

Global Urbanization; Reasons behind growth of Asian and African Megacities and the challenges faced by them.

Suhara Suhail, Farrukh Najeeb

Abstract: It took us only a few decades to trigger the transformation of our cities from places echoing as centers of culture, religion and economic opportunities into gigantic mechanized locus which has been asphyxiating the life at a rapid rate. From only two megacities in 1950 to 28 megacities in 2014 and 35 megacities in 2025, the tempo of urbanization has sped up due to a multitude of factors inclusive yet not limited to high wages, better water and sanitation conditions and other opportunities. Urbanization was a desirable progression in 1800s and in the west but in the contemporary world, 80% of the urbanization is taking place and will continue to take place in Asia and Africa and majority is in developing or least developed countries such as Nigeria, those least able to handle the political, social, economic and environmental problems associated with rapid urbanization, consequently portraying urbanization as an malevolent occurrence. The principle push behind such mind-bogglingly rapid growth is reduction of employment in the rural and agriculture sector, migration from rural areas to urban cities and to neighboring countries as well, high-fertility rates and better health, mechanization of retail sector, lucrative packages offered and consistent need of labour in cities along with the hope of finding basic life amenities. The densification of cities is good as it reduces your overall ecological footprint but there is a downside as well, that the population in megacities is outpacing almost all support structures in the cities where the threat of food shortages, traffic congestion, and insufficient education facilities have become a stark reality. The peripheral areas, along with the techno-managerial attempts to produce more sustainable forms of urban living actually continue to increase the socio-ecological apocalypse, are also the factors pushing the megacities to become larger than the countries causing the phenomenon of planetary urbanization.

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I. INTRODUCTION

A city with more than 10 million inhabitants is the general accepted standard of declaring a city, a megacity. Elsewhere, threshold is between 5 and 8 million. It has been seven decades since the first two megacities appeared on the map of the world, New York and Tokyo, both being in the developed countries. Presently, a large portion of megacities exists in Asia, Africa and Latin America and they are expected to grow at such a tremendous rate to become the largest megacities in the world. The current 33 megacities owe their swift and mind-boggling expansion to the prospect of employment and a better bright future in the industrial cities.

In 2010, just nine of the world's megacities were located in Asia; scroll forward 15 years and 21 of the projected 39 megacities will be situated here, with the biggest growth in population expected to take place in the new or lesser-known cities in South and East Asia. Hence the continent of Asia, by 2025-2030, will dominate the world with most megacities under its umbrella and while these megacities, each with populations of 10 million or more, harbour a wealth of investment, education, better health and employment opportunities, they likewise have to contend with issues such as overcrowding, traffic congestion, air pollution and income inequality. But it's not just the prompt increase in their numbers or their absolute size that renders these megacities, especially Asian and African megacities, to appear fascinating. They are different in different aspects of development, too compared to the megacities in the advanced countries.

The growth has been rapid and uncontrollable for the central government of Asian countries while the infrastructure present in such countries is not enough to provide a decent living space to the immigrants consequently the overall quality of life is getting worse along with low availability of drinkable water and breathable air, the constant deafening noise and traffic and a huge chunk of population earning less gross income than what is being earned by the residents of megacities in the developed countries. One positive aspect of rapid emergence of megacities is that the overall population growth of the globe will come to a halt after one or two decades and then it will begin to fall down leaving enough quality space for every habitant.

II. LITERATURE REVIEW

The trend of global urbanization is in full swing, with the last 100 years seeing remarkable change in attitudes to city life. In the past, urban living was an infrequent occurrence; for instance, in 1900 only 15% of the globe's population resided in cities. Nonetheless, changing consumer lifestyles and livelihoods have led to a stark rise in this figure and 2008 marked a historic milestone which saw over half of the world's population living in urbanized conurbations. The trend sees no end — at least in the medium term — as current projections suggest 60% of the world's population to be urban by 2030. (R. Fransua)

