

Cities without Sprawl: A Utopian Concept

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Abstract:

Urban sprawl refers to the extent of urbanization, which is a global phenomenon mainly driven by population growth and large scale migration. Every individual is trying to get better opportunities available in the urban areas. Unfortunately, the access is limited and bounded to a particular area which is a resultant from the transformation of the society. In this way, the majority of the dwellers in the country wish to move from one place to another place for getting hold of the limited available access and opportunities. The move has generated various problems and has to overcome by having broad perspective. In a developing country like India, where the population is over 1.2 billion, urban sprawl is taking its toll on the natural resources at an alarming pace. Therefore, there is a dire need to change the transformation process or urbanization process and its progress in different perspective across the world. Thus, this paper tries to bring the existing situation in the public domain for comprehensiveness discussion and resolution of the problem in the nick of time.

Introduction:

The study of urbanization has been the topic of interest to a wide range of experts. The multidisciplinary scope of the theme invokes the interest from ecologists, to urban planners and civil engineers, to the sociologists, to the administrators and policy makers, and finally the common man. This is because of the large amount of activities and processes that take place in the urban ecosystems everyday. The civilizations began to flourish when early humans started to settle on the banks of the rivers. The humans were able to invent the wheel, and light fire, created settlements and started to make adjustment with nature and maintained to survive.

The unprecedented population growth and migration led to urbanization. More towns and cities bloomed with a change in the land use along existing landscapes and ecosystems found on earth. Today, humans can survive under a wide range of climatic and environmental conditions. This has further led to humans contributing the urban centers at almost every corner of the earth. These urban ecosystems are a consequence of urbanization through rapid industrial centers and flourishing up of suburban colonies, also became the heart of economic, social, cultural, and political activities.

Urban planning evolved throughout the twentieth century, leading to a great variety of urban forms that often had little regard to their impacts upon the environment. In the 'developed world' this disregard is most evident in the rise of 'urban sprawl' as the primary form of urban development. 'Urban Sprawl' has come under increased criticism, not only because of its negative environmental impacts, but also social and economic effects. This change has occurred in conjunction with an increasing awareness of human impacts on the environment, and the emergence of 'sustainability' as an important concept of international significance. As a result, ideas of sustainability began to emerge in the urban planning literature.

Analysis and Discussion

What is Urban Sprawl?

Urban sprawl may be defined as the scattering of new development on isolated tracts, separated from other areas by vacant land (Lata, et al. 2001). It has also been described as leapfrog development (Jothimani, 1977; Torrens and Albert, 2000). Urban sprawl means different things to different people, and this dispersion of views can be confusing. Here, the term urban sprawl will refer to the excessive spatial growth of cities. The key word in this definition is excessive.

Urbanization and Urban Sprawl:

In India, with an extraordinary population growth and migration, an increased urban population and urbanization is unexpected. More towns and cities are up-coming with a change in the land use along the highways and in the immediate surrounding area of the city. This scattered development outside the urban core and transforming village centers along highways is defined as sprawl. Urbanization is a form of metropolitan growth that is a response to often bewildering set of economic, social, and political forces and to the physical geography of an area. Some of the causes of the sprawl include - population growth, economy, patterns of transportation initiatives like the structure of roads and the condition of infrastructure. The direct implication of such urban sprawl is the change in land use and green cover of the region.

Causes of Urban Sprawl:

“The causes of urban growth are quite similar to those of sprawl. In most

of the instances they cannot be discriminated since urban growth and sprawl are highly interlinked (B. Bhatta. 2012)”. However, it is important to realize that urban growth may be observed without the occurrence of sprawl, but sprawl must induce growth in urban areas.

Some of the causes, for example population growth, may result in coordinated compact growth or uncoordinated sprawled growth. Whether the growth is good or bad depends on its pattern, process, and consequences. There are also some of the causes that are especially responsible for sprawl; they cannot result in a compact neighborhood. For example, country-side living desire—some people prefer to live in the rural countryside; this tendency always results in sprawl. The table below lists the causes of urban growth, and shows which of them may result in compact growth and which in sprawled growth.

Causes of urban growth, which may result in compact and/or sprawled growth

Causes of urban growth	Compact growth	Sprawled growth
Population growth	•	•
Independence of decision		•
Economic growth	•	•
Industrialisation	•	•
Speculation		•
Expectations of land appreciation		•
Land hunger attitude		•
Legal disputes		•
Physical geography		•
Development and property tax		•
Living and property cost		•
Lack of affordable housing		•
Demand of more living space	•	•
Public regulation		•
Transportation	•	•
Road width		•
Single-family home		•
Nucleus family	•	•
Credit and capital market		•
Government developmental policies		•
Lack of proper planning policies		•
Failure to enforce planning policies		•
Country-living desire		•
Housing investment		•
Large lot size		•

(Source: B. Bhatta, Analysis of Urban Growth and Sprawl)

Population Growth

The first and foremost reason of urban sprawl is increasing in urban population. The growth of urban areas is the result of two population growth factors: (1) natural increase in population, and (2) migration to urban areas. Natural population growth results from excess of

births over deaths. Migration is defined as the relocation of an individual, household or group to a new location outside the community of origin. In the recent time, the movement of people from rural to urban areas within the country (internal migration) is most significant. Many other factors responsible for population growth, are

International migration, refugees and undocumented migrants etc.

