Reviewing City Limits: The Risk of Rapid Urbanizationin Davao City

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Abstract:

Urbanization is an inevitable trend that cities are becoming exposed and vulnerable to the effects of a wide range of disasters. This study used secondary data analysis and obtained from varieties information available in the internet, journal, online news and other electronic information forms.

The paper review revealed that the risk on the rapid urbanization is seemingly identifiable these days as such it is recognizable this includes rapid population growth in urban areas where the population most came from the rural areas to look for a greener pasture. Second is in the infrastructure which the issues emergence were electric power supply and distribution, water supply and sewages, communication infrastructure and transportation infrastructure which as state also that overpopulation is one major cause of traffic in urban areas. Third, urban health which compromised the status of urban poor that they are the most affected population on the urbanization as shows they could experience lack of social support, discrimination and isolation. Revealing also on the environmental risk that rapid urbanisation can contribute poor air quality and availability of water. It was also identified the risk on climate change as cities consume 78 percent of the world's energy and produce more than 60% of all carbon dioxide and significant amounts of other greenhouse gas emissions, mainly through energy generation, vehicles, industry and biomass use and lastly social instability was identified for rapid and unplanned urbanization can also quickly lead to urban violence and social unrest including widening inequalities. Thus, the researchers sees spatial development initiatives have been threw around strategic transport routes, linking ports to mining areas, stimulating industrial and commercial investment in the related urban hubs and the emergence of issues has been perceives on the on-going urbanization in Davao City.

Above all, the researchers recommended on adopting an infrastructure guided development policy that can be a potent, strategic tool for managing uncontrolled urban growth.

Keywords ─ **Climate Change, Health, Infrastructure, Rapid Urbanization, Rapid Growth Population.**

INTRODUCTION

Nowadays, over half of the world's population live in the city and according to United Nations, 66% of the total world's population are expected to live in cities by the year 2050 (UN, 2014). Due to rapid population growth and urbanization, cities are becoming more exposed and vulnerable to the effects of a wide spectrum of disasters, ranging from acute shocks such as floods and earthquakes to chronic stresses such as the ones caused by climate change or social dynamics (Rockefeller Foundation & ARUP, 2014).

The interpretation of city or urban and region vary across countries and societies, but these can be thought of as boundaries that indicate a particular place or area. Where, cities may be taken as areas in which large numbers of people gather or reside, resulting to a very high density or as an economic, political and cultural effects and the focal point of major traffic routes.

Urban areas in the Philippines are the "beacons of opportunity" (Webster Corpuz and Pablo 2003) and also suggested that urban areas are the engines of the country's growth, accounting for a large proportion of the economic output (about 75 percent) and the massive and continuing rural-urban migration flows can be obviously be attributed to the fact that urban areas offer opportunities for the rural poor. Environmental externalities mainly generated from population increase, rapid urbanization, high private vehicle dependency, deregulated industrialization and mass livestock production have serious concern for the upcoming of our wellbeing and even in or existence. However, too much concentration and expansion in the city has been done today just to cater the populace and it is proportioned anymore due to rapid growth of population.

OBJECTIVE OF THE STUDY

The objective of the study is to review factsfrom different international, national and local publishers which promulgate the rapid urban development in developed countries worldwide in which that could be a guide in urban expansion of Davao City, Philippines. This datashowcases the collaborative results of plans and programs from different government and non-government agencies just to derive for a good urban planning despite of unprepared and unplanned expansion of the City of Davao.

REVIEW OF LITERATURE

Urbanization is by no means bad *per se*.(Scott, J., 2015) as it brings important benefits for economic, cultural and societal development more than half of the world's population lives in urban areas. The world's urban areas are highly varied, but many cities and towns are facing problems such as a lack of jobs, homelessness and expanding squatter settlements, inadequate services and infrastructure, poor health and educational services and high levels of pollution.

According to (Kydd and Doward, 2001) rural areas are more integrated into world economy, as a result both of liberalisation and improved infrastructure. World-wide trade has grown twice as fast as GDP for several decades, and the rate seems to be increasing. Rural producers, including small scale producers are increasingly involved in global commodity chains (Kydd and Doward, 2001).

Rapid and uncontrolled urbanization once feature by(Dumlao, T. A., 2014) will most likely lead to a further decline in the quality of life, greater environmental degradation, acceleration of greenhouse gas emissions, social stress and political turbulence in cities such as Manila in the Philippines.

The estimation of Davao City's population is also expected to rise to 1.9 million according to 2015 census conducted by the Philippine Statistics Authority (PSA) and more people work and live in the cities, while it is also the destination of those who are capable to study in a good school.

