Chapter 5
Productivity Convergence and Asian Trade Blocks

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ABSTRACT
The present chapter tries to examine the trend of productivity growth and the process of convergence of productivity among the countries within three blocks viz., ASEAN, APEC and SAARC, using the data compiled by R. Summers and A. Heston in Penn World Table -Mark 5.6 and 7.1. Applying Galton model of the growth process it indicates that the countries within ASEAN and SAARC block do not show any convergence of productivity during the period 1960 to 2010. However, the countries within APEC show the sign of convergence of productivity. Standard tests for convergence show that only the APEC group of countries satisfies the test of absolute convergence that is significant whereas ASEAN and SAARC fail to satisfy the test of absolute convergence. The application of the test of conditional convergence on the ASEAN group of countries does not satisfy the criteria of convergence conditioned by the volume of investment but it shows strong tendency of conditional convergence of productivity among the countries of SAARC trade block.

INTRODUCTION
Productivity growth is one of the major forces behind sustainable economic development of a country. J. G. Williamson rightly pointed out that “If there were a topic for which an understanding of the long run mattered, productivity performance is surely it”(Williamson, 1991). There are two basic reasons for examining the growth pattern of productivity of countries. First, it is the only plausible route to increase the standard of living by raising the real purchasing power of the people of any country (Krugman, 1994; Balakrishnan & Pushpangadan, 1998). Second, productivity growth also raises the competitiveness of a country by reducing the cost, and thus, ceteris-paribus, the price of goods and services in the international market. But liberalization also raises the productivity of a country through competitiveness. So, when a country opens up its trade, the natural force of competition will raise the productivity of a country and also raise the quality of products at a lower cost. Naturally, productivity growth is a policy target of many developing and developed countries in today’s world.

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In recent years, studies have been done to understand various issues relating to the long run economic growth of countries. In explaining the economic growth of a country most of the studies have recognized the importance of productivity of the country (Baumol, 1986; Baumol and Wolff, 1988; De Long, 1988; Wolff, 1991; Williamson, 1991). It has been shown in many studies that in most of the cases there appear strong negative relations between growth rates and the initial levels of productivity. The main finding of these studies is that there exists convergence of output per labour among the industrialized nations and most of the developed nations have moved closer in terms of the average productivity growth. The spillover of productivity growth from the leaders to followers provides mutual benefits to both the countries but the benefits to the followers are much higher than the leaders. The countries which lag behind in productivity learn much more than advanced countries and thus the process converges to a steady state. Baumol (1986) argues that it is difficult to get convergence of productivity among less developed countries and when there is a large technological gap between the trading partners the convergence is not possible. He also argues that the evidence of convergence is preponderance in case of developed industrialized nations and there might exist more than one convergence-club. The idea of convergence is that poorer economies tend to grow faster than richer ones. If one takes a broad group of countries, the empirical relationship between the growth of per capita output or average productivity and the initial level of productivity may not always show a downward trend. Barro and Sala-i-Martin (1992) in their paper on convergence of per capita income, argued that the results for a broad sample of countries are similar, if one holds constant a set of variables that proxy for difference in steady-state characteristics.

The convergence of productivities among the trade blocks could be an interesting phenomenon in the growth literature due to the fact that an FTA (Free Trade Agreement) has multidirectional impact on the member countries. The answer to the question of catch-up and the factors behind the convergence of productivities give us an idea about the relative development across countries and insight into the process how poor countries can improve their economies. This study seeks to analyze the important question of convergence of productivities among the countries of each trade blocks in Asia. The problem of Regional Integration (RI) and Customs Union (CU) were originally initiated by Vinner (1950) in his study on trade creation and trade diversion due to Customs Union. The literature on this issue tells us that the welfare effects of economic integration on the member countries are ambiguous. There are enough reasons for thinking that FTA between developing countries might lead to divergence of their income levels, with richer countries benefiting at the expense of poorer. But, FTA’s that contain high income countries are most likely to lead to convergence rather than divergence of income level among the member countries (Venables, 1999). Therefore, if the developing countries build up forge trade links with high-income countries the developing countries might have welfare gains.

The experiences of many trade blocks of developing countries suggest that integration has promoted divergence. Thus, there is a need to study the convergence hypothesis among the countries in Asian trade blocks where most of the member countries are developing. Since productivity is a major component of economic growth, the study concentrates on the process of convergence of productivity among the member countries. It is argued that regional trade agreements promote technology transfer from the high income countries to lower income members. Although this mechanism of spillover is not fully understood, most of the studies argue that it is promoted by trade flows. They found that access to foreign technology is a significant determinant of rate of total factor productivity across OECD and developing countries (Coe & Helpman, 1995; Bernard & Jones, 1996; Coe, Helpman & Hoffmaistar, 1987; Keller, 1998). Moreover, regional trade agreement promotes foreign direct investment – another source of technology transfer. These considerations lead to strengthen the argument that FTA may help
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