strategy+business

India’s Demographic Moment

by Nandan Nilekani

from **strategy+business** issue 56, Autumn 2009

reprint number 09205

With the right conditions in place — education, entrepreneurialism, and environmental awareness among them — a young, eager, educated workforce can be the key to prosperity.

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by Nandan Nilekani

In June 2009, U.S. President Barack Obama noted in a speech at a Wisconsin town hall meeting that the U.S. would have to take decisive steps to better educate its children or else suffer further economic damage. American students, he added, now compete with children from India and China, who "are coming at us hard, and…they're really buckling down."

The global economic meltdown has been followed by many conversations about how the world economy might steer itself back to health. In this context, Obama's remarks notwithstanding, it has been surprising to see how rarely these debates include any consideration of education, or of the quality and size of an educated population. And yet it's clear that if a country's colleges and schools are in good health and if a significant proportion of the population is graduating from them, the prospects of economic growth are promising. When conditions are right, large numbers of young workers can drive a nation's growth to remarkable levels.

This theory is known as the "demographic dividend," a phrase coined by demographer David Bloom. He proposes that when young working-age adults comprise a disproportionate percentage of a country's population, the national economy is affected in positive ways. Indeed, when he and other demographers have looked at periods of sustained economic growth around the world, they have found that the effect of the demographic dividend was impressive. Bloom estimates that the dividend in the U.S., in the form of the baby boom generation, contributed 20 percent of the nation's GDP growth between 1970 and 2000. In Japan, during the same period, the contribution was smaller because the

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Opening photograph:
Students of the NALSAR University of Law in Hyderabad, India, celebrate their graduation.

dividend coincided with relaxed laws against abortion and birth control, but it still accounted for an estimated 10 percent. In East Asia as a whole, Bloom suggests, the demographic dividend drove one-third of the region's economic growth between 1965 and 1990.

This dividend effect can also be found in earlier explosive periods of ideas, prosperity, and growth. A dividend in 19th-century England drove the Industrial Revolution. In the United States after World War II, and in East Asia and Ireland between 1965 and 1990, the pattern was the same: a disproportionately large number of births for years, and then, as that population came of age, a drop-off in the birth rate. Women in these large, prosperous, relatively well-educated cohorts have fewer children while in their 20s, and more of them enter the workforce instead.

The economic advantage comes from young workers who are unencumbered by families or other responsibilities. As Bloom pointed out to me, the members of this dividend generation don't have to spend their incomes on children, and they don't worry as much as previous generations about financial security and health expenses. They may diverge from traditional career paths into more entrepreneurial directions, and when these risks pay off, the results for the economy are innovation, productivity gains, and rapid growth.

Now, looking ahead, we can see a massive demographic dividend approaching in several countries. The country most likely to be affected, and in fact already experiencing a dramatic boom, is India.

Taking the Dividend to Heart

The underlying premise of the demographic dividend — that growth depends first and foremost on people and their talents — feels simple and intuitive. My years in business have been based on it. Infosys Technologies Ltd., where I was a CEO and co-chairman, has long seen itself as a people-oriented company. The key parameters of company health that Infosys tracks include the number of people recruited from colleges each year, and employee retention and productivity.

But among national government leaders, the idea that human capital drives growth has not always been popular. Economists and economic policymakers have underestimated the value of human capital and the impact of youthful energy. In India and China, for example, well into the 1970s and 1980s, people were seen as more of a burden than an asset. The government of India for a time co-opted public health services to promote birth control, and appointed a demographer as its health minister, with the idea of reducing the population. In China, as birth-control policies evolved to become more stringent, the Communist Party's slogan transformed from "one is not many, two's just right, and three's too much" in the early 1970s, to "one is best, two's the maximum," and finally, to "it is good to have just one child."

Today, at least in India, attitudes are changing. A very young population is currently coming of age and entering the workforce. Consumer spending is booming. According to projections, the dividend will spur the rise of a middle-class population of half a billion people over the next two decades. This population boom is increasingly seen as an asset, not just to the Indian nation, but to the global economy.

Corporate leaders around the world will have to respond to the demographic dividend by changing or expanding their strategies involving human capital, both for customers and for employees. One of the best places

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to look at these emerging strategies is India — in part because of its immense population and size, but also because of its political and economic structure. India's democratically elected governments are in transition; its economic strength and demographics vary widely among regions (some provinces in the north have aging populations and no dividend at all). And its entrepreneurial sector, at this moment, is one of the most vibrant and imaginative in the world. By looking at the business activity in emerging India, we can see the strategies, particularly those that involve talent, that companies everywhere can adopt.

Experimental Entrepreneurship

Today's boom generation is bringing forth new ideas in marketing, distribution, and networking. Within Indian firms such as ICICI Bank (India's largest private financial-services company), Hindustan Unilever, the GMR Group (a rapidly growing energy and infrastructure company), and Comat Technologies (which provides access to information and services in rural and underserved regions), I've encountered young, entrepreneurial leaders who are eager to experiment with new ideas and business models.

For example, banks in India are linking up with self-help groups and post offices to reach the vast numbers of rural people who lack bank accounts and financial access. In urban areas, some banks are abandoning traditional bricks-and-mortar infrastructure and are instead leveraging information technology and communication tools to serve their consumers. One senior bank executive told me that his daughter can no longer fathom entering a bank to make a transaction. "When she discovered that the ATM near her house was out of order," he said, "she preferred to go a couple of kilometers down the road to use the next one, even though the first ATM was right next to the bank!"

Retailers are using unconventional means to tap into the rural consumer class and bypass infrastructure constraints. They are letting people pay with grain for consumer goods. They are setting up sales and distribution networks staffed by the villagers they hope to target. Companies such as the Solar Electric Light Company (SELCO) are meeting the needs of unelectrified communities in the states of Tamil Nadu and Karnataka through solar lighting. The dramatic growth of India's mobile phone market has been another success story, reflecting both government policy and dynamic entrepreneurship. Today, India has more than 300 million mobile phone users, most of whom use prepaid cards and buy talk time in very small installments. The rates are probably the lowest in the world, yet the companies are very profitable.

One major reason that global businesses are paying attention to India is this creativity and innovation now bubbling to the surface. It might appear at first glance that India has attracted the attention of these businesses purely as a consumer market, just as purchasing power in Europe and the U.S. is hitting a plateau. But India's domestic economy includes more than passive consumers; valuable technological and business strategies are emerging there that have promise for the rest of the world. The young in India are providing its markets with both the talent to build and sell products, and the consumers to buy them. This self-reinforcing circle is turning India's economy into a force to be reckoned with, just as it has in other countries where the demographic dividend has paid off.

Embracing Risk in a Fearful World

One casualty of the global economic recession has been the appetite for risk. Though the risk/reward ratios improved in global stock markets between October 2008 and the summer of 2009, caution prevailed. India has not been unaffected. The country's fiscal deficit has become more ominous, the construction and real estate sectors have taken hits, and some Indian businesses are flailing from the enormous debt they took on for acquisitions and overseas investments.

And yet the global mood of caution did not fully take hold in India, because the demographic dividend has a significant influence on a country's capacity for experimentation and entrepreneurship. In general, as economists Gurdip Bakshi and Zhiwu Chen have noted, the demographic dividend confers the willingness to take risks. Conversely, in countries with aging and retiring populations — and many people becoming unemployed — people grow risk averse. This dampens the country's productivity and future growth.

Overall, the Indian economy looks far more buoyant than its global equivalent. India's sustained but slow growth, its youthful population, and its conservative approach to financial globalization have run countercyclical to the long-term trends of the world economy. India can consequently provide a buffer for economies now experiencing slowing growth. Even as the aging, developed world becomes risk averse, India will have an appetite for risk during and after this recession, and can manage these risks within a well-regulated environment. India thus presents the opportunity for the developed world to cross-pollinate its risks, and leverage India's dynamism to grow its investments. In fact, before foreign institutional investors (FIIs) fled world markets as the financial crisis deepened, India's stock markets were home to more than 150 global pension funds from the United States, the European Union, Canada, and East Asia, among others.

In an era of globalization, demographic factors may make more of a difference to local economies than such physical assets as land, resources, and even industrial bases. Consider the United States, whose information technology and telecommunications industries drove rapid innovation and productivity gains during the 1980s and 1990s. This was the heyday of its demographic boom, when many baby boomers were in their most creative and unfettered period, their 20s, 30s, and early 40s. Even after its dividend began to tail off, the U.S. continued to see gains. This may well have been because its open immigration policies allowed hundreds of thousands of skilled foreign workers into U.S. industry and hundreds of thousands of foreign students into U.S. universities. More than 60 percent of advanced engineering degrees in the U.S. are awarded to immigrants, as are 40 percent of the patents. IT companies including eBay, Intel, Yahoo, Google, and Sun Microsystems were founded or cofounded by immigrants. If political proposals to tighten immigration laws, particularly for skilled workers, are adopted in the U.S., it could be counterproductive — choking off talent when the country needs it most.

Strengthening the Weakest Sectors

Any discussion of the demographic dividend in India and other emerging nations must include a cautionary mention of the dividend's downsides in an already heavily populated country. The dividend is not a pure equation, an unalloyed promise of growth. The real gains of a population boom depend on policies that allow the young to attain high levels of education, find jobs, and contribute to the economy. Even in developed economies that have deployed talent effectively in the past, bad policy can turn a talent advantage sour.

Bloom has tracked a number of countries that did not quite cash in on their dividends. For instance, countries in Latin America stumbled during the 1980s, despite demographic trends that resembled East Asia's today. Similarly, Russia and Cuba failed to gain from their demographic positives, including a large supply of young workers during that time. In India and countries with similar demographics today, the failure to create opportunity can turn the dividend into a crisis. India experienced these problems throughout the 1970s and 1980s, when unemployment and lack of income mobility fed extremist movements across the country and the rise of the underworld in major cities.

In the United States in the 2000s, one of the early signs of a financial bubble was the funneling of the country's best young talent into financial trading. A professor at an Ivy League university told me that it had become more difficult to get the best doctorate students to continue their research because the banks and hedge funds snapped them up, whether their degree was in physics or econometrics. These demographic and human capital advantages fizzled away in a bubble rather than contributing to real, lasting GDP growth. Unless industry and government collaborate to build policies that make effective use of a country's young

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workers, a demographic advantage can prove ineffective, and even counterproductive.

This means that businesses have to strategize thoughtfully while venturing into a country's market — looking not just for profits but for places where they can contribute to the growth of the whole economy, especially including those parts that would otherwise be weak. For example, India, an emerging economy, has some obvious weaknesses in its institutions and market maturity. India dismantled its socialist framework only recently (in 1991), setting up its modern stock exchange and commodity markets and freeing businesses from red tape. Because the resulting economic infrastructure is so new, when it comes to job creation and policies that would support the dividend, India has not yet fully figured out how to handle the influx of young workers in the coming decades. The demographic dividend will also place enormous pressure on natural resources, and this pressure is likely to intensify.

This environment presents corporations with a series of opportunities. Instead of relying solely on the growing middle class for customers, many corporations have tapped into the country's growing poor-but-aspirational consumer base. The advantage of doing so is twofold: It expands markets in innovative ways, and it gives the bottom income earners a way out of poverty. The effect is difficult to exaggerate. The Tata Group's recent project of making urban housing available to the poor by offering homes starting at US$8,000 suggests the beginning of real estate developments that take the poor away from the grime of the slums and the sway of the slumlords. Tata's effort is a private, for-profit version of the low-cost housing initiatives undertaken by governments in developed countries to house the poor. Other private businesses offer low-cost English schools and information and communications technology services, provide low-cost health care through hospitals such as Aravind Eye Hospital and Narayana Hrudayalaya, and sell low-cost utility solutions through solar lighting systems.

In short, the entrepreneurial private sector in India is providing services not yet provided by the government. And in the process, it is finding its entrepreneurialism reflected in a new sense of service and openness on the part of the Indian government. For example, one great constraint in harnessing the workforce of a country for growth has been access to energy. In India, more than half the population lives without electricity, which puts a low ceiling on productivity and potential GDP growth in many parts of the country. The challenges of climate change, however, are compelling the Indian government to explore options beyond its traditional, coal-fueled electricity grid, including decentralized, diverse energy sources. Solar technology, wind power, biofuels, gas, and nuclear power all offer India the chance for more equitable access to energy. Such a decentralized energy approach is well matched to India's dispersed population and to the innovative companies spawned by India's demographic boom. The resulting expansion of energy is just beginning to have an effect on poverty reduction and domestic market growth; within a few years, the impact could be immense.

Synergy with Government

India's greatest advantage might turn out to be the synergy between its demographic dividend and its increasingly reformist governments. The economy has a lot of ground to cover, and market opportunities remain wide

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open. Prosperity, for example, has been largely limited to the south and west of India; the east and the interior states have yet to see substantial growth take off. Recently, however, states such as Madhya Pradesh, Bihar, and Rajasthan have embraced reform, and their infrastructural weaknesses are being addressed through the national government's highway projects and private investment. As a result, India's demographic dividend has the chance to mature within a stable, well-regulated, expansionary, and competitive market. This should make the dividend more potent in its positive effects.

The demand for reforms in governance can now be felt across India's institutions, where an ambitious young cohort of bureaucrats are designing and implementing better policy. Their efforts have enabled the New Pension Scheme, a universal, defined contribution–based social security policy; the landmark National Commodity & Derivatives Exchange Ltd. (NCDEX), an online exchange that is one of the most mobile, well-connected commodity trading exchanges in the world, built by a group of former banking technocrats; and the National Stock Exchange (NSE) and National Securities Depository Ltd. (NSDL), which are now among the world's most agile and technologically mature stock exchanges and depositories.

The Indian government's appetite for reform bodes well for the country's demographic potential and for the future of business in India. Businesses have long been at the forefront of driving innovation, whether on Henry Ford's assembly lines or in Silicon Valley's microprocessors. If the demographic dividend is a force for innovation and talent, business is most effective at harnessing it. India's government appears to recognize this. India is thus offering the world a rare combination: a reform-minded approach to growth, an expanding consumer class, and a stable democracy.

