

Moving Day: Urbanization in India and China

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Abstract

This article analyzes the differences and similarities in urbanization between the two nations that hold the largest number of people in the world. As of 2012, India and China combined have a population of 2.6 billion people, which is equivalent to about 37 percent of the world's population. Both countries are in the midst of moving massive amounts of people from the rural areas to urban areas. Some say that the rate at which China's cities are growing has never been seen in the history of mankind. India on the other hand has not spent nearly the amount of money investing in their cities. This article compares the two Asian countries in terms of their move to a more urban environment.

I. Introduction

This article contrasts the urbanization in what are considered two of the fastest growing nations today. China and India, along with being the two most populous countries, also are geographically close to each other. Both countries have been involved in a mass migration of people into urban areas. Following a brief literature review and some empirical background, the discussion section focuses on three parts. The first part provides some historical trends and the current state of urbanization in both countries. The second part focuses on two problems related to urbanization, which are the emergence of slums and environmental consequences. In the third part of the discussion, the article will lay out a couple of policy reforms that could improve the urbanization process in China and India.

II. Brief Literature Review

There are plenty of publications that delve into the topic of urbanization within each of the two countries. However, there is not a lot of literature that compares urbanization between China and India. The following brief literature review examines two recent publications contrasting the two countries and then two journals that discuss urbanization in each country individually.

- The *Asia Pacific Housing Journal* published an article entitled "Comparing China and India's urbanization". The article looked at a recent McKinsey Quarterly report on China

and India's urbanization and expanded on the ideas that were presented. The author states that China has started to embrace urbanization and is more efficient at doing so compare to India who on the other hand, is just realizing the grand opportunity that awaits. A core idea they tried to illustrate though is that even though the previous fact might be true, India has the ability to gain a lot more in terms of their urban demographic due to the fact that China is aging at a fast rate. The article stresses that two major countries have never urbanized at the same time as much as they are now. The implication of that will change not only the individual countries' economies but also shift the world economy.

- A discussion paper by McGranahan and Martine (2012) examines urbanization in the BRICS. The BRICS, referring to Brazil, Russia, India, China, and South Africa, are considered the world's emerging economies. McGranahan and Martine explain how China's urbanization is the most explosive among the five BRICS. They talk about how China's household registration system, called hukou, restricts mobility by not giving proper registration rights to migrants. Also, the increases in housing prices make it hard for migrants to find places to live in the city. According to McGranahan and Martine, the main three issues for China are economic inequalities, environmental problems and economic instability. With regards to India, McGranahan and Martine examine certain stages of urbanization related to the affordability of amenities, which increase the inequality among migrants.
- Henderson (2007) is one of the many publications that focus on China's urbanization. Henderson's report is written based on a variety of background papers covering China's urbanization, especially the hukou system and the massive gap in rural-urban income that is considered to be worse in China than in other Asian countries. The report also talks about the fact that many cities were half their efficient size, leading to the issue that "China has too many cities with too few people."¹ The author advises China to decentralize from larger cities to medium or small cities. The report also discusses the living conditions of migrants in China and the two big issues that worsen the discrimination and social discontent: first, a lack of opportunity given to educate the migrants' children, and second, a policy that is based on a belief that migration is not a permanent situation. Some options to help urbanization include harmonious rural and urban development under rapid urbanization and the promotion of efficient use of natural resources.
- Mohan and Dasgupta (2004) authored a working paper for the Stanford Center for International Development, entitled "Urban Development in India in the 21st Century: Policies for Accelerating Urban Growth." They analyze the past urbanization of India as well as future projections of urban growth. They also explain that in India, urbanization is seen as a negative aspect of development. Mohan and Dasgupta provide policy suggestions that would make India's urbanization a lot better.