Developing cities dominate the megacity scene as in 2017, 26 of the 33 megacities were in developing countries. Developing countries will dominate the megacity scene over 2017–2030 as well, adding five of the six new megacities in the period. Asia Pacific has the largest number of megacities. In 2017, Asia Pacific accounted for the largest number of megacities, with 19 of the 33 (58%). China and India are the regional and global leaders, with six and four megacities each in 2017, respectively. After Asia, African megacities are expected to lead population surge reflecting its position as the last major continent to undergo urbanization. It will account for the largest absolute rise in megacities over 2017–2030, adding Dar es Salaam and Luanda to the region's current megacities of Cairo (Egypt) and Lagos (Nigeria). In Nigeria - the largest country by population in Africa - the urban share is expected to jump by nine percentage points over 2017–2030. (R. Fransua)

Currently, the world's population totals an estimated 7 billion-plus people, with more than half of the total population and also half of the world's urban population residing on the continent of Asia. This surge of global urbanization did not occur solely due to migration from rural to urban areas but also due to natural increase in the population of the urban areas with highest growth rate found in the Middle East and African countries in 2017 even though China, Japan and India - still having the largest chunk of world's population and also the most urban populace - has had a slow and to a certain degree constant growth rate. Oman has experienced a growth rate of 8.45% in recent years. This rate of growth positioned this Middle Eastern country within the top spot globally in terms of possessing the fastest population growth rate among any nation. Whereas the African nations of South Sudan and Niger experienced a growth rate of 4.09 and 4.00 respectively. (World Atlas)

The rate of urbanization for a continent like Africa is both promising and troubling. As rural residents move to cities for work or in some cases to escape conflict, Africa has seen its urban population become more than double in 20 years to 360 million last year and according to UN figures, that's the fastest rate of any continent or region. The troubling part is that because so many people arrive in cities before more houses or infrastructure are built to absorb them – with the exception of China, where migration is more subject to central control – a large percentage of the initial growth in such megacities is likely to be in slums. Without urgently improving city infrastructure, there is a risk that the poor quality of life in megacities could spiral downwards into social collapse.

A couple of billion people have moved from rural areas to cities over the last 50 years in Asia and Africa, and another couple of billion will do so by 2050. This population growth within the two continents has been a consequence of concurrent rise in the median age of the population, declines in infant and total mortality rates, and high fertility rates which, although declining, are still far above the replacement rate in many of these areas. (World Atlas)

Ultimately, this mammoth increase will result in a slowdown in population growth as people have fewer children when they move from rural areas to city centres. For example, Brazil was one of the first emerging economies to experience mass migration in modern times – Sao Paulo's population went from 2 to 20 million between 1950 and 2000 – and its fertility rate plummeted from an average of 6 births per woman in 1970 to 1.8 in 2010. However, Brazil as a whole will not start to experience population deflation until around 2030, about the same time as China, Indonesia and Iran; it will be the second half of the century before it is happening everywhere. We still have several decades of megacity growth to navigate before population pressure eases and this megacity growth will continue because of several common and location specific reasons. (Oliveira R.R)

Now in terms of GDP, the world's 600 largest cities account for 60% of global GDP. This figure will stay the same over the next decade are expected to play a larger role in the global economy. Although a large number of the megacities exists and will appear in Asia and Africa but the massive population does not indicate better disposable income per household or better health and economic conditions. Finance centers such as London, New York, Tokyo and Seoul continue to maintain an economic advantage over their developing world counterparts.

By 2030, disposable income per household in megacities in developed nations is forecast to remain five times higher, on average, than in emerging urban centres. Average GDP per person will be four times greater in developed nation megacities, with 33% of households earning a disposable income exceeding \$100,000, compared to just 3.3% in emerging megacities. However, analysts expect larger populations and investment growth in megacities in the developing world to bring economic expansion and rising incomes. Dhaka, Manila

and Bangalore are forecast to achieve dramatic growth in real output between 2017 and 2030, surpassing 150% in the case of Dhaka. (W. Johnny)