Rapid Urbanization

Conferring to (Palanivel, T., 2017) that on-going urbanisation has the potential to improve the well-being of societies which generate more than 80 percept of Global Domestic Product (GDP).

The conversion of farmland of the local government land-sales (Hillman,B.,2013) boom of Zhongdian, China residential and commercial use also presented local officials with unprecedented opportunities for self-enrichment. An old town's refurbished market square, the neighbourhood committee organises community dances each evening. Locals also benefited from the influx of products and services as the town expanded. The new restaurants, bars, and supermarkets were especially popular. In short, although rapid urbanisation has created problems such as pollution and unsightly construction, Zhongdian's transformation into a small city has been mostly a boon for the locals.

Rapid Population Growth

According to (UN, May 2018) urban population has grown rapidly from 751 million in 1950 to 4.2 billion in 2018. The rapid growth of the world's population over the past one hundred years results from a difference between the rate of birth and the rate of death. (Kinder,C., 1998). The human population will increase by 1 billion people in the next decade. This is like adding the whole population of China to the world's population. However, despite of lower level of urbanization (UN, May 2018) Asia has the 54% of the world's urban population.

Human settlement conditions in many parts of the world, particularly the developing countries, are deteriorating. Natural hazards now occur right at our door steps and the frequency of occurrence and magnitude of damages that they cause is seen to be on an increase especially in poor urban communities (Kinder, C., 1998).The natural environment is deteriorating at a rate faster than the rate at which natural occurring processes and resources available within the environment can replenish. If left unabated, landslides, flooding, sporadic fire outbreaks, collapse of major road axis, houses and bridges have the potential of plunging urban centre's into an abyss of environmental chaos.

Overpopulation also leads to traffic congestion: congestion has become another big problem. it makes people life inconvenient. The situation where more and more migrant workers go to the city to find jobs, leads to the shortage of labour force in rural areas, where the output of our agricultural products is in decrease

Infrastructure

The quality of a city's infrastructure is vital to the residents' quality of life, social inclusion and economic opportunities. It also determines the city's resilience to a number of global risks, in particular environmental and social and health-related risks. The availability and quality of infrastructure are at the core of many of the challenges faced by rapidly urbanizing cities in developing countries. (WEF data.)

- Infrastructure investments in most developed economies are insufficient to maintain the quality of infrastructure (WEF and OECD data): Transportation infrastructure (roads, railroad, airports, ports)
- Electric power supply and distribution
- Water supply and sewage

- Communications infrastructure

As cities expand rapidly, there is a risk that infrastructure will not keep pace with their growth or the increased expectations of their populations. The OECD estimates that governments will have to spend approximately USD 71 trillion by 2030 to provide adequate global infrastructure for electricity, road and rail transport, telecommunications, and water.

Urban Health

The impact of urbanization on mental health in South-Asian countries needs to be examined by these developing economies (McMichael, A.J. (2013) and a significant proportion of population still living in poverty in line particularly vulnerable and tend to have a higher burden disease with an already compromised primary health care delivery system (Trivedi, K.J. et.al., 2008).

Throughout the 20th century, the health of city dwellers increasingly benefited from better access to education and healthcare, better living conditions, and targeted public-health interventions. In advanced economics, emergency medical care can be accessed within hours and advanced facilities for longer term treatments are readily accessible (Scott, J., 2015).

It is striking that, today, almost 700 million urban dwellers lack adequate sanitation. The problem is particularly acute in sub-Saharan Africa and south-central Asia, where 62 percent and 43 percent, respectively, of the urban population live in slums and are faced with unacceptable levels of risk to illnesses, worm infections, cholera and diarrhea.

According to the World Health Organizations (WHO) that in the Philippines about 60% of the total population lives in urban settings and about 28% live in squatter and slum dwellings. Urban health is a pressing concern, especially for the poor, they are socially excluded and face challenger such as lack of social support systems; isolation unsafe living and working conditions; discrimination; isolation, powerlessness; and inability to pay goods and services. Urban poor Suffers from unfavourable living conditions, and often times cannot afford the prohibitive high cost of health services and worse they will face illnesses and premature deaths from unpreventable deaths, due to lack of safe drinking water, improper sanitation, health facilities, safety, security and health information. Urban poor also expose to social and economic determinants of health status and other outcomes.

Climate Change

The UN HABITAT (2012) has been tackling about urbanization and climate changes are converging in dangerous ways. Cities are major contributors to climate change although they cover less than 2 percent of the earth's surface, cities consume 78 percent of the world's energy and produce more than 60% of all carbon dioxide and significant amounts of other greenhouse gas emissions, mainly through energy generation, vehicles, industry and biomass use. Hundreds of millions of people in urban areas across the world will be affected by rising sea levels, increased precipitation, inland floods, more frequent and stronger cyclones and storms and periods of more extreme heat and cold.

