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A Comparative Study: How Educational and Healthcare Preparedness Affected Marketization of the Chinese and Indian Economies

Cindy Arjoon
University of South Florida, carjoon@mail.usf.edu

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by

Cindy Arjoon

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Major Professor: Bernd Reiter, Ph.D.
Earl Conteh-Morgan, Ph.D.
Steven Roach, Ph.D.

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Abstract

In this archival study, I explore reasons why India's economic takeoff into marketization in 1991 failed to meet the same success as China in 1979 when it made the same transition. I analyze the impact of education and healthcare on development and how investments in both sectors can yield significant returns privately and socially. The research in this paper seeks to answer the following question: Why was the Indian economy unable to meet the same success as China when developing a global, open market economy?

In order to answer this question, I begin by proving a solid relationship between education, healthcare, and development. Then, I set out to undercover education and healthcare reforms enacted by China that helped contribute to the overall success of the new economy. After, I look at the holes in the education and healthcare sectors of India that contributed to the weak transition into the new economy, as well as new mandates that seek to repair these issues so that the economy can grow and prosper at a more favorable pace.

The results of this study reflect that India was unable to meet the success of China when transitioning to a global market economy

because poor social preparedness prevented the Indian people from reaching their full potential. With poor education and a major lack of healthcare, the population could not contribute to the growth of the new economy because they either did not understand how to stimulate it, or were simply too sick.

Introduction

For years, both China and India have been making strides developmentally to move towards more open, market-oriented economies. The two states started preparing for entry into more internationally active economies at similar times (China in 1979 and India in 1991). However, when taking into consideration the parallels between the two by means of size and population, several discrepancies arise as it becomes clear that China has succeeded in developing far more quickly than India. The cases of development in India and China can seem baffling because they represent the two largest populations in the world as well as two of the largest states when considering land mass. One might automatically assume that the stages of development would happen at the same pace, but when examining GDP, the differences become more apparent (Sen, p. 47). In 2010, the latest year with which one can accurately measure the GDP of both countries, China's GDP stood at almost six trillion dollars, compared India's GDP of just under two trillion dollars (data.worldbank.org).

If China and India, so similar in so many ways, made the transition into global market economies around the same time, the two countries should have experienced the evolution of their economies at a similar pace, but they did not. This discrepancy begs the following question: Why was the Indian economy unable to meet the same success as China when developing a global, open market economy?

Before researching in depth into this question, I hypothesize that India exhibited poor social preparedness prior to seeking an open market economy-- unfreedoms in education and healthcare retarded the development of the Indian economy when compared to that of China.

Before testing my hypothesis, I first evaluate the theoretical grounds of the supposition by reviewing the works of scholars arguing that education and healthcare can positively stimulate market growth. The first chapter elaborates on what actually encompasses the term "development," offers an in depth discussion on the impact investments in education and healthcare have on development, and seeks to prove that said investments have positive private and social returns (and thus positive contributions to development). The need for highly skilled laborers for technological enhancements is also reviewed when discussing the importance of education. In the vein of healthcare, the chapter uncovers how good nutrition proves essential

to the foundations of a healthy population. Once that connection is established, a clear picture is painted of how the healthiest individuals in a population contribute the most in a working environment, and that the wealthiest individuals enjoy the healthiest lifestyles because they tend to have the greatest effect on the goods and services that promote health.

After laying the theoretical groundwork for the hypothesis, which argues that investments in healthcare and education do, in fact, positively promote development, chapter two offers a country study on China. A comprehensive approach is taken to discuss the steps taken by the country to ensure that as many people as possible could read, write, and access healthcare facilities. Attention is paid to several education and healthcare reforms.

The third chapter offers a country study on India, first discussing the failures of the state's educational system and how India has since taken steps to remedy the situation. Then, the same consideration is given to shortcomings in the healthcare system and the new health reforms and programs that have swept the country in efforts to provide healthcare to its entire population. In this chapter, a quick comparison is made with regards to healthcare statistics between China and India to help elaborate on the substandard quality of the system.

The final section of this paper concludes by reflecting upon the findings in the first three chapters with relation to my hypothesis.

Chapter 1: Understanding the Basics- Education and Healthcare as Anchors to a Strong Economy

To understand the significance of the topic this chapter revolves around, one must sufficiently understand the link between basic education, healthcare, and a strong economy. Concentrating on the works of outstanding scholar Amartya Sen, can help open the door to such knowledge. In his book, *Development as Freedom*, Sen (1999) makes the argument that all people enter the world with certain capabilities— the opportunities and capacities that a person has in order to obtain valuable resources throughout life (Sen, 1999:18). Recognizing these capabilities proves critical for people to take the necessary actions to defeat the common foe known as poverty. Taking advantage of their capabilities to overcome their "unfreedoms" helps people drive their states toward development. Some sources of unfreedoms described by Sen include lacks in education, healthcare, political rights, and civil rights (Sen, 1999:7).

He writes of two reasons for the critical nature of personal freedom with relation to the concept of development—evaluation and effectiveness (Sen, 1999: 18).

> *"Having greater freedom to do the things one has reason to value is (1) significant in itself for the person's overall freedom, and (2) important in fostering the person's opportunity to have valuable outcomes. Both are relevant to the evaluation of freedom of the members of the society and thus crucial to the assessment of the society's development."* (Sen, 1999:18).

With this thought, Sen drives home the fact that by having greater capabilities and more freedoms, people are more likely to take initiative and have more of an effect on society as a whole. Acknowledging capabilities and exercising more freedoms allow an individual to help him/herself better his/her quality of life and have a greater influence on the world—two tenets that Sen writes are fundamental to the process of development (Sen, 1999:18).

Sen and noted philosopher Martha Nussbaum worked together to further develop the capabilities approach to development in a book called *The Quality of Life (Wider Studies in Development Economics)*. Sen and Nussbaum elaborate on the reasoning that capabilities like the ability to live to an old age, take part in economic transactions, and partake in the political events in one's society are essential components of development (Sen and Nussbaum, 1993:33). They also argue that poverty exists as a form of capability deprivation.

Before diving into theoretical aspects of how tightly knit education, healthcare, and development truly are, one must gain a deeper understanding as to the definition of the term "development". Development, in the view of Sen, is "a process of expanding the real freedoms that people enjoy" (Sen, 1999:36). In other words, development can be understood as a vehicle for the growth of human freedoms—the more developed a state, the more capabilities for the people, and thus the more freedoms the people can enjoy. Keeping this in mind, social preparedness and economic development share a very close relationship. Adequate social preparedness helps yield economic development and thus, more freedoms.

In his book, "*Encountering Development: The Making and Unmaking of the Third World,*" Arturo Escobar also lends a definition to the term development. According to Escobar, development does not occur as the result of the expansion of entities like population or monetary/fiscal policies (Escobar, 1995:40-41). He argues that development does not occur as the result of new ideas, nor does it stem from the policies of international organizations like the World Bank or United Nations (Escobar, 1995:40-41). It does not come as the product of elements like the establishment of capital or technology (Escobar, 1995:40-41). Instead, development arises when a relationship is fostered between all of these previously mentioned

entities, practices, and organizations, and the structure of these relationships forms a whole (Escobar, 1995:40-41). Although development encompasses much more than just economic growth, for the purposes of this work, the term "development" focuses on just that.

This chapter seeks to explore how social preparedness can impact the economic development of a state. One can understand social preparedness and economic development the same way as understanding how a farmer prepares for harvest. In order to receive a bountiful yield, a farmer must prepare by tending to the land, planting seeds, and watering them. Similarly, when a country chooses to make strides toward developing its economy, it must first tend to its people—to ensure that they are healthy, educated, and proficient enough to stimulate the demands of a new, blossoming economy. The importance of healthcare and education reforms becomes increasingly apparent when contemplating the possibilities of economic development and the untapped potential of a strong population. This chapter also takes a look at alternate explanations for why the development of the Indian and Chinese economies varied.

