of Economic Perspectives*, 22 (1), 45-66.

Collins, S. and B. P. Bosworth, 1997, "Economic Growth in East Asia: Accumulation versus Assimilation," *Brookings Papers in Economic Activity*, Vol. 27, 135-204

Das, D.K. (2001), Some Aspects of Productivity Growth and Trade in Indian Industry, Ph.D. Dissertation, Delhi School of Economics.

Dholakia B.H and R H Dholakia (1993), "Growth of Total Factor Productivity in Indian Agriculture," *Indian Economic Review*, 28(1), 25-40.

Goldar, B.N. (1986), *Productivity Growth in Indian Industry*. New Delhi: Allied Publishers.

Kim, J.I. and L.J. Lau (1994), "The Sources of Economic Growth of the East Asian Newly Industrialized Countries*", Journal of Japanese and International Economies*, 8,235-271

Krishna K.L (2007), "What do we know about Sources of Economic Growth in India" in A.Vaidyanathan and K.L. Krishna (eds) *Institutions and Markets in India's Development: Essays for K.N. Raj*, OUP, New Delhi

Panagariya, A. (2008*), India: The Emerging Giant*, New York, Oxford University Press

Trivedi, P (2004), "An Inter-State Perspective on Manufacturing Productivity in India: 1980-81 to 2000-01", *Indian Economic Review*, Volume 39.

Young, A.(1992), 'A Tale of Two Cities: Factor Accumulation and Technical change in Hong Kong and Singapore', Macro Economics Annual, NBER,13-54