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on Demographic Issues

Demographic Change and Economic Growth in South Asia

by David E. Bloom, David Canning and Larry Rosenberg

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Demographic Change and Economic Growth in South Asia

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1. Links between demographic change and economic growth

Identifying factors that influence the pace of national economic growth is a time-worn activity of economists. Strangely, demographic change has often been absent from consideration. But new thinking and evidence have highlighted the powerful contribution that demographic change can make to economic growth, and this line of inquiry has some salient implications for understanding past growth in South Asia and assessing and shaping its future prospects.

South Asia has acheived major improvements in population health in the past six decades. These are indicated by the more than two-thirds decline in infant mortality rate (IMR – the number of infants who die before their first birthday in a given year, divided by the number of live births that year), and, since the early 1980s, the nearly 50 per centdecline in child mortality rate.[2] Such improvements in child survival contributed to a baby boom because many babies who once would have died survived. The baby boom subsequently abated as couples realized they did not need to have as many births to realize their fertility targets and as desired fertility itself diminished. This fertility transition was greatly abetted by the expansion of girls' education, urbanization, the development of financial markets, and the advent of family planning programmes. For the region as a whole, fertility fell by more than half since 1950.[3] This set of events – an improvement in child survival followed by a fertility decline – has meant that cohorts born preceding the decline in fertility are relatively large in size. As the large-sized cohorts matured, they came to constitute a working-age group that is, in historical terms, also relatively large. The whole process – a switch from high mortality and fertility rates to low ones – is known as the demographic transition. The countries of South Asia are at different stages of this transition, but all of them have seen a fall in their infant mortality rates and have at least begun to

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[2] The region's IMR declined from 168 per 1000 live births in the early 1950s to 53 in 2010. The child (under 5) mortality rate fell from 145 per 1000 in the early 1980s (the first period for which the UN has data) to 77 in 2010.

[3] The total fertility rate (TFR – the number of children the average woman would bear during her reproductive years assuming she conforms to the age-specific fertility rates prevalent in a particular year) fell from 6.1 children per woman in the early 1950s to 2.8 in 2010.

experience a decline in their fertility rates. They have relatively large cohorts of young people who have substantially entered, or will soon enter, the prime ages for work and saving.

Changes in the age structure of the population create potential for faster economic growth, a phenomenon referred to as the demographic dividend. The dividend is a composite of five distinct forces. The first is swelling of the labour force as the baby boomers reach working age. The second is society's ability to divert resources from spending on children to investing in physical capital, job training, and technological progress. The third is the rise in women's workforce activity that naturally accompanies a decline in fertility. The fourth has to do with the fact that the working age also happens to cover the prime years for savings, which are key to the accumulation of physical and human capital and technological innovation. And the fifth is the further boost to savings that occurs as the incentive to save for longer periods of retirement increases with greater longevity.

The demographic dividend is not an automatic result of the demographic changes outlined here. Rather, enjoyment of the dividend is crucially determined by the policy environment. For example, good governance, carefully constructed trade policy, and sound macroeconomic management enhance the prospects of capturing the economic benefits of a favourable age structure. By contrast, undue tampering with competitive forces in labour and capital markets and the failure to provide public goods diminish a country's prospects of benefiting from demographic change. In addition, public policy and investment can catalyse or accelerate the demographic transition itself. Investments in general health (for example childhood immunization programmes and the provision of safe water and sanitation) and in education (especially for girls) and reproductive health (for example family planning) are all key.

Heterogeneity within a country may suggest the need to customize policy interventions to local circumstances. For example, based on 2001 data (the most recent state-level data available), life expectancy differences across Indian states were as wide as that currently between Hungary and Senegal, and fertility differences were comparable to that currently between Japan and Kenya. Although some policies (for example in the areas of macroeconomic management and international trade) are inherently the domain of national decision makers, others, including some aspects of labour policy and decisions that affect fertility and mortality rates, are subject to local influence.

This chapter proceeds as follows. Section 2 examines the demographics of South Asia as a region, with attention to significant aspects of demographic change in particular countries. It also compares demographic indicators in the region with those in several other large developing countries: Brazil, China, and Indonesia. Finally, it looks at the region's economic growth rates and draws connections between these rates and demographic change. Section 3 examines the size of the potential demographic dividend in the large countries of South Asia and compares this potential to that in countries outside the region. Section 4 expands upon the point that the demographic dividend does not arise automatically in response to demographic transition. Rather, policy choices can make a huge difference in whether the potential inherent in demographic change translates into higher rates of economic growth. Section 5 looks at several factors that can get in the way of realization of the demographic dividend, including one (population ageing) that is unlikely to matter as much as is widely thought. Section 6 concludes by extracting the key messages relevant for South Asia.

2. Demographics of South Asia and connections to economic growth

South Asia and the countries it comprises have been undergoing rapid demographic change during the last few decades.[4] The region saw a rapid fall in the IMR (from about 160 per 1000 live births in the 1950s to about 60 in 2010. All countries in the region saw significant declines, though Afghanistan's IMR remains, at about 150, much higher than that for the region as a whole. Sri Lanka, even in 1950, had a much lower IMR than any other country in the region, and at 15 it still has the lowest .

In response to falling IMR and other factors, the region's TFR fell from nearly 6.0 children per woman in the 1960s to about 2.8 in 2010. With the exception of Afghanistan, all countries in the region experienced this decline. Sri Lanka was the first country to begin a rapid decline and in 2010 is just above the long-run replacement level of 2.1 children per woman. The Maldives had the most rapid decline, going from nearly 7 children per woman in 1980 to 2.2 by 2005 and 2.0 in 2010 – one of the fastest of any country in the world.

Since 1950, life expectancy at birth (the average age at death for everyone born in a given year calculated on the assumption that age-specific mortality rates prevailing in that year remain stable over time) increased from under 40 in the early 1950s to 65 in 2010. This indicates that the people of South Asia are much healthier than they were a half-century ago. Only Afghanistan significantly lags behind the other countries of the region; its life expectancy of 45 years was surpassed by the region as a whole in the late 1960s.

