

Dynamics of Economic Growth in South Asia in Last Two Decades

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Introduction

Economic growth dynamics or productivity growth can be defined as the output of products and services per unit of all production resources over a certain time period. Natural resources are not distributed equally throughout countries. Some countries, for example, benefit from fertile agricultural soils, whereas others must invest heavily in artificial soil improvement. Some countries have discovered abundant oil and gas reserves on their own soil, while others must import them. Natural resource scarcity or abundance used to make a significant impact in the development of countries.

A large literature comparing the development of different countries demonstrates that the efficient use of productive resources such as physical capital and human capital is widely recognized as the primary indication of a country's or region's level of economic development. Such studies, however, are highly difficult, owing to the difficulties of assessing values on elements of natural and human capital. Therefore, natural resource abundance is no longer the most important determinant of progress. Consider the case of high-income countries. Their advanced economic growth enables them to use their scarce natural resources far more productively (efficiently) than many less developed countries. Balanced growth models (BGM) are based on the Kaldorian facts. These “great ratios” imply that in the long run growth rate of output, the capital-labor ratio share is roughly constant over time. In this study, we examine the dynamics of growth in South Asian economies over the last two decades. This paper analyzes the impact of capital productivity, labor productivity and total factor productivity on growth dynamics of South Asian economies

Overview for the Economic Growth in South Asia

Income disparities between countries are explained by the factor endowment model of neoclassical growth as a result of varying capital-labor ratios. Balanced growth models (BGM) are based on the Kaldorian facts, which imply that the capital-labor ratio is essentially stable across time in the long run. Modern economic research, however, demonstrates that

the empirical evidence does not support the baseline form of the neoclassical model of economic growth. Solow's calculations stated that technological advancement, rather than capital and labour inputs, accounted for the majority of economic growth. However, the calculations used to support this assumption are flawed because they fail to account for changes in both investment and labour inputs (Jorgenson 1990). Landes' (1969) assertion that "the machine is at the heart of the new economic civilization" is typical of accounts that place mechanisation at the centre. As Mokyr (1990) puts it, "the lever of riches" has been technology manifested in machines.

Work in the Solow growth accounting school has often concluded that capital accumulation accounts for just a modest proportion of productivity growth (e.g. Denison and Chung 1976). However, Jorgenson's more complex and disaggregated growth accounting exercises uncover significant complementarity between equipment investment and total factor productivity growth, implying that investment plays a slightly larger role in enabling productivity development. Many other studies, for example, De Long and Summers 1991, 1992, show that investments are a major driver of long-run economic growth.

South Asian economies' service sector shares are steadily expanding. When an economy transforms from one sector to another, capital, labour, and total factor productivity all change. Therefore, in this section we show the patterns of economic growth, investment, labour productivity and total factor productivity (TFP) in recent two decades

Dynamics of Economic Growth of South Asian Economies (Last Two Decades Analysis)

South Asia is predicted to grow at a 5.8 percent annual rate this year, faster than any other emerging country region in the world, but slower than before the pandemic and not fast enough to reach its development goals. India, which accounts for the majority of the region's economy, is predicted to maintain its high growth rate of 6.3 percent in FY23/24. Maldives is predicted to expand by 6.5 percent in 2023, while output in Nepal is expected to grow by 3.9 percent in FY23/24. Several countries in the region are currently dealing with the fallout from recent currency crises. Growth in Bangladesh would decrease to 5.6 percent in FY23/24. In Pakistan, growth is expected to be 1.7 percent in FY23/24, which is lower than the pace of population growth. Following a severe recession, Sri Lanka's economy is anticipated to increase by 1.7 percent in 2024, after falling by 3.8 percent in 2023.