III. Empirical Background

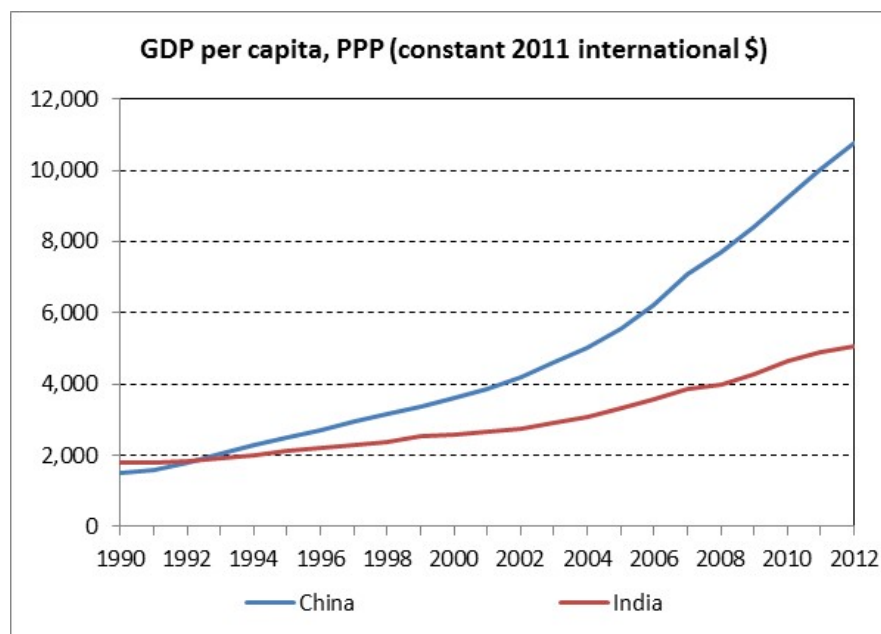
China is an upper-middle income country located in the East Asia and Pacific region. In 2012, the country had a population of 1.35 billion people inhabiting the 9.3 million square kilometers of land. With that amount of people it is the most populous country in the world. As of 2011, over 50

¹ Henderson (2007), p. 5.

percent of people lived in the urban parts of China. The Communist Party of China governs the country. India, a lower middle income country, is a part of the South Asia region. With a population of 1.24 billion people in 2012, India is the second most populous country in the world. The country has 2.97 million square kilometers of land, of which around 60 percent is agricultural. India's government system is a parliamentary republic.

Figure 1 displays PPP adjusted GDP per capita for both China and India in constant 2011 international \$ from 1990 to 2012. Though China had a lower GDP per capita than India in 1990, the far higher growth rates in China than in India implied that China's GDP per capita is now more than twice that of India. From the years 1990 until 1995, China's GDP per capita increased from \$1,490 to \$2,503. After 1995, the GDP per capita soared to \$10,771 in 2012. India on the other hand, which had a GDP per capita of \$1,812 in 1990 increased it to \$5,050 in 2012, which is still a significant increase.

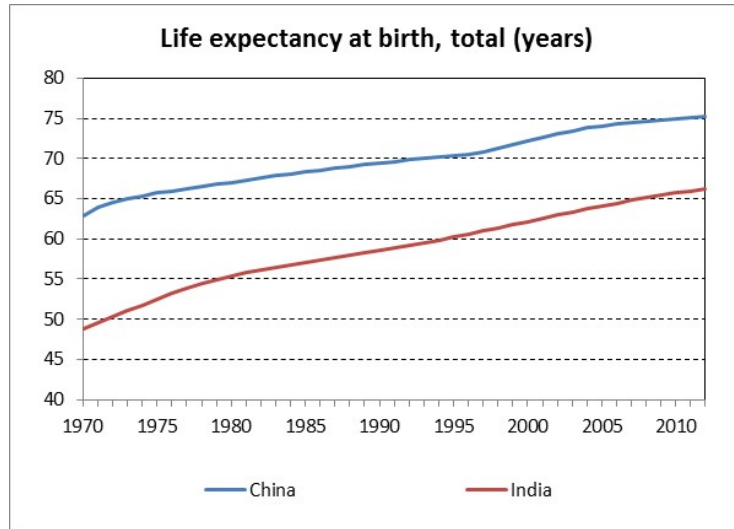
Figure 1: GDP per capita, PPP (constant 2011 international \$), 1990-2012



Source: Created by author based on World Bank (2014).