The working-age share of the population (which is also reflected in the ratio of working-age to non-working-age population) is a crucial indicator of a region's or country's potential for reaping a demographic dividend.[5] The mortality and fertility changes discussed so far have combined to create a common pattern in developing countries throughout the world: a falling ratio after World War II, followed by a rise that is still under way. Using the UN's medium-fertility scenario – that is the scenario the UN considers to be most likely – Figure 2.1 compares South Asia's historical and projected trend in this ratio to that in Brazil, China, and Indonesia (which serve as comparators because they are large, prominent developing countries outside of South Asia). The ratio for South Asia is well below that of these comparator countries. It lags behind that of Brazil and Indonesia by nearly fifteen years and that of China by about twenty-five years and will never reach as high a point as those of all of the comparator countries are projected to. (The significance of this pattern is discussed in the latter portion of this section, where the correspondence between demographic patterns and economic patterns will be evident.) Very roughly, the countries of the region are all following a somewhat similar pattern. The exceptions are Afghanistan, in which this ratio began to rise only in 2005; Bhutan, where the ratio rose after World War II, before subsequently falling (and then rising again); and Sri Lanka,

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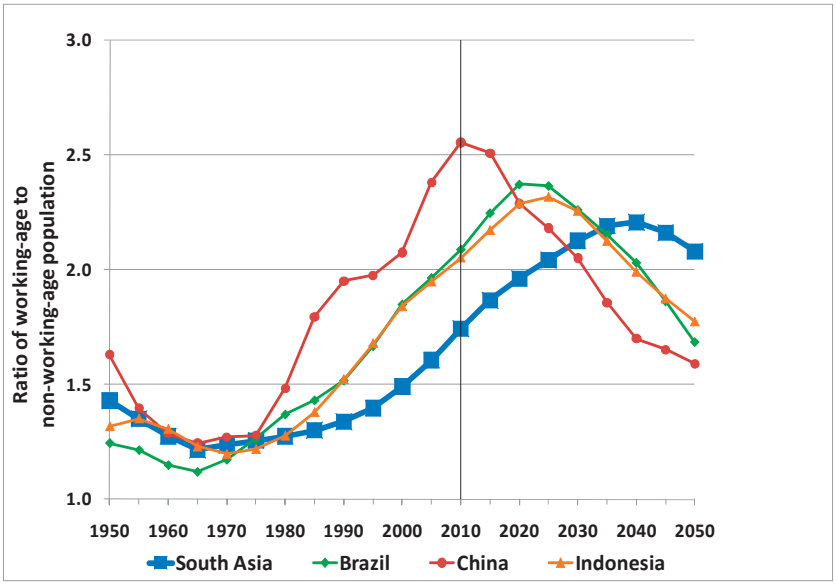
[4] Following the World Bank's definition, this chapter takes South Asia to comprise Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka. All demographic data are from United Nations (2009).

[5] This chapter follows the most common definition of 'working age', that is ages 15 to 64. The true range of ages at which people work varies by country and over time, as does the share of population of a given age that is working. The results presented herein are not sensitive to a more precise and country-specific definition of the labour force.

where the ratio steadily rose and peaked in 2005. Consistent with its dramatic TFR decline, the Maldives underwent the fastest rise in this ratio.

Figure 2.1: South Asia's Demographic Change Compared to that of Brazil, China, and Indonesia

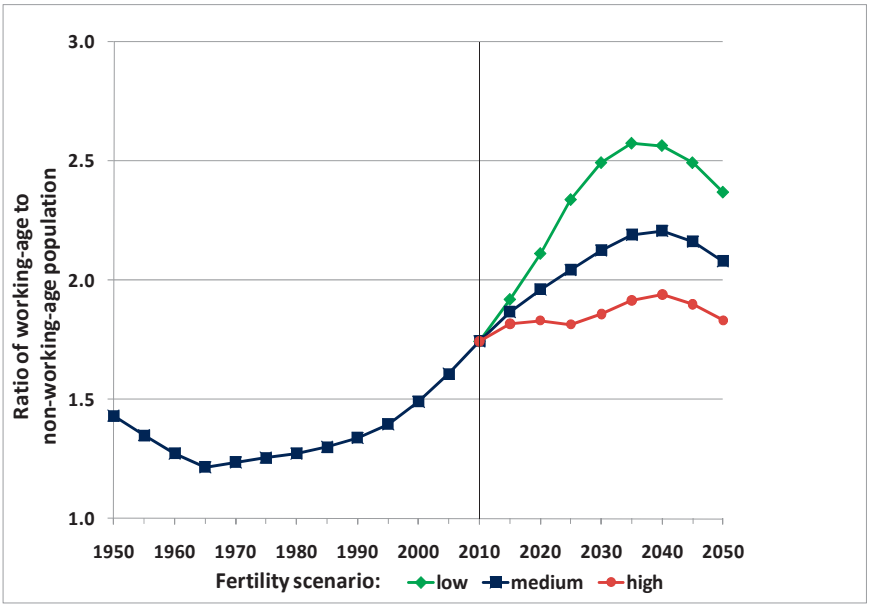


Source: United Nations (2009).

Because projections in demographic data are based to a significant extent on tracking the ageing of individuals who have already been born, the UN projections regarding the ratio of working-age to non-working-age population are reasonably reliable. The UN does create several fertility scenarios (for example using low-, medium-, and high-fertility assumptions), but obviously the differences in these assumptions do not affect the likelihood of those who are already living being alive and of a particular age at any point in the future. Using the UN's medium-fertility scenario, the ratio for South Asia is expected to peak in 2040. The countries of the region will mostly peak around then, with the exception of Afghanistan, which is projected to still be rising; the Maldives, which will have been high since 2015; and Sri Lanka, which, as noted earlier, has already peaked.

The picture becomes more interesting if the UN's low- and high-fertility scenarios are taken into consideration. Figure 2.2 shows the projected trajectory of the ratio of working-age to non-working-age population under all three UN fertility scenarios. If South Asia follows the low-fertility scenario, the ratio will rise to nearly 2.6 in 2035 – the same ratio at which China is currently peaking. If, on the other hand, the region follows the high-fertility scenario, the maximum reached by the ratio will be just over 1.9 in 2040. As will be evident in the discussion later in this chapter, it is likely that this relatively low maximum would impede economic growth in South Asia.

Figure 2.2: Assumptions about the Rate of Fertility Decline and Effect on Projected Ratio of Working-age to Non-working-age Population



Source: United Nations (2009).

Another aspect of the changing age structure that is potentially economically consequential has to do with the share of the population in the older age group. As fertility rates have fallen and life expectancy has increased, the share and number of the region's elderly have risen, with the share of population aged 60 and older rising from 5.5 per centin the 1960s to 7.2 per cent in 2010. UN projections show this figure rising to nearly 19 per cent (431 million people) by 2050 and the share of those aged 80 and above quadrupling from 0.6 per cent in 2010 to 2.4 per cent (56 million people) by 2050.

