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India, Population

India: The Inclination of Urban Cities

India has the second largest population after China averaging around 1.3 billion people. There is an average of 4.9 people per household that dwell in numerous dwellings such as apartments, villas, huts, tents, etc. Residents in India have jobs such as mining and factory workers, scientists and technicians. Most of these jobs consist in the closest city in India whereas jobs regarding agriculture reside in rural areas. The income per family is only enough to provide two meals per day in each household. The trend of people moving in cities seems to be becoming increasingly detrimental. In order to improve the negative effects of urbanization, more resources and money will be in demand from the government. As a result of urbanization, sanitation, space, and pollution have become major issues, although India's efforts to solve the problem of urbanization are still in progress, much more can be done to solve the problem with eco-friendly infrastructure and stricter laws.

The consistent problem in India is the increase of urbanization within the country. Urbanization can be caused by emigration from inside or outside the country into India's popular cities. Although the population is further concentrated in the rural area, the urban part of India is the most visited by tourists and there is a gradual decline in the rural population. What could be the cause of this movement? Most causes of urbanization include political and economic causes; education; environmental degradation; and natural population increase.¹ However, India's main reasons for urbanization are natural population increase and environmental degradation in rural areas. Today, 67% of the population lives in rural areas whereas, 33% live in the urban area.² According to the World Bank, the rural population has dropped from 82% in 1960 to 67% in 2016 and the urban population has increased from 18% to 33%. Rural areas are not as affluent as the urban areas because opportunities present in the urban community provide a great incentive to move there. Those who live in rural areas do not leave just because of the opportunities but because of the environment.

In India, there are major rivers that supply irrigation to crops including the Ganges, Mahanadi, and Brahmaputra rivers. Global warming is affecting India in many ways and one way is the limited supply of water flowing in their rivers. The Ganges is a sacred river that receives fresh water from the glaciers of the Himalayan Mountains. As climate change increases the glaciers melt and the Ganges River starts to decline. The Ganges provide fish for food and water for drinking and farming.³ For Kamal Barua, the

¹ Fitzgerald, Helen. "What Are the Causes of Urbanization in Poor Countries?" *Bizfluent*, Leaf Group Ltd, 26 Sept. 2017, bizfluent.com/info-8643337-causes-urbanization-poor-countries.html.

² Champakalakshmi, R., and A. L. Srivastava. "India." *Encyclopædia Britannica*, 25 July 2018, www.britannica.com/place/India/Caste.

³ Wax, Emily. "A Sacred River Endangered by Global Warming." *The Washington Post*, WP Company, 17 June 2007, www.washingtonpost.com/wp-dyn/content/article/2007/06/16/AR2007061600461.html?noredirect=on.

Ganges is his source for fish to sell at the local market. However, because of the decline in water he and his family had to move since the water levels were inadequate for fishing.⁴ He demonstrates how environmental degradation is influencing families in rural areas of India. The cause of urbanization has been the struggle of life in rural areas of India and because of the rapid population growth among the Indian people.

Urbanization is having a major impact on the people of India. Issues surrounding urbanization consist of inadequate sanitation, space, and increased pollution. There are approximately 1.3 billion people in India and yet, more than 72% of the rural population need to relieve themselves behind bushes, in fields, or by roadsides.⁵ This is a safety issue because it is a hazard for those who go to the bathroom alone at night.. It is also a sanitation issue because there is no proper utilities nearby for citizens to use the restroom. Since there are so many people, the government is not capable to keep up with the amount of sanitation facilities required to satisfy approximately one billion people. Sanitation is more of an issue in rural communities where most of the population resides. As the population increases the more money the government needs to spend on supplying toilets for people so that they do not defecate in other people's yards and fields nearby.

India is settled on a land area of 1.269 million square miles which makes for a large population density per kilometer. Because of urbanization, cities are developing larger apartments and buildings to house the rapidly increasing population which decreases the amount of space in rural areas of the country. Although new homes are being built, people are starting to reside in the numerous number of slums surrounding these luxurious cities. Slums are known as smaller and cheaper cities on the outskirts of larger cities, usually where people who can't afford the luxurious life in the city go.

One instance from a CNN source explains how a woman, her husband, five children and other relatives lived in a hut built on land owned and provided by the government, only to have it taken away from her and her family.⁶ They were forced to move once the bulldozers arrived, and they currently reside in the slums since her family did not meet the proper relocation requirements for proper housing.⁷ Due to the fact that the country has so many people, the government is destroying people's homes in rural areas and causing people to go homeless in order to make room for the wealthy since the cities are becoming more crowded. Some of the rural population is not moving to the city because they want to, but because they are forced to move into smaller spaces in slums on the outskirts of the cities. The land per person ratio in India will gradually decrease as urbanization continues.