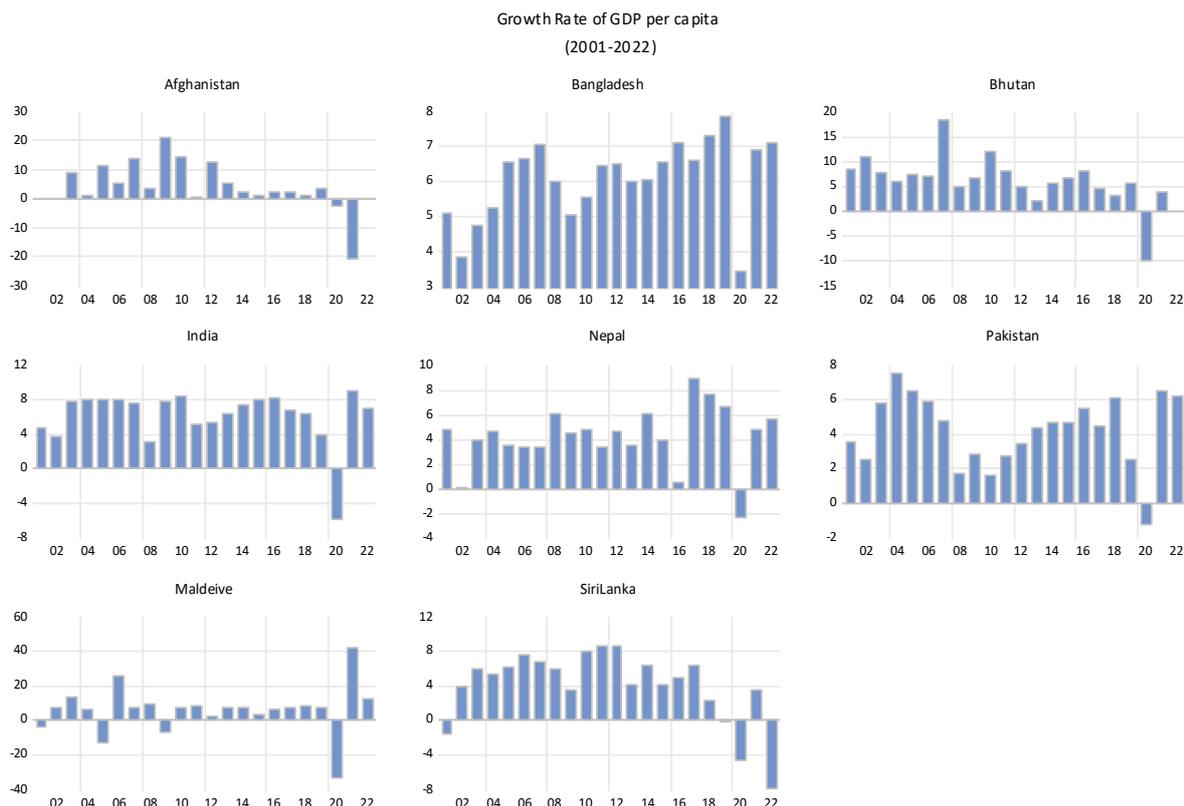


Figure 1: Economic Growth Rate of South Asian Economies in Last Two Decades

Source: WDI data

According to Solow (1957), physical capital accumulation leads to a rise in the level of production and consequently economic growth. Capital accumulation influences economic growth by determining national production capacity. The impact of capital accumulation on economic growth is determined by the intensity of capital accumulation variables such as savings, foreign direct investment, and interest rates. One of the most critical problems limiting countries' long-term growth is insufficient capital accumulation (Onyinye et al., 2017). Savings are critical for investing. Developing countries can increase their GDP per capita by amassing capital and improving capital efficiency. National savings can help to accumulate capital. Most South Asian countries have low national savings rates. The model was created by economists Roy Harrod and Evsey Domar in the 1930s and 1940s. The essential principle behind the Harrod-Domar model is that economic growth is determined by the amount of capital available for investment, and the rate of capital accumulation is proportional to the rate of savings, Harrod (1939)

Dynamics of Investment in South Asian Economies

Gross fixed capital formation (GFCF), often known as "investment," is defined as the acquisition of produced assets (including second-hand acquisitions), as well as the production of such assets by producers for their own use, minus disposals. The relevant assets are assets that will be used in the production of other goods and services for longer than a year. The term "produced assets" refers to assets that come into being as a result of a manufacturing process. As a result, it excludes, for example, the purchase of land and natural resources OECD (2023).