It is also interesting to compare demographic change in South Asia to corresponding changes in Brazil, China, and Indonesia. Noteworthy among these comparisons are the following:[6]

- India's TFR decline began at roughly the same time as Brazil's and China's, but it has been much slower. It is still more than one-half child per woman higher than Brazil's.
- Declining IMR in India parallels that of Brazil, but the latter has long had about twenty-five fewer infant deaths per 1000 live births. Currently, India's IMR is more than twice that of Brazil or China.
- Changes in life expectancy tell a similar story: India's development parallels Brazil's (especially since about 1980), but the current figure in India (64 years) was reached by

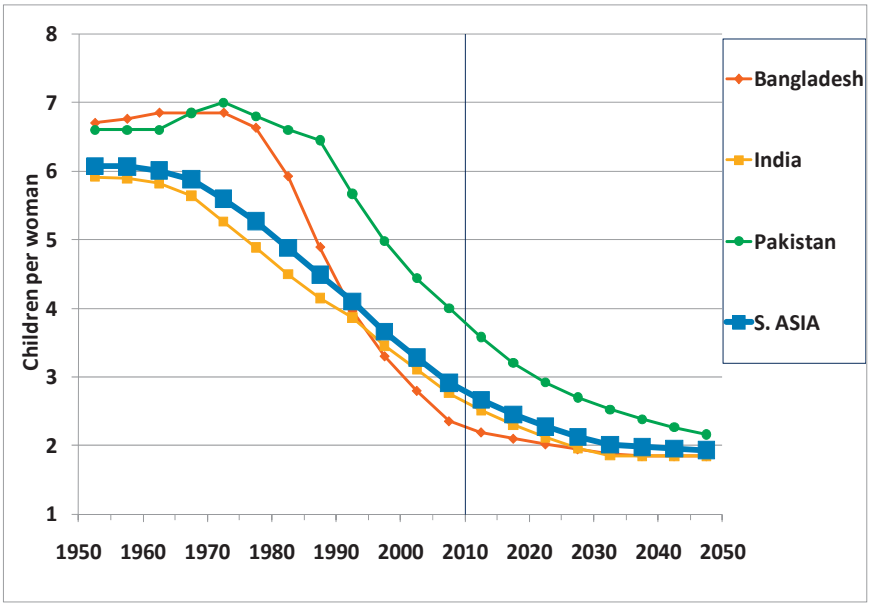
[6] Because India's overall demographic data are similar to those of South Asia as whole, and because its passage through the demographic transition places it between Bangladesh and Pakistan, the other two large countries of the region, comparisons made with India apply to much of South Asia. Overall, Bangladesh is somewhat ahead of India in the demographic transition and Pakistan well behind .

Brazil in 1985. Both Brazil and China currently have life expectancies nearly ten years higher than India's.

- In the most important summary indicator for assessing progress through the demographic transition, the story is the same. The ratio of working-age to non-working-age people in India is the same as it was in Brazil in the late 1990s and China in 1985.
- Overall, India (and much of South Asia) is far behind Brazil, China, and some other developing countries and even further behind the United States in various aspects of the demographic transition.

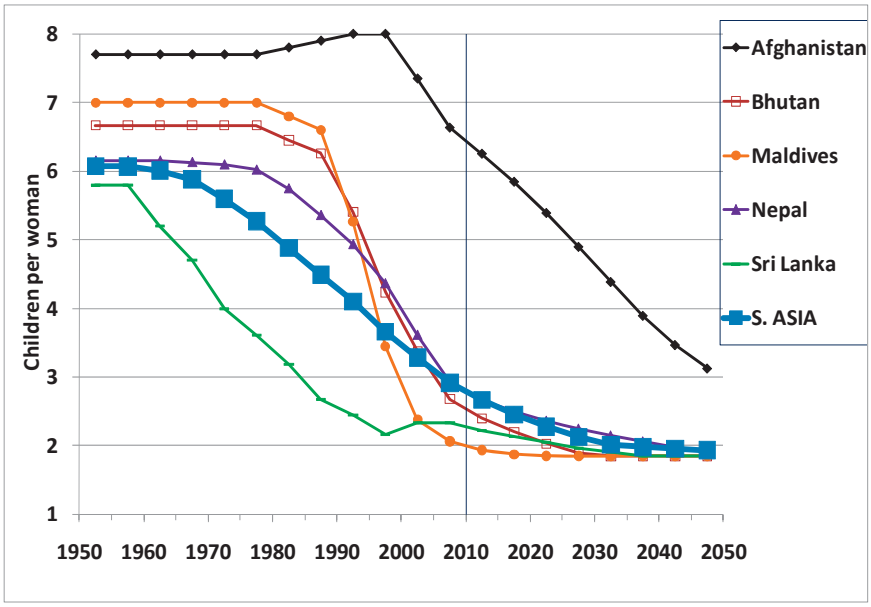
The countries of South Asia have proceeded through the demographic transition at varying paces. In particular, fertility decline, a major component of the transition, has occurred throughout the region, but its time of initiation and pace have differed from one country to another. Figures 2.3 and 2.4 show the historical and projected patterns of fertility rates for South Asian countries and the region as a whole. Although the general pattern is the same for most of the countries, Afghanistan, the Maldives, and Sri Lanka stand out for their differences. Each of them offers a potentially instructive situation. Afghanistan, as noted, is by far the least advanced in its demographic transition. With a current TFR of 6.4 (down from 8.0 in 1995), and still-high IMR, it has barely begun the transition that is well along in the rest of South Asia. Because of Afghanistan, the spread in TFR across the region, from highest to lowest, has increased since 1950. In the Maldives, as noted, TFR fell precipitously, beginning in the early 1990s. By 2000, its working-age to non-working-age ratio had begun to rise with corresponding rapidity, and it now has the highest ratio in the region. Sri Lanka, with its very rapid fertility decline, has had a steady rise in its ratio of working-age to non-working-age population, reaching a peak (2.2), as noted, in 2005. Already in 1990, its ratio was 1.67, a figure that South Asia reached only a few years ago. South Asia will not reach Sri Lanka's 2005 ratio until 2035. For each of these countries, we could potentially examine the connections between demographic change and economic growth. In practice, however, a combination of either a dearth of reliable economic data, rapid swings in economic growth rates, or severe, longstanding conflicts renders such an analysis not as useful as it is for other countries

Figure 2.3: Varying Rates of Fertility Decline across South Asia's Large Countries



Source: United Nations (2009).