Moreover, the reasons behind formation of so many Asian megacities are all-encompassing i.e. social, economic, and technological. When rural people migrate for a better standard of living, including long-term employment and the availability of business opportunities that could improve their quality of life. It is also an attempt to escape grinding poverty, frequent crop failures, or even famines. The causes are also social, like a desire for better education for their children, improved health care facilities, a five-day work week in contrast to working seven days on the farms, or the availability of entertainment facilities. Often the reasons are combinations of these issues. (Tortajada. C and Biswas. A.K)

At the same time, the emergence of new megacities and merger of existing megacities and industrial clusters is leading to the formation of mega economic spheres that are expanding into mega-regions consequently making all mega regions, a global urban region. The center of gravity of industrial structures in mega cities is meanwhile shifting toward the service industries as they evolve into nerve centers for economic spheres. There has also been a corresponding shift from manufacturing to services as the main focus of investment by foreign companies.

Talking about the aftereffects of such massive urbanization, the developed world has never had to deal with problems related to infrastructure and service provision in their megacities – also New York and Tokyo became megacities a century ago. When the original megacities of New York and Tokyo were built, there were relatively few existing buildings or democratic mechanisms of control and stakeholder consultation. While obviously welcome, these mechanisms have the downside of making the implementation of new infrastructure an extremely slow process. Governments from all parts of the ideological spectrum feel helpless.

Moreover, capital is scarce in least developing and developing countries and increasingly large parts of public spending is likely need to go towards health and pension needs, leaving fewer resources available for investing in infrastructure. All these factors are the basis of the other problems associated with contemporary planetary urbanism where megacities have grown so much that their individual needs are more than the entire country as they are holding more than half of the planet's population.

Why megacities are consistently growing especially in Asia and Africa

The population of the world has skyrocketed from 2.5 billion in 1950 to 6.0 billion in 2000 to 7.2 billion in 2017. This tripling, if not quadrupling, of population in the space of just 70 years, the 20th century has come to be known as the century of the population explosion. The analysis of population growth in the rural and urban segments separately, nevertheless, we find the increase in the rural population has been less than two times, from 1.8 billion to 3.3 billion, between 1950 and 2000, in contrast the urban population quadrupled from 700 million to 2.8 billion. This reflects that the population explosion did not occur in rural areas, where birthrates are higher, but in urban areas or cities. Cities have always been the engines for urbanization as well as economic growth. There are very strong direct and indirect interrelationships between urbanization and growth.

The regions where urbanization is occurring most precipitously are Asia and Africa. The combined urbanization ratio for only Asia, including Japan, China, South Korea, Taiwan, Hong Kong, Singapore, Thailand, Malaysia, Indonesia, the Philippines and Vietnam, has climbed from 15.3% in 1950 to 48.8% in 2010. The ratio is expected to exceed 50% within five years, and to reach 74.4% by 2050.

The two factors behind this brisk increase in the urban populace and formation of oodles of megacities in Asia and Africa are the increase in birth rate along with decrease in death rate and rural-urban migration. The *raison d'être* behind these two factors are numerous even though overall birthrate of the world has decreased and will keep on decreasing but the population of megacities will consistently increase.

Economic Reasons

The major motivations are financial and commercial which push rural populace to migrate to have a better quality of life, inclusive yet not limited to long-term occupation and the availability of industrial, business and trade opportunities that can recuperate their by and large paradigm of living. In the Asian and African megacities such as Jakarta, Delhi, Shanghai and Lagos, people find extensive and lucrative opportunities for employment as well as for entrepreneurship. Take the example of Jakarta, which being highest populated and the capital of Indonesia, contributes to 17% of Indonesia's economy, had an increase of 6.22% in its economy in 2017 which was higher than the national growth in the economy. This due to the fact that having a massive labor force has attracted a lot of foreign investors to the megacity hence increasing the economic opportunities provided to the population residing and migrating to Jakarta and consequently be a magnet for be a focus for inviting more rural people to the capital. If Jakarta was considered to be an autonomous country, GDP per capita of Jakarta in 2017 was estimated at USD 46,633, a flabbergasting figure that GDP per capita of Jakarta is above the GDP per capita of France, United Kingdom, Japan, and Canada, according to the statistics taken from World Bank.

