

Demographic Dividend of India and its Mechanism for Growth

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Abstract—Demographic change in India is opening up new economic opportunities. As in many countries, declining infant and child mortality helped to spark lower fertility, effectively resulting in a temporary baby boom. As this cohort moves into working ages, India finds itself with a potentially higher share of workers as compared with dependents. If working-age people can be productively employed, India's economic growth stands to accelerate.

There is a large and significant growth impact of both the level and growth rate of the working age ratio. This is robust to a variety of empirical strategies, including a correction for inter- state migration. The results imply that a substantial fraction of the growth acceleration that India has experienced since the 1980s—sometimes ascribed exclusively to economic reforms—is attributable to changes in the country's age structure.

With the future expansion of the working age ratio concentrated in some of India's poorest states, income convergence may well speed up, a theme likely to recur on the global stage. Theoretical and empirical literature on the effect of demographics on labor supply, savings, and economic growth underpins this effort to understand and forecast economic growth in India. Policy

Choices can potentiate India's realization of economic benefits stemming from demographic change.

India's changing demographics are creating a strong impulse for economic growth, and policymakers have several options for making this potential demographic dividend, as reality.

Keywords— Demographic dividend, China-India Comparison, age-structure, migration, convergence.

Introduction

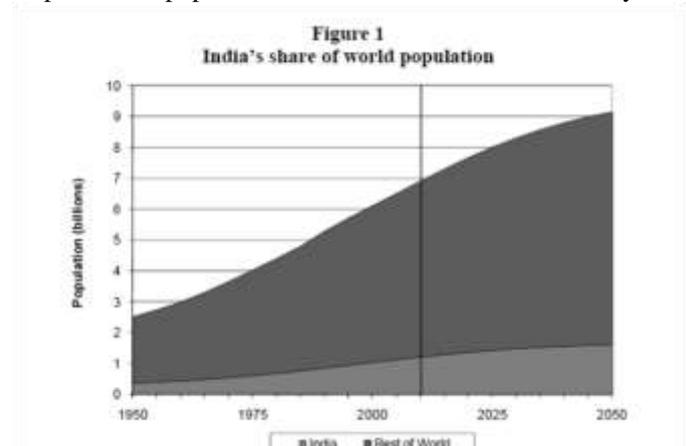
What exactly is the demographic dividend?

When a developing country reduces child mortality, it experiences a population explosion in which the proportion of dependants to workers rises. This is a sort of negative dividend — workers have to support a much higher proportion of dependants, depressing per capita income. But in the next phase the birth rate falls sharply, even as the original baby boomers enter the workforce. So, the proportion of workers rises sharply, even as the proportion of dependants falls. In many countries, the ratio of workers to dependants goes from 40:60 to 60:40, giving a huge boost to per capita income.

The drop in fertility rates often follows significant reductions in child and infant mortality rates, as well as an increase in average life expectancy. With fertility rates continue to fall and older generations having shorter life expectancies, the dependency ratio declines dramatically. This demographic shift initiates the demographic dividend. With fewer younger dependents, due to declining fertility and child mortality rates, and fewer older dependents, due to the older generations having shorter life expectancies, and the largest segment of the population of productive working age, the dependency ratio declines dramatically leading to the demographic dividend. Combined with effective public policies this time period of the demographic dividend can help facilitate more rapid economic growth and puts less strain on families. This is also a time period when many women enter the labour force for the first time. In many countries this time period has led to increasingly smaller families, rising income, and rising life expectancy rates.

I. HOW IT WILL AFFECT INDIAN INDUSTRY

Global population grew at roughly 2% per annum from 1960-2000, a level that is unsustainable in the long term, as it translates into population doubling every 35 years. India's population is currently growing at a rate of 1.4% per year, far surpassing China's rate of 0.7%. The differential between India and China will result in India surpassing China with respect to population size in less than 20 years.



II. INDIA'S ECONOMIC PROSPECTS

Consideration of demographic realities may help Indian policymakers adopt measures that can accelerate India's demographic transition and magnify India's demographic dividend. Alternatively, India could experience a demographic drag on its economy if the country falls prey to potential demographic threats to its economy.