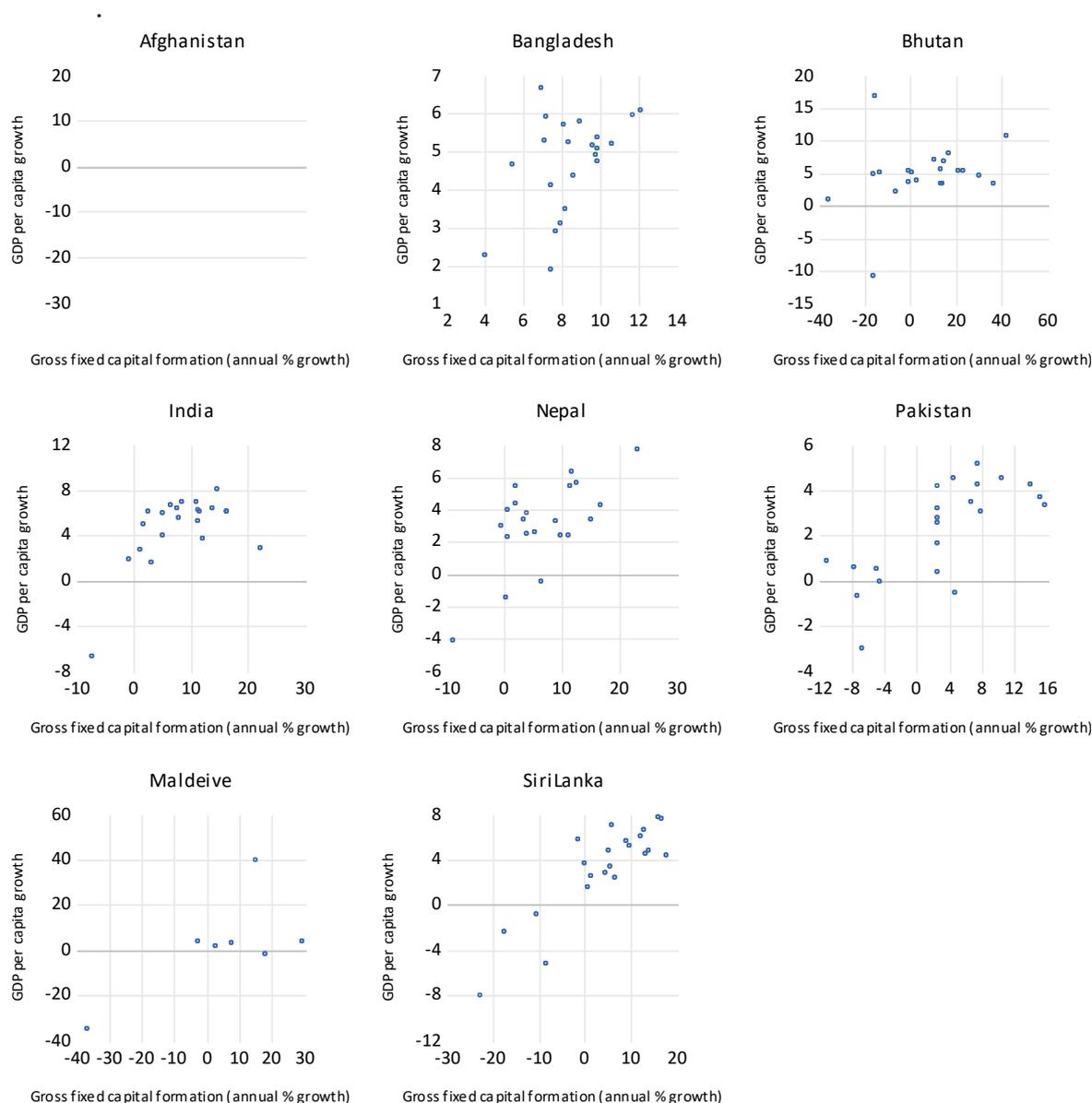


Figure 2: Annual Growth rate of Gross Fixed Capital Formation and GDP per capita

Source: Authors regressions on WDI data

Figure 2 depicts a scatterplot with a line of best fit demonstrating the relationship between GDP per capita growth rate and gross fixed capital formation. The scatterplot demonstrates