Economic Growth

Expansion of the economic base (such as higher per capita income, increase in the number of working persons) creates demand for new housing or more housing space for individuals (Boyce 1963; Giuliano 1989; Bhatta 2009). This also encourages many developers for rapid construction of new houses. Rapid development of housing and other urban infrastructure often produces a variety of discontinuous unrelated developments. Rapid development is also blamed owing to its lack of time for proper planning and coordination among developers, governments and users.

Expectations of Land Appreciation

Expectations of land appreciation at the urban fringe cause some landowners to withhold land from the market (Lessinger 1962; Ottensmann 1977). Expectations may vary, however, from landowner to landowner, as does the suitability of land for development. The result is a discontinuous pattern of development. The higher the rate of growth in a metropolitan area, the greater the expectations of land appreciation; as a result, more land will be withheld for future development.

Transportation

Transportation routes open the accessibility of the city to the countryside and responsible for linear type of development. The construction of expressways and highways cause both congestion in the city and rapid outgrowth (Harvey and Clark 1965). Roads are commonly considered in modelling and forecasting urban sprawl (Cheng and Maseru 2003; Yang and Lo 2003), as they are a major category of infrastructure which helps in the creation and existence of the sprawl. At the same time it is important to realize that transportation facilities are essential to cities and its neighborhoods. Development of the urban economy and thereby job opportunities are directly dependent on the transportation facilities. Therefore, transportation facilities can never be suppressed; rather initiatives to reduce or stop linear branch development by means of government policies and regulations should be practiced.

Physical Geography

Sometimes the sprawl is caused because of unsuitable physical terrain (such as rugged terrain, wetlands, mineral lands, or water bodies, etc.) for continuous development. This often creates leap-frog development sprawl (Harvey and Clark 1965; Barnes et al. 2001). Important to mention that in many instances these problems cannot be overcome and therefore should be overlooked.

Unsuitable physical terrain prohibits continuous development



(Source : B. Bhatta, Analysis of Urban Growth and Sprawl)

Government Developmental Policies

Restrictive land-use policies in one political jurisdiction may lead developers to 'jump' to one that is favorably disposed toward development or is less able to prevent or control it (Barnes et al. 2001). Often dissimilarities in development regulations, land-use policies, and urban services among the neighboring municipalities (or local governments) may cause discontinuous development.

Lack of Proper Planning Policies

Lack of consistent and well-experimented planning policies may also cause urban sprawl. A city may be planned with exclusive zoning policies which means separation of residential, commercial, industrial, office, institutional, or other land uses. Completely separate zoning created isolated islands of each type of development. In most cases, the automobile will become a requirement for transportation between vast fields of residentially zoned housing and the separate commercial and office strips, creating issues of automobile

dependency and more fossil fuel consumption and thereby pollution. A mixed land-use policy is preferred to fight against sprawl.

Failure to Enforce Planning Policies

Having a proper planning policy is not enough, rather its successful implementation and enforcement is more important. Unsuccessful enforcement of land-use plans is one of the reasons of sprawl in developing countries, since the enforcement is often corrupt and intermittent in these countries.

Consequences of Urban Sprawl:

Consequences of urban sprawl or growth may have both positive and negative impacts; however, negative impacts are generally more highlighted because this growth is often uncontrolled or uncoordinated and therefore the negative impacts override the positive sides. Positive implications of urban growth include higher economic production, opportunities for the underemployed and unemployed, better life because of better opportunities and better services, and better lifestyles. Urban growth can extend better basic services (such as transportation, sewer, and water) as well as other specialist services (such as better educational facilities, health care facilities) to more peoples. However, in many instances, urban growth is

uncontrolled and uncoordinated resulting in sprawl.

Developed and developing countries of the world differ not only in the number of people living in cities, but also in the way in which urbanization is occurring. In many megacities of the developing world, urban sprawl is a common problem and a substantial amount of city dwellers live in slums within the city or in the urban periphery in poverty and a degraded environment (India Infrastructure Report 2004). These high-density settlements are often highly polluted owing to the lack of urban services, including running water, sewer, trash pickup, electricity or paved roads. Nevertheless, cities provide poor people with more opportunities and greater access to resources to transform their situation than rural areas.

Inflated Infrastructure and Public Service Costs

Sprawl is usually accepted as being inordinately costly to its occupants and to society (Harvey and Clark 1965). Sprawl is blamed due to its environmental cost and economic cost (Buiton 1994). Cities have experienced an increase in demand for public services and for the maintenance and improvement of urban infrastructures (Barnes et al. 2001) such as fire-service stations, police stations, schools, hospitals, roads, water mains, and sewers in the countryside. Sprawl requires more infrastructures, since it takes more roads, pipes, cables and

wires to service these low-density areas compared to more compact developments with the same number of households. Other services such as waste and recyclables collection, mail delivery and street cleaning are more costly in low-density developments, while public transit is impractical because the rider density needed to support a transit service is not there.