Rapid, inadequate and poorly planned expansion of cities can also leave urban populations highly exposed to the effects of climate change (Scott, J., 2015). The migration from rural areas to cities is at least partially driven by the increasing prevalence of extreme weather; however cities tend to be located near the sea or natural waterways, where they are at more risk of flooding. Fifteen of the world's twenty

megacities – those with over 10 million inhabitants – are located in coastal zones threatened by sea-level rise and storm surges.

Environmental Risk

The National Geographic posted (2018) that urban threats includes poor air and water quality, insufficient water availability, waste disposal problems and high energy consumption are exacerbated by the increasing population density and demands of urban environments.

1. Intensive urban growth can lead to greater poverty, with local governments unable to provide services for all people.
2. Concentrated energy use leads to greater air pollution with significant impact on human health.
3. Automobile exhaust producers elevated lead levels in urban air.
4. Large volumes of uncollected waste create multiple health hazards.
5. Urban development can magnify the risk of environmental hazards such as flash flooding.
 6. Pollution and physical barriers to root growth promote loss of urban tree cover
7. Animal population are inhibited by toxic substances, vehicles, and the loss of habitat and food sources

Social Instability

Cities' capacity to generate prosperity already largely determines global growth: just over half the world's population lives in cities, but they generate more than 80% of global GDP.The (UN, May 2018) says ultimately, new migrants in cities are expected to create greater economic value than they would have in the countryside.

Rapid and unplanned urbanization can also quickly lead to urban violence and social unrest. Widening inequalities also tend to be more starkly visible in urban than rural areas. The combination of inequality, competition for scarce resources such as land, impunity from the law and weak city governance increases the risk of violence and potential breakdowns in law and order. Some cities in developing countries are already extremely dangerous, for example San Pedro Sula in Honduras suffered 169 killings per 100,000 residents in 2011.

Urbanization can also create connected and cascading effects. For example, high population density fuels property bubbles while a shortage of affordable housing contributes to social exclusion, with this combination threatening to destabilize the wider economy and increase social instability.

Summary

Ultimately, urbanization creates opportunities but also exacerbates risks, and the speed at which it is happening challenges our capacity to plan and adapt. This is particularly true in developing economies. For rapid urbanization to provide opportunities to all, carefully considered urban planning and good governance with effective regulatory frameworks are required.

The inability of governments to provide appropriate infrastructure and public services is at the core of many urban challenges in developing countries.

What is more, as the world continues to urbanize, power will increasingly be concentrated in cities. This power ranging from economic to social not only makes cities the centre of gravity, but offers greater scope to find practical solutions to the most pressing challenges. Indeed, many observers and

organizations are now focusing on cities and the connections between them rather than directing their attention at the national level. The strength of city-level institutions in addition to national institutions their capacity to be flexible, innovative and dynamic, and effectively involve multiple stakeholders in governance – will largely determine whether urbanization makes the world more resilient or more vulnerable in the face of global risks.

What are the issues?

Urban inequity and segregation are also a token of global inequity (UNESCO, 2016). While more and more citizens want to focus on services and hi-tech, the dirty work of the world remains to be done in the poorest cities with the most meagre resources to protect their citizen and the lest developed countries are predicted to have the fastest rate of urbanization, almost 4 percent in the 2010-2020.

According to (ODI, 2011) rural risks and vulnerability**:** the rural poor face new risks due to increasing natural disasters and rapid economic change. External support for risk-mitigation and coping strategies is generally insufficient. Public and private roles in supporting insurance and risk-coping need to be strengthened, which in turn depends on the fiscal burden being addressed.

The UN HABITAT 3.6.1 insisted that weaknesses and constraints affecting CDP and CLUP implementation: despite the vast and legal mandates vested by the LGC to local governments many of them are weak at implementing their CDP's and CLUP, contributing factor cited are inadequate resources and lack of technical competencies, exacerbated by inconsistency and contravening policies of some national agencies. The weak synchronization in the implementation of national programed and local plans is often discussed as another reason.

UN HABITAT III: 3.6.2 Land market inefficiencies and the prolonged reform process, land regulation in the Philippines remains fragmented and out dated with formal judicial proceeding required to effect even the most simple property transaction. This makes the transportation of free-hold- the most commonly known and preferred type of secure tenure- a lengthy, complex and costly process which disadvantages the urban poor the most.