There are toxic levels of air pollution in many cities in India, including Delhi. According a newspaper called the "Times of India", the top reasons for air pollution include: traffic, dust particles locked into the air from construction, overpopulation in the capital, low investment in infrastructure, and industrial

⁴ ibid

⁵ "The Final Frontier." *The Economist*, 19 July 2014, www.economist.com/asia/2014/07/19/the-final-frontier.

⁶ Sidner, Sara. "India Razes Slums, Leaves Poor Homeless." *CNN*, 14 Jan. 2009, www.cnn.com/2009/WORLD/asiapcf/01/14/india.slums/index.html.

⁷ ibid

pollution and garbage dumps.⁸ Out of all of these factors of air pollution most of them have to do with urbanization. Traffic contributes the most to air pollution. There are so many people in urban India and they all need to have means of transportation. When there are too many people in one area it can cause congestion or traffic. Traffic requires people to wait in their running cars which emits greenhouse gases into the atmosphere.

There is a lack of funding in infrastructure that there are not enough roads or space to transport people from one place to another. As people move into the cities of India there is a need of buildings for jobs and apartments for people to live. Over-population and construction go hand-in-hand as construction is done to make room and prepare for those who move into the city. Construction emits pollutants and dust into the air, especially if certain projects have been delayed because there is a buildup of space, dust and pollutants. As previously stated, garbage dumps contribute to air pollution because there are so many people who move into the city. Waste is a small portion of greenhouse gases that contribute to air pollution but if India's problem of urbanization can be solved, so can air pollution.

The government has come up with solutions to help solve the problem of urbanization. A few of their missions include: Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Smart Cities Mission, and Pradhan Mantri Awas Yojana-Housing for All (PMAY-HFA).⁹ The AMRUT overall purpose is to (1) ensure that every household has access to a tap with assured supply of water and a sewage connection, (2) increase the amenity value of cities by developing greenery and a well maintained open spaces (parks), and (3) reduce pollution by switching to public transport or constructing facilities for non-motorized transport (walking and cycling).¹⁰ This program is primarily funded by the Central government of India.¹¹ This is an advantage because the company has an unlimited amount of resources provided by the government. However the disadvantage of being funded by the government means that every purchase and activity is being monitored. However, as regard to their progress on their website, that link is under construction.

The purpose of the Smart Cities Mission is to provide for the aspirations and needs of the citizens, developing the entire urban eco-system and comprehensive infrastructure.¹² However Prime Minister

⁸ TNN. "Top 8 Main Causes for Air Pollution in Delhi." *The Times of India*, India, 15 Nov. 2017, timesofindia.indiatimes.com/life-style/health-fitness/health-news/top-8-main-causes-for-air-pollution-in-delhi/articleshow/61626744.cms.

⁹ "Poverty and Urbanisation - UN India." *United Nations*, United Nations, in.one.un.org/poverty-and-urbanisation/.

¹⁰ Atal Mission for Rejuvenation and Urban Transformation. "The Mission." Ministry of Housing and Urban Affairs.

¹¹ "Atal Mission for Rejuvenation and Urban Transformation -AMRUT." *Ministry of Housing and Urban Affairs, Government of India*, Ministry of Housing and Urban Affairs, Govt. of India, 31 July 2018, mohua.gov.in/cms/amrut.php.

¹² "What Is Smart City." *Smart Cities Mission*, Ministry of Housing and Urban Affairs, Government of India., 5 Sept. 2017, smartcities.gov.in/content/innerpage/what-is-smart-city.php.

Narendra Modi has already launched 14 projects since the year he announced the Smart Cities Mission.¹³ It is not clear which form of finances have been decided for this, but some ideas include taxes, municipal bonds, assistance from the World Bank, and even converging with government schemes such as AMRUT.¹⁴ One of the disadvantages of working from a non-government run programmed can be the challenge of finding funds to support the cause. One advantage is that if they get the funding that they need, they are not relying on another company or under contract with another company. Finally the mission of the PMAY-HFA is to provide central assistance to implement agencies through States for providing houses to all eligible families/beneficiaries by 2022.¹⁵ This program is a government run business supported by Public Private Partnerships. This can prove to be a disadvantage as the cost might be greater due to the fact that the private company determines the cost within the contract with the government. Also there are a limited amount of private sectors so that makes negotiating incentives harder to identify. So far they have not gotten to far presumably to the fears the spurt in fuel price, violence among international borders and inappropriate withdrawal of money if implemented.¹⁶

Out of all these solutions, the Smart Cities Mission stands out the most because they are primarily a private company that is trying not to be used by the government or private sectors for money. Their sense of independence in order to accomplish a goal or willingness to combine with other organizations is very appealing. All these solutions are great but I think that overpopulation within the country is causing urbanization and needs to be dealt with before anything else.