III. THREATS TO INDIA'S FUTURE PROSPERITY

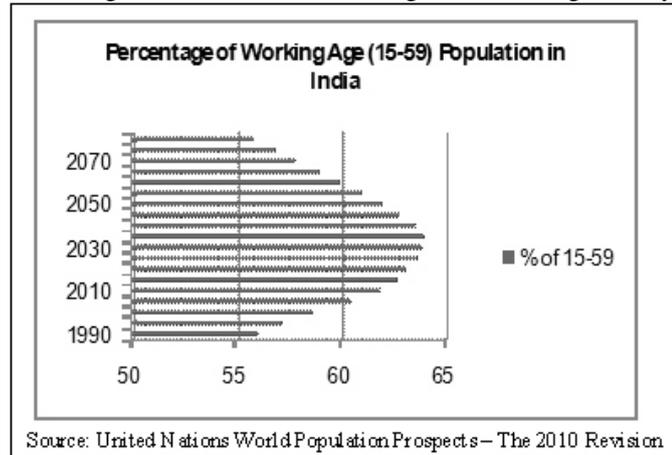
Three major threats to India's future prosperity are population aging, population heterogeneity, effects of urbanisation on health.

A. Population aging

Today's large cohorts of working-age individuals will be large cohorts of elderly dependents in the future.

Figure below shows that the share of India's 50+ populations today is relatively small, accounting for only 16% of India's population. Going forward however, India will witness rapid growths among this age group. By 2050, over 33%, or roughly 536 million

people, will be aged 50 or over; the share of those aged 65 and over will increase from 5% to 14%; and the share of those aged 80 and over will rise from 1% to 3%. The main force driving India's changing age structure are the maturing of past birth cohorts, upward trends in life expectancy due to increasing survival rates at older ages, and falling fertility.



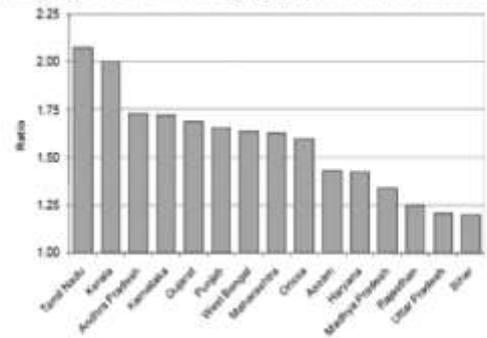
There is currently a vacuum with respect to institutions and policies to address these challenges in India; less than 10% of the Indian population currently has health insurance (either public or private) and 90% of the elderly have no pension.

B. Population heterogeneity

A second potential threat to India's future prosperity is, India is a particularly heterogeneous country demographically, with most demographic indicators varying enormously across states. For example, Figure below shows cross-state differences in the main indicator of potential for a demographic dividend, namely, the ratio of the working-age population to the non-working-age population. Here, the comparison of Tamil Nadu and Bihar shows as great a disparity as the current difference between Ireland and

Rwanda – giving the economy of Tamil Nadu a much larger potential demographic lift than that of Bihar

Ratio, working-age to non-working-age population, by Indian state, 2001



C. Effects of Urbanisation and health

India, like virtually every country in the world, is becoming more urbanized: the fraction of people living in urban areas grew from 18% in 1960 to 30% in 2008 (World Bank 2010). During this period, it has been confronting a surge in chronic diseases accounting for 53% of all deaths in India in 2005 (Reddy et al 2005) – that are related to a decline of infectious disease mortality, tobacco consumption, patterns of nutrition, and urban living and a more sedentary lifestyle. People living in cities are typically exposed to greater pollution levels than rural dwellers. They often have more sedentary lives, and they may be subject to more stress. Some chronic illnesses, such as hypertension and diabetes, tend to be positively correlated with wealth (and hence with urban living), whereas others, such as anemia, tend to be negatively correlated. Left unchecked, the increased prevalence of chronic diseases will pose serious threats for India's future economic and physical well-being. Despite urbanization's negative effects on health and the possible follow-on effects that poorer population health can have on economic growth, there are clearly other aspects of urbanization that may promote economic growth.