The most populous city of Nigeria and also of Africa, Lagos, contributes 30% in Nigeria's economy and its output in 2017 was \$136 billion which is more than a third of Nigeria's gross domestic product. The city's rate of unemployment is lower than the rest of Nigeria. The rate was 9.9% in 2015 as compared to 22% in the rest of Nigeria. The Lagos economy is significantly bigger than that of the whole of Kenya, east Africa's most dynamic country, with a nominal per capita income of more than \$5,000, more than double the Nigerian average. This is due to the fact that Lagos has a massive potential to bring and incorporate skilled labor force and is financially viable, generating over 75% of its revenues independent of federal grants derived from oil revenues.

The population of Lagos was just 1.4 million in 1970 and due to intense migration of thousands of people to Lagos has increased to 21 million in 2017 and it is also one of the most densely populated city in the world. But the city is the center of most of the country's manufacturing and home to a pan-African banking industry as well as a thriving music, fashion and film scene that reverberates around the continent and it has been doing a great job for providing people enhanced employment opportunities in secondary and tertiary sector of industry with 19% and 78% people working in both sectors respectively.

Social and Cultural Reasons

Other significant reasons behind such mammoth rate of migration to megacities are social needs of people which include a need of better education and health services. The need to have an improved literacy rate and a reduction in mortality rate especially of infants and adolescents. The covet of having a better place of living with rudimentary yet indispensable amenities nearby if not at a walking distance and also the want of five-day work week in contrast to working seven days on the farms, or the availability of all ilk of entertainment facilities also attracts rural population.

In Nigeria, when it comes to matters of health, Lagos is listed among States in the "high end" class because of the high number and variety of general and specialist health facilities on offer. Statistics from the Healthcare Facilities Monitoring and Accreditation Agency, HEFAMAA, shows that in Lagos, there are 26 registered General Hospitals, 256 public healthcare centers, 2, 886 private hospitals or specialist clinics and laboratories or diagnostic centers in addition to an estimated 160 tradomedical centers. Moreover, Things are certainly looking up for Lagosians when it comes to health matters as the level of preparedness, service and attention to detail at public health facilities is quite commendable in Lagos.

According to 2017 statistics of WHO, the infant mortality rate of Nigeria being the third highest in the world is still lower than Pakistan and India. These are India (24 percent), Pakistan (10 percent), and Nigeria (9 percent). The infant mortality rate of Lagos is 24.5 per 1000 births which is lowest in Nigeria while the average infant mortality rate of entire Nigeria is 69.8 per 1000 births.

Other megacities like Shanghai, Jakarta, and Delhi 4.2 has 5.5, 22 and 18 infant mortality rate as compared to their respective countries i.e. China having 12 IMR, Indonesia with 20 IMR and India with 37 IMR. The infant mortality rate of megacities of developing countries is 44, 77, 35 and 26 in Cairo, Lahore, Dhaka and Mumbai respectively.

Analogous statistics can be found in illustration of education and owning of a dwelling unit and it can be inferred from this that the individual reason behind the continuous arrival of flocks of migrants, not only from the neighboring cities of these megacities but also foreign migration from poor and least developed countries, is better availability of basic life facilities with healthcare opportunities and sounder economic opportunities being the leading factors.

Impacts of growth of megacities and challenges faced by megacities

The overall population increase of the globe is at halt now and will begin to decrease in a couple of decades but the population increase in the megacities will continue to rise leaving megacities to deal with teething troubles associated with the provision of proper and required infrastructure and basic facilities to ever increasing population. The point is that cities are getting larger and growing swiftly, particularly in Asia and Africa, but that does not make them better or sustainable. Megacities such as Kolkata, Mumbai, Manila, Sao Paolo, Lagos and Mexico City - all are among the top 10 most populous cities in the world - present a great opportunity for large corporate development firms who pledge to fix their problems with ultra-expensive hardware, which is nothing but a pipe dream.