Sen writes about the stark contrast between India and China prior to marketization. Poor social arrangements in the education and healthcare sectors took a toll on the economic developmental abilities

of India. On the other hand, by enacting several healthcare and education reforms prior to marketization, China met success with its global market economy that was unmatched by India. The central argument of this work proclaims that the discrepancy between the successes of the Chinese and Indian economies lays in the fact that the Chinese population was healthier and better educated than the Indian population prior to the takeoff of the new economies.

To understand why unfreedoms emulated through the lacks of education and healthcare can affect the ability of a market to thrive proves both simple and straightforward. For a country to successfully develop and maintain an open market, the people must possess a solid comprehension of the best way to utilize said market. With that being assumed, they must obtain a certain level of education to understand the mechanics of a global market and how to fuel it. They must also have access to healthcare so that they can be healthy enough to contribute to the economy—whether by manpower or by simply being healthy enough to go shopping.

In this chapter, it shall be demonstrated that education and healthcare and are causally linked to economic growth. To prove this point, attention must be given to the theoretical tools that allow for this type of analysis. To gain perspective on this subject, I study the works of noted economists like Amartya Sen, George Psacharopolous,

and Harry Anthony Patrinos, as well as scholars like Arthur Blakemore, Berthold Herrendorf and George Alleyne, Daniel Cohen, and Robert Fogel, to name a few.

Ensuring Education Gives Promise to a Growing Economy

The significance of educational investment when analyzing the procedures associated with economic development may not seem obvious at first, but with second consideration, the need for an intelligent population becomes increasingly apparent. As with any form of economic development, the transition of labor takes place from agriculturally centric, to industrial, and then into services (Blakemore and Herrendorf, 2009:2).

With this evolution comes the need for a more competent population, as the level of skill required for new jobs increases with each shift. In order to maintain a healthy and rapid growth rate, the economy of a country must continually adopt and adhere to new technologies and innovations on the market (Blakemore and Herrendorf, 2009:2). To keep up with the pace of other countries, the people in a country whose economy undergoes development must be familiar with the mechanics of these technologies and products. This paints a clear picture of the role of education in economic development; as the economy progresses, so must the people.

In their report about the importance of education on technological innovation, Blakemore and Herrendorf look at the effects of education on economic growth. While focusing mainly on higher education, the authors shine light on the ever-evolving nature of technology in today's economy. As previously stated above, for an industrial or service based economy to succeed, it must prove competitive with the innovations of the time—and this can only be achieved with the help of highly educated individuals (Blakemore and Herrendorf, 2009:21). The authors say it best through the following excerpt:

> *"Note that higher education also improves a state's performance because education is required for many high-skilled jobs, and it gives workers the flexibility to adjust to the process of creative destruction. Education is required not only for producing cutting-edge technology, but it also provides the ability to adjust to technological innovation."* (Blakemore and Herrendorf, 2009:30).

World Bank Economist George Psacharopoulos and Harry Anthony Patrinos have written several pieces emphasizing the positives associated with educational preparedness and economic development. They describe educational investment as no different to any other kind of investment, stressing that the bounties of higher

education go far beyond the creation of an intellectually elite population— "the benefit from higher education is the additional product resulting from the higher productivity of qualified manpower" (Psacharopoulos and Patrinos, 2004: 112). Investments in education yield positive private and social returns, thus contributing to development in a progressive manner. Psacharopoulos and Patrinos stress the importance of human capital—which can essentially be understood as the skills set or competencies that one can acquire from experience on the job—to economic development. Human capital can contribute to the industrialization of a state's economy by offering highly skilled workers that are capable of dealing with the changes that come with the modernization of an evolving economy.

Understanding the nature of a global market economy, the importance of higher education can seem more clear, as it helps produce a population that understands the nature of globalization (Psacharopoulos and Patrinos, 2004: 111). Figures 1 and 2, depicted below from their work, reflect how social returns to investment in primary education are highest in lower income countries (Psacharopoulos and Patrinos, 2004:113-114). When studying private returns, one can also see the positive relationship with investment in education. The two authors prove that with every extra year of education that an individual pursues, the economic returns are more

than bountiful, as the amount of money earned every year increases significantly.

Figure 1

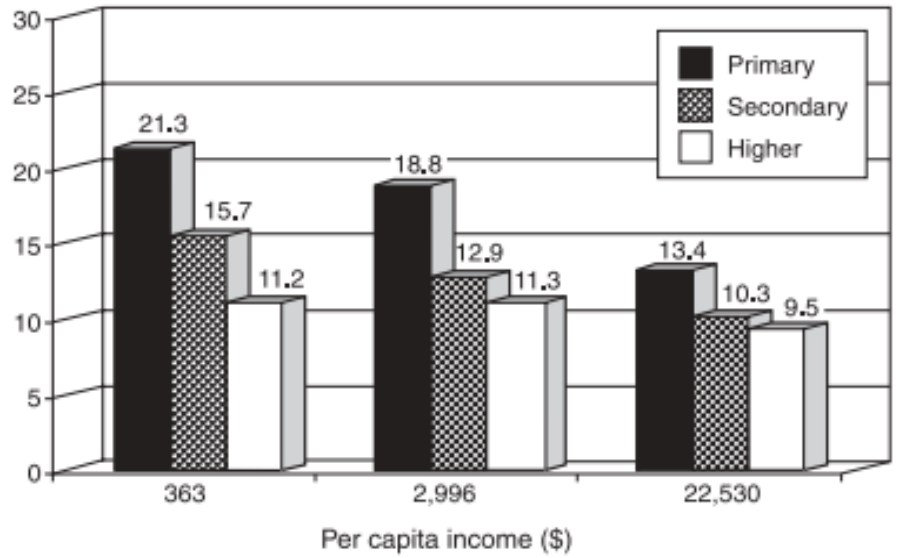

Figure 1: Social Returns to Investment in Education by Income Level

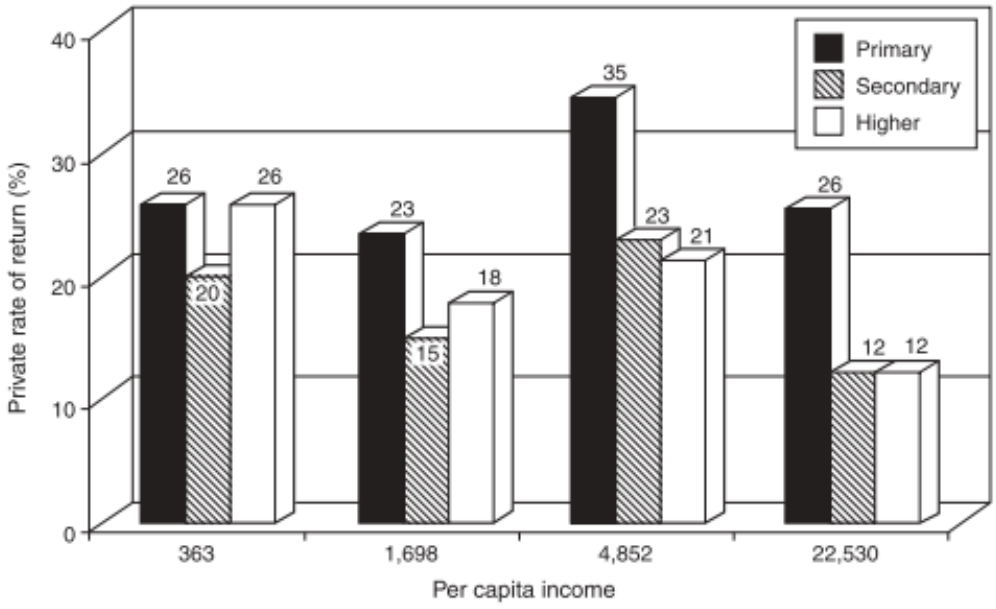

Figure 2: Private Returns to Investment in Education by Income Level

In their book *India: Development and Participation*, Sen and Drèze best describe the importance of literacy to economic development:

> *"An illiterate person is significantly less equipped to defend herself in court, to obtain a bank loan, to enforce inheritance rights, to take advantage of new technology, to compete for secure employment, to get onto the right bus, to take part in political activity—in short, to participate successfully in the modern economy and society"* (Drèze and Sen, 2002:143).

