Reaping the Demographic Dividend: Components & Policies Required

*Monica Das Gupta**

Research Professor, Dept of Sociology,
University of Maryland, College Park MD.

Email: mdasgupta@gmail.com

Abstract

Recent discussion of the demographic dividend often emphasizes that the dividend is "not automatic", and will be "squandered" in the absence of policy and institutional settings conducive to generating economic growth.

This paper makes two obvious points. The first is that fertility decline in low-income settings yields a substantial automatic dividend in reducing poverty in low-income countries — regardless of whether they have growth-friendly policies in place — simply by mitigating the shortage of land and jobs. This was the explicit motivation of the vigorous family planning programs set up across Asia from the 1960s.

The second obvious point is that reaping this larger dividend does not require that countries have the most appropriate policies and institutions in place from the outset. Very few countries have in fact been so organized, but most have gained substantially from both the automatic as well as the policy-dependent demographic dividends even if they have been very slow to improve their policy settings. Pending broader economic transformation, much can be achieved by building on existing institutions to expand employment and incomes.

These obvious points are made to suggest that it is not helpful to advise countries that they will fail to reap a demographic dividend unless they meet a daunting list of pre-requisites in terms of policy and institutional settings. This is not the experience of the vast majority of developing countries, many of which have become middle-income countries.

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Recent discussion of the demographic dividend often emphasizes that the dividend is "not automatic", and will be "squandered" in the absence of policy and institutional settings conducive to generating economic growth. To briefly re-cap a large literature,[1] the demographic dividend arises when fertility declines in high fertility settings, reducing dependency ratios and creating a "window of opportunity" for savings, increased productivity, and investment: a "tailwind" for economic growth and poverty reduction.

This paper makes two obvious points. The first is that fertility decline in low-income settings yields a substantial automatic dividend, arising simply from increasing the resources per capita for services, infrastructure, and livelihoods. A far larger dividend can be reaped with good policy management and investment in physical and human capital, using the period of low dependency ratios to transform economies such that their growth potential remains high after the window has closed. This is evidenced especially in East Asia (Bloom and Williamson 1998, World Bank 1993).

The second obvious point is that reaping this larger dividend does not require that countries have the most appropriate policies and institutions in place from the outset. Few countries have in fact been so organized, but most have gained substantially from both the automatic as well as the policy-dependent demographic dividends even if they have been slow to improve their policy settings.

These obvious points are made to suggest that it is not helpful to advise countries that they will fail to reap a demographic dividend unless they make extensive — and perhaps politically fraught — changes in their policy and institutional settings.

1. The automatic dividend: if it isn't a tailwind, it's a headwind

Developing countries with high fertility will benefit from fertility decline, regardless of whether they have growth-friendly policies in place. There ***is*** an automatic dividend, arising simply from the arithmetic truth that, over time, fertility decline decreases the numbers requiring livelihoods and other resources (Box 1a), and mitigates the shortage of land and jobs.

For example, the numbers of people entering working age will rise sharply in sub-Saharan Africa between 2015 and 2050, while the pressure for job growth will be eased in Asia due to fertility decline (Figure 1). In India, the projected decline in numbers of youth between 2015 and 2030 will offset some of the negative fallout of its slow job growth arising from weak economic policies (Figure 2).

There is also a shortage of land. Aggregate availability of cropland per agricultural person in subSaharan Africa fell by 40 percent between 1960 and 2003 (World Bank 2007:63). Significant proportions in Asia and sub-Saharan Africa are virtually landless (World Bank 2013). In response, people are expanding into more fragile lands (World Bank 2007:55), and also migrating to urban areas in search of livelihoods. Climate change adds to this. Land degradation and drought have already caused much movement of people seeking livelihoods elsewhere. With lower fertility, fewer people will be pushed to live in marginal lands that are especially exposed to climate-related risks, such as arid land and land prone to flooding.

Fertility decline in itself yields a very substantial dividend in reducing poverty in low-income countries. This was the explicit motivation behind the vigorous family planning programs started in South Korea and most other Asian countries in the 1960s and 1970s, where widespread poverty was compounded by sharply rising population growth rates. Family planning was viewed as an integral part of the countries'

[1] There is a very large literature on the demographic dividend, but see for example Higgins and Williamson 1997; Kelley and Schmidt 1996, 2005, and Lee and Mason 2011.

development strategy.[2] The experience of these countries shows that sustained fertility decline can occur in poor countries, given political commitment to family planning programs.