Similarly to the missions previously stated, eco-friendly infrastructure is another possible solution to decrease urbanization. Instead of trying to build up, the cities can try to build underneath. There can be eco-friendly underground parking lots, and train stations. If cars that emit fuels want to park, there should be a fee. I also think that the government should push for the purchase of electric cars. There should be a mission to increase carpool and the amount of electric cars in the country. There are countries like Germany who are now looking into and developing eco-friendly trains, particularly ones that run on hydrogen instead of diesel.¹⁷ Instead of pushing families from their homes to move, the government should renovate those homes in the country or just leave them alone.

Factors that make a city prominent should be moved outside the city. The purpose of the city is to link businesses in one commonplace, however, if multiple different companies disperse around the country, there will be less congestion and need for people to clog one place. Even at my own school we have Leadership in Energy and Environmental Design (LEED) certified buildings. If India can develop a

¹³ PTI. "Urbanisation Can Mitigate Poverty, Says PM Narendra Modi at Smart City Launch." *The Indian Express*, 26 June 2016, indianexpress.com/article/india/india-news-india/urbanisation-can-mitigate-poverty-says-pm-modi-at-smart-city-launch-2875814/.

¹⁴ Pratap, Kumar V. "Financing for Smart Cities." Ministry of Urban Development Government of India, 9 Sept. 2017.

¹⁵ The Joint Secretary. "Pradhan Mantri Awas Yojana." Ministry of Housing and Urban Poverty Alleviation, 2015.

¹⁶ Sharan, D P. "Four Years of Modi Regime; A Victim Of Sycophants." ProQuest, 4 Jan. 2018.

¹⁷ Leary, Kyree. "Germany Is Getting Hydrogen Powered Trains." *World Economic Forum*, World Economic Forum, 27 Nov. 2017, www.weforum.org/agenda/2017/11/this-country-is-introducing-hydrogen-powered-trains.

program like LEED and make all of its buildings in the city LEED certified, then the effects of urbanization can be solved and more people will be able to be housed and have jobs in buildings that are eco-friendly. All of could be funded by a non-profit organization that seeks donations form people in the country who would like to see the issue of urbanization get better.

All of this could be funded by a non-profit organization that seeks donations from people in the country who would like to see the issue of urbanization get better. There could be further research to figure out whether or not these solutions coincide with India's primary religion of Hinduism and others so that everyone feels respected. In order to convince companies to move, their incentive can be that there are more people looking for work in rural areas. Workers in rural areas run a farm life and have to deal with larger families compared to urban families. Plus another incentive could be to land provided. Although India is losing some of its agriculture land, 75% of the land that companies receive will go to whatever they need and another 25% can go to proper housing for their workers if need be. All the work necessary can be funded with the help of donations and sponsorships from large companies who want to see the country become better.

Today, there is currently an organization like the Leadership in Energy and Environmental Design hoping to make a similar impact in India. The India Green Building Council (IGBC) is a subdivision of the Confederation of Indian Industry (CII) hoping "To enable a sustainable built environment for all and facilitate India to be one of the global leaders in the sustainable built environment by 2025." ¹⁸ So far this company has accomplished a Green building footprint of 5 billion square feet and hopes to achieve more. It is unclear whether or not this company receives money from the government, but they closely work with State and Central government agencies. So far 1461 projects have been certified and are functional out of the planned 4,766 projects. ¹⁹

India's developing problem with urbanization is slowly killing the people in its country. If the causes and effects of urbanization are solved than the overall issue can be gone. Lack of sanitation, space and increase in pollution have proved to contribute to the problem of urbanization. The government of India recognizes what is at hand and what is at stake and they have developed many missions and plans to solve them. There are more solutions that are not recognized with the government that could make a difference within this developing country. With the help of both the government and the people, India can become a more eco-friendly place with equal conditions for everyone.

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¹⁸ "About IGBC." *IGBC- Smart Cities & Green Building Concept in India*, Indian Green Building Council, 2015, igbc.in/igbc/redirectHtml.htm?redVal=showAboutusnosign.

¹⁹ "Green Building Movement in India." *IGBC- Smart Cities & Green Building Concept in India*, Indian Green Building Council, 2015, <https://igbc.in/igbc/redirectHtml.htm?redVal=showAboutusnosign>.

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