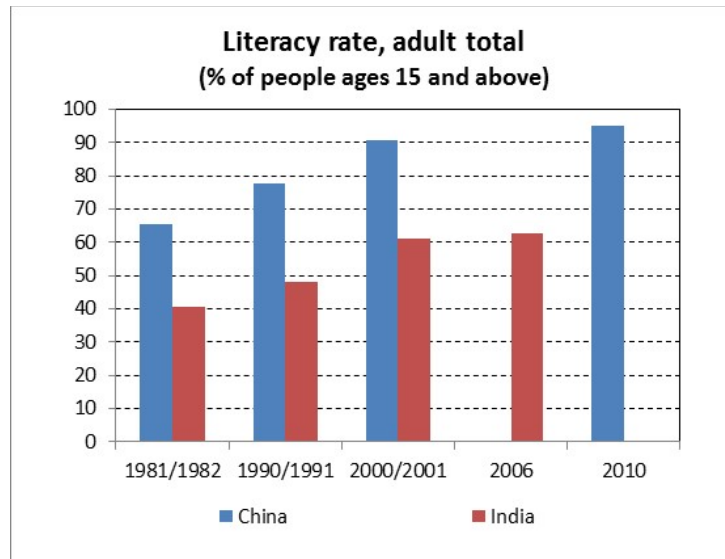
Figure 2 shows the life expectancy in both countries from 1970-2012. The graph shows that both countries have seen a steady increase. In the 1970s, India's life expectancy for a newborn baby was at a staggering 48.8 years, while it was about 63 years in China. With the development of medicines and new technology the life expectancy of both countries increased. Overall, India's life expectancy is growing at a little bit faster rate and they are closing the gap that they had with China in the 1970s. Currently the life expectancies for China and India are about 75 and 66 years, respectively. What is interesting is that China's GDP per capita was around the same as India's for the first part of the 1990s but China's life expectancy has always well surpassed that of India's. Similarly, as Figure 3 shows, China always had far higher adult literacy rates than India. These differences in social development indicators may partly explain China's higher GDP growth rates.

Figure 2: Life Expectancy at Birth, Total (years) 1970-2012



Source: Created by author based on World Bank (2014).

Figure 3: Adult Literacy Rates in China and India, all available years



Source: Created by author based on World Bank (2014).

IV. Discussion

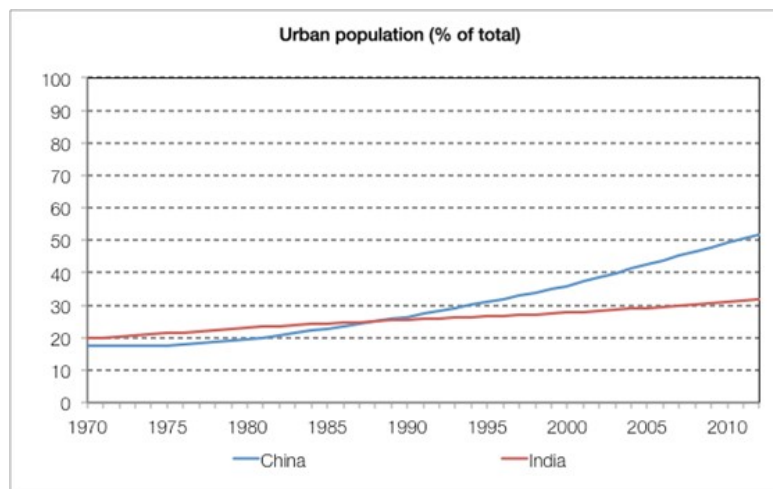
This discussion section is divided into three sub-sections: (1) past trends and current situation, (2) problems with the current situation with a focus on urban slums and the environment, and (3) possible future policies to improve the current situation.