In short, importance of education to economic development is the epitome of fundamental. By ensuring both basic and higher education opportunities for the people, a state transitioning into a developed economy faces great promise. With higher education, and thus a more knowledgeable population, experiences of income growth will be more apparent due to increased capabilities to acquire jobs that call for advanced skills and technical abilities. This alone can boost the position of a state on the platform of the global economy, especially in the technologically centered culture of current times. Better education procedures can increase the productivity of the people and offer them a better quality of life—increased capabilities and freedoms, in the words of Sen. With the growth of the economy driven by an educated

population, states have the best chance to remedy instances of unfreedoms like poverty.

Education also helps drive the development of an economy in a successful manner by helping create new technology and adjusting existing technology. When an individual possesses the knowledge necessary to understand the mechanics of cutting edge technology, they can optimize their use of said technology to develop new goods that can enrich the lives of people everywhere, whether by finding easier methods of spreading their knowledge (via internet, computers, etc.) or by creating new jobs. By making optimal use of available technology to build on and create better goods, people also challenge themselves and tap into their own senses of creativity, which results in them becoming more intelligent as well. This creates a dual sense of betterment—for the individuals and the state economy.

Healthy People= Healthy Economy

Strong economies and healthy people go hand in hand for states. In order for any economy to thrive, the people must be healthy enough to stimulate and support the market—whether by working or spending. Healthy workers appear physically and mentally stronger than unhealthy workers, and are thus more productive because they do not have to miss work due to instances of illness. By not missing work, they can earn more money, and are in effect more able to

stimulate the economy and attract more investment. Moreover, higher attendance rates at work prove more conducive to the production of goods that will help drive the market in a positive direction.

According to a report entitled "Health, Economic Growth, and Poverty Reduction" associated with the World Health Organization, healthy populations can be considered one of the main engines for economic growth (Alleyne and Cohen, 2002:1). People that achieve the highest incomes enjoy the healthiest lifestyles because they have great influence over the goods and services that promote health (Alleyne and Cohen, 2002:1).

Health also plays a role in economic development because it directly affects the ability of children to attain their education. If a weak health care system exists, illness may force children to adopt poor attendance habits at school due to illness-- either falling sick themselves or dealing with sickness in their families. Aside from illness, malnutrition may also negatively affect the promise of a young student. The healthier the child, the more he/she can reflect attentive study habits in class and excel in his/her courses. The more knowledgeable the child, the more technical of a job the child can occupy when he/she matures into adulthood, thus helping the economy development. By aiming to enrich the educational and health aspects of the population starting from childhood, a state strengthens

its chances of a successful economy by paving the way to a knowledgeable and health workforce from youth.

The writings of economist Robert Fogel have been hailed for reflecting the promise of a healthy population to economic growth. Fogel effectively uncovered a link between body size and food supply—revealing that a healthy food supply and body size for the people in a population can be of utmost importance for labor productivity over a long period of time (Fogel, 2004). Countries on the brink of economic transition should consider their malnutrition statistics prior to approaching development.

The importance of available healthcare for the people is clear when considering drivers for economic growth and development. Seeing how "the body serves as the essential tool to survival", especially for poor individuals, access to doctors is essential for people in every region of a country (Alleynye and Cohen, 2002:44).

Deviations in healthcare prices can help evaluate the linkage between general health and economic outcomes. Studies show that people who receive free healthcare are more likely to take advantage of it. After conducting a social experiment, the authors noticed something quite interesting. They first surveyed an area that offered cheap healthcare services and noticed that labor participation remained high— presumably because the people did not have to pay

as much to treat their ailments. Two years later, following an increase in prices in the same area, the researches resurveyed and noticed a decline in both health care utilization and labor participation (Alleyne and Cohen: 2002, 32). Females who received free healthcare experienced higher participation in the labor force relative to females who paid for their health services (Alleyne and Cohen, 2002:32).

The role of healthcare in economic development goes further than maintaining a healthy population. By investing in the health of the people, the government creates new jobs—taking a minute to ponder over the business aspect of the healthcare sector can make this more obvious. Securing the health of the population before diving into economic expansion creates jobs for thousands of intellectuals (reiterating the importance of education as well). Doctors and nurses aside, the healthcare industry relies on hundreds of other professions including pharmacists, drug manufacturers, scientists, insurance providers, and even construction workers to build healthcare facilities (Mahmud and Parkhurst, 2007:8).

According to the report by Mahmud and Parkhurst concerning the role of the healthcare sector in economic development, there exists a link between healthcare, education, and economic growth. When focusing on the health of the population (to create health workers and students), the need for educated individuals escalates.

The authors focus on the pharmaceutical vein of the healthcare sector and how it can contribute to the growth of an economy, especially in the developing world.

They write that one of the "core competencies of pharmaceutical companies lies in expanding access to medicine and healthcare." (Mahmud and Parkhurst, 2007:8). Unhealthy workers and feeble public health structures—especially in areas where diseases are widespread (rural India may fall into this category) can conclude in not only "lower productivity and poor attendance in other job fields, but also increased staff turnover, loss of skills, increased costs, and declining profits and investments" (Nelson, 2006:5)

While advancing healthcare policies in developing states can create jobs, these jobs are only available to those who can attain higher education. While this may seem like a negative characteristic, it does drive people to pursue knowledge in order to better their lives. Mahmud and Parkhurst go on in their report to state that the nature of business for pharmaceutical companies abroad is to help create easy access to medicine and healthcare, and that the economic opportunities serve as more of a bonus than anything else.

Alternative Explanations are Available

Though the opinions of Sen-- that unfreedoms symbolized through lacks of access to proper healthcare and education slowed Indian economic development-- prove most influential for the underlying argument, alternative explanations are available for the reasoning behind why the Indian economy failed to kick off with the same bang as the Chinese economy. In this section, the impact culture and the varying political systems of China and India are discussed as other causes for the different economic transition experiences in the two countries.

When thinking outside of the realms of education and healthcare investments, one must realize the significance of culture to the economic development of China and India. The existence of the caste system in India may have contributed to the slow transition into the open market economy. In order for the elite in India to maintain their privileges in the hierarchical society, new laws had to constantly be created and upheld so as to prevent those in lower classes from obtaining similar opportunities. With such restrictions, hundreds of thousands in the Indian population were left untapped when considering the promise of the new market. Rural dwellers of lower social standing missed out on opportunities that would allow them to stimulate the market, like job prospects that would allow them to earn

decent wages. Conversely, in China, reforms implemented prior to marketization targeted improving situations for the poor so that the entire population could support the new economy.

The differing political systems of China and India should also be taken into account during this brief discussion of alternative explanations for the varying degrees of success during market development. China's authoritarian government may have helped fuel market development, as reflected by the writings of Adam Przeworski and Fernando Limongi. The authors looked over the results of eighteen different studies that examined the growth rates of countries that were democratic and authoritarian.

> *"Among them, eight found favor in democracy, eight found favor in authoritarianism, and three discovered no difference. What is more puzzling is that among the 11 results published before 1988, eight found that authoritarian regimes grew faster, while none of the nine results published after 1987 supported this finding."* (Przeworski and Limongi, 1993:60).

