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The Obstacles Facing India on Its Journey to Becoming a Developed Country

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The Obstacles Facing India on Its Journey to Becoming a Developed Country

Abstract

Among the developing countries in the world, India marks itself as being one of the fastest growing economies. India, the seventh-largest country in the world, borders the Indian Ocean to the south, the Arabian Sea to the south-west, the Bay of Bengal to the south-east, and shares borders with Pakistan, China, Bhutan, Burma, and Bangladesh. India is recognized by a long history of commercial and cultural wealth. India's political and economic history has led it to become one of the fastest developing countries in the world. Despite being a newly industrializing nation, India continues to face challenges of over population, poor water and sanitation, and low adult literacy rates. These problems are addressed in this report along with the policy recommendations for India to overcome these challenges.

The Obstacles Facing India on Its Journey to Becoming a Developed Country

Tara Gracer, Zahra Lalani, & Chi Nguyen

I. INTRODUCTION

Among the developing countries in the world, India marks itself as being one of the fastest growing economies. India, the seventh-largest country in the world, borders the Indian Ocean to the south, the Arabian Sea to the south-west, the Bay of Bengal to the south-east, and shares borders with Pakistan, China, Bhutan, Burma, and Bangladesh. India is recognized by a long history of commercial and cultural wealth. India's political and economic history has led it to become one of the fastest developing countries in the world. Despite being a newly industrializing nation, India continues to face challenges of over population, poor water and sanitation, and low adult literacy rates. These problems are addressed in this report along with the policy recommendations for India to overcome these challenges.

II. POLITICAL & ECONOMIC HISTORY

India has 7,000 kilometers of coastal access to the Indian Ocean and the Arabian Sea. The largest mountain range in the world, the Himalayas, separates India from Nepal and China. From the mountains, comes the most important fresh water source in the world. Both the Ganges and Brahmaputra rivers supply India's 1.2 billion people with fresh water (CIA Factbook). The Deccan Plateau is in the south and is an up-land plain. The Thar Desert sits in the west where it crosses over into Pakistan. India's climate varies throughout the region as it spans many different geographical areas. Climate can vary from tropical monsoons, hot temperatures in the desert, or to a mild temperate forest (CIA Factbook). All varying geographical features have had a significant effect on the country's access to natural resources, such as water, for its population.

India received its independence from the United Kingdom on August 15, 1947. In order to succeed in its independence, the people of India had to fight for their freedom from British colonial rule. The

Battle of Plassey in 1757 determined India's colonial fate for many years. Finally, during and after World War II, demonstrations and violence took hold all over India between Hindus and Muslims. A resolution was met in June of 1947 when the Muslims moved into northern India and Pakistan while the Hindus and the Sikhs stayed.

India's constitution was passed on November 26, 1949 and came into force on January 26, 1950. India's independence allowed the government to become a federal republic, even though its full name is the Republic of India. The constitution states that Hindi is the official language of the Union. However, English can be used for official purposes as well (Statesman's Yearbook).

Since independence, India has had several regional tensions with its neighboring countries such as China and Pakistan. In 1948 and 1965, India engaged in several wars with Pakistan over a territory known as Kashmir. India also lost a short border war to China in 1965. Again in 1971, a third war began between Pakistan and India in which Eastern Pakistan was created into the country now known as Bangladesh. More territorial disputes arose in 1990 over Kashmir when Muslim separatist groups began using violence. In 1999, violence returned to the region where India and Pakistan went to war again. Tensions in Kashmir continued to rise into the 2000s until a ceasefire was called in 2003 (BBC). India has, therefore, undergone several war-like events in recent history, which has had a toll on its people and economy.

India is made up of 28 states and seven territories. Each state has its own Governor that is appointed by the President. The President is the head of the Union and is elected by an electoral college of the members of Parliament. The President appoints the Prime Minister. The Council of Ministers aids the President, and the ministers are appointed by the President with the advice

of the Prime Minister. Parliament is separated into three sections: the President, the Council of States, and the House of the People. The Council of States is known as the Upper House, which contains 245 members that are elected by the members of the Legislative Assembly of that State. The House of the People is known as the Lower House, which consists of 545 members that are elected based on their adult suffrage from territorial constituencies in both the states and territories. State legislatures can be divided into three sections: the Governor, the Legislative Assemblies and the Legislative Councils. Parliament has the power to abolish any existing Legislative Council members (Stateman's Yearbook). The Indian government has developed, as a result, into a stable democracy that can enforce its policies, such as contraceptive and educational programs.

The current President is Pranab Mukherjee and the Vice-President is Hamid Ansari. Some of the political parties are Bharatiya Janata Party (BJP), Indian People's Party/ Bharatiya Lok Dal (BLD), Indian National Congress (INC), Indian National Congress-Indira Gandhi faction (INCi), People's Party/Janata Dal (JD), and United Progressive Alliance (UPA). India has dozens of national and regional political parties. However, parties with four or more chairs are considered representatives in the People's Assembly (Statemen's Yearbook). Therefore, it can be said that India is the largest democracy in the world because of the vast number of political parties. In 2007, India even had a women become president, Phratibha Patil, for the first time in history (BBC).

For economic growth, Gross Domestic Product (GDP) per capita in 1990 for India, Pakistan, and China was between 316 dollars and 449 dollars, with India at the lower end. Twenty years later the growth of China's GDP has far surpassed that of India and Pakistan. In 2011, China's GDP per capita was approximately three times that of India's. While India had a higher GDP per capita than Pakistan (837 dollars to 672 dollars) in 2011, India's government still has a lot of work to do in order to reach the same GDP per capita as China or the United States. The United States is not pictured in the appendix because it has a relatively higher GDP per capita throughout the time period which distorts the scale of the Figure 1. For comparison purposes, the United States GDP per capita in 1990 was 28,298 and 37,691 in 2011.