Fertility decline also facilitates economic growth, by increasing the available resources per capita that can be invested in accelerating economic growth by investing in health and schooling, infrastructure, physical capital, and job growth — as well as to respond to the growing need to adapt to climate change.

2. Reaping the larger "policy-related" demographic dividend: how onerous are the requirements?

The extent to which the increased resources per capita resulting from fertility decline translates into higher living standards depends on policy settings. This can be viewed as the fuller "policy-related" dividend (Box 1b). With good policy management and investment in physical and human capital, the savings from this "window of opportunity" can be used to transform economies such that their growth potential remains high after the window has closed. This is evidenced especially in some countries in East Asia (Bloom and Willamson 1998, World Bank 1993).

Developing countries could be easily daunted by the prospect of establishing all the features of a policy environment conducive to economic growth that the literature indicates is needed, and feel that these onerous requirements give them little chance of reaping a demographic dividend. For example, the World Bank (2013) says the "policy environment must be conducive to growth. That requires attending to macroeconomic stability, an enabling business environment, human capital accumulation, and the rule of law." This summarizes the desirable conditions, but many developed and middle-income countries do not meet these standards. For example, many developed countries have experienced low macro-economic stability, while some have limited rule of law.

While some East Asian countries were effective at reaping a high demographic dividend, countries can still achieve a substantial policy-related dividend even if they do not have the full gamut of conditions in place from the outset. The case of Thailand (Box 1b) also illustrates this: while its rate of growth of GDP per capita is nowhere near the speed of South Korea, it has achieved much growth, and has far from "squandered" its demographic dividend.

2a Countries can be late starters: the case of Brazil

The experience of Brazil illustrates that even if conditions are unconducive to economic growth for decades while the dependency ratio is falling, the country can still reap a high demographic dividend. Dependency ratios started falling in Brazil from 1965 (Figure 3). But for about two decades from the mid-1970s, economic growth was hampered by the oil shocks and prolonged debt crisis. Growth in GDP per capita took off in the mid-1990s (Figure 4). Nevertheless, the economy grew rapidly once the policy environment improved, helped by the "tailwind" of the falling dependency ratios.

Brazil also illustrates the benefits of the automatic demographic dividend. In 2000, the UN (2013) estimates show that Brazil had 35% fewer children aged <15 years than projected by the UN in 1973 (Figure 5). This facilitates the provision of generous social assistance programs such as the Bolsa Familia, which makes cash transfers to low-income families. To build human capital among children of low-income families, additional cash transfers are given conditional on prenatal visits, the children being vaccinated and sent to school, and the use of other social services (Lindert 2006). The program goes far towards reducing poverty both directly as well as inter-generationally through building human capital.

[2] See for example Jones (1982) on Vietnam, Das Gupta (1995) on India, and the official presentation of the South Korean family planning program made at the IUSSP General Population Conference, Busan August 2013.

Having a third fewer people than projected entering the labor-force in coming decades also improves the prospects of their employment and potential earnings.

The example of Brazil illustrates how countries can benefit in multiple ways from fertility decline, even if circumstances and policies remain unconducive to rapid economic growth for decades. Countries have the opportunity to alter this situation over time, and increase rates of economic growth. Meanwhile, poverty reduction is enabled not only by reducing the drag of population growth on the growth of per capita income, but also by increasing per capita resources for investment in poverty reduction and human capital development — creating a more skilled laborforce for the future.

2b Countries can build on existing institutions to expand employment

The formal sector offers the greatest scope for creating jobs, and raising incomes, with far higher value added per worker. This is especially the case with the manufacturing sector, which can produce for deep world markets for manufactured goods, and can absorb large numbers of semi-skilled workers. Countries such as South Korea focused on such lower-end manufacturing in the 1960s and 1970s, while building skills and policies to expand into higher-end manufacture and services. Vietnam moved from exporting primary produce to manufacturing for foreign companies, such as assembly plants for Samsung. This created jobs for semi-skilled laborers.