Figure 2.4: Variations in Fertility Decline across the Region's Small Countries



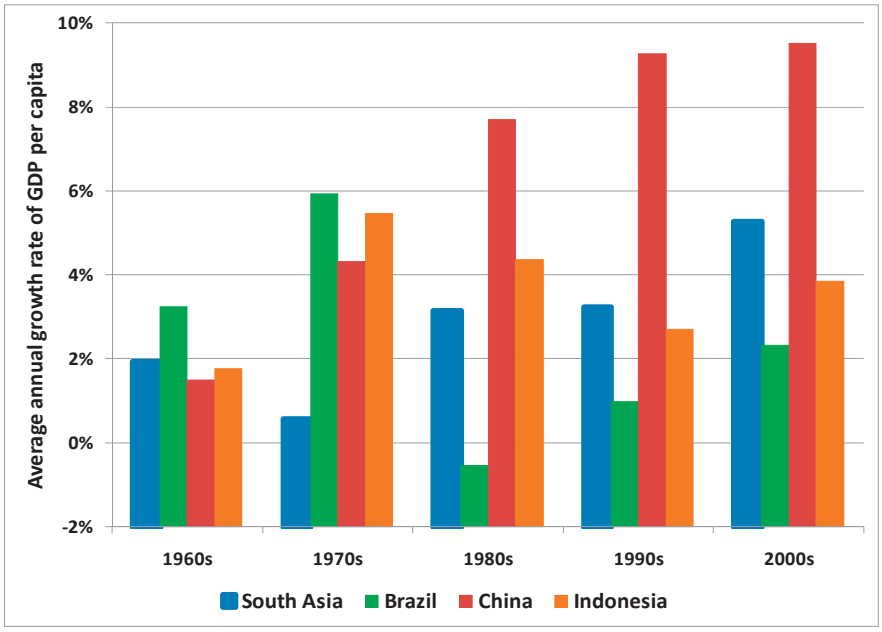
Source: United Nations (2009).

Not only are there large differences in demographic patterns across countries; within countries there are similar differences. India is a good example. In 2001, the working-age to non-working-age ratio in Tamil Nadu was 2.1, as compared to 1.2 in Bihar. TFR varied across the states of India by a factor of more than 3. Life expectancy in Kerala stood at 73 years while in

Madhya Pradesh, it was 59. These large differences in different Indian states' passage through the demographic transition are one factor that can help account for the widely varied levels of economic development seen across India. Unfortunately, the least economically developed states of India, which are the ones that will see the largest increase in their working-age population, are the ones least prepared to take advantage of the demographic change they will undergo. This observation parallels that found in *The Poor Half Billion in South Asia,* edited by Ejaz Ghani (2010),that a complex set of conditions contributes to the continuation of patterns that have led to some parts of South Asia chronically lagging behind others in economic development.

Turning now to economic growth: South Asia has experienced a varying, but generally increasing, annual average growth rate in per capita gross domestic product (GDP), beginning at 1.9 per cent in 1960-70, falling to 0.6 per cent in the next decade, rising to 3.2 per cent for each of the next two decades, and climbing to 5.3 per cent since 2000. However, beginning in the 1970s, these rates are well below the corresponding figures for China (see Figure 2.5).

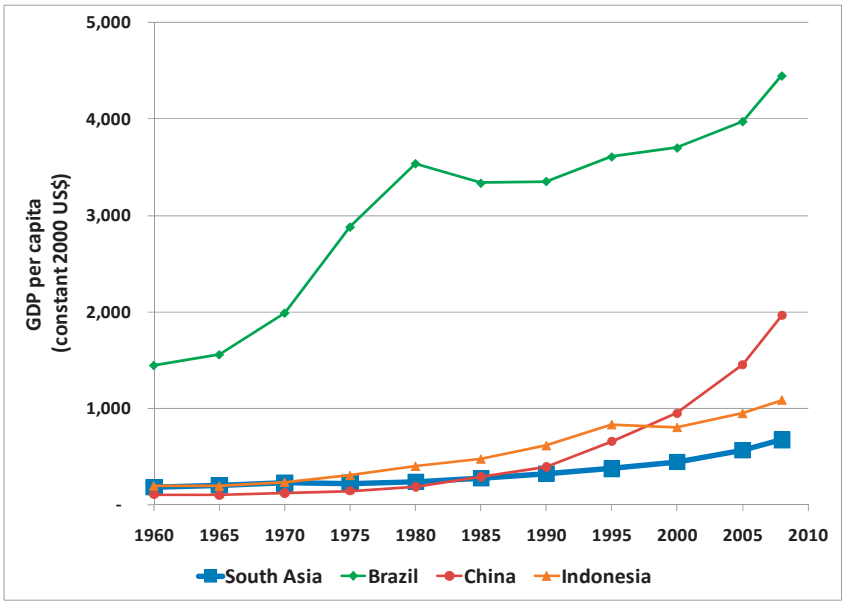
Figure 2.5: South Asia's Rising Economic Growth Rate Lagging behind China's



Source: World Bank(2010).
Notes: 1.This figure is based on exchange-rate GDP data, which are available for earlier years than are PPP GDP data. However, the comparisons look the same for PPP data. 2. Figure for '2000s'is from 2000 through 2008.

Figure 2. 6 shows how South Asia's relatively slow rate of economic growth has resulted in its GDP per capita falling progressively behind that of Brazil, China, and Indonesia.

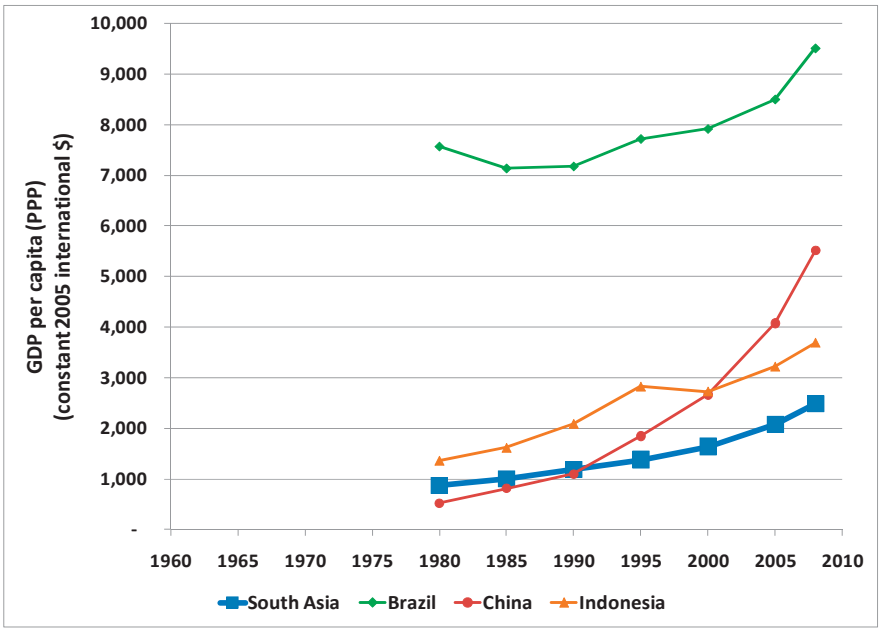
Figure 2.6: Relatively Slow Growth of GDP Per Capita in South Asia



Source: World Bank (2010).
Note: This figure is based on exchange-rate GDP data., which are available for earlier years than are PPP GDP data.

Figure 2.7 shows a similar pattern when GDP per capita data are based on purchasing power parity (PPP).