After finding mixed results, the authors proceeded to carry out their own statistical research on the matter in attempts to explain the apparent discrepancies. Their analysis proved that "authoritarian regimes grew faster than democracies, despite the fact that these data

were generated under the assumption that regimes have no effect on growth." (Przeworski and Limongi, 1993:63). They write that with authoritarian capitalism, state autonomy is key, and refer to the Asian Tigers as a prime example. State autonomy is described as "a combination of the 'capacity' of the state to pursue developmentalist policies with its 'insulation' from particularist pressures, particularly those originating from large firms or unions." (Przeworski and Limongi, 1993:56). They go on to argue that only through authoritarianism can this goal of state autonomy be achieved. The problem with democracy when dealing with economic development, according to the authors, is that it generates the need for immediate consumption—a desire among the population that hinders investments, and thus growth.

Interestingly in *Development as Freedom*, Sen discusses the economic evolution of the Asian Tigers, and his work shows that the authoritarian nature of their government does not offer the best explanation to their growth. While the author has argued that basic political rights are a capability necessary for development, he also writes about how the "indifference of Asian values" towards them is a generalization at best (Sen, 1999:232). He writes how the diversity of the expansive Asian area makes it hard to argue that authoritarian regimes are the reason behind economic success in the region. Advocates of the "Asian values" tend to look primarily at Eastern Asia

when discussing economic success—generalizations about the contrast between the East and West often only take into account countries east of Thailand (Sen, 1999:232).

One must also pay heed to the nature of the welfare state and how it can be applied to the discussion of the Chinese and Indian economic transitions. The writings of scholar Nita Rudra offer great insight to the decline of the welfare state in lesser-developed countries. Welfare states, according to Rudra, refer to states where the government still exists as a key figure in the protection and promotion of social wellbeing and economic security of its people (Rudra, 2002:411). She writes about how "a country's successful development depends on a nation's ability to utilize its labor capacity upgrade the skills of its workforce, and foster the development of strong political institutions." (Rudra, 2002: 411). She writes that development in lesser-developed countries can be slowed because larger numbers of unskilled/low skilled workers, along with a large surplus labor population, make it difficult for there to be strong collective action among labor unions. When workers in lesser-developed countries come head to head with the struggles presented by globalization, they have difficulty maintaining their welfare benefits. She also recognizes the fact that issues within the labor force result in workers that exhibit reluctant attitudes about "moving up the technological ladder," which

in turn retards the ability for the state to develop economically (Rudra, 2002: 412).

Culture and political system differences in China and India offer alternative answers to the proposed research question. However, Sen's argument that health and education are the two main drivers to help people reach their capabilities, and thus stimulate development, will serve as the favored approach to answering the question at hand. To be educated and healthy for an individual serves as a segway for that individual to be an active participant in the economy because he/she will understand how to stimulate the market. With this, I strongly advocate Sen's approach to the drivers of economic development.

Conclusion

The close of the first chapter offers an overview of the theoretical nature of the main subject. Healthcare and education play vital roles in economic development, and the neglect of either can yield less than favorable results. The writings of Sen seek to explain how important development is to the lives of people everywhere. A progressive state offers its people the best chances of maximizing their capabilities to ensure a better way of life and a chance to eliminate existing unfreedoms. He also shines light on the necessary forms of preparedness in relation to economic expansion. Social preparedness through education and healthcare is key to achieving successful

economic development. The writings from Sen, Blakemore and Herrendorf, Psacharopoulos and Patrinos, Alleyne and Cohen, Fogel, etc. help bolster these remarks.

The underlying themes of each of the works discussed in this chapter unite to prove how important a role education and healthcare play when contributing to development. An educated population drives economic expansion and aids in successful market takeoff by offering creative minds that can innovate and invent. Educated people understand the intricate details of a market economy, so they understand how to stimulate the economy and help it grow. Given the progressive nature of the international economy, an educated population is essential to keep up with the growing demands and fast paced nature of technology. A healthy population serves as the workforce that is needed to keep the economy running smoothly. Tapping into the healthcare and education sectors prior to marketization can prove beneficial for several reasons, one of which lays in the fact that it can produce new jobs. From teachers to doctors to construction workers, investment in education and healthcare proves most advantageous. It is important to bear the lessons of this chapter in mind when continuing into this work.

Chapter 2: Healthcare and Education Help Propel Chinese Marketization

After analyzing the theoretical aspects of healthcare, education, and economic development, one can clearly observe that with adequate social preparedness, economic development can strive.

Sen writes about the stark contrast between India and China prior to marketization. Poor social arrangements in the education and healthcare sectors took a toll on the economic developmental abilities of India. On the other hand, by enacting several healthcare and education reforms prior to marketization, China met success with its global market economy that was unmatched by India.

The central argument of this work proclaims that the discrepancy between the successes of the Chinese and Indian economies lays in the fact that the Chinese population was healthier and better educated than the Indian population prior to the takeoff of the new economies. To apply the discussions of the previous chapter to the research question at hand, in this chapter, I will examine the healthcare and education systems of China. First, the chapter looks into various healthcare reforms implemented by the Chinese government prior to marketization in order to secure a population of healthy workers.

Then, we switch gears to learn about steps taken by the government to ensure that the population was competent enough to stimulate an open market economy.

Getting to Know the Chinese Healthcare System

China began its transition into an internationally active, open market based economy in the beginning of 1979 (Sen, 1999). According to a report on health, poverty, and economic development in China written by the World Health Organization, the decent quality of human capital that was readily available at the time of economic transition is partially responsible for the success of the Chinese economy's evolution to an open, global market (www.who.int, 2005:6). Human capital refers to the economic value of a person's skills. When bearing in mind the role of human capital in the successful development of the Chinese economy, one can understand how health and education play essential roles—people need the capacity to learn and be productive on the job for any economy to be fruitful (www.who.in, 2005:6).

Indicators in the Chinese healthcare sector, according to the WHO report, related strongly to those of countries with similar levels of per capita income when studying countries by using their infant mortality rates as functions of per capita income (www.who.int, 2006:6). The report states that, "China entered the post-1979

market-reform period with health indicators much better than those expected at its income per capita…" (www.who.int, 2006:6). China made strides in the thirty years preceding its decision to undergo economic development through various healthcare reforms.

By the time the country began its transition, it had already introduced nearly universal access to preventative health services as well as various other healthcare amenities. The facts in the WHO report state, "Health service delivery costs were almost fully covered by funding from the central Government coffers." (www.who.int, 2006:5). The international community acknowledged the outstanding effort the Chinese put forth to improve the standard of health within their state. The reforms that were made were touted as a "successful health revolution" and were used as models for many other developing countries that sought to improve their healthcare sectors (www.who.int, 2006:6).

The Chinese healthcare system takes on two paths, one each for urban and rural healthcare structures, and although one may argue that urban and rural locations experience the same political and economic decrees, healthcare reform from the Chinese government generally affected each region separately (Bloom, 2011:1302). During pre-reform times, urban regions had two distinct healthcare systems: one for business workers and one for government employees (Du,

2009). During the same time in rural China, a system known as the Cooperative Medical Scheme afforded basic medical care for citizens until the system was absolved in 1979 (Bloom, 2011:1302).

In 1951, the Government Administrative Council passed the Labor Insurance Regulations, which held responsibility for the welfare benefits of business class workers and their families, by taking on the payments for any instances of sickness or injury (Du, 2009:388). According to a website used by the International Labour Organization to translate Chinese laws, under the Labor Insurance Regulations, if a worker or staff member acquired any injuries while on duty, he or she held entitlement to treatment at the clinic or hospital associated with the company they work for. If said hospital or clinic lacked the necessary tools to treat the person, the administration of the enterprise would bear the expense to move the injured individual to a hospital or clinic capable of treating the worker accordingly (www.novexcn.com). What is more, the Regulations ensured that if a worker were injured to the point that he or she could no longer complete their duties on the job, the injured individual would receive 75% of their monthly wages until death. This way, the welfare of the worker and his/her family was secured. The funding for this program was taken out of the wages of the workers.