India began to liberalize its economy in 1991, and since then it has slowly moved towards a free-market system by emphasizing both foreign

trade and direct investment inflows. After four years, India joined the World Trade Organization (WTO) on January 1, 1995. India's primary exports include petroleum products, precious stones, machinery, iron, steel, chemicals, vehicles, and apparel (India, 2009). A decrease in the percentage of manufactured goods of the total exports was caused by more service exports, especially in the areas of software outsourcing. While India is an expert exporter of jewelry, gems, textiles, and chemicals, it lacks oil resources to meet its growing energy needs. The growth rate of India's exports in 1990 was 11 percent and increased to 18 percent in 2000 (World Bank). Meanwhile, imports were growing at 3.4 percent in 1990 and 4.6 percent in 2000 (World Bank). Terms of trade in India were 127.20 in 2010, and it was much higher than Pakistan, China or even the United States (World Bank). India has managed to keep its export prices high, which implies that to maintain the same level of imports, India can trade fewer exports. Thus, India could save its scarce productive resources and import machinery, vehicles, raw materials to build up its capital. From a baseline of more than 236 million dollars of Foreign Direct Investment (FDI) in 1990, India received more than 102 times that (over 24 billion dollars) from foreign investors in 2010 (World Bank). In 2010, India ranked approximately 16th in terms of inflows of FDI. India became the largest FDI recipient in South Asia and accounted for four fifths of total FDI inflows to the region. Also, a recent survey by United Nations Conference on Trade and Development (UNCTAD) projected that India would become the second most important FDI destination after China. Highest FDI inflows were recorded in services, telecommunication, construction activities, computer hardware and software, and hospitality sectors. India has therefore exemplified significant economic measures to enlarge its economy and prosperity.

III. POPULATION

One of the most pressing problems India is currently facing is its total population size and growth. India's population in 2010 was 1.2 billion (CIA Factbook). It is predicted to exceed 1.63 billion by 2050, which would overtake China's estimated population of 1.44 billion (BBC News, 2004). This means that India's population could become the largest in the world in the years to come. Population size, therefore, is a significant issue for India to address in order to ensure its prosperity and security on a national level.

To address India's population crisis, population growth rates should decline. Figure 2 demonstrates

that India is indeed experiencing a decrease in its population growth rate from 1990 to 2000, where the rate dropped below 2 percent. India, in relation to Pakistan's population growth rate, has a lower rate. The United States and China, on the other hand, both have decreasing population growth rates, which are lower than India's. Therefore, India is stuck in the middle between these three countries according to its population growth rate.

From 2000 to 2010, the Indian population growth rate continued to drop under 1.5 percent, which is shown in Figure 3. Once again in Figure 3, the United States and China have lower population growth rates than India while Pakistan has higher population growth rates than India. All countries, however, have decreasing population growth rates from 1990 to 2010. This decrease in population growth rates can be attributed to several policies that India and others have implemented in decades before. However, the population growth rates are still not as low as that of the United States and China, which pose a serious threat to scarce resources.

In 1952, India was the first nation to implement a national family planning program focused on supporting small family sizes and human development (WHO). India continued to implement policies in support of family planning. For example, in 1992, 1994, 1997, and 2000, several pieces of legislation and programs were passed. In 1992, new constitutional amendments were implemented to decentralize the family planning program to a new institution for control. The Indian Parliament, in 1994, even passed a law to "regulate and prevent the misuse of modern prenatal diagnostic techniques, largely for sex-selective abortion" (WHO). The 1997 policy created the Reproductive and Child Health (RCH) program where health services should be delivered with full satisfaction of the client. Finally in 2000, the National Population Policy set up one goal to lower the average total fertility rate of 2.1 by the year 2010, which dissolved centrally fixed targets and created a target-free approach. India has not reached this national goal because its estimated total fertility rate is 2.58 (WHO).

Besides implementing legislation, India has adopted several methods to reduce total fertility through contraceptives, which are becoming more and more popular (WHO). In 2000, 48.3 percent of married women used contraception, which demonstrates that unwanted child bearing still occurs. Three out of four

people in India rely on sterilization as a contraceptive because it is the preferred method by 85 percent of married women. Only 7 percent of married women use pills, IUDs, or condoms as modern contraceptive methods (WHO). Two more methods have been used: a shot that lasts up to ten years and an after pill that was expected to decrease the unwanted child bearing and unsafe abortions (WHO). However, contraceptives have not been entirely successful because of India's poor literacy rates, little access to family planning information, poverty, and discrimination against the female sex. Access to family planning in rural areas is nearly non-existent, in addition to the staffing shortages and proper health services. These reasons exemplify why India is still having problems with lowering their population growth rates to those of developed countries such as the United States.

A. Solution for High Population Growth

In order for India to solve its population problem, it should continue the same policies because they are having some positive effect on decreasing the overall population growth rate. In addition, these policies are boosting funds and access for contraceptives to areas with lagging fertility rates. By spreading a policy to provide equal access to contraceptives, India can help women lower unwanted births and unsafe abortions. Birth control and safe abortions can prevent women from having children beyond their family's financial supportive capabilities. An increase in contraceptive use will therefore result in a decrease in population growth rates, which India is striving for.

The advantages of India continuously reducing its population growth rates are as follows: more capital per capita, an increase in output, less competition for jobs, unemployment decreases, and a drop in unnecessary births. Just by dropping the unnecessary births, India will stop a larger labor force from being born. If fewer workers are born, then fewer workers are competing for jobs and fewer workers are unemployed. Therefore, by reducing the number of unwanted births, unemployment in the future can be decreased. According to the Solow Growth Model, if India were to have an increase in population growth, it would result in a decrease in output and a decrease in capital per capita, which is shown by Figure 3. However, since India is implementing policies that have reduced the population growth rate from 1990 to 2010, the opposite will occur. Instead of moving from point A to point B, India is moving from point B to point A. The arrows in Figure 3 showing output decreasing and capital per capita

decreasing both will increase if population growth rates are reduced. This means by lowering its population growth rates, India has the potential to make workers more productive because more capital per capita will be available as well as an overall increase in output of India's economy. However, India has to decide whether or not these advantages outweigh the disadvantages.