Formal sector manufacturing can thrive even in poor developing settings. Bangladesh's garment industry expanded rapidly when Daewoo of South Korea teamed up with the local company Desh. Daewoo sent 130 employees to Daewoo's garment factory in Korea, for an eight-month intensive training course on sewing skills, factory management, quality control, and international procurement and marketing. Almost all the trainees left Desh to start their own garment businesses, and other entrepreneurs learnt from their methods. Companies from other countries entered the sector in Bangladesh (World Bank 2012:117).

However, it can take time for some countries to expand formal sector employment on a large scale. Meanwhile, they can do much to increase employment opportunities, labour productivity, and living standards in rural and urban areas — building on existing institutions and opportunities to increase the living standards of broad sections of the population — while gradually moving up the production chain to higher-end manufacture and services.

This can be done by relatively simple measures. For example, agricultural productivity can be increased with agricultural extension and making inputs available. Research on soil and other conditions can help identify higher-value cash crops that can be grown. Expanding farmers' capacity to grow and market crops such as fruit and coffee has had high payoffs in countries such as China and Vietnam, as also fish-farming and livestock.

Expanding livelihoods in rural areas also helps slow the pace of migration to urban areas, allowing more time for urban infrastructure and employment creation to permit people to have better lives when they migrate.

The state can also act as a major catalyst in expanding the productivity of small and micro-enterprises. With its infinitely wider access to information, the state can convey information on what to produce for wider markets, provide access to material inputs and credit, ensure quality control of the output, and set up links to wider markets.

This is the power of the "putting out" system (or cottage industry) used during pre-industrial and early industrial period in the developed world, for producing textiles, shoes, and many other products. Larger business operators who understood what the wider market wanted would make available raw materials to people to work on in their homes, along with information on what to produce and quality control when

they collected the finished goods for marketing. This system has been in place also in many developing countries in both rural and urban areas, in sectors such as textile production in China and India.

This approach can help to generate livelihood opportunities on a large scale, as illustrated by two very different examples - that of the dairy industry in India (Kurien 2007, Kurup 2001) and of the township and village enterprises (TVEs) that flourished in China from the 1980s to the mid-1990s (Xu and Zhang 2009).

India's National Dairy Development Board vastly expanded jobs in both rural and urban areas. It established a network of dairy cooperatives. Most of the milk producers are landless or nearly landless. It is a good source of income for them, since keeping one or two milch cattle is labour-intensive but requires little capital. By the late 1990s milk production had quadrupled, and there were 11 million members of these dairy cooperatives (Kurien 2007:50.

Besides the milk producers, the industry created many more millions of jobs in rural and urban areas in (a) the collection, transport, processing, and sale of milk, (b) in the manufacture and sale of a range of milk products, as well as (c) in ancillary activities such as veterinary centres, improving breeds, and training institutions.

China's TVEs employed people in villages and small towns, by creating manufacturing enterprises that produced a very wide range of products for local consumption and export (Xu and Zhang 2009). These were publicly owned and functioned with deep direct involvement of local governments, modeled on the Commune and brigade enterprises that preceded them. The local government officials had access to information and other resources from the wider world of officialdom and abroad. These included ideas as to what to produce, raw materials, quality control, marketing, credit and land.

There were several models of TVE, depending partly on their location and connections. In 1995, the TVEs contributed 37% of China's GDP, more than its SOEs (Xu and Zhang 2009). They flourished through the 1980s to the mid-1990s, then lost ground once the government approved private enterprises and backed large state-owned enterprises. The TVEs helped foster the entrepreneurship and create the business models and links which facilitated China's subsequent explosion of productivity.

Expanding links with regional markets is also useful. It saves transport costs and diversifies the risk of dependence on specific markets. Pending moving up the quality chain, it also enables selling products that are of adequate quality for consumers in lower-income countries, but not for developed country markets.

Conclusion

It is not helpful to developing countries to suggest that they will not benefit from the demographic dividend unless they undertake onerous reforms to create the conditions for becoming rapidly industrialized. This is not the experience of the vast majority of developing countries — many of which have become middle-income countries — where fertility decline has greatly helped reduce poverty and boost economic growth, both through the automatic dividend as well as through improvements in policy settings that are slow — sometimes painfully slow — compared to the pace set by some countries in East Asia.