IV.1. Past Trends and Current Situation

In the article “Comparing China and India’s Urbanization” the *Asia Pacific Housing Journal* (2013, p. 30) states: “Never before in history have two of the largest nations (in terms of population) urbanized at the same time, and at such a pace.” China is known to be seeing the fastest and most explosive move from the rural to the urban areas. The explosion in the urbanization started around the 1978 economic changes. In the 1980s there seemed to be more of a rural focus of development as opposed to urban centric. They wanted to “raise the volume of agricultural production and increase food security.”² However, with increases in population density, the huge rural and farming emphasis caused rural areas to become more like cities.

Furthermore, coastal cities start to show up as the main urban centers, which have been resulting mostly due to migration. The rate at which the cities grew is phenomenal. The number of cities with over one million people rose from 13 in 1982 to 58 in 2007.³ Figure 4 shows the growth in the urban population in China and India from 1970 to 2012. In 1970, China’s share of urban population stood at 17.4 percent, which increased to 51.8 percent in 2012. Though India’s share of urban population was with 19.8 percent in 1970 slightly higher than that of China, India’s share of urban population increased to a far lower 31.7 percent by 2012. Given India’s large population, India is not really a “late bloomer” so to say, but its urbanization has been “slow and steady”.⁴

Figure 4: Urban Population (percent of total) in China and India, 1970-2012



Source: Created by author based on World Bank (2014).

The projections of what India’s urbanization would entail did not come to fruition like people hoped they would. Mohan and Dasgupta (2004) lay out possible reasons behind why there was a decline in urban growth in India. They state that one reason could be because of labor legislation and small industries’ reservations. In the second part of the 1970s, there were restrictions on labor legislation. Along with that, reservations by smaller industries grew. Another reason for the

² McGranahan and Martine (2012), p. 9.

³ McGranahan and Martine (2012), p. 10.

⁴ McGranahan and Martine (2012), p. 10

underwhelming amount of urbanization could be due to location restrictions. The original idea behind restricting where entities can go was to help encourage more scattering of industrial activity.

These restrictions backfired when it became harder for companies to prosper outside of where they wanted to settle down. They lacked infrastructure and skilled labor. When they needed to move in order to grow, location policies caused them to spend a lot of money. The existing laws did not help. Mohan and Dasgupta (2004) also stated that the investments into water and sanitation facilities as well as into urban transportation were a lot lower than expected. This could have contributed to a lack of urbanization due to the fact that cost of locating a city might be perceived as more expensive than it actually is. This deters possible migrants.

Lastly, a possible reason for the lower rate of urbanization is India's land policy. In India, there exist rent control laws, which tighten up the amount of city housing. Overall, China has seen what most call the biggest migration in the history, while India, who is slowly behind, is expected to experience a huge influx of people to the urban centers in the next few decades.

IV.2. Issues with Current Situation: Slums and the Environment

Two key problems that are the results of urbanization in India and China are the emergence of urban slums/poor areas and rapid environmental problems. Both issues have negatively impacted both China and India.