Several disadvantages lay ahead if population growth rates continue to decline. Since fewer workers are being born, this signifies that the number of replacement births will decline. This has the potential to cause severe problems if population growth rates become negative and begin to harm the productivity of the workers and the output of the economy. In addition to negative replacement birth rates and population growth rates, the smaller new generations of workers will have to support the bigger older generations who move into retirement. This could put strains on the small new working generation because they would have to be more productive because there would be fewer workers to produce the same amount of output. This, however, can be overcome through technological changes and accumulating capital stock. Regardless, India will have consequences on output by reducing its population growth rate, but the severity can be dampened through technological research and foreign aid.

IV. WATER AND SANITATION

Water impacts every facet of human life. Improving access to safe drinking water can result in tangible health benefits. According to the United Nations, safe drinking water is defined as water whose consumption does not cause health problems over a person's lifetime. Disruptions in water supplies and sanitation services increase the likelihood of children under five acquiring diseases such as diarrhea, cholera, typhoid, and respiratory and skin infections.

Poorly developed storage capacity, a growing population, and a large agricultural industry, combined with a lack of rainfall, creates a devastating shortage of safe drinking water in India. Demand for water currently outweighs the supply and is likely to cause heightened food shortages in the future. Aside from pollution and fecal contamination, the issue of water scarcity could in large part have been prevented by using better management with respect to legislation, conservation, efficiency, and investment in infrastructure. Issues of water management were placed on the back burner to issues of economic growth and food scarcity after

India gained independence. In the absence of legislation, the people are able to draw any water that lies under their plot of land. Free access to water results in over pumping and provides no incentive for the user to conserve. With the government's focus on growth, the more water a farmer pumps, the more he can grow, and the more income he can generate. Agriculture is, therefore, important since India has a constant increasing demand for food to meet its growing population.

The World Bank defines an improved water source as:

"the percentage of the population with reasonable access to adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, and rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 liters a person a day from a source within one kilometer of the dwelling."

Unfortunately for India, there are regions in the country which lack an improved water source. India and China both had lower water accessibility levels than the United States and Pakistan in the 90s, but as of 2010, all four countries had accessibility levels in the 91 to 99 percent range.

Poor sanitation, especially in rural areas, is the number one cause of death of children under the age of five (UNICEF). Children are highly prone to diarrheal diseases and respiratory infection which can greatly be reduced by washing hands with soap. Washing hands with soap before eating and after using the bathroom is the most effective way to prevent diarrheal disease. In 2008, only 31 percent of India's population used improved sanitation (UNICEF).

Much of the sanitation issues in the country deal with problems of open-defecation. According to UNICEF, 638 million people in India defecate in public and 44 percent of mothers dispose of children's feces in the open. Over 50 percent of the population still defecates in the open. The widespread prevalence of this activity has direct impact on water contamination, which when used for drinking, causes diarrhea and other adverse effects on health. The root of this problem lies in the lack of private toilets. Without toilets, the only option to defecate is in the open. Women and young girls often wait until the night fall to defecate in order to maintain safety and preserve their dignity, by avoiding being seen by others during the daylight hours.

Contracting disease makes it more difficult for children to attend school to obtain an education that would make them contributing members of society. Thus it is essential to invest in the maintenance of water supplies and sanitation facilities. Initiatives such as the Total Sanitation Campaign, along with the work of UNICEF have made improvements in water and sanitation for schools. This decreases the likelihood of contracting disease and infections, and increases regular attendance, subsequently making it more likely for them to achieve their educational goals.

The World Bank defines improved sanitation facilities as:

“the percentage of the population with at least adequate access to excreta disposal facilities that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained.”

As seen in the graph in the appendix, India has not made significant progress towards improved sanitation conditions as China and Pakistan have over the last twenty years.

Significant lags exist between the pronouncement of a policy and its subsequent implementation. These lags are heightened when data availability is limited. The responsibility for water and sanitation at the central and state levels is shared by various ministries. Central ministries, however, only have advisory capacity and provide limited funding for improvement initiatives. Thus the main responsibility for improvement falls upon state governments.

In 1986 India implemented its first sanitation program, the Central Rural Sanitation Program. This program was restructured in 1999 and renamed the Total Sanitation Campaign (henceforth TSC). The restructured campaign moved from a high subsidy to low subsidy program, with the hopes of encouraging direct community participation in the program. The program emphasized information, education, and communication to generate demand for sanitation facilities. The program was launched in a few cities, with the goal sanitation in all households and schools. Local village leaders had the primary responsibility of spearheading the campaign in their respective communities. Often times these leaders, also known as Gram Panchayats, contributed their own income towards the projects. Non-governmental

organizations are used to spread awareness about the significant health benefits of improved sanitation in rural communities as well as to ensure that people actually use the latrines built. Unlike the earlier program, the cost of building sanitation facilities lies completely with the communities.

School Sanitation and Hygiene Education is a subsection of the TSC. The program promotes children's rights to have a clean and healthy environment. It also provides the following facilities at school: toilets and urinals (separate for structures in co-ed schools), hand washing facilities, water supply facilities, garbage and soaking pit, and drainage systems.

From the TSC initiative stemmed an incentive scheme in 2003 called Nirmal Gram Puraskar (henceforth NGP). Gram Panchayats, Blocks and Districts qualify for a monetary rewards and national recognition if they reach 100 percent sanitation coverage in households and schools, and that are open-defecation free. The monetary rewards should be used for the maintenance of sanitation facilities.

More recently, the government of India has implemented a similar program for urban cities called the National Urban Sanitation Policy. The goal is to create “totally sanitized cities.” These cities would ideally be open-defecation free, would safely collect and treat all wastewater, and collect and dispose of waste safely. The plan was launched with the hopes of generating awareness amongst households and institutions about sanitation and its linkages with public and environmental health, in the same manner as TSC.

A. Solutions to Poor Water and Sanitation

With the low sanitation coverage shown in the “Improved Sanitation Facilities” graph located in the appendix, and the current policies in place, it is important to continue monitoring these programs. While sanitation is increasing, it is not increasing nearly as rapidly as it is in Pakistan or China, which were both at the same level of coverage in 1990. In addition to ongoing monitoring, implementing hygiene and health into grade school curriculum should be the top priority of schools. Early exposure to the links between sanitation and health, may lead to changing open-defecation behavior. While latrines are being built, many people in India do not see a reason to change their behavior. A school curriculum on the matter may help change that idea. The future benefits of these initiatives greatly exceed the current costs needed to put them

in place. While costs of implementing new education programs may require training teachers and spending resources on developing a new curriculum, it would have long term positive effects of changing behavior. If people live healthier lives as a result of improving their hygiene practices, then their life expectancies increase. If their life expectancies increase they are healthier for longer periods of time and can obtain higher education. Higher education in conjunction to high life expectancy would increase the Human Development Index for India. Aside from the heavy initial outlay of funds, the only other side effect to this initiative would be that the results causing a change in behavior would take time to observe and measure.

V. LITERACY RATES

According the Word Bank Data, the adult literacy rate in India in 2006 was 62.75 percent. With this number, India belonged to the bottom group of lower middle income countries, along with its neighbor Pakistan which had a rate of 54.15 percent. At that time, China already had a 93 percent adult literacy rate. Compared with India, its number of just slightly over 60 percent would clearly suggest a critical issue for India to cope with.

Illiteracy in India also stems from high dropout rates, which was 52.79 percent in 2005 (Kondapalli). In 2008, the percentage of students entering primary school was 116 percent, according to the World Bank, while the percentage of students entering secondary schools was 60 percent (World Bank). However, the primary school enrollment figure is not reliable because it is recorded as over 100 percent. The dropout rate is more consistent. Children drop out of school regularly because of various reasons, including their families' financial situations or quality of education.

Another problem is that India has a shortage of teachers. The average student-teacher ratio in India was 40:1 in 2004 (World Bank). This ratio was relatively high compared to Pakistan (37:1), China (21:1) and United States (14:1) (World Bank). Even though literacy rate and dropout rate have been improving through the years, the teacher to student ratio seems to be stagnant. More seriously, India also had to grapple with the challenge of teacher truancy because 25 percent of teachers in government schools failed to turn up for class every day which gives India one of the most dismal rates of teacher absenteeism in the world (Coulter, 2004). A large number of teachers simply cut off their teaching time for private family earnings. Among the

devoted teachers, most of them are often pulled out of classroom by the government for non-educational duties: taking census data, updating voter rolls, running vaccination programs, fetching rice for school lunch, or even counting cattle and sheep (L.A. Times, 2008). These flaws in the educational system have gravely worsened the attempt to improve the literacy of India.

The issue of literacy does not only explain the underdeveloped society in India but it also captures one of the reasons that have held back India's economic growth. Even though literacy demonstrates social value to the society, it is considered to be a key indicator of economic development in that country as well. Literacy leads to the enhancement of human capital, which is a part of the economic resources that make the prosperity of a country. School enrollment, which directly affects literacy rate, is proven to have positive correlation with GDP per capita. This is shown by Friedrich Huebler's graph in the appendix (2005).

With a developing country like India, it is important to move from a traditional subsistence economy to an industrialized economy. However, like any developing country undergoing the industrialization process, India faces the underdevelopment trap in which the country remains stuck in subsistence agriculture. It happens when firms are not willing to enter the market or plant themselves in one area if workers do not possess the skills that firms need. Likewise, workers do not acquire skills if there are no firms to employ them. As no one makes the first move, the solution to get out of this trap could be government intervention in education. If the government trains the people, firms will have more incentive to invest in the area, and will catalyze industrialization. Thus, when a country is trying to find its way into development, it is essential that literacy should be emphasized in order to maximize the human capital of the country.

In addition, literacy has proved to give better access to formal sector employment for poor households. With more education, people from rural areas have the incentive to migrate to urban areas for better jobs, higher wages and better prospects of life. Because of this, more people are coming into the manufacturing industry and leaving traditional agriculture. According to the Harris Todaro Model, this increasing labor entering manufacture helps both agriculture and manufacture laborers. The labor in agriculture decreases which leads to an increase in their wages (see Harris Todaro Model in appendix). With better education, migrating people

have better chance of getting into the formal sector as mentioned above. And informal sector in fact provides training for transitional phase to enter formal sector, which prepares them for future application.

A. Solutions to Low Literacy Rates

In order to deal with this issue, India has implemented many acts and laws that help decrease illiteracy and promote school enrollment. The government started Right to Education Act in 2009 to ensure that all children between the ages of 6 to 14 have the right to free and compulsory elementary education. Besides encouraging children to go to school, the government makes sure to provide good health treatment to children, which eventually helps improve school participation. In 2000, UNICEF launched a project to address the absence of safe drinking water and toilets in many schools in India after acknowledging that students fall ill frequently because of poor sanitation. Also, the Indian government keeps reinforcing the ban on the employment of children, pushing more and more children to school while at the same time reducing the dropout rate. This law was amended to spread the range of prohibition from hazardous industries to domestic servants or roadside restaurants (Kazmin, 2012). With so many policies boosting the number of children in schools, the government also tries to overcome the shortage of teachers by introducing the para-teacher scheme. These para-teachers are generally members of the same community in which they teach, and share many experiences and cultural practices with their students. The program has managed to gather more than 500 thousand para-teachers in a number of states, and this number is sure to rise more in the future (UNICEF India, 2006).

After clearly recognizing India's most critical problems with literacy, there are several possible solutions. Firstly, India should implement more effective legislation on the teacher retention issue in order to meet the demand for primary and secondary education in rural areas. In addition, the Indian government should increase the prestige attached to the teaching profession, making it more attractive to students entering that field. Raising salaries for teachers might be one solution. However, it is not enough to talk only about the quantity. What is most important is that the government improves the quality of teaching at Indian schools. According to a report, teachers' declining morality and responsibility most commonly stem from the underequipped infrastructure of schools, the lack of a staffed system, and poor condition of teaching

materials (Coulter, 2004). Thus, there should be greater incentives for teachers to perform their job well by improving the physical quality of schools and providing adequate school management. With a disciplined and organized system of schooling, teachers have more time to concentrate on their teaching instead of helping the government with unrelated tasks. Moreover, performance pay should be encouraged to motivate them to enhance their teaching quality. While these are ideal solutions, a poor country like India cannot easily get the funds to invest in improving school facilities while simultaneously raising teacher salaries. To do this would require additional foreign aid.

In order to obtain more foreign aid to address its illiteracy issues, India should encourage the involvement of non-governmental organizations and international agencies like the United Nations. The difficulty that India faces with this solution is that external aid is small and governments have set a higher distributional priority for those funds. Thus, it is best to receive earmarked foreign aid. Also, in the long run, the country should not depend too much on outside help. Yet, the advantages that can be seen are evidently an increase in the rate of literacy, which, in the long term will help develop India both socially and economically.

VI. CONCLUSION

The critical challenges India faces today can only be overcome through communication and cooperative initiatives between the people of India and the current political administration. Once both parties recognize that these critical problems of population, water and sanitation, and literacy rates need to be addressed, only then can India truly begin to successfully develop. If these issues go unaddressed, India might encounter severe consequences that can result in potential and permanent damage to India's chance of becoming a developed nation.

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Figure 1: GDP per Capita (Constant 2000 US\$)

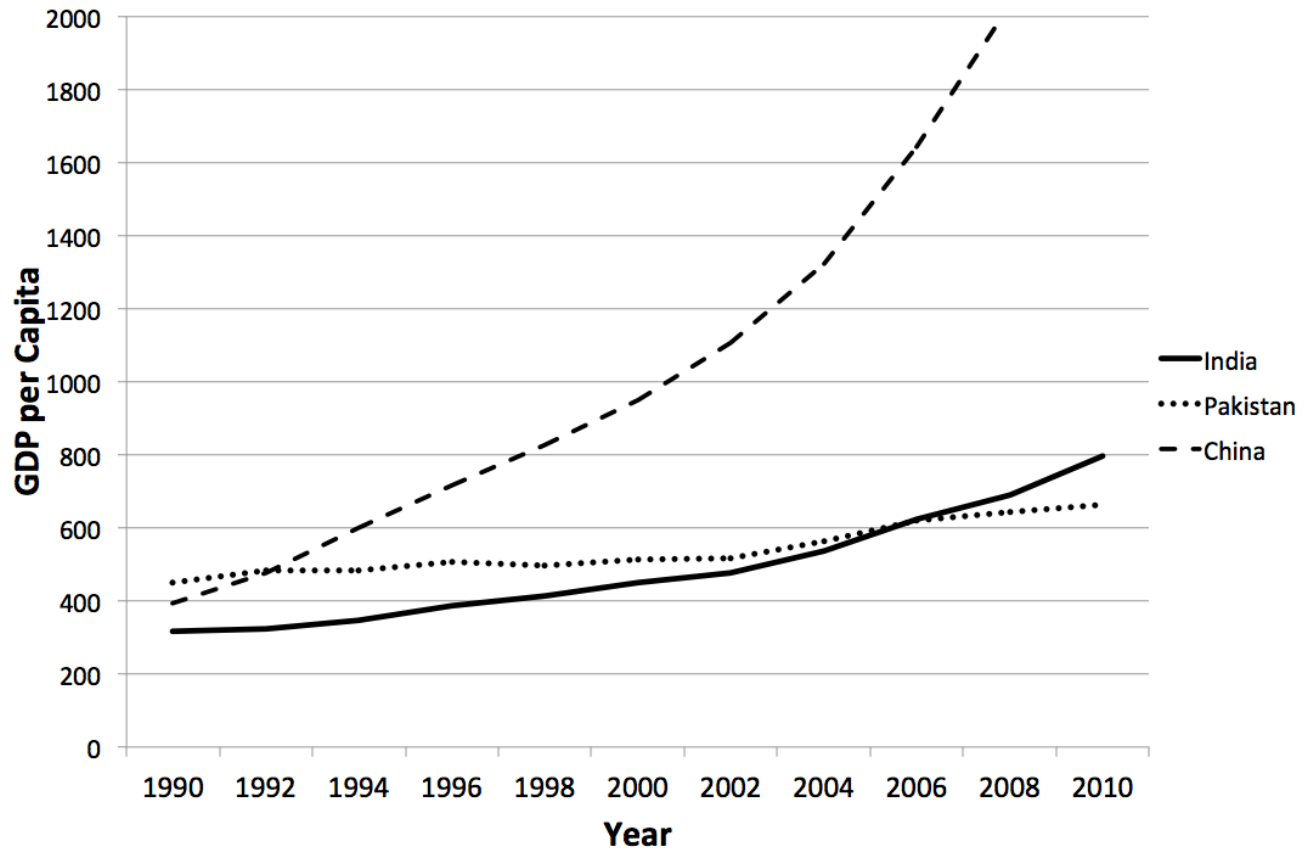
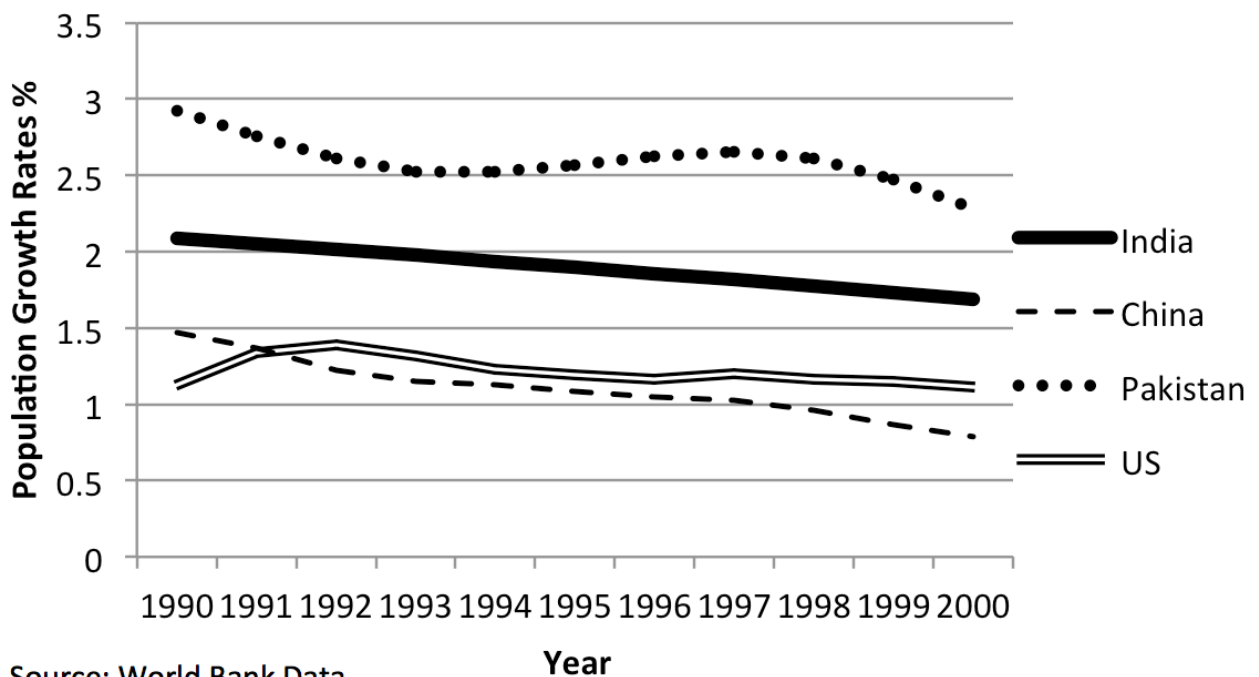