that there is a positive linear relationship between the increase of GDP per capita and the growth of Gross fixed capital formation for all South Asian economies except Afghanistan, where the majority of the data points in blue are missing. All other South Asian economies' data points largely continue to move in a favorable direction; however, there are a few outliers on both the positive and negative sides of the X-Axis. These anomalies are most likely explained by unusually substantial increases in either GDP or investment. Figure 1 also depicts negative jumps in the economic growth of Maldives, Bhutan, and Sri Lanka.

Dynamics of Labor Productivity in South Asian Economies

Most of the studies investigate the labor productivity positive effect on economic growth and development , , (Palle et al, 1995). Also growth accounting model focused on labor productivity.

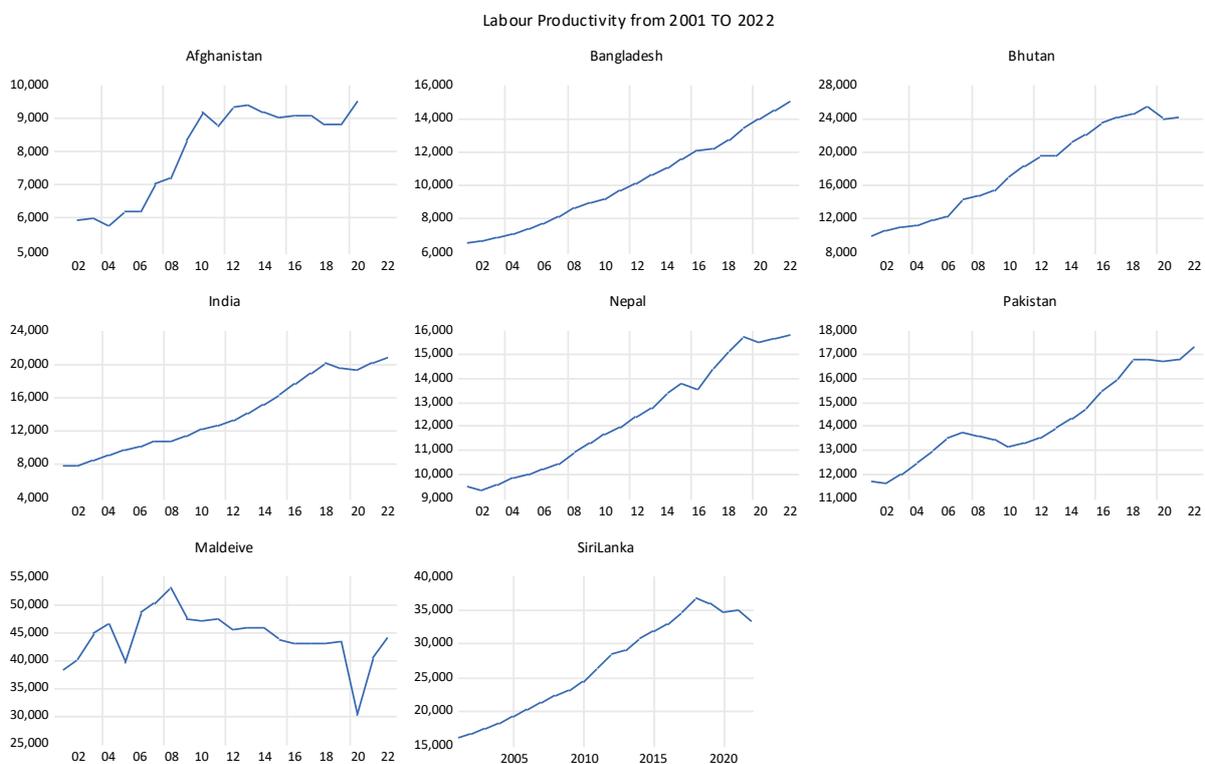


Figure 3: Labor Productivity of South Asian Economies from 2002 to 2022

Source: Authors regressions on WDI data

Figure 3 depicts the upward trend in labor productivity in all South Asian economies over the last two decades. According to an Asian Development Bank research, economic development in Asia has advanced swiftly in recent decades, bringing many people out of subsistence agriculture and into more productive jobs in manufacturing and services. Using a