For government workers, the Government Administrative Council took on all matters dealing with healthcare, including diagnostic tests, injuries or sicknesses, and even the cost of medicine (Du, 2009:388). The only fees members were expected to pay covered the costs of food. Funding for this system came from the government treasury.

For people living in rural areas in China, the Cooperative Medical System provided streamline healthcare services from basically trained individuals known as "barefoot doctors" (Bloom, 2011:1303). Funding for this system came from agricultural communes. "Barefoot doctors" were the names given to groups of young adults (mainly young men and women in their twenties) who were given basic medical education in a rigorous three to six month training session. With this medical training, they learned sciences like anatomy and bacteriology, how to diagnose diseases and perform the art of acupuncture, and the importance of sexual education/health and maternal/infant health (Liu and Cao: 1992, 390). The occupation of the barefoot doctor set these young men and women apart from Western-educated doctors working in urban healthcare systems of China because they carried on their regular duties working in the farms and fields with the people they treated.

The nicety of the barefoot doctor was how accessible he/she was to rural peasants when the need for first aid, immunizations, or health

education was needed. Aside from treating injuries and ailments, barefoot doctors also educated the population about public health. These doctors preached the importance of washing hands, practicing safe sex, and the relevance of basic hygiene. If a patient required more advanced medical treatment, the barefoot doctor, lacking advanced medical knowledge, would have to refer the patient to a doctor at a more urban healthcare center.

Authors Liu and Cao (1992) note that by the end of the 1970s, almost 90% of the rural Chinese population was covered under this system, making it the healthcare program used by the most citizens because at the time, almost 80% of the population could be considered rural peasants (Liu and Cao, 1992:389). Obvious distinctions existed between the quality of healthcare offered to the urban and rural populations throughout China, as the barefoot doctors' training only enabled them to provide the most basic forms of medical care, whereas individuals living in urban areas had access to higher quality medical care (Bloom, 2011). During the period between 1980-1990, the government greatly reduced the funding to the barefoot doctors program, forcing farmers to pay for their own healthcare. Eventually, the system fell apart, but is still referenced by countries looking to improve public health in rural areas (Liu and Cao: 1992, 391).

The Chinese government also made strides during the pre-marketization healthcare reform period to capitalize on public health issues. Under a movement known as the Patriotic Health Campaigns, which began in the 1950s, the government met great success in efforts to improve hygiene and sanitation, and push people to receive their immunizations (Du, 2009:390). One of the goals of the Patriotic Health Campaign waged war against the "four devils" of Chinese public health—flies, mosquitos, mice, and sparrows (Du, 2009: 390). Edicts instructed citizens to maintain a clean environment at home, work, and school.

Members of the Patriotic Health Campaign Committee committed to random inspections to ensure that these edicts were followed. It is greatly believed that this campaign and the fact that the government fervently made sure that the rules were followed both decreased the instances of diseases like Yellow Fever and Cholera, which plagued the country for years and increased the population percentage that had access to other life saving vaccines. Similar to the barefoot doctors, the Patriotic Health Campaign Committee set forth to explain the importance of personal hygiene and sexual health to the masses. Members encouraged safe sex practices by passing out contraceptives.

Through avenues like these, the Chinese government was able to build a healthier population. Prior to entry into the global market

economy, the government worked efficiently over the course of twenty years to eradicate diseases like cholera, Yellow Fever, and plague to the best of its abilities. By educating the population as to the importance of public health and helping ease the economic blow of expensive medical treatments, the government slowly but surely raised a healthy population capable of nurturing the new economy into a successful competitor in the global arena.

With raising standards of medicine, statistics reflect the winning ways of the Chinese healthcare reform—life expectancy, which ranged from 35-40 years old in 1949 increased to almost 70 years old in 1980—one of the most steady growths ever recorded (Miller, Eggleston, and Zhang, 2011). The life expectancy now stands at about 77 years old for women and 73 years old for men (CIA World Factbook). While life expectancy increased, birth rates fell dramatically (Du, 2009:393). While one may attribute this drop in births to a population more knowledgeable about sexual health, in the case of China, one must also factor in the one-child policy that has existed in the country since 1978 (Du, 2009:393).

Educational Reforms Put China Ahead

China's push to form a more literate population picked up steam soon after it became a communist state in 1949. During the first years of the People's Republic of China, the government targeted adult

literacy rates in a series of literacy campaigns aimed to stabilize the economic promise of the country (Liu and Dunne, 2009:461). The government chose to alleviate illiteracy problems first with the adult population because almost 80% of Chinese adults could not read or write (Liu and Dunne, 2009:461).

In 1950, the government mandated that literacy courses should aim to teach a minimum of one thousand Chinese characters, and it took steps to publish books and character lists of more than two thousand Chinese characters to be used in literacy classes. The definition of literacy was tailored to specific groups of people, depending on their occupations and where they lived (UNESCO, 1984:28-29). For example, for nonagricultural and corporate workers to be considered literate, they had to recognize three thousand Chinese characters, exercise the ability to draft letters, receipts for business, and other documents, and be able to read newspapers and books (UNESCO, 1984:28-29). For peasants, the definition of literate required them to read one thousand Chinese characters, write documents that were used on a daily basis in villages, and read simple books (UNESCO, 1984:28-29). Differing expectations for literacy depending on the lifestyle of the people made it easier for the government to raise literacy rates while maximizing the use of a limited amount of literacy-enhancing resources.

The school system in China during this time reflected a clear bias to the urbanized areas of the country. Schools in rural areas proved very few and far between, and screening processes made it difficult for village children to attend. Prior to admission into primary school, children had to pass screenings ensuring their abilities to read and count to one hundred (Han, 2008:37). These prerequisites blocked a large majority of rural children from attending school, because their parents and grandparents, also illiterate, could not teach them the necessary skills. In urban areas, however, literacy rates among children began to rise with the implementation of more literacy campaigns.

The Cultural Revolution in China, spanning from 1966 to 1976, garners a negative reception from scholars, but it did improve the schooling situation in rural China. As a whole, the educational system of China suffered a blow during the Revolution because the standards of education decreased. However, one contributing factor to this decrease stems from the eradication of the screenings required for people to pursue educational opportunities. Villagers, soldiers, and peasants alike were allowed to attend school free of charge. (Han, 2008:37). Also, during this time, leader Mao Zedong implemented the "Down to the Countryside Movement," in which high school graduates from the cities were transplanted to rural mountain and farm villages

to learn more about agriculture (Yu, Jiang, and Greenman, 2007:686). These graduates, dubbed China's "lost generation," never afforded the opportunity to attend university (Yu, Jiang, and Greenman, 2007:686).

With the end of the Cultural Revolution, came the focus on spreading education equally throughout the country. The Chinese State Council mandated several new rules related to prevention of illiteracy. To further education in villages, half-day school options were offered to rural children who worked to help support their families (Wang, 1985:28). While directives like these helped children, illiterate adults were empowered to enroll in night schools, short-term schools, and special literacy schools (Wang, 1985:47).

In a 1985 UNESCO document, Wang's chapter revolves around the characteristics of these literacy programs. He notes that mobilization for literacy programs was possible because of educational administrative bodies like the Communist Youth Leagues, Women's Federations, and Peasants' Associations (Wang, 1985:50). In some Chinese communes, organizers of literacy classes took the extra step of going door to door in the evenings to encourage adults to attend night school classes for literacy until they could read and write proficiently (Wang, 1985:50). Because mobilization efforts were mainly carried out by the people and not forcibly by the government, they proved both practical and effective.

Also, during this "second wave" campaign for literacy, textbooks and reading materials used to teach literacy contained content matter that "respected the customs, habits, and desired forms of activities of the national minorities in those areas where they were populous." (Wang, 1985:52). In order to motivate all groups to join the anti-illiteracy movement, many textbooks contained folk songs and stories to grab the attention of all citizens—a successful strategy, as many peasants praised the textbooks. If the people enjoyed the content of the books, they would be more inclined to keep reading.