Figure 2: 1990-2000 Population Growth Rates



Source: World Bank Data

Figure 3: 2000-201 Population Growth Rates

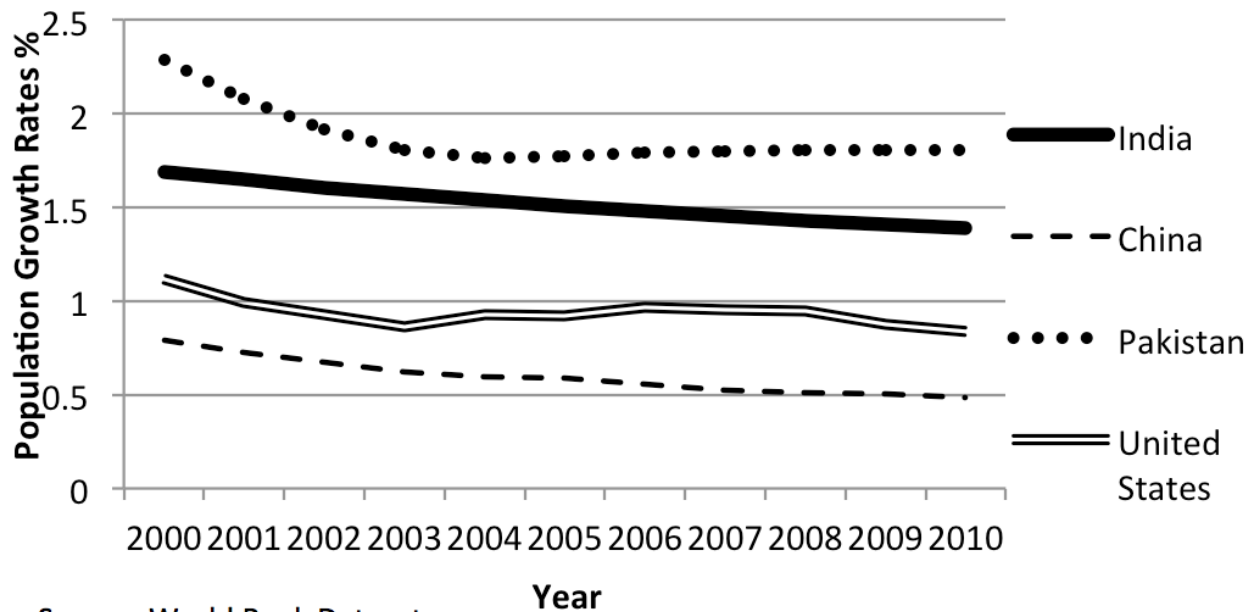


Figure 4: Solow Growth Model
Solow growth model and population growth rate change