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Box 1: If it's not a tailwind, it's a headwind

The demographic dividend: comparing the Philippines, Thailand, and the Republic of Korea

Box 1a: The "arithmetic" demographic dividend

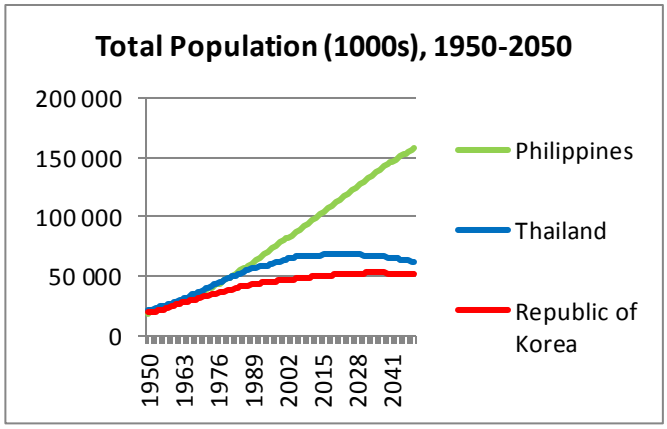
Fertility decline is often seen as providing a "tailwind" in support of policy reforms for economic growth by reducing dependency ratios, but goes much further than that by reducing the "headwinds" of population growth that constrain economic growth.

In 1950, the Philippines, Thailand, and the Republic of Korea (ROK) had similar total populations of 19-20 million each. Fertility decline was earliest and steepest in the ROK, followed by Thailand, but slow in the Philippines. Their estimated populations in 2015 (in millions) are 102 in the Philippines, 67 in Thailand, and 50 in the ROK.

During 1950- 2015 the Philippines had over 3-fold growth in the numbers of children who need schooling, health, and future jobs, and a 5.5-fold increase in the number of working age people needing jobs. The total population needing food, services, jobs, and basic infrastructure grew 4.5-fold during 1950-2015, and under the medium fertility projections will grow 7.5-fold between 1950 and 2050. That is a substantial "headwind".

By contrast, the fertility decline in Thailand and the ROK gave them a "tailwind" for economic growth, with far more resources per capita for investing in human capital, in economic growth, and thereby raising living standards.

	% change 1950-2015		
	Philippines	Thailand	Rep of Korea
% change in child population (<15 yr)	320	35	-13
% change in working age population (15-64)	549	332	245
% change in total population	448	227	159



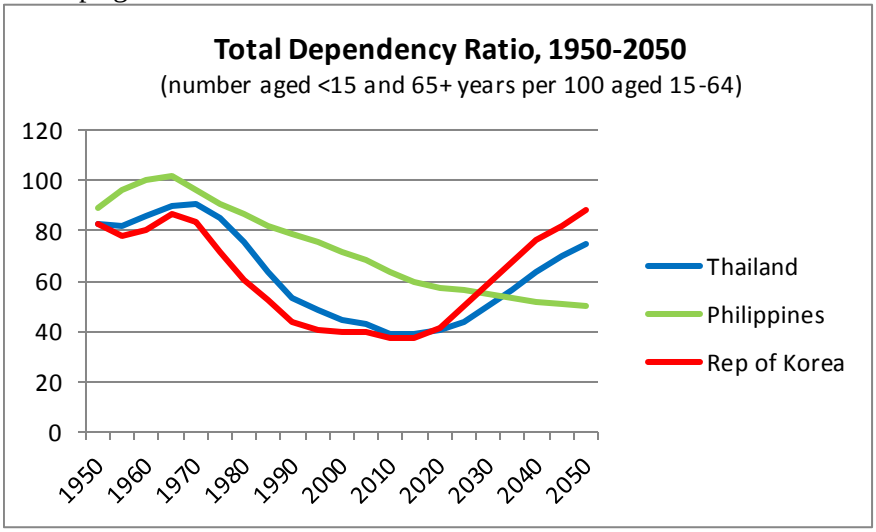
Source: UN (2013) estimates and from 2015 the medium fertility projections.

Box 1b: How effectively is the tailwind used? *The fuller "policy-induced" demographic dividend*

Thailand and the RoK differ modestly in their trends in dependency ratios, compared to their difference in pace of growth in GDP per capita. The ROK's better policy and institutional settings obtained far higher growth in GDP per capita during its "demographic window of opportunity".

The Philippines shows slow growth in GDP per capita. In 1950, estimated GDP per capita in the Philippines was 1070, higher than the ROK (854) and Thailand (817) — by 2008, this had grown 1.7 fold in the Philippines, 22-fold in the ROK, and 9.7 fold in Thailand (Maddison 2010).

However, few countries are in a position to replicate the ROK's tight control over policy-making and implementation. Thailand's pace of economic growth has been high, and would be the envy of many developing countries.



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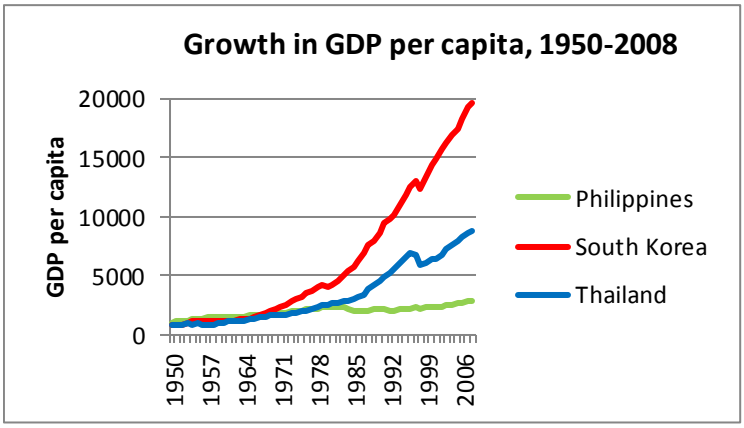
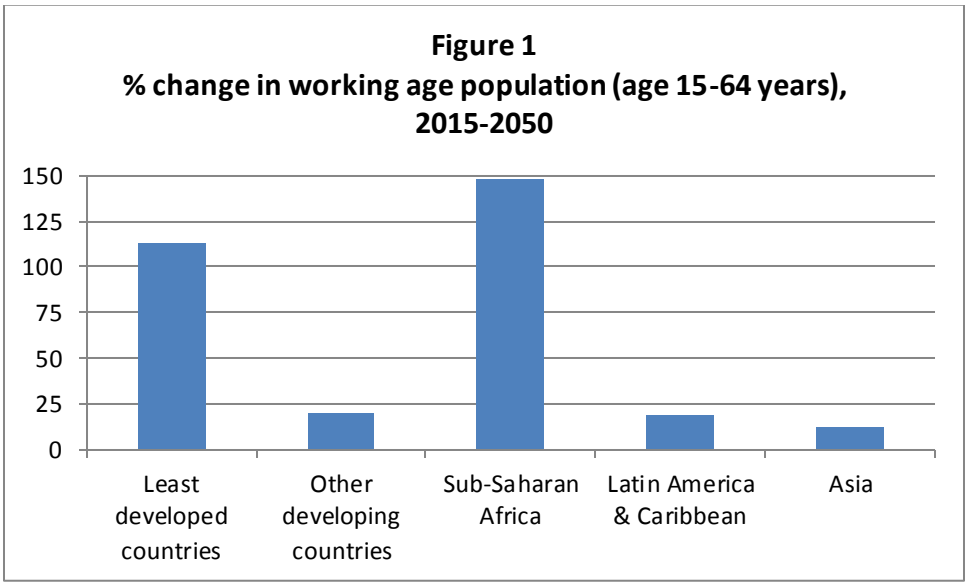
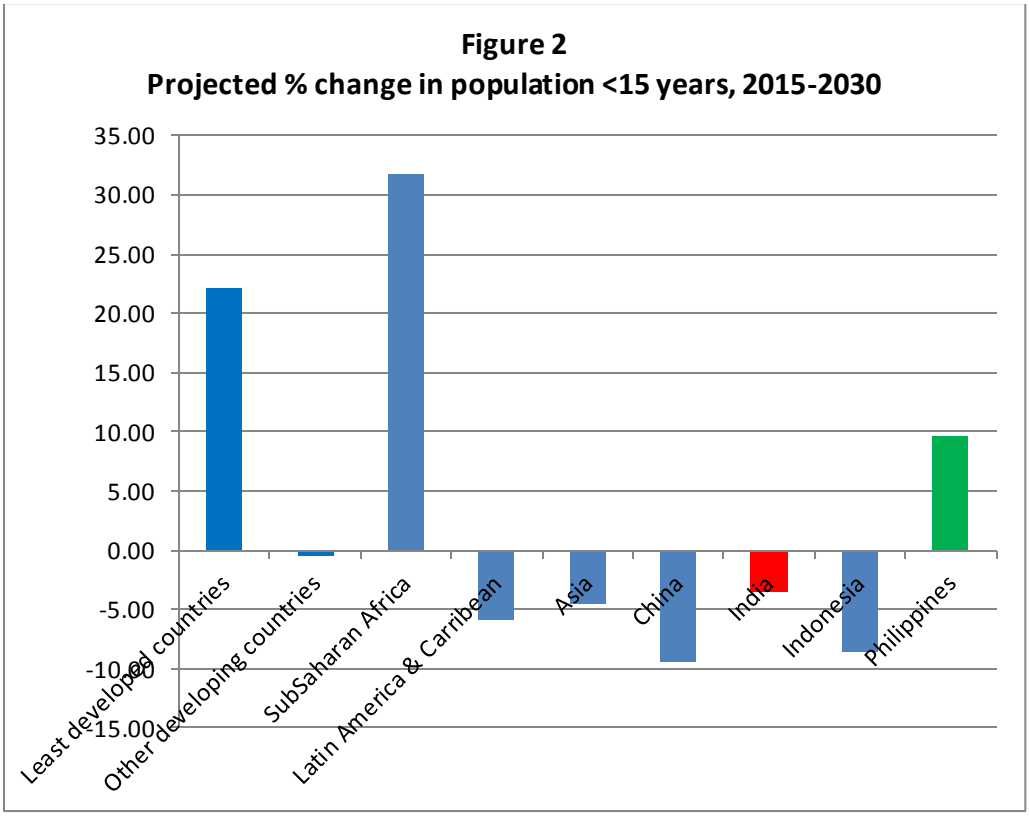