IV.2.a. Slums / Poor Areas

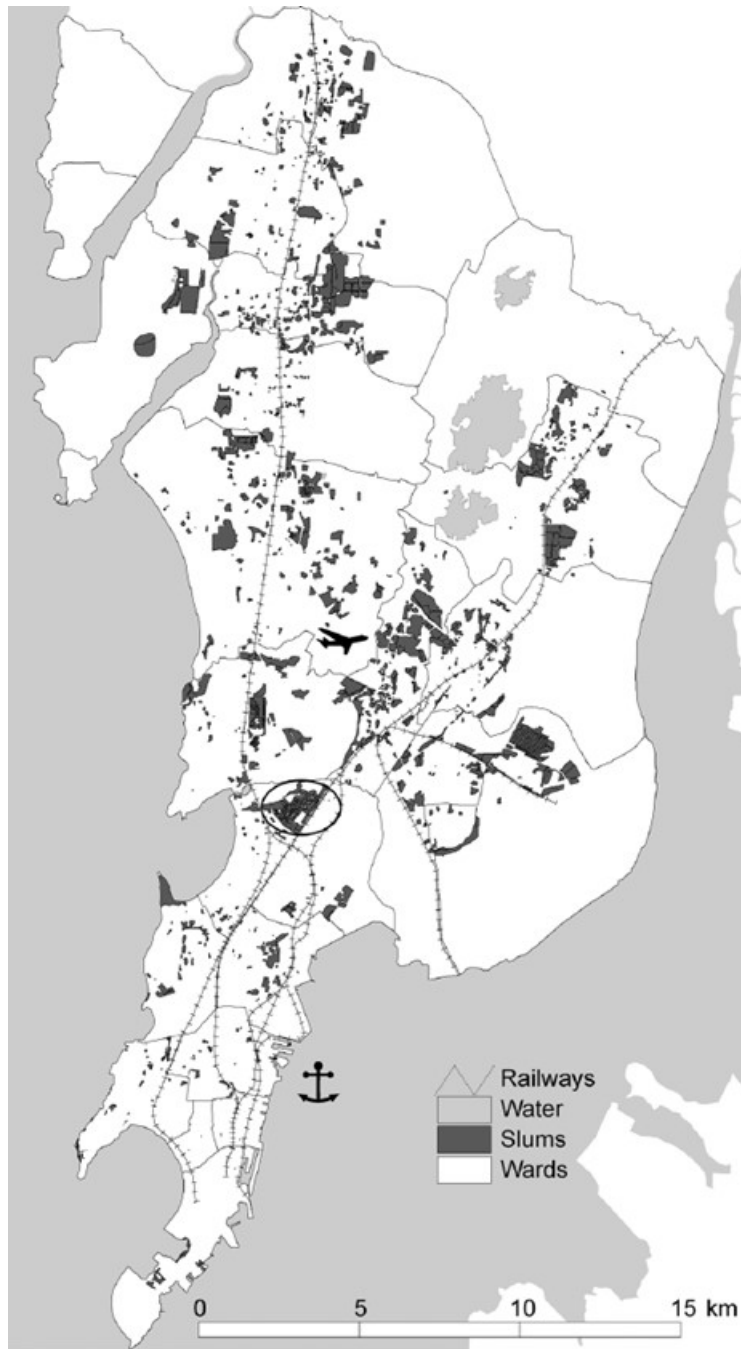
The creation of urban slums is one key outcome of urbanization. With the growing number of people moving from the rural areas to the urban parts of the country, more affordable housing is needed. When the infrastructure is not necessarily all there, urban slums start to develop. Slums in China are different from the slums in India, but nonetheless they are existing and have important implications.

As for India, the presence of slums is a big issue in regards to urbanization. According to the Indian government, a slum is "housing that is unfit for human habitation or detrimental to safety, health and morals of the inhabitants."⁵ One of the most astonishing facts about the slums is the fact that they grew 25 percent from 2001 to 2011 when the entire urban population grew 31 percent in that same decade.⁶ Nijman (2015) presents a couple of reasons for these slums. One possible reason for the abundance of slums is because the slums are a result of the lack of job opportunity due to a large amount of people already in the cities. This reason focuses more on the slum as a bi-product of urbanization. However, the second reason focuses on government failure. The reasons for the slums could be because the government or other institutions did not provide certain infrastructure. Infrastructure is key in order to help improve living conditions and help others get out of the urban slums. The living conditions in these slums are close to unlivable.

⁵ Nijman (2014) p. 410.

⁶ Nijman (2014) p. 410.

Figure 5: Map of the Slums of Mumbai, India



Source: Nijman (2015), p. 411.

The government knows that there are places unfit for human habitation, but they still grow despite the knowledge. Chandrasekhar (2005) describes the situation in the slums pretty well. There are differences between notified slums (ones that are “notified as slums by the respective

municipalities, corporations, local bodies or development authorities”)⁷ and non-notified slums. Overall both types of slums fail to have the adequate amount of anything in order for it to be a place fit for living, but when comparing the two, non-notified slums do have it significantly worse. A lack of water supply and sanitation is a key issue in slums. Some 44 percent of non-notified slums do not have a drainage system and about 50 percent of non-notified slums have latrines.⁸ Those numbers for notified slums are 15 percent and 17 percent, respectively.⁹ Diseases such as diarrhea and other water borne diseases are common due to these lacks in water supply and sanitation. As can be seen from the map above, the slums of Indian cities are all over the city. The biggest slum in India is in the city of Mumbai and is called Dharavi. The dark and colored-in sections of the map shown in Figure 5 are the urban slums in Mumbai, while the pocket that is encircled is specifically Dharavi.