IV. CAPTURING INDIA'S ECONOMIC POTENTIAL

India is poised to reap economic benefits from the favorable demographics discussed earlier, but this windfall is not guaranteed. India has several opportunities to increase its chances of success, the first being to make wider and deeper investments in health. Insofar as investing in health can help stimulate development, India has considerable potential to promote higher income through programmatic and financial commitments to health. India has taken a significant step in this direction by establishing the Public Health Foundation of India and the National Rural Health Mission, which seek to fill India's pressing need for a wide range of further investments in the promotion and protection of health, including the training and wide deployment of medical and public health professionals who focus on disease prevention, treatment, and care. India's second great demographic opportunity involves the acceleration of fertility decline. In general, there are three main approaches to promoting fertility

decline, and India has scope for improvement with respect all three. The first is the expansion of family planning services in a way that is respectful of people's reproductive rights. Currently, approximately 13% of Indian women (10% in urban areas and nearly 15% in rural areas) report unmet need for contraception, meaning that many currently married women who desire to postpone or forego childbearing are not using contraception. Overall, 56% of married women in India (64% in urban areas and 53% in rural areas) report that they use contraception (either modern or traditional methods), with female sterilization by far the most common method. (Government of India, 2005-2006).

V. FOUR MECHANISMS FOR GROWTH IN THE DEMOGRAPHIC DIVIDEND

During the course of the demographic dividend there are four mechanisms through which the benefits are delivered.

The first is the increased labor supply. However, the magnitude of this benefit appears to be dependent on the ability of the economy to absorb and productively employ the extra workers rather than be a pure [demographic gift](#).

The second mechanism is the increase in savings. As the number of dependents decreases individuals can save more. This increase in national savings rates increases the stock of capital in developing countries already facing shortages of capital and leads to higher productivity as the accumulated capital is invested.

The third mechanism is human capital. Decreases in fertility rates result in healthier women and fewer economic pressures at home. This also allows parents to invest more resources per child, leading to better health and educational outcomes.

The fourth mechanism for growth is the increasing domestic demand brought about by the increasing GDP per capita and the decreasing dependency ratio. Low fertility initially leads to low youth dependency and a high ratio of working age to total population. However as the relatively large working age cohort grows older, population aging sets in. The graph shows the ratio of working age to dependent population (those 15 to 64 years old, divided by those above or below this age range - the inverse of the dependency ratio) based on data and projections from the United Nations.

There is a strategic urgency to put in place policies which take advantage of the demographic dividend for most countries. This urgency stems from the relatively small window of opportunity countries have to plan for the demographic dividend when many in their population are still young, prior to entering the work force. During this short opportunity, countries traditionally try to promote investments which will help these young people be more productive during their working years. Failure to provide opportunities to the growing young population will result in rising unemployment and an increased risk of social upheaval.

VI. AFTER-EFFECTS OF DEMOGRAPHIC DIVIDEND

The urgency to put in place appropriate policies is magnified by the reality that what follows the "demographic dividend" is a time when the dependency ratio begins to increase again. Inevitably the population bubble that made its way through the most productive working years creating the "demographic dividend" grows old and retires. With a disproportionate number of old people relying upon a smaller generation following behind them the "demographic dividend" becomes a liability. With each generation having fewer children population growth slows, stops, or even goes into reverse. This is currently seen most dramatically in Japan with younger generations essentially abandoning many parts of the country. Other regions, notably Europe and North America, will face similar situations in the near future with East Asia to follow after that.

China's current independence ratio of 38 is unprecedentedly low. This represents the number of dependents, children, and people over 65, per 100 working adults. This implies that there are nearly twice as many working age people as the rest of the entire population combined. This historically low dependency ratio has been extremely beneficial for China's unprecedented period of economic growth. This dramatic shift was brought about largely in part due to China's [one-child policy](#). As a result China is currently aging at an unprecedented rate. China will be older than the United States by 2020 and by Europe by 2030. Combined with the sex-selective abortions widely practiced as a result of the [one-child policy](#) – China will have 96.5 million men in their 20s in 2025 but only 80.3 million young women – China's future demography holds many challenges for the [Communist Party](#).

VII. CONCLUSION

In conclusion, demographics matter to the pace and process of economic growth and development-in India and elsewhere. While many factors influence economic growth, few are more important and reliable than demography. India's changing demographics are creating a strong impulse for economic growth, and policymakers have several options for making this potential demographic dividend, a reality. India has the responsibility to formulate and implement public policy on population ageing.

ANNEXTURE:

