Globalization — Tipping the Scale of Economic Supremacy

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Not since the era of the Roman Empire has a nation sustained its position as a world superpower as long and as dynamically as the United States has. From the end of the 19th century through the 20th century, America's ambitious work force propelled our agricultural, textile, manufacturing, and technology industries to elite status in the world economy. Americans took pride in being number one in just about everything, from inventions such as the telegraph, electric light bulb, and nuclear power to such great accomplishments as being the first to land on the moon.

Times change, however, and cracks are appearing in the veneer surrounding the U.S. and its place at the top of the world hierarchy. Throughout the 20th century, the United States has held its own as other countries rose up, creating a possible challenge to the American way of life: the German military machine in World War I and World War II, the Soviet Union and communism in the Cold War, Japan in WWII and later as the leader in consumer electronic technology. And although the United States had been humbled at times by other nations, e.g., the Vietnamese and North Koreans, it was not until 1989 that an event occurred which had the potential to shake the foundations of American society. Ironically, the United States played a lead role in bringing it about . . . the fall of the Berlin Wall and the end of the political influence of the Soviet Union in Eastern Europe.

The Eastern Europeans, suddenly out from under the shadow of the Iron Curtain, elected to embrace capitalist ideals, and the floodgates of a free market economy burst open with tremendous force. Several states, nations, and blocs were freed from communism at once, and there was no single overarching government to monitor economic development through gradual implementation of measured steps and local experiments. Eastern Europeans were, and are, an ambitious, hard working, and motivated group. Furthermore, they are recognized as having some of the highest education standards in the world.

As economic reform was spreading in Europe, some interested observers were taking note in Asia.

India Opens its Economy

India is viewed as a rising economic superpower today, but as recently as 1991, it was in dire financial straits. The newly elected finance minister decided that the only way to save the country from economic ruin was to abolish existing trade controls. Economic liberalization opened India's doors to foreign investors and did away with much of the bureaucratic red tape that had impeded business growth.

Before India began welcoming foreign trade and investors, its economic growth rate hovered around 3%. Three years after the 1991 reforms, the rate of growth jumped to 7% (Friedman, p.50), and since then, the country has experienced an overall 6% growth rate. (Engardio, p.54) India had only $1 billion in foreign currency at the time of the reforms; today, it has an astounding $118 billion. (Freidman, p.51)

India began its rise to power by filling a customer service need in the information technology sector — call centers. Call centers employ more than 245,000 Indians. In America, such jobs are low wage, low skill, and therefore low prestige. In India, these jobs have the opposite status. (Friedman, p.24) Call centers are indicative of types of jobs that are perfect for outsourcing. Information technology makes it easy to move work to the worker, and American workers cannot compete in a global economy because they cost too much.

Every year, more major U.S. corporations move at least part of their business overseas to India and places like it. As the skill level of overseas workers continues to increase, more jobs that are considered high skill/high wage/high prestige in the United States will go abroad as well. Outsourcing of the processing of federal income tax returns to India is a prime example. In 2003, roughly 25,000 tax returns were sent to India for processing. The number increased to 100,000 in 2004, and was expected to be 400,000 in 2005. If the work can be digitized, it can easily be moved anywhere in the world. Doctors in U.S. hospitals send CT scans to India for reading. (Friedman, p.16)

India is playing an increasingly important role in information technology innovation. Motorola, Hewlett-Packard, Cisco Systems, and other technology giants rely on their Indian employees to design software platforms and futuristic multimedia features for next-generation devices. (Engardio, p.53) In December 2005, Microsoft announced that it plans to invest $1.7 billion in India and nearly double its work force there over the next four years by adding 3,000 jobs. Bill Gates, Microsoft's chairman and co-founder, said a substantial portion of the investment will go towards designing an operating system specifically for India in nine native languages. The new investment follows the $400 million that Microsoft announced in 2002. Intel Corp. will invest more than $1 billion in Indian technology companies over the next five years. Cisco Systems Inc. plans to spend $1.1 billion in India over the next three years. (Mahapatra)

The business model that these major U.S. corporations operate under is smart. They recruit and hire world-class talent at a fraction of what an American with comparable skills would be willing to work for. To these companies, it makes no sense to support the standard of living of the American middle class in this way. Since Americans cannot afford to work for the same wages as their counterparts in many other countries, the only way to sustain a U.S. middle class would be to increase the skill level of all Americans. **Tipping the scale of competitive balance in favor of the U.S. worker requires one thing … better education standards.**

China Opens its Economy

"To get rich is glorious," declared China's leader in 1977, signifying the opening of the world's most populous country to international trade. In China today, there is no question that communist ideology takes a backseat to capitalism for economic growth. China's ascension as an economic empire dwarfs that of the United States during its rise to power. For the past two decades, China's average annual economic growth has been an incredible rate of 9.5%. (Engardio, p.54) If this rate continues, China's economy could be 75% bigger than the U.S. economy by 2050. (Fishman, p.17)

Whether or not we are aware of it, China impacts our lives in some fashion every day, as consumers, sellers, employees, employers, manufacturers, etc. China leads the world in the number of clothes made and toys assembled. China makes more than 40% of all the furniture sold in the United States. (Fishman, p.13) Estimates of how much of Wal-Mart's merchandise comes from abroad range from 50 to 85%, (Fishman, p.154) the majority of which is made in

China. Furthermore, around 2000, China became the world's largest manufacturer of consumer electronics. In the not-so-distant past, a product labeled "Made in China" would never have been mistaken for a German-made machine, a Japanese-made television, or an American-made cabinet or textile. This is no longer true.

The population of China is approximately 1.5 billion … and growing. Along with opening its economy to free enterprise, the Chinese government made another radical concession — allowing peasants to leave the countryside to search for opportunities in urban areas. Hundreds of millions of farmers and peasants or their offspring have migrated to coastal cities in hopes of making a better life for themselves. In 2005, China had between 100 and 160 cities with populations of one million people or more. In contrast, the United States has nine, and all of Europe has 36. The lowest estimate of the number of Chinese who moved to the cities equals the number of people in the U.S. work force. (Fishman, p.1-7)

India and China on the Rise

China and India inspire awe with their size and ability to generate resources. Countries with large populations and cheap labor naturally attract business and enterprise domestically and internationally. China's massive population has allowed it to become the world leader in the production of manufactured goods. That population also produces, and allows China to nurture, its brightest students to become world-class business managers, scientists, and engineers. China's economic ambition for global dominance does not end with manufactured goods. China has also positioned itself to become a world leader in biotechnology and computer manufacturing.

Together, China and India represent a formidable threat to the United States' leadership position in the global marketplace. What makes them more potent together is that their strengths complement each other. China will remain dominant in mass manufacturing, continue to build electronics and heavy industrial plants, and develop its biotech research industry. India will continue its rise as a power in information technology through software design and service as well as its growing precision industry. (Engardio, p.55)

The meteoric rise of India and China has happened so quickly that most Americans have not really given much thought to what it means to them and their way of life. The United States can take actions that would improve its chances of, if not remaining the sole superpower, at least reserving a seat at the head table. The race for the top will be won by the younger generations. Is the U.S. education system investing in its future by preparing students to compete successfully in this race? The answer is no.

The International Education Gap

The developing nations in Asia and Eastern Europe place a premium on educating students to excel in industries that will drive the future global marketplace. While the number of scientists and engineers who graduate from Indian and Chinese universities is increasing, U.S. universities are awarding fewer degrees in science and engineering every year, and many of them go to international students. Higher education in the United States continues to have excellent standing worldwide, but increasing numbers of foreign students are taking their diplomas back home, some because they believe their quality of life will be better and some because they cannot get visas to remain in the U.S. Whereas it is the highest honor for a Chinese, Indian, or Eastern European student to land a job in a science or technology field, American students go

through the education system with the mindset that becoming an engineer is not cool. Not only must U.S. education restructure its standards to reflect relevant skills and knowledge for a global economy, it must also overcome a culture of apathy and complacency that impedes serious education reform.

China and India are churning out large numbers of well-educated students armed with the skills that are necessary to compete in and drive an economy based on information and technology. In 2005, China produced 3.3 million college graduates; India, 3.1 million; and the United States, 1.3 million. All of India's graduates were fluent in English. In engineering, China graduated 600,000 students; India, 350,000; and the United States, 70,000. Any American who believes outsourcing of low skill jobs is the biggest threat to the U.S. labor force is in for a rude awakening. (Colvin, p.72)

The United States remains unsurpassed in research and development, but that will change over time if we cannot recruit, educate, and keep talent within our borders. Countries whose economies are growing two or three times faster than ours can offer opportunities for elite students that are too tempting to pass up. The diminishing of U.S. technological leadership could signify the beginning of a new world order. The U.S. economy will suffer while traditionally poor countries grow richer, distributing wealth more evenly around the world. (Colvin, p.77) As a result, China, India, the poorer countries of Eastern Europe, and the rest of the world will find that they have achieved what they have always envied in the United States — a middle class. In this scenario, the middle class quality of life to which Americans have become accustomed and which the younger generations expect to achieve as a bare minimum will be history.

The United States came to power in part because it had the foresight to restructure its education system. As the country moved from an agrarian to an industrial economy, an eighth-grade education was no longer enough. High schools came into existence. As a result, the U.S. became the best educated and most innovative nation in the world. Our accomplishments throughout the 20th century were historic and world-changing, and the United States took tremendous pride in its innovative spirit.

"The sky is not falling, nothing horrible is going to happen today," said Shirley Ann Jackson, president of the American Association for the Advancement of Science in 2004 and currently president of Rensselaer Polytechnic Institute in Troy, New York. President Jackson goes on to say, "The United States is still the leading engine for innovation in the world. It has the best graduate programs, the best scientific infrastructure, and the capital markets to exploit it. But there is a quiet crisis in U.S. science and technology that we have to wake up to. The U.S. today is in a truly global environment, and those competitor countries are not only wide awake, they are running a marathon while we are running sprints. If left unchecked, this could challenge our preeminence and capacity to innovate." (Friedman, p.253)

Our ability to innovate remains unsurpassed, as evidenced by the U.S. giants mentioned earlier. And while these companies have business investments overseas, they are headquartered in the United States, where the highest paying jobs are. President Jackson explains that the American standard of living will not disappear overnight, but the shrinking pool of scientists and engineers possessing the ability to innovate and discover will eventually have critical consequences.

In 2004, Congress cut the 2005 budget for the National Science Foundation (NSF) by 1.9%, or $105 million dollars. (Friedman, p.255) NSF, an independent federal agency, was created by Congress in 1950 "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense…." NSF is a influential agency that

strives for the betterment of science education and technology research in the U.S. The fact that its budget has not been increased but rather the opposite is indicative of the misplaced values that permeate this country's attitude towards science education.

Equity and Excellence as Conflicting Ideals

Comparisons of U.S student performance with other nations are not always fair. Our education system, like the systems in Europe and Japan, is open to all children of school age, including those with disabilities. China, on the other hand, does not attempt to provide education opportunities to all, and economically, it does not need to. China's huge population supplies ample numbers of educated professionals to fill its needs. India is trying to make education available to all its citizens, and enrollment of Indian children ages 6 to 14 increased to 90% in 2005, up from 75% in 2000. However, about 75% of those students drop out by 8th grade and 85% by 12th grade. (Kripalani, p.95)

Every country makes a decision about how much of its resources to allocate to education in pursuit of excellence and equity. China has decided to educate a small percentage of its school-age population. India endeavors to educate its entire school-aged population but is finding it difficult after years of providing schooling just for the elite. Now, India has a deep well of resources to commit to the problem. A Universal Education Incentive Program established in 2001 has a $2.4 billion annual budget for providing students with a meal a day, free textbooks, medical care, and remedial classes. The Indian government enhanced the program by increasing education spending from 3% of gross domestic product (GDP) in 2004 to 4% in 2005. It is soon expected to reach 6% of GDP. (Kripalani, p.95)

Since the Industrial Revolution, the U.S. education system has attempted to balance equity and excellence. Our education system is not perfect in this regard, of course, because all schools are not created equal. Schools in inner cities and rural areas and those that have a high-minority, low-income student body typically experience neither equity nor excellence. If the U.S. is to remain a player in the global economy, it needs to — if not budget more money for education — spend it more wisely. Money will only get tighter in the years ahead as Social Security, Medicaid, and Medicare spending reaches critical mass. Corporations and other institutions nationwide are reevaluating their payment structures for employee pension plans. Many of these companies look overseas and see the opportunity to move their business to places where employee benefits are nonexistent or minimal in comparison to domestic requirements.

Conclusion

The challenges facing America are numerous. If we truly value our children as our greatest national resource, we must invest in their future. The U.S. may not have the massive human resource numbers as in China or India, but education can be the great equalizer. The United States has proven that it could invest in education in the past; the return being that it became the most powerful nation on Earth. It must summon the will to do so again. This means providing better classrooms in *all* regions of the country, raising educational standards to reflect the relevancy of the times, and restoring a sense of national pride in our education system.

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