The slum situation in China operates a little bit differently than in India. China does not have a lot of slums due to the Hukou system. The Hukou is a household registration system in which citizens have to register to a certain area in which they live. China has this system in place to prevent mass migration and to limit the population growth in the urban areas. The system tries to guard industrial development by forming a wall. China also does want others to know that they have slums. A lot of slums are even knocked down by bulldozers. Instead of slums, China has so-called urban villages. The villages are slum-like areas that are usually on the borders of the urban areas. A lot of these areas are mostly inhabited by the poor and tend to cultivate drugs, crime and prostitution. The ”城中村” or “villages in the city” are usually not regulated and lack key infrastructure. For all intents and purposes, these areas are similar to what the slums are in India.

Overall, the governments of China and India have tried to reduce the population of people living in the slums but due the rapid increase in people moving to the city, the governments’ effects have not been successful. The slums/urban villages in both countries still exist.

IV.2.b. Environmental Issues

The cities in both China and India are feeling the drastic effect urbanization has on the environment. Air pollution, water shortages, horrible sanitation, and large amount of solid waste are key issue when it comes down to environmental impacts urbanization has.

Both countries suffer from air pollution. One cause of this is the rapid use of cars as a mode for transportation. As Table 1 shows, the number of motor vehicles in India increased from 19.2 million in 1990 to 53.1 million in 2000, which is an average growth rate of about 10 percent. Maiti (2005, p. 285) states that carbon monoxide from the vehicles contribute to around 65 percent of the air pollution. Khan (2013, p. 10) states that it was estimated that about 70 percent of India’s pollution is due to the transportation surge. The mass amounts of people heading to cities to go to work and movements of people living in the city cause huge amounts of pollutants to be released into the air. Factories and other work places also contribute to pollution.

⁷ Chandrasekhar (2005), p. 3.

⁸ Chandrasekhar (2005) pp. 7-8.

⁹ Chandrasekhar (2005) p. 8.

Table 1: Growth in Motor Vehicles in India, 1990-2000

<i>Years</i>	<i>Number of vehicles (in thousands)</i>	<i>Percent increase</i>
1990	19152	-
1991	21374	11.6
1992	23507	10.0
1993	25505	8.5
1994	27660	8.4
1995	30287	9.5
1996	33850	11.8
1997	37231	10.0
1998	43159	15.9
1999	48240	11.8
2000	53100	10.1

Source: Center for Pollution Control Board, Ministry of Environment and Forests, Government of India, New Delhi, 2000

Source: Maiti (2005), p. 285.

In Beijing, China, there has always been a concern with the heavy smog that engulfs the city. In 2012, the number of vehicles in Beijing was counted as slightly more than 5 million.¹⁰ According to Tuo, Li and Wang (2013, p. 733), “some experts’ statistics show that at the beginning of twenty-first century, automobile exhaust emissions accounted for 30 ~ 60 percent of atmospheric pollution.”

Beijing is estimated to be growing at an enormous rate. The increase in population will also contribute to an increase in energy consumption. When you burn coal, which China burns a lot, the main pollutants of carbon dioxide and sulfur dioxide are put into the air. In 2006, China burned 2.4 billion tons of coal, more than the United States, Japan, and the United Kingdom combined.¹¹ Many Chinese cities rank in the top 20 most polluted areas in the world. The fog and pollution has gotten so bad that it threatens the lives of the people living in the cities. China’s Environmental Protection Department has tested the air quality of China’s cities and determined that constant breathing in of the air can weaken the lungs of the citizen and could lead to diseases and other health risks.