Developing a Distinct Niche

Until now, demographic dividends have primarily benefited countries that had built up large export industries. The United States in the baby boom era emerged as the dominant economy in a diminished postwar world, which allowed it to dominate world exports and create millions of jobs for its young workers. East Asia similarly leveraged its demographic dividend into its transformation as an export manufacturing hub. India, too, has some export-related advantages, especially when it comes to talent. The country is coming of age as the economies of Europe, the U.S., and China are aging, and these countries will need young workers to drive growth and investment and to support their growing numbers of dependents.

But a demographic opportunity exists now that didn't exist in the past: the global environmental and climate crisis. Until now, what might be called a "calculus of the bootlegger" has prevailed with India's natural resources. Businesses, for instance, do not pay a penalty for industrial emissions or for pumping effluents into water bodies. The consequences have been horrendous. The Damodar River, for example, has more than 300 coal, iron ore, limestone, and mica mines dotting its banks, all releasing effluents that turn its water into a dank sludge. Another big river, the iconic Yamuna, receives nearly 3 billion liters (800 million gallons) of waste every day from small industries and sewage lines; it is polluted to a level 100,000 times above the standard for safe bathing.

An effective way to create a market-driven mechanism for environmental costs is through the pricing of carbon emissions, as economist Nicholas Stern has promoted. Businesses can gain much from such regulations, particularly because they would generate green standards and investment. Foreign investments in India are already emerging as a source of "green intellectual property" and technology. In the IT industry, exposure to global sustainability practices has pushed companies toward environmentally friendly business approaches.

The more clearly corporate leaders see these trends, the more effective they can be at making decisions in their own companies. Infosys, for example, has adopted sustainability standards that are among the most stringent in India. The company is also pursuing other opportunities related to the demographic dividend. For example, it is collaborating with ACDI/VOCA, a nonprofit international development organization that is working to make local agricultural and business information available to farmers; these efforts respond to the entrepreneurial energy in the rural parts of the country. Infosys has its share of employees who come from financially constrained backgrounds — sons of rickshaw pullers and wives of street vendors. And it has entered into partnerships with local governments on such issues as infrastructure and education.

Awareness of the demographic dividend inevitably changes corporate strategies; the dividend demonstrates that prosperity is innately tied to the quality, energy, and capabilities of people. Even in countries such as India, where people may be in great supply, business will have to find ways to attract them and maintain their interest. Our demographic dividend, like all others, will someday end. +

Reprint No. 09305

Resources

David E. Bloom, David Canning, and Jaypee Sevilla, *Demographic Dividend: A New Perspective on the Economic Consequences of Population Change* (Population Matters, RAND Corporation, 2003): Research showing the link between population age structure and demographic growth.

Vinay Couto and Ashok Divakaran, "How to Be an Outsourcing Virtuoso," *s+b,* Autumn 2006, www.strategy-business.com/press/article/06304: Features Infosys as a master provider.

Gordon Crovitz, "Time to Push for U.S. Immigration Reforms," *Wall Street Journal,* April 28, 2009: Source on the large proportion of immigrants in U.S. higher education.

Nandan Nilekani, *Imagining India: The Idea of a Renewed Nation* (Penguin, 2009): Explores India's transformation from colony to socialist state to capitalist market to emergent global leader.

Barack Obama, "Text of Remarks at Green Bay Town Hall Forum," *Milwaukee (Wis.) Journal Sentinel Online,* June 11, 2009, www.jsonline.com/news/wisconsin/47780942.html: The U.S. president on education and prosperity.

"Peering into Their Murky World," *The Economist,* July 2, 2009: In his new position, Nilekani is overseeing the development of India's first national biometric identity card.

C.K. Prahalad, "The Innovation Sandbox," *s+b,* Autumn 2006, www.strategy-business.com/press/article/06306: How ingenuity is transforming business in India, featuring Aravind Eye Care and Narayana Hrudayalaya.

Sheridan Prasso, "A Challenge for India," *s+b Leading Ideas Online,* 1/29/08, www.strategy-business.com/li/leadingideas/li00060: N.R. Narayana Murthy, cofounder (with Nilekani) of Infosys Technologies, argues for broad-based economic opportunity.

Lord Andrew Turnbull, "How to Be a Demographic Realist," *s+b,* Autumn 2007, www.strategy-business.com/press/article/07315: The former head of the U.K.'s Home Civil Service explains why basic assumptions about retirement and growth will have to change.

Infosys Web site, www.infosys.com: Includes essays and news releases on similar themes, including one on the ACDI/VOCA partnership to promote agricultural information.

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