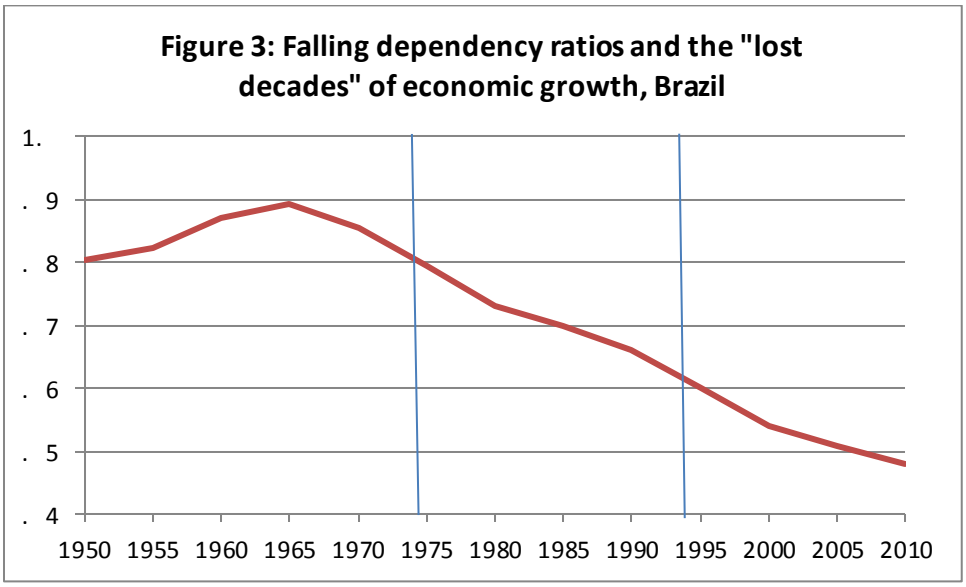
Source: Maddison (2010) *Historical Statistics of the World Economy* (data in 1990 International Geary-Khamis dollars).