Figure 7: Relatively Slow Growth GDP per Capita (PPP) in South Asia



Source: World Bank (2010*)*.
Note: This figure is based on PPP-adjusted GDP data, which are available from the World Bank database starting only in 1980.

The countries of the region have followed a somewhat more varied pattern, with Bangladesh and India matching the regional pattern most closely. Sri Lanka avoided the 1970s South Asian dip in economic growth rate, but now lags behind the region as a whole, with a rate of 4.0 per cent since 2000. Pakistan grew faster than the region through 1985, but has since seen slow growth (averaging 2.4 per cent since 2000). Nepal has languished during the entire period since 1960. Historical data for Afghanistan, Bhutan, and the Maldives are spotty, but the latter two economies have done reasonably well since 2000 (with per capita income growth rates of 6.1 per cent and 5.4 per centrespectively).

The correspondence between increasing GDP per capita and the rising ratio of working-age to non-working-age people is striking. In the case of China in particular, the rise in GDP per capita closely mirrors the rise in this ratio. For South Asia too the general rising pattern of economic growth in the region since the 1960s corresponds, albeit roughly, to the increasing ratio of working-age to non-working-age people. If the correspondence between demographic opportunity and economic realization of that opportunity continues to hold, the projected rise in the ratio of working-age to non-working-age individuals suggests that South Asia will have a bright economic future.

Indeed, South Asia is projected to add an average of 18 million people to its working-age population every year for the next two decades – and the result will be a very high ratio of working-age to non-working-age individuals, which will peak in 2040 at 2.2:1. As discussed, this ratio augurs well for future economic growth. In addition, smaller families may cause female labour-force participation rates to rise from their currently low levels. A Goldman Sachs report observes that the size of India's labour force would grow by 110 million by 2020 if women's labor-force participation by then rises to 38 per cent. All of this growth in the size of the labour force can impel economic growth if working-age people are productively employed.

However, existing skill levels (for example in India) are thought to be far from adequate for what future economies will require. Thus the availability of appropriately skilled people may not be sufficient to impel economic growth. If governments are to capitalize on the high share of working-age people in the population, they will have to ensure that those people are healthy, well educated, and well trained in the skills demanded by the labour market. Pursuing such an agenda fits very well with what many governments seek to do, even in the absence of a potential demographic dividend. However, the dividend, which is a time-bound opportunity, may give policymakers incentive to redouble their efforts to promote the skills of the working-age cohort so that it has the ability to contribute productively to the economy.

3. Size of potential demographic dividend

A country has the opportunity to reap a demographic dividend when the ratio of its working-age to non-working-age population increases appreciably. In East Asia, very large increases in this ratio took place at the time when economic growth surged in that region. (This correspondence in the case of China can be seen by comparing Figures 2.1 and 2.5.) Continuing increases have been accompanied by sustained growth. Estimates suggest that one-third of that region's economic growth during the 'East Asian Miracle' period can be accounted for by the

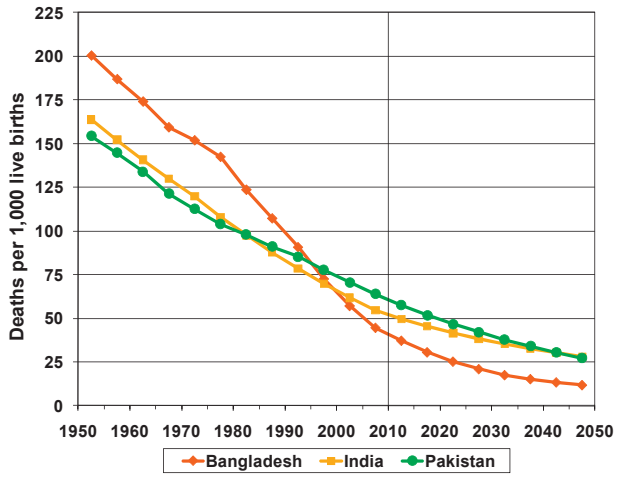
effects of demographic change. Ireland offers another example, where the 1979 legalization of contraception enabled a precipitous decline in fertility. The result, an increased share of working-age people in the population, was a key element underlying Ireland's subsequent rapid economic growth. However, it is important to emphasize once again that these effects do not come about automatically. A set of enabling policies and circumstances must be in place if a country or region is to receive an economic boost from a change in the age structure of its population.

As noted earlier, South Asia and all of the countries it comprises are now undergoing increases in their working-age to non-working-age ratios. The higher the ratio and the faster the pace of its increase, the greater the demographic impetus for more rapid economic growth.

A detailed examination of demographic trends and projections of South Asia's three largest countries (Bangladesh, India, and Pakistan) conveys a sense of where these countries lie in the demographic transition and of the potential magnitude of the demographic dividend.

Figure 2.8 shows these countries' trends in IMR, including UN projections through 2050. All three have seen substantial declines since 1950, but Bangladesh, which was worst placed at that time, experienced the most rapid decline and its IMR is now below that of India and Pakistan. Declines in IMR and child mortality rate are the first stage of the demographic transition.

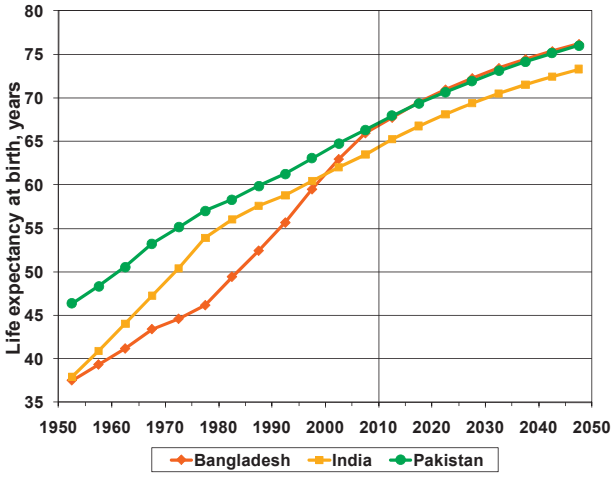
Figure 2.8: Declining IMR: India, Bangladesh, Pakistan



Data source: United Nations (2009).

A related indicator of declining mortality is rising life expectancy (see Figure 2.9). The rise in life expectancy seen in all three countries reflects increases in survival probabilities at all stages of the life cycle. The most dramatic rise has been in Bangladesh , with an increase of more than thirty years since the middle of the last century. But even in Pakistan, which has seen the slowest increase of South Asia's three largest countries, life expectancy grew rapidly, gaining twenty years during the same period. And as the figure shows, the UN projects a substantial continuing rise – nearly an additional ten years before 2050.

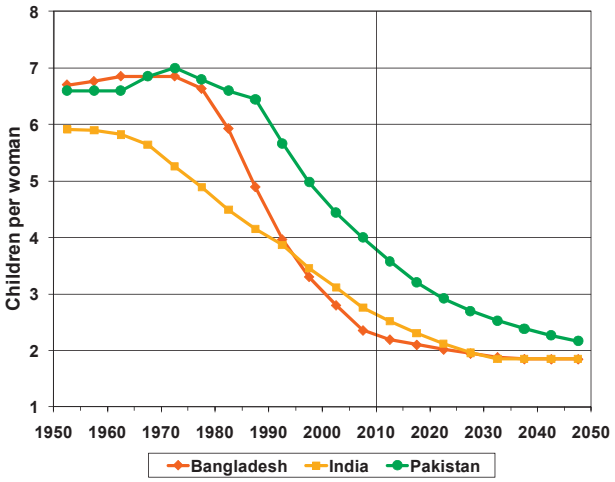
Figure 2.9: Steady Rise in Life Expectancy



Source: United Nations (2009).

In response to falling infant and child mortality, as well as an array of other factors, all three countries have undergone a very substantial decline in TFR(see Figure 2.10). In all three cases, fertility decline began after infant mortality had begun to fall. The speed of decline was greatest in Bangladesh, where fertility fell from 6.6 children per woman in the late 1970s to 2.3 in 2010. The United Nations assumes that fertility will reach replacement level (approximately 2.1 children per woman) by 2020 in Bangladesh and by 2025 in India, and that it is on course to reach that level shortly after 2050 in Pakistan. It is important to note that the United Nations' projections of population age structure, discussed later in the chapter, are based in part on its assumptions about future fertility rates.

Figure 2.10: Falling TFRs: Bangladesh, India, Pakistan

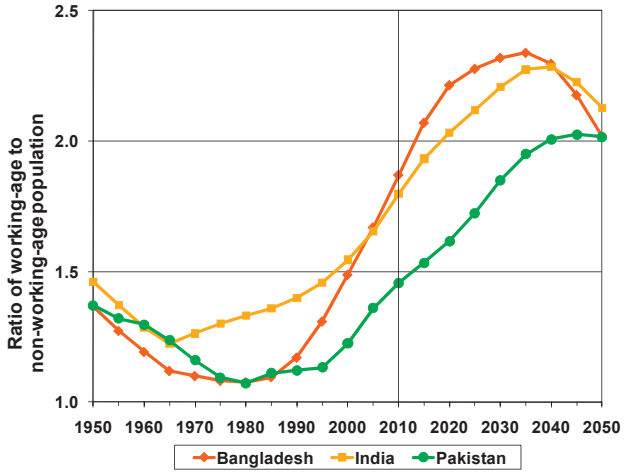


Data source: United Nations (2009).

The lag between the onset of infant mortality decline and subsequent fall in total fertility is important because children born during this period constitute the leading edge of the baby boom. All South Asian countries had begun to see a decline in infant mortality by 1950, but only Sri Lanka, as noted earlier, saw a nearly immediate substantial fall in fertility. The other countries experienced various delays. India was next, but most countries saw steep declines only in the 1980s or 1990s (and Afghanistan only in the 2000s).

In Bangladesh, India, and Pakistan, the first relatively large cohorts of young people (the baby boomers) have reached working age. Figure 2.11 shows the trend to date and UN projections for the ratio of working-age (15-64) people to non-working-age (below 15 and 65+) people, usually referred to as dependents). In 1980, this ratio was so low in Bangladesh and Pakistan that there were barely more working-age people than dependents. The ratio has risen rapidly in all three countries, particularly in Bangladesh, where there are now almost 1.9 working-age people for each dependent. Pakistan's rise has been the slowest, but even there the ratio has nearly reached 1.5.

Figure 2.11: Large Changes in Working-age to Non-working-age Ratio



Data source: United Nations (2009).

Generally speaking, the countries of South Asia have yet to enjoy a demographic dividend. In some cases (especially Afghanistan, Nepal, and Pakistan), there has not yet been a major increase in working-age share, so no dividend was possible. In other cases (Bangladesh and India), the demographic dividend has not been enjoyed to an appreciable extent, perhaps because it has been choked off by a non-enabling policy environment. Sri Lanka, which has seen major growth in its working-age share and had relatively open economic policies during some portion of the previous half century, did receive a modest dividend.

Looking ahead, the UN's demographic projections are more favourable for potentiating a demographic dividend. With the exception of Sri Lanka, all the countries of South Asia will experience a significantly faster increase in their working-age share between 2005 and 2050 than they did between 1960 and 2005. Assuming a favourable set of economic policies in the coming years, they stand to reap a demographic dividend – an increase in GDP per capita – of roughly

one percentage point per year, compounded annually during the coming decades. This calculation is based on data from United Nations (2009) and a cross-country regression analysis of the contribution of demographic change to economic growth that takes into account an array of variables including economic openness and the growth rate of the working-age share of the population.

4. Generating, expanding, and capturing the dividend

The economic benefits of the demographic transition do not arise automatically. They require policies – and circumstances – that take advantage of the transition and bring about a demographic dividend. The circumstances – often involving political, economic, and military relations with other countries and in some cases international organizations – can sometimes be beyond the control of an individual country. But a country's policies are at least in principle more subject to in-country decision-making.

The policies needed to bring about or strengthen a demographic dividend depend on a country's progress through the demographic transition. For example, if a country has only begun to experience a decline in infant mortality, policy will need to focus on facilitating faster mortality decline by, say, strengthening prenatal and neonatal care and providing sanitation and clean drinking water. In Afghanistan, for example, even though IMR has fallen, it is still very high (about 150 per 1000 live births) – about the same level as India's in the late 1950s.

In some countries, fertility has been falling, but accelerating the pace of decline would help speed the demographic transition and potentially catalyse the emergence of a demographic dividend. In Afghanistan, again, TFR is still very high, at about 6.5 children per woman. In Pakistan, TFR began to fall rapidly in the 1990s but is still, in 2010, at 3.8 children per woman, the second highest in the region. Within-country variation is also substantial. For example, numerous Indian states have seen very substantial fertility decline, while others have not. Some are now experimenting with payments to encourage couples to delay childbearing. More broadly, family planning programmes, for example in Bangladesh, have had a significant effect on the pace of fertility decline. Countries that choose to speed this decline may be able to learn from successful efforts elsewhere. The expansion of basic and secondary education, especially for girls, also tends to speed the fertility transition.

Sri Lanka and the Maldives both lie at the opposite end of the mortality and fertility spectrum : both have relatively low IMRs and TFRs.