decomposition technique on data collected by the Asian Productivity Organization (APO) as well as World Input-Output data, ADB shows that the services sector contributes the most to labor productivity in most Asian economies. Furthermore, SDB discovers evidence of a significant shift in labor from agricultural to services, bypassing the manufacturing sector. This study undermines the conventional wisdom that countries in their economic development must first employ their workforce in manufacturing before transitioning to services Long et al. (2019).

Dynamics of Total Factor Productivity in South Asian Economies

Another goal of this strategy is to identify how much economic growth is due to inputs (capital and labor) and how much may be attributed to technological improvement. The fact that TFP is classified as a residual category. The origins of this strategy can be traced back to the pioneering study of Solow (1957). Therefore, we use TFP to show the trend of technological progress. As first step, we estimated impact of capital and labor on growth rate of GDP by using growth accounting equation.

Table 1: Dependent Variable: GDP Growth Rate

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| C | -0.018 | 0.006697 | -2.779757 | 0.0065 |
| Capital | 0.2065 | 0.041219 | 5.010586 | 0.0000 |
| Labor | 0.170 | 0.303075 | 3.666272 | 0.0004 |

The results in Table 1 reveal that capital and labor have a favorable and considerable impact on the economic growth of South Asian economies. A 1% increase in the growth rates of capital and labor can boost economic growth by 20% and 17%, respectively. To capture the impact of TFP, we obtain the Solow residual from the aforementioned regression estimate, and the Solow residuals are referred to as total factor productivity (TFP) and are depicted in the figure below. In South Asian economies, information and communication technology may be the most important component contributing to total factor productivity.

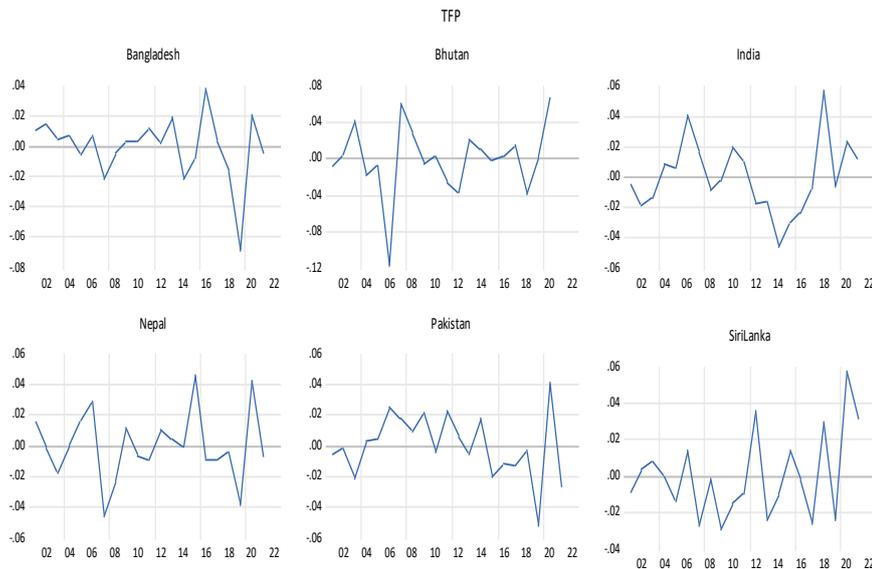


Figure 4: Total Factor Productivity (TFP) of South Asian Economies from 2002 to 2022
Source: Authors regressions on WDI data

There are three ways that ICT sector helps the economy growth. First, it makes production more efficient across the economy. Second, users have seen prices go down a lot while quality has gone up for at least 20 years, because ICT equipment is made in a way that is affected by how quickly technology is changing. This suggests ongoing support for ICT investment. Third, there are signs that ICT, because it is flexible and used by a lot of people, may speed up technical change and, in turn, productivity and GDP growth. .