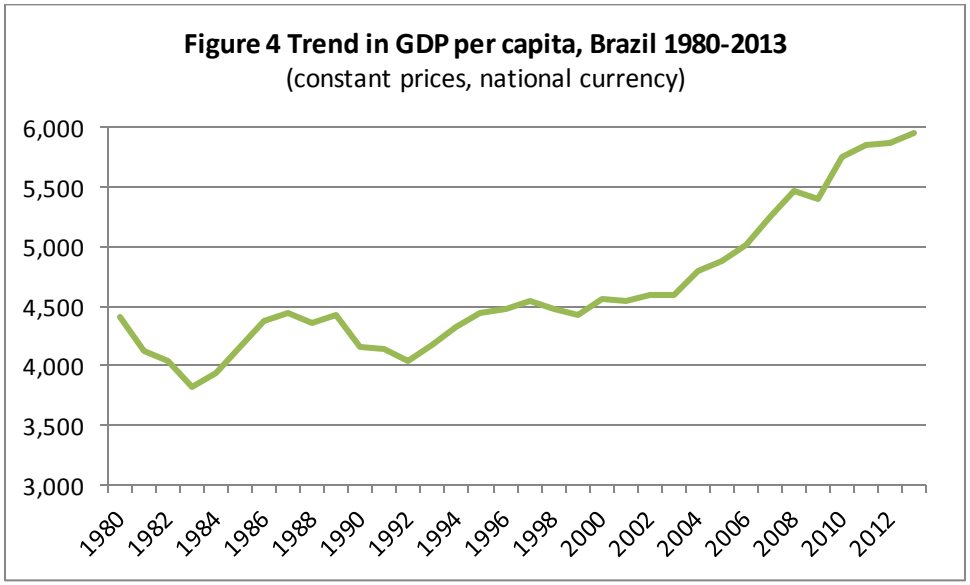
Source: UN (2013) medium fertility projections



***Source*:** Das Gupta (2014), from United Nations (2013) medium variant



Source: UN (2013) estimates



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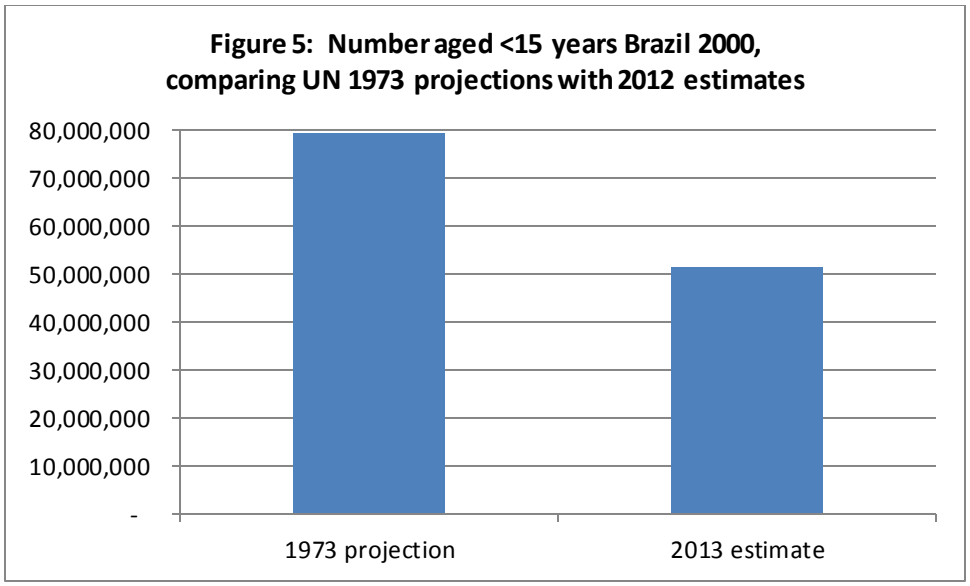

Source: UN (1977) medium fertility projections, and UN (2013) estimates