For all intents and purposes, megacities in developing countries should be seen for what they are: a heartrending and appalling replaying of the worst aspects of the mass urbanization that occurred in 20th century in the West which resulted in mass of slum population living under worse than poor settings. Even with the rugged economic growth, these megacities are not necessarily becoming better places to live. Take the instance of Mumbai where in 1971, slum dwellers accounted for one in six Mumbai dwellers; now they constitute an absolute majority. Inflated real estate prices push even fairly decently employed people into slums. A modest one-bedroom apartment in the Mumbai suburbs averages around 10,000 rupees a month, double the average worker's monthly income.

Moreover, built environments of urban regions are often poorly equipped to provide stable and sound sources of food for sustaining massive populations. In low-income and middle-income megacities, such as Dhaka, Bangladesh, food shortages and poverty result in the increase of food prices and also malnutrition due to economic inability of people to buy apt and healthy food. In addition, many megacity denizens exhibit a shift towards more deskbound lifestyles and a western diet, leading towards increased body-mass indices (BMIs) and instances of obesity and diabetes.

Megacities are also linked with amplified occurrences of violent victimization and gender-based violence. Urban women, in many instances are the victims of violence and they are at a higher risk of contracting sexually transmitted infections and HIV than their rural counterparts. The increased cases of violence in megacities can also contribute to deteriorating mental health within the population. A mental-health survey of the residents in the metropolitan area of São Paulo, Brazil, found a higher prevalence of mental disorders than that found with similar surveys of residents in non-megacities.

Furthermore, when talking about environment, megacities are a hotspot for higher greenhouse gas emissions that continuously have a devastating impact on the wider environment. Air pollution has a substantial effect on the wellbeing of people worldwide. 92% of the global population is exposed to higher-than-recommended concentrations of PM 2.5, resulting in 3 million premature deaths annually. PM 2.5 exposure is particularly high in megacities and can cause fatal diseases including stroke, chronic obstructive pulmonary disease, and lung cancer.

Another atmospheric phenomenon is called the urban-heat-island effect which megacities are infested with as well, as they are often being 5-11°C warmer than surrounding areas especially the rural regions. It is associated with increased incidences of dehydration, heat stroke, and cardiovascular and respiratory diseases. These higher temperatures generally lead to increased demand and use of cooling systems that release hydrofluorocarbons and other greenhouse gases into the atmosphere, further exacerbating the heat-island effect and also unimarginably ruining the overall environment.

Other challenges that are also associated with urban-built environments include overcrowding, immense traffic congestions, a scarcity of open space, poor sanitation, and insufficient groundwater management.

III. CONCLUSION

It is becoming impossible to stop the process of urbanization in the continents of Asia and Africa which have grown from a few hundred million in 1950 to 3 billion in 2018. Together, India, China and Nigeria will account for 35 percent of the projected growth of the world's urban population between 2018 and 2050. It is projected that India will have added 416 million urban dwellers, China 255 million and Nigeria 189 million by 2050 in the existing urban population. Asia and Africa are the home of 15 out of 20 megacities in the world and the number is expected to rise up with time.

This rapid pace of formation of megacities and urbanization has been due to several factors including the desire of earning better, the dream of owning a house, the need of having medicine for problems ranging from a simple fever to cancer, the yearning of attaining better and higher education. On one hand, these factors have contributed to major and continuous foreign investment and provided multitude of opportunities to enhance commercialization but there is another and gruesome side of the picture as well. The increase in number of megacities raises concerns over the demand on resources, infrastructure and services in such sizable and dense populations. All the developing Asian and African countries face challenges in meeting the needs of their growing urban populations, including for housing, transportation, clean water and sanitation, sustainable energy systems and other infrastructure, as well as for employment as people in these megacities are earning less than what the population of develop countries earns but the rate of services never seems to stop increasing.

The situation is expected to get worse as the economies of the developing countries of these two continents are not strong enough to provide the necessary infrastructure so integrated policies along with strengthened social structure to improve the lives of both megacity and non-megacity dwellers are necessitated.

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