The push for literacy following the Cultural Revolution in China did not leave out women. Women's Federations and other groups pushed for women to attend literacy classes alongside men. Many women faced difficulties finding time to attend classes due to their family and household responsibilities, but the government only encouraged them. Mothers in law were called upon to mind their grandchildren and tend to the farm animals, and husbands were expected to carry their weight when dealing with household chores (Wang, 1985:53).

The government also recognized the growing importance of eliminating illiteracy from the start by focusing attention on the youth. Aside from the half-day school options for rural children, literacy programs aimed to organize activities to educate children in a

proactive manner—a way to call for active participation. Youth centers around the country provided children and adolescents with a variety of books, magazines, and newspapers on topics that would appeal to their interests: sports teams, fashion, fairytales, etc. (Wang, 1985:54). Centers also offered the opportunity for youths to take part in art-performance groups and singing contests (54). Wang notes that that these activities helped promote literacy as well as scientific knowledge and technical skills (Wang, 1985:54).

Aside from the literacy school programs that swept the country from 1976 leading up to the early beginnings of China's marketization in 1979, the government relied on the strategy of allowing those who knew how to read share their knowledge, or "letting the masses teach the masses" (Wang, 1985:57). With this, Wang writes, literate people were mobilized to help teach illiterate people, including trained personnel, educated youths in the villages, primary and secondary school teachers, and even demobilized soldiers (57). This approach to spreading knowledge proved a great success. In the Heilongjiang Province of Northeast China, for example, one million educated youths and teachers organized a literacy campaign over the course of two years (1977-1979) that resulted in 1.57 million formerly illiterate people developing reading and writing skills (Wang, 1985:57).

The directives issued in China's war against illiteracy achieved an overall victory for the state. Since its establishment as a communist government, China has seen its literacy rates steadily increase with time. In 1949, the same year China became communist, 80% of its population could not read or write, ten years later, in 1959 the percentage fell to 43% (Wang, 1985:47). In 1979, the year China's economy entered marketization, the illiteracy rate dropped to 30% (Wang, 1985:47). According to the website for the World Bank, as of 2010, 94% of China's population proves literate, which means that in a span of thirty one years, the educational reforms instituted by the government managed to decrease the illiteracy rate from 30% to a mere 6% (www.data.worldbank.org).

While the literacy rate of China left much to be desired during the time the country entered marketization, it reflects the efforts of the government to cultivate an educated population. With 70% of the population able to read and write, there was in turn, an increase in the economic opportunity for China. On a small scale, rural villages benefited greatly from the increase in educated individuals. More abundant schooling opportunities allowed for high school and technical school graduates to stay in the villages to help their people instead of graduating and leaving to the cities for more promising lives. Farmers learned how to better irrigate and fertilize their farms and plant more

diverse crops (Wan, 2001:32). With the help of technical school graduates and scholars from other parts of the country, small factories were built in villages to help with the harvesting process (Wan, 2001:32). The agricultural market was one of the first to benefit from the developments in education.

Conclusion

The healthcare and educational reforms that swept China in years leading up to its entry into the global market economy undoubtedly played a large role in the success of the transition. Taking a look at the annual GDP growth rate over the years since entry into the global economy, one can quickly realize the steady increase in China. According to *China's Statistical Yearbook 2012*, from 1979 to 1980, the first year of the economic transition, China's GDP grew by 11.9%, and then again by 7.6% from 1980-1981 (www.stats.gov). Growth of the GDP slowly continued until 1984 and 1895, when the first rounds of foreign investment hit China, and the GDP growth increased by 20.9% and 25.1%, respectively (www.stats.gov). Since China's market transition, it has never experienced a year in which the GDP growth percentage rate has reflected negative growth.

By passing a series of regulations to ensure the welfare of business class workers and farmers as well as their families, the Chinese slowly but surely developed the healthy population they

needed to attain the type of economic growth discussed above. Initiatives like the Labor Insurance Regulations and support from the Government Administrative Council provided a safety net of sorts for workers who suffered on the job injuries. The aid given to workers went beyond covering the cost of medical care and diagnostic tests--extending into monthly stipends to keep families afloat if workers could no longer do their jobs. In rural regions, public health initiatives helped teach civilians the significance of practicing good hygiene. Barefoot doctors offered basic medical care for injured villagers. The Patriotic Health Campaigns made strides when addressing the health of the Chinese people by leading to the eventual extermination of diseases that plagued the country for centuries.

Similarly, the passage of literacy programs and campaigns helped the Chinese mature into a more educated population. Passing of literacy mandates and programs helped push the Chinese people into the world of academia. Slowly but surely, biased school systems began to dissolve, and education became a freedom for children and adults everywhere to enjoy. While rural children still had difficulties attending school due to family responsibilities, half-day school schedules and youth centers helped spread knowledge throughout the villages. Similarly, women were motivated to learn how to read and

write as well, with the help of propaganda calling for more help from the men and elders in the family when faced with household tasks.

Considering the aforementioned statistics with the theoretical discussion in the previous chapter, one can clearly decipher how the healthcare and education reforms initiated by China in the years preceding marketization played a role in the constant growth of its GDP. Without a doubt, the healthcare and education directives enacted by the Chinese government helped cultivate the healthy, knowledgeable workers the new economy needed in order to thrive. Strong and educated people, after all, stimulate the economy by working to earn the money they later spend.

Chapter 3: Poor Investment Slows India's Takeoff

With the theoretical evidence of how investments in healthcare and education can help drive economic development from Chapter 1 reflecting favorably through the Chinese example, this chapter seeks uncover how poor education and healthcare systems negatively affected the ability of the Indian economy to develop. Sen's discussion of how failure to overcome unfreedoms proves detrimental to the development of a state plays a key role in the discussion of India.

Structurally, this chapter differs from the previous as it pays mind to changes India has made since recognizing the shortcomings brought on by lacks of investment in these sectors. It looks at reforms that were implemented following India's transition to a market economy in 1991, mainly steps that are being taken today to help alleviate instances of unfreedoms that still exist. First, problems with education are highlighted and then a discussion of education reforms past and present are looked at. Then, issues with the healthcare system in India are examined and light is shined on improvements that have been made. Throughout this chapter, it can be seen how unfreedoms like poverty, sexism, exclusion, and lack of

educational/healthcare opportunities contributed to the slow economic takeoff of India. Some interesting statistics with relation to differences in the healthcare systems of China and India are also presented to help depict more clearly why India's economic takeoff trailed behind China's. Finally, a discussion of the Indian state, Kerala, proves most beneficial, as it reflects how investments in education and healthcare do not guarantee economic development.

A Need for Quality Control

Educational unfreedoms in India made higher education only accessible to wealthy families. What is more, instances of basic education in rural areas of India still prove far and few between. Although an increase in primary school enrollment has been apparent, some eight million children between the ages of six and fourteen do not have educational opportunities. Gender, regional, and caste issues also add to the problems some Indians face when trying to access educational opportunities (Lall, p. 4). Without an educated youth, the possibilities of the economy flourishing in the future becomes dim—when the younger population matures, one cannot help but question who will function and stimulate the market.

In her work, Marie Lall writes about how the main problems in the Indian system stem from high drop-out rates due to the obligation of children to leave school to help support their families, inadequate

school infrastructures, difficulties in hiring educators, inadequate funds, and poor quality of education (Lall, p. 4). The unfreedom represented by the difficulty of acquiring an education is only exacerbated for "at risk" children, who are categorized as orphans, laborers, and victims of riots and natural disasters, who do not have access to the most basic forms of education (Lall, p. 5).

Wherever educational resources do exist for the people of India, the quality depends greatly on the background of the individual (which makes it even harder for the above mentioned group of at risk children). Essentially, three main types of education exist in the Indian state. The top tier schools, considered English-language schools, cater to the richest children of high social standing, receive government funds, and associate themselves with high standing programs like the International Baccalaureate program in the United States. They base their courses off of globally recognized curriculums. Those who cannot attend these top tier institutions attend English-language schools that run using government aid and base their courses off of state-level curriculums. The lowest tier educational facilities represent those schools that are poorly managed by the government and cater for the children of the poorest majority in the population (Lall, p. 5).

As one would assume, the quality of education received at each tier of school varies quite drastically from the other. The different

qualities of education available depending on the income of the individual represent a major restrain on the capabilities of the individual. Because an equal opportunity to an adequate form of basic education and beyond does not exist for all children, one can see how the holes in the Indian education system retarded the growth of the economy during the marketization period. When considering the lack of uniform education quality in the school system, one must keep in mind that this accounts for the population of children that can actually afford to obtain a rudimentary education—there still exists a high percentage of Indian youth that have no access to educational facilities.

Sen writes about how prior to marketization, Chinese educational reforms made certain that accessibility to basic forms of education proved available to the majority of the people. With the lack of available schooling and the differing qualities of education for those who can attend into consideration, it becomes apparent why the Indian economy did not meet the same success as the Chinese economy when making the transition into a market economy. Without an equal opportunity to gain a quality education, from elementary to higher level, the Indian people do not stand a fighting chance to manage technical positions required by a thriving market economy.

The Silver Lining, of Sorts

Although the Indian market still has much to accomplish before meeting success of the same nature as the Chinese, strides are being made in the educational sector to help the progression of the market's development. Reforms are being passed to help enrich the school system in India and changes are being made so that facilities are more accessible to people across the country—regardless of income, social rank, or distance from urban centers. While many of the educational enrichment programs in India receive much criticism because they fail to live up to their promises or are riddled with corruption, every positive step in the right direction counts when trying to help the people of India exercise their educational capabilities.

Introduced in 2001, the Education for All movement in India was hailed as the "flagship programme run by the Government of India" (www.india.gov). According to the website for the Indian government, the program sought to erase social, regional, and gender gaps by offering active participation by the government in communities by managing schools. The main goal for this movement was to have all Indian children aged between six and fourteen enrolled in elementary schooling systems by 2010. However, soon after the launch of the program, it became clear that its goals would never be accomplished, as corruption amongst officials in charge of the program led to most of

the government aid ending up in the wrong hands and being spent for the wrong reasons. Negligence on the part of the government was blamed for the failure of the program.

The Right of Children to Free and Compulsory Education Act, or Right to Education Act, which is considered to replace the Education for All movement, promises free and compulsory education to all Indian children between the ages of six and fourteen under the Indian Constitution (www.un.org). The Act proves of a special breed of Indian educational reforms, as it requires all private schools to reserve 25% of the seats in every classroom to children of poor backgrounds. The children of poor families that occupy the seats in expensive private schools receive government reimbursement. What is more, the Right to Education forbids any schools unrecognized by the government to teach and does not allow for any child to be expelled from class until completion of elementary school. While the program gained approval from the Indian parliament in 2009, its implications did not come into effect until 2010. The act has been hailed by organizations like the World Bank, the United Nations, and UNICEF, but has also been called into question for not taking into account children under the age of six. It is too early to see if all aspects of the program have been enforced and whether or not the program proves successful in helping India achieve the United Nations Millennium Development Goal of having

every child enrolled in elementary school by the year 2015 (www.un.org). With only two years left to achieve this Millennium Development Goal, it hardly seems promising, but any improvement counts when striving to enrich the educational system of India for the sake of the people and the country's economic development.

India Ignores Healthcare

In *Development as Freedom*, Sen writes that prior to the strive for marketization, health conditions in China proved significantly better than India due to substantially better commitment to pre-reform health care (Sen, p. 42). He writes that, "Oddly enough, that commitment, while totally unrelated to its helpful role in the market-oriented economic growth, created social opportunities that could be brought into dynamic use after the country moved toward marketization. (p. 42). India, however, proved distracted by "elitist concentration on higher education" and severely neglected not only its educational system, but also its responsibility to provide the most basic health care to its people. This combination, according to Sen, left India wholly unprepared for economic expansion.

Healthcare issues definitely impeded the growth of the Indian economy when compared to China. To get a basic idea of the nature of health care in each country, one may account for government spending. While China devotes 4.6% of government expenditures to

healthcare, while India spends 2.4% (CIA World Factbook). Because of the small budget for healthcare in India, accessibility to hospitals and doctors is still less than stellar for poor people and people living in rural areas. According to the CIA World Factbook, the number of hospital beds per thousand people was severely lacking in India compared to China since 2009. In China, for every thousand people, there were about four beds (which is even better than the United States, which only has about three beds per thousand people). In India, the situation is much more dire—with only one bed for every thousand people. Due to the lack of available healthcare, the Indian life expectancy hovers at about 64 years compared to 74 years China (hdr.undp.org). These statistics reflect that the people of India do not enjoy as healthy a lifestyle as the people in China. After understanding the tightly knit relationship between health and economic development, it is clear how the lack in healthcare has affected the development of the Indian economy.

According to a 2011 United Nations Development Programme Human Development report, scarcity of public healthcare has led poor Indians to rely on private doctors—many of whom do not have adequate medical education and training. What is more, the need for public health referendums resonates greatly when pondering the sanitation issues plaguing the country. Millions of households in India

lack proper toilets and easy access to latrines. Sadly, this pushes many people to relieve themselves in open streets and waterways. This practice leaves many areas of the country, mostly rural, to exist as breeding grounds for parasitic and bacterial sicknesses that magnify the spreading of diseases and instances of malnutrition. Not to mention, the practices of using waterways as restrooms has severely inhibited the safety of drinking water in several regions of India. Negligent public health care leading to these problems has only increased the rate of child mortality in the country—and a high child mortality rate paves the way for a grim future when discussing the possibility for India's economy to thrive in a way similar to that of the Chinese economy.

Steps in the Right Direction

While the healthcare system of India has a long way to go before it can catch up to the system in China, it is slowly evolving in a positive manner to accommodate needs of the Indian people. According to the UNDP report, the growth of the elderly population and the shift from a majority of chronic diseases to lifestyle diseases among the Indian people has led to an increase in government expenditures for healthcare.

The government has also taken steps to help introduce safe healthcare options for people living in rural areas throughout the

country. In 2005, Ministry of Health officials enacted the National Rural Health Mission, which aimed to improve the nature of health care in rural regions. According to the Ministry of Health and Family Welfare, the program offers several new methods of offering healthcare in rural regions, including teaching locals to become "accredited social health activists", offering motherhood protection programs, and aiming to remedy the issues encompassing hygiene and sanitation in rural areas (www.mohfw.nic.in). This healthcare initiative mainly focuses on eighteen poor and rural states in India. While the program has been called into question for serious issues of corruption (including the murders of high standing doctors and health officials), there have been some positive contributions.

With the help of the UNICEF, the National Rural Health Mission offers something known as "Village Health and Nutrition days" monthly in rural parts of India. Each month, villagers are able to interact with health officials like doctors, nurses, and other intellectuals to obtain free medical services and gain health education. They learn about preventative techniques in health care and options for seeking health care at proper facilities (instead of turning to doctors with questionable educational backgrounds). The Village Health and Nutrition days also offer a time for village children to receive life saving vaccines free of charge. Free vitamin supplements are given to malnourished children

and eligible couples are also given free contraceptives to promote safe sex (www.unicef.org). These monthly health days are seminal to pregnant women in rural village as well, as the Village Health and Nutrition Days call for pregnant women to receive three essential check-ups over the course of their pregnancies to ensure the health of mothers and their babies.

Another large healthcare program in India, the "National Health Insurance Programme" led by the Ministry of Labor and Employment, offers free health insurance to people struggling to survive below the poverty line (www.rsby.gov.in). Under the National Health Insurance Programme, every family categorized as living below the poverty line (families that own a government issued yellow ration card) pays about the equivalent of seven cents to receive smart cards containing copies of their fingerprints and photographs (Otoo, 2012:933). Families who own these smart cards are eligible to be treated for diseases that call for hospitalization, up to a cost of the equivalent to $670 (www.rsby.gov.in). Those with certain preexisting conditions have their medical treatments covered under this plan, and the plan offers aid to people of every age. Also, participating households have the freedom to choose between treatments at public or private hospitals. One catch with the program, however, is as follows: coverage only

extends to five members of every household—the "head of the household, spouse, and up to three dependents." (www.rsby.gov.in).

India has also tapped into advances in technology to help improve the quality of its healthcare services. A phenomenon known as "telemedicine," aims to increase basic healthcare services and public health education to rural areas of India. According to the World Health Organization, telemedicine can best be defined as follows:

> *"The delivery of healthcare services, where distance is a critical factor, by all healthcare professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for continuing education of healthcare providers, all in the interests of advancing the health of individuals and their communities".* (WHO, 1998:9)

The telemedicine techniques have thus far proven incredibly helpful to treating patients in remote and rural areas of the country, and India has even emerged as a leader in telemedicine technology (WHO, 1998:9).

Telemedicine can be divided into three separate branches, each with its own unique method of helping to offer healthcare from a distance (Bagchi, 2006:298). The "store and forward" method pertains

to the acquisition of medical information like x-rays and storing them in a database for a doctor or other healthcare specialist to assess at a later time. This offers a boost for healthcare in rural areas because through the store and forward system, patients and doctors need not be together in one location for treatment (Bagchi, 2006:298). The second category, known as remote monitoring, benefits those suffering from chronic ailments like heart disease or diabetes. With remote monitoring, healthcare providers can assess a patient using a variety of devices that encourage self-monitoring (Bagchi, 2006:298). Finally, the third category of telemedicine is known as interactive services, where patients and doctors engage in concurrent interactions—whether via telephone calls, house calls, or Internet communication (Bagchi, 2006:298). If the Telemedicine system of India can maintain its stature and avoid the corruption that tainted previous health initiatives, the system in India has a bright future.

While the Indian Ministry of Health has made strides on its own and with the help of international organizations, only time will tell if the health initiatives that have been enacted will help remedy the healthcare issues that plague the country. Once reforms in the healthcare sector have helped bring the Indian population to healthier standards of living, the country stands a chance to develop at a faster, more successful rate. Until then, India must focus on nourishing its

people until they prove strong enough to offer meaningful contributions to the economy.

The Curious Case of Kerala

The Indian state of Kerala can offer a rebuttal of sorts to the argument that high literacy rates and a strong healthcare system can be feeders to economic development. Kerala offers a curious case in the sense that the region boasts the highest human development index (HDI) in India, an index that measures attributes like life expectancy, education, and income to indicate levels of human development (Parayil and Sreekumar, 2003:465). The human development index of Kerala places the region in the "very high" category, meaning that the standards of living rank amongst those of developed countries. Local government spending in primary education and healthcare proved comparably higher to other regions in India.

With these investments, Kerala was able to land a devastating blow to local poverty, and the people began to thrive. Statistics from 2011 reflect the accomplishments brought about by education and healthcare investments in Kerala, as it has one of the highest literacy rates in the entire country, as well as the highest life expectancy—74 years (www.who.int). Within a matter of forty years, from 1970-2010, regional poverty in Kerala was slashed from almost 70% to 12% (www.who.int.). Focus on social welfare holds the responsibility for the

decline in poverty rates during that time. According to the World Health Organization, in the state of Kerala, almost 95% of children born were delivered in a hospital atmosphere—a percentage much higher than the rest of Indian states. Pondering this, one can see that the Kerala population proves both healthy and educated. With little to no poverty, the standards of living are expectedly higher than other areas of India.

Although Kerala enjoys a high human development index, the economic development in the region leaves much to be desired. While one may assume that, because of the high literacy rates and healthy population, economic development would follow naturally, but Kerala has fallen victim to a severe brain drain. Scholars from the region regularly leave their hometown to find work in other countries. With that being said, remittances provide a large chunk of the region's GSDP (Gross State Domestic Product) (Lieten, 2002:43).

In *Development as Freedom,* Sen argues that another explanation for the paradox in Kerala lies in the state's failure to adhere to the principles of free trade as expressed by Adam Smith. Sen writes that because of this, "Kerala has suffered from what were until recently fairly anti-market policies, with deep suspicion of market-based expansion without control" (Sen, 2000: 91). Sen contemplates how development in the region would have been

different, had the officials adhered to the fundamentals of neo-liberal policies (Lieten, 2002:48).

Kerala goes against the grain of central argument of this work. While it can be said that the Indian economy experienced lackluster results when entering the global market due to poor prior investments in education and healthcare, Kerala shows how education and healthcare preparedness do not necessary promise development.

Conclusion

To recap on this chapter, a thorough examination of India's education and healthcare system was carried out. Institutions missed their marks when delivering quality educations to pupils, as the financial background of the pupil weighed heavily on the value of education he/she received. The three-tiered education system discussed by Marie Lall hindered the ability for children reach their fullest academic potential. With this, India failed to cultivate the most knowledgeable population attainable, and thus retarded the future growth of the economy. However, education reforms past and present have set out to rectify this situation, and one can see bright horizons in the future for India's youth.

Similarly, a failing healthcare system contributed greatly to the failure of India's market to meet the same success as China's when transitioning. By comparing statistics, one can see how investments in

healthcare helped put China ahead. Healthcare reforms and programs have since begun to transform the picture of health in India, and slowly but surely, rural areas once suffering the consequences for poor investments in healthcare are finally getting the attention they desperately need.

Finally, a brief discussion regarding the Indian state of Kerala reflects how investments in education and healthcare do not always promise economic development. While the region of Kerala boasts the highest human development index in India—placing it amongst even some developed countries—economic development has left much to be desired.

Results and Concluding Thoughts

Since 1979 and 1991 respectively, China and India have begun the transition into global, open market economies. Upon first thought, one may think that the two may have made the economic evolution at similar paces, but this instance proves quite the opposite. China developed at a rate much faster than India, with its annual GDP in 2010 more than three times higher than the Indian GDP. The incongruity may seem baffling as the two states have so much in common with relation to size and population, but upon further research, a clear explanation can be given.

The question at hand sought to inquire why India failed to meet the same success as China when developing an open market economy. As earlier noted, I hypothesized that India exhibited poor social preparedness prior to seeking an open market economy-- unfreedoms in education and healthcare retarded the development of the Indian economy when compared to that of China. Surprisingly, my hypothesis proved correct.

Upon reading Sen and Psacharopoulos, the importance of education with regards to economic development seemed crystal clear.

While China invested heavily in education during the pre-economic reform period to ensure that the vast majority of its youth could read and write, India failed to recognize the importance of such initiatives. A literate population is essential to a healthy market economy, as an advanced market requires advanced positions. With marketization comes higher technology—maneuvering a crane in the year 2012 requires the ability to use a computer, while the case may have been quite different a decade ago. Since India failed in the social preparedness category by not pushing its population into equal opportunity educational facilities, it hindered the ability of the people to stimulate the new economy.

The same can be said about the issues of healthcare related to economic development. India again exercised poor social preparedness through the neglect of basic healthcare for its people. The people were poorly prepared for economic expansion, and due to the unavailability of doctors and health care in several areas of the country, the quality of laborers proved substandard. The new health initiatives currently working to help increase the quality of life for people who live in rural areas and cannot afford healthcare will hopefully help stimulate the economy so that India can experience development similar to China.

Contemplating all of the information gathered to answer the proposed research question asking why India did not meet the same

success during economic development as China, the most appropriate answer would be as follows: While great improvements have been made in efforts to help offer better quality education and health care to the people, poor social preparedness prevented the Indian economy from developing at the same rate as the Chinese economy when undergoing marketization.

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