Figure 4 shows volatility in total factor productivity across the south Asian Economies. Another study by Shah (2021), supports volatility of TFP in shown in figure 4. TFP is increasing in a typical technology-based economy like India, as a result of technical progress. On the other hand, among labor-intensive economies, Sri Lanka performs better because TFP in Sri Lanka is improving at a good clip, while TFP in Pakistan is also gradually increasing. TFP growth in both countries is being driven by good technology change. TFP is declining in Bangladesh, which is the worst performer among five South Asian countries, despite the fact that technical advancement is still occurring. Nepal's TFP is also improving, albeit at a slower rate. Except for Bangladesh, the remaining countries exhibit a progressive trend in efficiency change.

Expectations and Implications Towards Nearest Future

South Asian growth has been growing, and the region's economic performance over the last two decades has been outstanding. Economic progress has helped to significantly reduce poverty in the region. South Asia is currently at a crossroads with strong prospects for continued high development and poverty reduction. If the appropriate policy choices are

implemented, the region has a rare potential to substantially reduce poverty over the next decade. According to the World Bank, South Asian economies are expected to grow by 5.6 percent in 2024-25. In 2023-2024, India will account for 6.3%. Maldives 6.3%, Nepal 3.9%, Bangladesh 5.6%, Pakistan 1.7%, and Sri Lanka 1.7% are showing signs of improvement after falling by 3.8% in 2023 due to a severe recession. The output in the Maldives and Nepal is satisfactory as a result of a strong recovery in tourism. Several countries in the region are still coping with the aftermath of recent currency crises. Pakistan's growth is predicted to be 1.7 percent in FY23/24, less than the rate of population growth. Sri Lanka is showing signs of recovery following a devastating recession, with the economy expected to grow by 1.7% in 2024 , World Bank (2023).

South Asia has experienced structural transformations, with the services sector leading the way. The share of the services industry has increased significantly during the previous few decades. Investment, labor productivity, and total factor productivity are all major drivers of growth in the services sector. Therefore, the impact of capital productivity, labor productivity, and total factor productivity on the growth dynamics of South Asian economies is examined in this article. Because the majority of South Asian economies are labor heavy, high skilled labor is essential to drive economic growth, and these economies must increase spending and cooperation to advance technologically. India could play an important role.

Our findings indicate that South Asian economies should prioritize capital accumulation through increased national savings. National savings are crucial for investment. According to the Harrod-Domar growth model, developing countries can raise GDP per capita by accumulating capital and improving capital efficiency. Capital accumulation might be achieved through national savings, while capital efficiency may be attained through the use of contemporary technology. Gross domestic savings as a percentage of GDP in South Asia are falling from 29% in 2011 to 26% in 2023. Second, labor productivity is an essential aspect in the dynamics of growth. When the economy transitions from one sector to another, labor productivity changes. Therefore, changes in labor productivity affect economic growth. South Asian economy are labor-intensive. Improving human capital is critical to increasing labor productivity. According to an Asian Development Bank analysis, human capital generated approximately 22% of annual GDP per worker growth in India, 21% in Bangladesh, and 16% in Sri Lanka. (ADB, 2017).

The third most important factor is the contribution of total factor productivity. Total factor productivity is a measure of productive efficiency that determines how much output can be

generated from a given set of inputs. According to a study conducted by Saha (2022), total factor productivity in South Asian economies is uneven. India is developing a standard technology-based economy as a result of technological advancement. In Sri Lanka, it is improving at a good pace, while Pakistan's TFP is also steadily increasing. Positive technical advancement drives the expansion of TFP in both countries. Bangladesh is experiencing TFP decline, as it is the worst performer among five South Asian countries, despite the fact that technical advancement is still occurring. Nepal's TFP is also improving, but slowly. Except for Bangladesh, efficiency change shows an upward trend in the remaining countries.

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