In general, the countries of the region are seeing substantially lower fertility and mortality rates, and the ratio of working-age people to dependents is rising. Thus they are at a point in their demographic transition where a focus on the policy environment will maximize the chance of capturing a demographic dividend. Factors and policies that may help bring about, or increase the size of, the demographic dividend include:

- *Quality of governmental institutions.* The efficiency and effectiveness of governmental institutions has a large effect on the ability of a government to carry out programmes of

every type. If a government is to design and implement policies that facilitate the absorption of labour into productive employment, it will need to have programmes, policies, and well-trained people in place to reach this objective. Corruption, which has afflicted a large number of governments around the world, can greatly impede government performance. Governments that ensure respect for property rights, the sanctity of contracts, and the rule of law are more likely to be able to construct an economic environment that will facilitate realization of the demographic dividend. If a government is ineffective, it may not be able to bring about stronger economic growth by building on the opportunities inherent in the demographic transition.

- *Labour legislation.* A key task of government is to take actions that help create an environment in which people are productively employed. With a historically large share of the population being of working age, this task becomes particularly important. A large unemployed or underemployed segment of the population will be a liability economically and in other ways. The 'low road' for achieving high employment, characterized by a focus on expanding low-wage jobs, has led to continued poverty in many countries. A 'high-road approach, characterized by seeking to build up types of employment (in services, industry, or agriculture) that reward workers' skills with higher wages, is attractive but has proven difficult for many countries. Although there is no single path that works for all countries, some agreement about the relative power and role of labour in strengthening the economy is useful. Some countries have struggled with the power of unions in a few industries or in government employment and with the effects of enforcing high minimum wage laws. Such concerns and related arguments apply directly to only the small portion of the labour force that works in the formal sector. Nevertheless, worker organization and wages in the formal sector may have some effect on the labour market in the informal sector, so the possible force of these arguments cannot be entirely discounted.

- *Macroeconomic management.* A country that has persistently high inflation will find it difficult to grow rapidly. The uncertainty of the value of future cash flows tends to dampen savings and thus hinder investment in new productive assets. Similarly, a country that has taken on a large amount of debt relative to its GDP may find itself saddled with high interest payments that sap the government's ability to carry out effective programmes. In addition, government borrowing to make interest payments can cause interest rates to rise. A stable macroeconomic environment is in general a necessary part of the environment in which a demographic dividend can be realized.

- *Trade policy.* Trade policy can have a substantial effect on a country's ability to capture a demographic dividend. Historical evidence suggests that neither autarky nor a fully open economy is the most likely route to achieving sustained economic growth – and that country-specific circumstances are an essential guide to policymaking in this area. In general, however, a country with a large working-age cohort can increase employment by encouraging export industries (though this need not be done at the cost of the local market).A point to note is that not all countries can be net exporters at the same time.

  The import side of this issue is more complicated. Trade liberalization was hailed by many (academic researchers and international financial institutions), especially during the

ascendance of the Washington Consensus, as a sine qua non for rapid economic growth. Unfettered imports, it was pointed out, can stimulate local development by spurring local producers to produce more efficiently, resulting in lower prices for consumers and potentially creating export industries. In practice, the importation of capital goods in particular has proved beneficial, especially when such imports are accompanied by technology transfer that results in more-efficient production.

But a wide range of experiences has led to considerable doubt about the value of across-the-board liberalization. In particular, it appears that countries risk considerable damage to their economies and to the livelihoods (and employment prospects) of large numbers of their residents if they open their markets to widespread importation of consumer goods, many of which, ironically, are subsidized in their country of origin. The argument about protection of 'infant industries' is not yet settled.

Although some research has found that having few restrictions on trade is an important factor in bringing about the demographic dividend, other research has cast doubt on the importance of 'free' trade in bringing about economic growth, independent of questions related to the demographic transition. Both developed and developing countries that have experienced significant periods of rapid economic growth have done so while maintaining careful and extensive controls on imports.

- *Education policy*. A burgeoning supply of working-age people can be employed in a wide range of activities. The economic value of those activities depends to a significant extent on the education and training of the workforce. When countries were primarily agricultural, and especially when agriculture depended primarily on unskilled manual labour, it was possible to suggest that education was not a major factor affecting a country's productivity. As countries have mechanized agriculture and as industry and services have come to have considerably larger roles in most economies, the need for an educated workforce has grown. As high-value-added industries come increasingly to the fore (for example information and communications companies in India), the demand for educated workers will grow. But even in a wide range of services and industries that do not rely on cutting-edge technologies, having well-educated workers who are easy to train for ever-evolving positions is important for countries seeking to benefit from the demographic transition.

5. Potential pitfalls

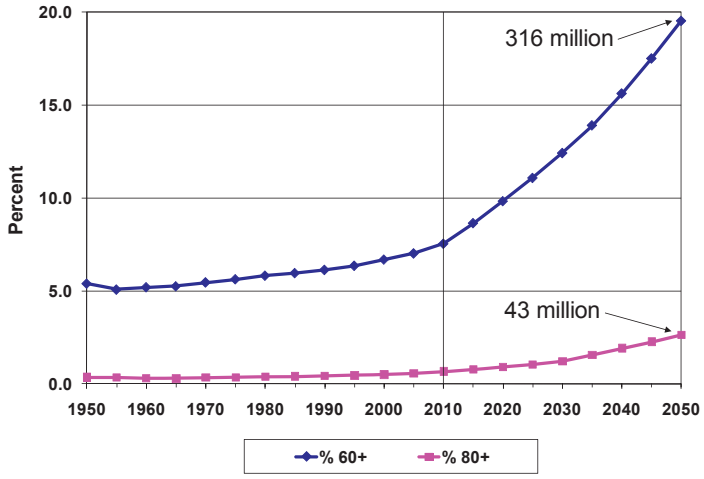
Although the demographic transition can lead to a demographic dividend, it can also bring significant challenges with it. Among these are those related to population ageing, economic inequality, and a failure to take measures to ensure that the population is productively employed.

The ageing of a country's population is an inevitable consequence of the post-demographic transition period. With lower fertility, new generations eventually come to be smaller than previous ones. At the other end of the life cycle, increased life expectancy (an indicator of better health across all ages) is in part reflected in large numbers of people living to

older ages than in the past. Although population ageing is most associated with Japan and Europe, it will eventually affect many other countries, including those in South Asia.

Figure 2.12 shows UN projections for the size and share of the elderly population in India. The 60+ population has already grown significantly, but it is set to accelerate in the near future, reaching nearly 20 per cent of the population in 2050. The 80+ population is projected to reach 43 million people by 2050. For South Asia as a whole, the 60+ population is projected to reach 431 million in 2050 (19 per cent of total population); the corresponding figures for the 80+ South Asian population in 2050 are 56 million and 2 per cent.

Figure 12: Projections of Rapid Rise in India's Elderly Population



Data source: United Nations (2009).