TOWARDS SUSTAINABLE DEVELOPMENT: UN HABITAT –UNEP – today three billion people half of the world's population live in cities. One billion residents live in slums, condemned to a life of poverty and ill health; they are exposed to air pollution and are denied to clean air, basic sanitation and adequate shelter. There can be no social and economic development in cities without a healthy environment especially when it concerns the urban poor. Environment and poverty are interdependent. The urban environment is a source to reduce poverty and health conditions while poverty reduction can have positive effects on the environment.

What are the challenges?

According to UN HABITAT (III.3) future challenges and issues that can be found by a new urban agenda, where:

First, a globalizing economy and urbanization requires cities to be more competitive: a well formulated city development plan and comprehensive land use plan and DRRM and supported by an integrated transport infrastructure plan can guide cities towards their desire urban growth path resulting in the development of inclusive communities;

Second, boosting local capacity for strategic urban planning and (UNISDR, 2018) incorporating climate change adaption and disaster risk reduction and management. The Department of Interior and Local Government (DILG) and Housing Land Use Regulatory Board (HLURB)continuously update and

revised their policies and guidelines for formulating CPD's and CLUP's including detailed guidelines for specific areas as the new urban agenda needs to promote mechanisms for how local governments can promote competitiveness, environmental reliance and social inclusiveness.

Third, managing urban form and design through effective regional planning and development. To guide urban development and control the current sprawl the new urban agenda can stimulate growth in the secondary cities to redirect population movements and economic development to this area, easing the burden on major urban centres.

Stipulated by (Yigitcanlar et al.), prosperity and environmental sustainability of cities are inextricably linked; consequently, cities can only maintain their prosperity when environmental and social objectives are fully integrated with economic goals and the Achieving Sustainable Development Programme (ASUD) mentions that empirical knowledge points to the fact that spontaneous and unplanned urbanization processes often result in slum formation, widening inequalities, lack of access to urban basic services, poor connectivity and congestion are just few unwanted consequences of this phenomenon.

Conclusion

The City of Davaoin the land of Mindanao becomes highly urbanized, its growth sprawled across different barangays tends to form several independent points rather than from one Central Business District (Multiple Nuclei Model, Ullman and Harris, 1945). While this modern growth is inevitable, there are realities and consequences we need to address when more agricultural lands will be converted and overrun with this development.

The Davao City's development is gradually making its way to suburban areas. The purpose of this progress is to decongest the city, as we can see malls are in suburbs and even are slowly appearing in agricultural areas. However, the concerned is that there may come time wherein we might have to import even our staple food from other countries. As we notice, agricultural lands are being converted into housing and villages, large farms becoming less; live stocks farms are expected to rise. With this, rice paddles and other farmlands might be gone soon and a devastating outcome of this change is the impact to environment when not mitigated.Modernization is good but we must also not forget that both can be achieved.

Recommendation

The thrust of the national transportation and infrastructure plans should likewise oriented to include secondary cities.(Webster, et.al., 2003). Adopting an infrastructure guided development policy can be a potent, strategic tool for managing uncontrolled urban growth. In addition, the shape of the subsequent development in the peri-urban areas manifesting urban sprawl has to be plan carefully (Sha, J., 2015). Plans should consider the transport, communication, housing needs of all including the vulnerable and disadvantage groups as well as associated investment cost that go with them.

From a legal perspective there is a need to legislate the separation of the right ownership of land from the right, to develop and occupy the land. Tools such as transfer of rights and land value capture should be explored in order to increase the supply of urban land especially for socialized housing and public service.

The ASUD Programme proposes a proactive yet simplified urban planning approach to guide future population growth, mainly focusing in developing countries, which is innovative and practical to match the phenomenal urbanization trends. It can produce better living conditions and more sustainable

urban patterns, increase wealth and inclusion and provide a long-term incentive to local development. Where they said, a good planned city extension needs to consider the following:

1. Public space layout minimizes transport needs and service delivery costs optimizing the use of land.
2. Street pattern allows adequate mobility and enables space for civic and economic activities.
3. Open spaces provide areas for recreation and social interaction
4. Block typology allows private investment in defined and serviced areas.

The Achieving Sustainable Development Programme (ASUD) represents UN-Habitat, that a initial knowledge at country level to address the growth process from new paradigm is that the updating of the Davao Region Physical Framework Plan, 2015-2045 came at an opportunity when formidable challenges in reducing not only on disaster risk but also adopting to climate change need to be strategically and spatially addresses to ensure sustainable development in the Davao Region. This is in collaboration with RLUC XI members and the Technical Working Group of Land use and Experts.

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