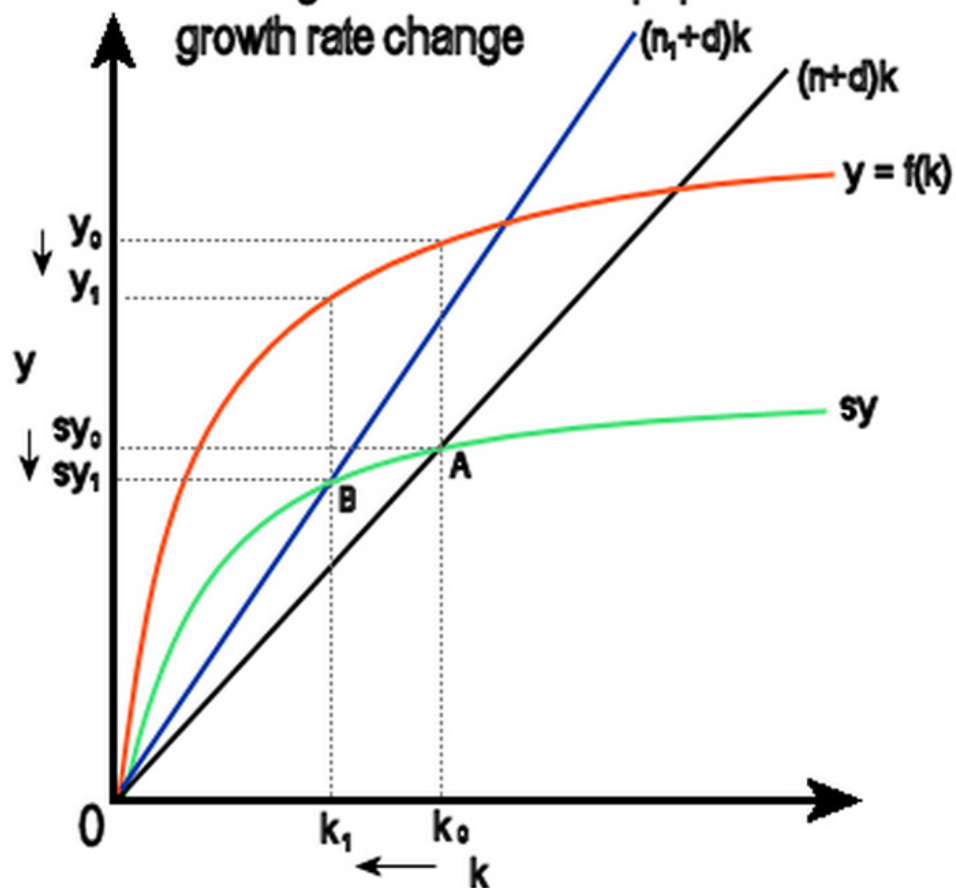


Figure 5: Improved Water in Rural Areas

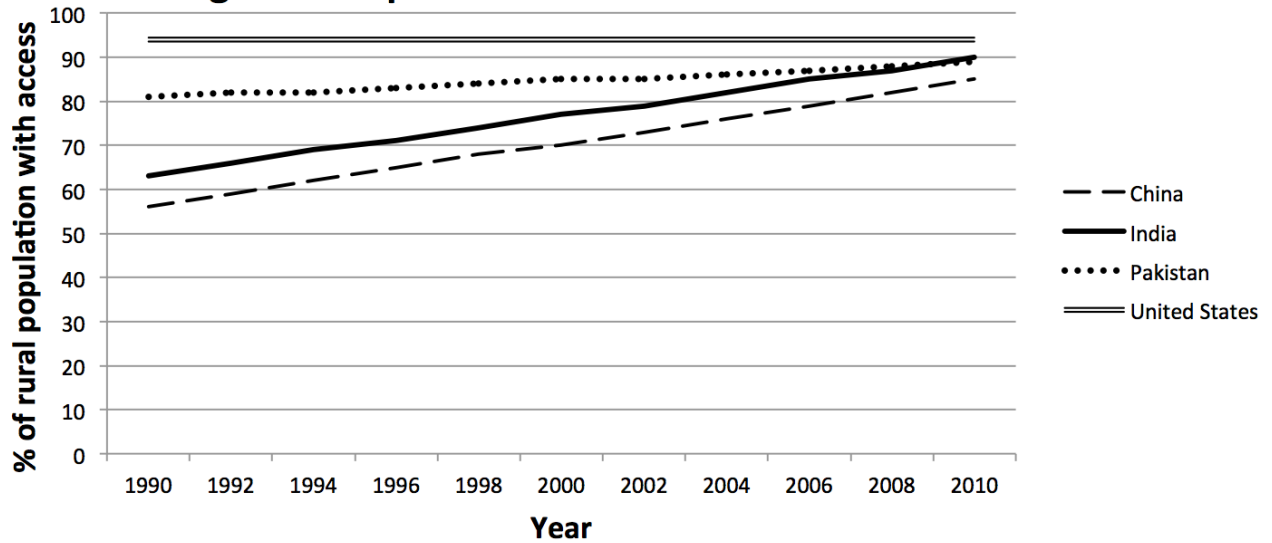


Figure 6: Improved Sanitation Facilities

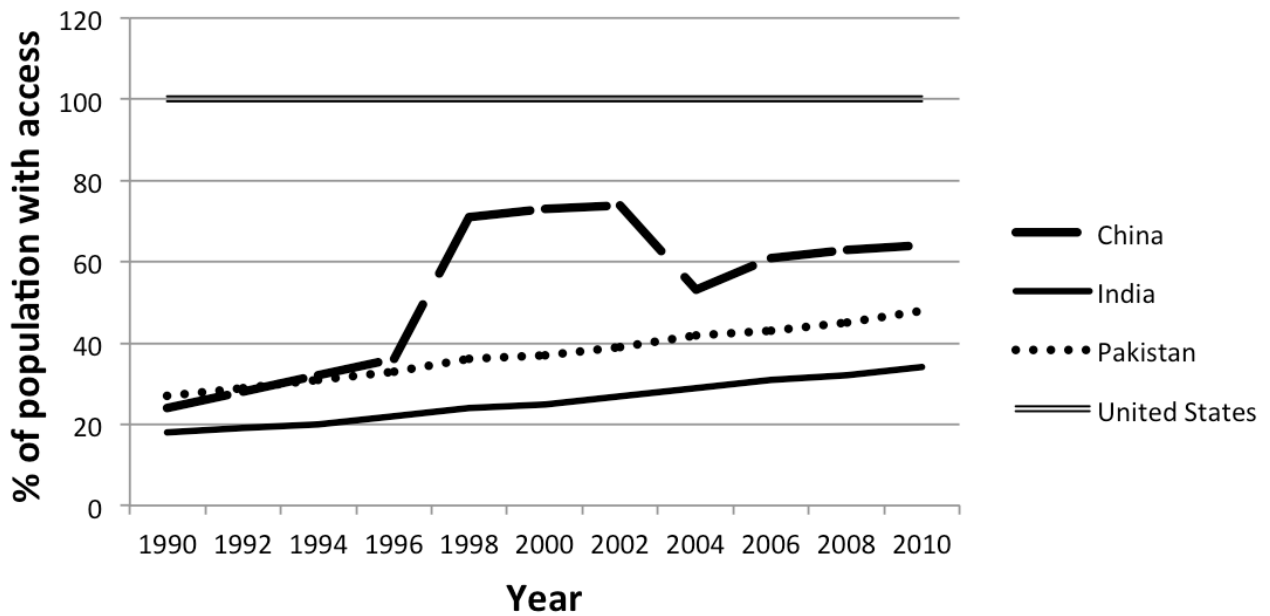


Figure 7: Harris Todaro Model

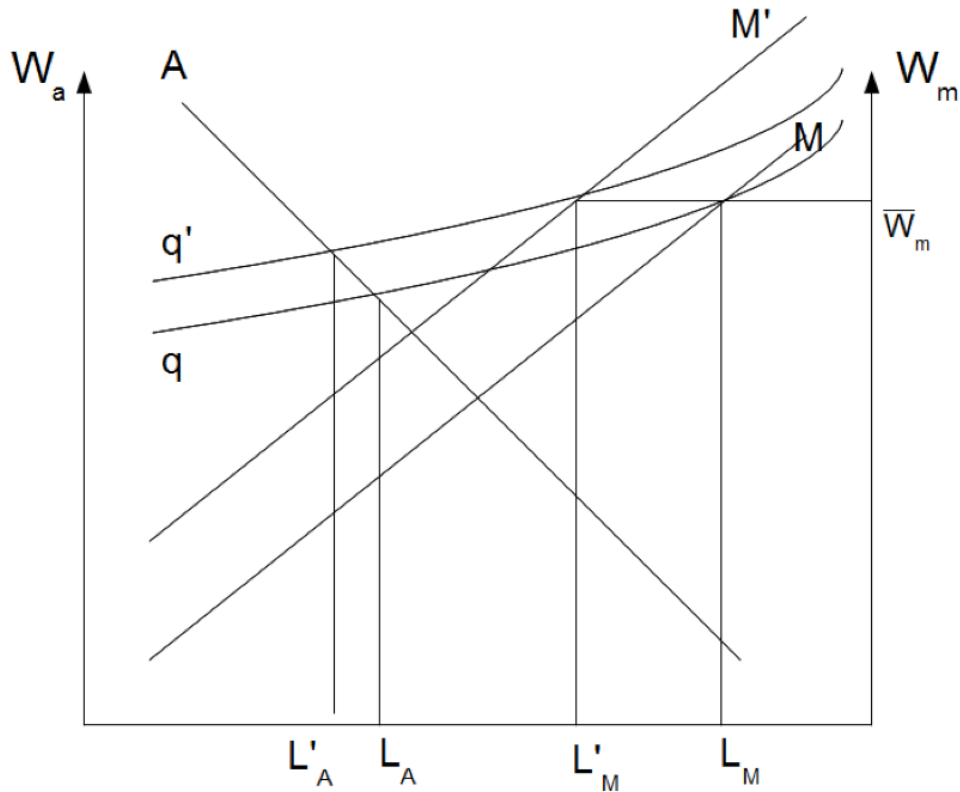
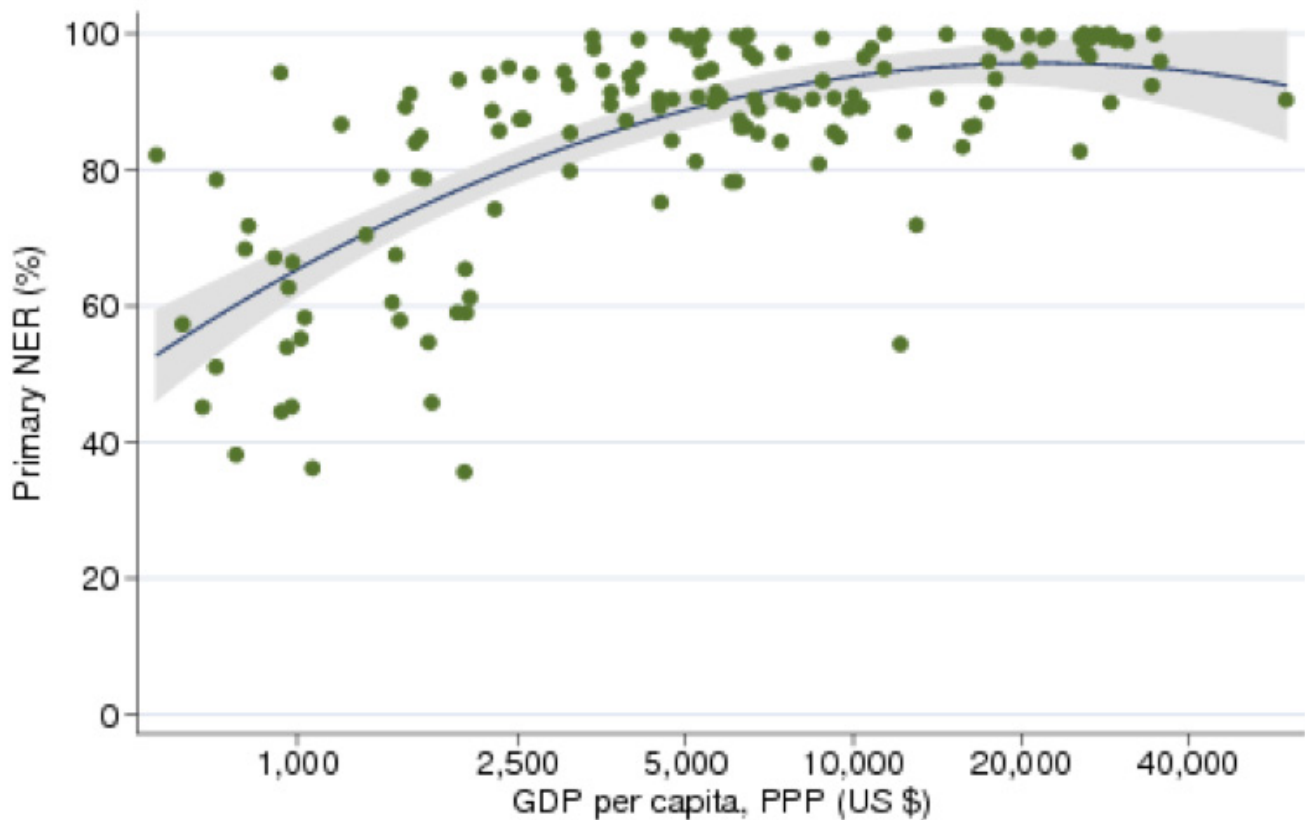


Figure 8 Primary school NER and GDP per capita of 120 countries, 2002



Friedrich Huebler, September 2005, huebler.blogspot.com