Another environmental problem concerning China and India is the lack of access to clean water. Not only is the rapid increase in demand for water a factor, but also that a lot of the water is wasted. The Chinese businesses are very wasteful when it comes to water. About 20 percent of the water lost is due to leaky pipes.¹² In India, the same act of wasteful water goes on. While higher water prices could easily solve the waste of water, the constraint is that water prices are a sensitive political issue as many poor people cannot afford higher water prices.

¹⁰ Tuo, Li and Wang (2013) p. 733.

¹¹ Economy (2007) p. 40.

¹² Economy (2007) p. 42.

There are plenty of other environmental issues that urbanization is contributing to, especially municipal solid waste and water sanitation. These issues impact the citizens that live in the city as well as the economics of the entire country. If these issues are solved, or at least lessened, the countries will be able to run more efficiently and the citizens would live healthier.

IV.3. Possible Policies

When it comes to solving or at least lessening the urbanization issues in both countries, there are suggestions. First of all, there needs to be more done in the area of combating the slums. China has to increase its infrastructure. India has had a history of trying to improve the slums. India has tried to fix the problem of slums since the 1950s. In the 1970s, it had undertaken a variety of environmental improvements of urban slums, including sanitation, other urban services, and the provision of infrastructure. A concern is that India develops these “Master Plans” that try to curb overall urban growth.¹³

According to Economy (2007), these plans’ expenses are usually never calculated correctly and almost always left at a standstill because they planned for something that could not be accomplished. One way to combat this is to split up the infrastructure responsibilities. This idea of making smaller agencies to do the work instead of one large entity can help make sure that the services can adapt to the changes in demand and because they are smaller, they can manage the funding better. Mohan and Dasgupta (2004) also dislike that there seems to be a monopoly of the actual development of the urban land. They state that private companies should take over and get rid of the terrible managerial aspects of the people who have been doing it since the 1960s.

China does not want to fall into a trap of slums as they exist in Latin America and other regions. They could implement a policy to reform the existing Hukou system in order to lessen the severity of the urban-rural income that they have been experiencing. Some reform options to the Hukou System include getting rid of the obstacles that make it hard for some people to access certain public services or allow free migration throughout all provinces.¹⁴ All of these options would help combine the rural and urban segments of the country and possibly help people get out of the poorer urban villages.

To help the environmental issues, India has started to provide public transportation that runs on cleaner fuel. Subsidized public transportation also causes less people to use cars. That, in turn, releases less pollution into the air. In the mid-1990s, India added to the list in their constitution that describes the tasks of Urban Local Bodies (ULB) with the most prominent tasks calling them to help with solid waste management. China also has to deal with the environmental factors. China could raise the prices of gas. These policies would incentivize taking public transportation and as a result, help lessen the pollution of the air and free up the traffic in the city centers.

V. Conclusion

In conclusion, China and India have urbanized at different rates but still developed similar problems as well as similar ways to combat the issues at hand. For the last three decades, China is going through a mass relocation of people from the rural to the urban areas. India’s urbanization

¹³ Mohan and Dasgupta (2004) pg.15

¹⁴ Henderson (2007) pg. 9

has not been as fast as people thought it would be but India's great surge of people moving to the cities is expected to come in the next few years.

Both countries are dealing with major negative impacts of urbanization. China and India are trying to deal with poor areas and slums. These areas lack sufficient services and infrastructure. It is typically the poorest people who inhabit them. In China, the urban villages are slum-like and also lack services. Another major challenge is to deal with the environmental impact of urbanization. Air pollution, a lack of access to clean water, insufficient sanitation, and huge amounts of solid waste are major issues that plague the urban centers of both countries.

The two countries need new policies in order to fix or lessen the negative effects of urbanization. Policies that deal with slums include an increase in infrastructure or at least for China, reform the dated Hukou System. Raising the prices of gas and/or creating better public transit could help reduce the carbon footprint of the two countries. Now is time to invest in infrastructure in order to make the lives of all of the people moving into the cities better.

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