The rapid rise in the share of elderly population has led many to wonder whether the burden imposed by a growing dependent group will inhibit capture of the demographic dividend. This question arises in the broader context of concerns that population ageing might slow economic growth. The concerns stem from several considerations. First, simply, older people tend to have considerably lower labour-force participation and savings rates than prime working-age individuals. They very often depend on savings, government transfers, and family support. In these respects, they may be a collective drag on economic output and economic growth. In addition, the elderly need care and companionship, which take the form of financial and human resources that could otherwise go toward producing goods and services for the broader economy. These considerations and fears have led to considerable anxiety over the future of developed and developing economies alike. Among the various public policy questions raised have been the issues of retirement age and pensions. Although these last points are relevant to South Asia, they have not risen very high on the policy agenda, perhaps because other economic considerations are so pressing. However, the ageing of the region's population will no doubt bring these issues into greater prominence.

Notwithstanding the reasons for concern about the economic consequences of population ageing, new research on this topic in relation to developing countries suggests that there is little reason for major worry. Bloom et al. (2010) find that in developing countries the effects of a

higher old-age dependency ratio will be more than counteracted by a lower youth dependency ratio. In particular, the size of the labour force as a share of total population is actually projected to rise, on a global basis, from 47 per cent in 2005 to 49 per cent in 2050. Table 2.1 shows that this ratio is projected to increase for all South Asian countries except Sri Lanka. This increase will be further augmented by greater participation of women in the labour force due to smaller family size. The effect of this rise will be that economies will be more, not less, ableto produce the goods and services needed.

Table 2.1: Projected Rise in the Size of the Labour Force as a Share of Total Population (per cent)

	2005	2050
Afghanistan	34	43
Bangladesh	46	53
Bhutan	43	52
India	39	47
Maldives	40	50
Nepal	39	48
Pakistan	36	45
Sri Lanka	42	40

Source: Calculations by Bloom et al. (2010), based on United Nations (2009) and International Labour Organization Bureau of Statistics (2007). ILO Database on Labour Statistics, International Labour Organization.

There are other reasons to think that population ageing will not have the dramatic negative effects on economies that some have predicted. First, with improving health and longevity, more of the elderly are able to work well past traditional retirement ages. Even in South Asia, where most of the workforce is engaged in the informal sector, people are likely to work until later than in the past. This trend is abetted by a worldwide 'compression of morbidity', in which the portion of people's lives in which they are physically or mentally unable to work comes later and is shorter than in the past. Second, increased life expectancy will tend to lead toward greater savings for workers who anticipate a longer period of life after they stop working. Increased savings are normally channeled into increased investment, which has a positive effect on economic growth. Third, concern about a dearth of workers to replace large cohorts of retiring older workers may be allayed by the fact that most developing countries, including those in South Asia, have a large population of underemployed and effectively unemployed people who would like to have work. These people, currently living in both urban and rural areas, can be drawn into the labour market should shortages loom.[7] Fourth, part and parcel of population ageing is a decrease in the share of children in the population. In particular, with fewer children on average in each family, both governments and families can afford to invest more in the health and education of each child. This investment can translate into a more

[7] The case of China is considered in Banister, et al. (2010).

productive workforce. And fifth, business can play a role in responding to ageing workforces by making changes that encourage older workers to remain in the labour force and that limit the fall in productivity that tends to come with an older workforce.

Inequality is another obstacle that potentially stands in the way of realizing the demographic dividend. None of the countries of South Asia are entirely homogeneous entities. Each contains numerous sources of powerful heterogeneity in such dimensions as language, religion, caste, income, and education. Sometimes heterogeneity can be a source of constructive synergy.At others, it can be the cause of social and political unrest and instability. Insofar as demographic cycles induce economic cycles by the arguments made above, the extraordinary degree of demographic heterogeneity within most South Asian countries suggests economic trajectories that are widely different. Policymakers must customize policies to local realities to address the possibility that geographic differences in economic growth rates could exacerbate internal inequality and political frictions and undermine realization of the demographic dividend.

Finally, it is important to consider the consequences of inaction. That is, what will happen if countries do nothing in response to demographic change? The most likely major effect will be that a large number of young, working-age people will be unemployed or underemployed. This is of course already the case in many countries, but this situation could easily become much worse than it is now. Large numbers of unemployed workers (of any age, but perhaps especially of relatively young working-age people) can lead to increased internal conflict. In addition, unemployed young people will effectively increase the share of the population that is dependent on workers, slowing economic growth. And finally, the economic insecurity of the elderly can increase, because there will be fewer productively employed workers to generate the wealth on which both government and families rely to support the elderly.

6. Conclusion

The demographic transition leads to the possibility of countries capturing a demographic dividend of substantial size. As the ratio of working-age people to dependents is currently rising in South Asia, now is the time when the dividend is on offer.

It is important to focus on the fact that the demographic dividend does not automatically arise when the demographic transition takes place. What countries do matters; the policies chosen can have a large effect on the outcome. Among the points to consider are the following:

- The countries of South Asia stand at different points in the demographic transition. Some would benefit economically by speeding the decline in fertility. Failure to continue (or in some instances accelerate) fertility decline will result in a reduced or delayed demographic dividend.
- A high share of working-age people is beneficial only if those people are employed. If they are unemployed, the outcome will likely be problematic. Labour market policies must encourage employment, but there are choices to be made about how this is to be accomplished.

- Investment in access to healthcare and education and quality improvement in these areas is crucial for ensuring that working-age people are prepared for the demands of the economy. Advances in these areas are of course important independent of demographic change; the potential for reaping a demographic dividend is an extra spur to policymakers.
- Sound macroeconomic management is key. An economy that has persistently high inflation is unlikely to be able to take the best possible advantage of a large segment of working-age people.
- Contrary to longstanding development theory, new evidence, including that pertaining directly to South Asia, suggests that services, rather than manufacturing, are particularly effective in leading to sustainable growth (Ghani 2010). This finding has implications for the type of education that should be offered to students and young adults entering the workforce.
- Trade policy matters. Many countries have benefited by expanding their exports, and a large working-age population can benefit by having a country's products succeed in the external market. Nevertheless, imports, unless carefully handled, have the potential to wreak havoc with the lives of millions of workers and their families.
- Government institutions face a wide array of challenges. If governments are not up to the tasks they face – of providing infrastructure and other public goods and a legitimate and efficient policy environment, and addressing income and social inequality – a potential demographic dividend may be squandered.
- Relations with other countries and with international financial organizations matter and can be important in potentiating economic growth.

The bottom line is that the economies of the countries of South Asia have been improving, and to some extent this change has been impelled by a rising share of working-age people in the population. But full realization of the demographic dividend depends on the policies countries choose and on their political, economic, and military relations with each other and the rest of the world.

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