Energy Inefficiency

Higher densities mean shorter trips, but more congestion. Newman and Kenworthy (1988) find that the former effect overwhelms the latter. Even though vehicles are not as fuel-efficient in dense areas owing to traffic congestion, fuel consumption per capita is still substantially less in dense areas because people drive so much less. Urban sprawl causes more travel from the suburbs to the central city and thus more fuel consumption. With electricity, there is a cost associated with extending and maintaining the service delivery system, as with water, but there also is a loss in the commodity being delivered. The farther from the generator, the more power is lost in distribution.

Impacts on Wildlife and Ecosystem

In areas where sprawl is not controlled, the concentration of human presence in residential and industrial settings may lead to an alteration of ecosystems patterns and processes (Grimm 2000). Development associated with sprawl, not only decreases the amount of forest area, farmland,

woodland, and open space, but also breaks up what is left into small chunks that disrupt ecosystems and fragment habitats (Lassila 1999; O'Connor 1990). Roads, power lines, subdivisions and pipelines often cut through natural areas, thereby fragmenting wildlife habitat and altering wildlife movement patterns.

Loss of Farmland

Urbanization generally, and sprawl in particular, contributes to loss of farmland and open spaces (Zhang 2007). Urban growth, only in the United States, is predicted to consume 7 million acres of farmland, 7 million acres of environmentally sensitive land, and 5 million acres of other lands during the period 2000–2025 (Burchell et al. 2005). Provincial taxes and land-use policies combine to create financial pressures that propel farmers to sell land to developers and builders. Low prices of farm commodity in global markets often mean it is far more profitable in the long term for farmers to sell their land than to continue farming it. In addition, thousands of relatively small parcels of farmland are being severed off to create rural residential development. Collectively, these small lots contribute to the loss of hundreds of hectares of productive agricultural land per year.

Solutions to Sprawl – Examples:

“More and more cities are developing plans for smart growth,

which is the efficient use and conservation of land and other resources". Most often this involves encouraging development close to or inside the limits of existing cities. Good public transportation systems help to make smart growth possible by cutting down on auto traffic.

PORTLAND'S GROWTH BOUNDARY:

In 1979, the city of Portland, Oregon, drew a line around itself to create an urban growth boundary. The building was allowed inside the boundary. The surrounding green space was off limits to developers. This decision caused controversy, but has paid off. Portland has continued urban sprawl. (Source - www.pearlandisd.org)

VANCOUVER'S PLAN FOR SUSTAINABLE COMMUNITIES:

Since 1961, Vancouver, British Columbia, has seen the population of its metropolitan area double. The growth of outlying suburbs often took place at the expense of forests, farms, and flood plains. In 1995, the Greater Vancouver Regional Board adopted a plan to manage growth. It involved turning suburbs into sustainable communities, that is, communities where residents could live and work. The same solution was applied to Vancouver's downtown area, where about 40 percent of its residents now walk to work. This has cut down on commuting. (Source - www.pearlandisd.org)

GRASSROOTS OPPOSITION:

In some metropolitan areas, citizens have banded together to offer their own solutions to urban sprawl. For example, citizens in Durham, North Carolina, opposed additional commercial development along a congested area of a nearby interstate highway. They formed CAUSE—Citizens Against Urban Sprawl Everywhere. The organization is working against sprawl through education and political activism. (Source - www.pearlandisd.org)

DENSIFICATION IN URBAN GENEVA:

In the master plan adopted in 2001 and validated by the confederation in 2003, the canton of Geneva has included the development of its territory for the next fifteen years, with a view to agglomeration and sustainable development. Likewise, the policy of settlements from the confederation insists on the need to curb urban sprawl by the densification of city centers and densification modulated peripheral areas.

These two approaches based on revising the master plan of the municipal city of Geneva, has led the center of the city a home to major infrastructure, job centers, recreation centers and cultural areas. The redensified area remains the town's most attractive and most dense area in terms of housing, employment and transport. (Source: Stéphane Christeler; Ousmane Sall, Urban Growth Without Sprawl: Four examples in the

Genevese Region, 44th ISOCARP Congress 2008)

Conclusions:

There is no doubt that urban sprawl exists in most of the cities nowadays. The consequences and significance of such sprawling, average or good are evaluated, based on its socioeconomic and environmental impact. Urban Sprawl is not the type of growth we wish for our future. There are steps taken at many places as stated above and are effective in control of Sprawls. These

methods can be taken as a benchmark study and control the growth in different parts of the world. When crafting policies to address sprawl, policy makers must recognize that the potential market failures involved in urban expansion are of secondary importance compared to the powerful, fundamental forces that underlie this expansion. A more cautious approach, which recognizes the damage done by urban sprawl, should be adopted for the preparation of plans and policies. The aim of urban growth should also emphasize on the sustainable, compact growth of a town or a city.

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