

Liabile City toward Rapid Urbanization in Regional city of Thailand

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Abstract— Urbanization, referring to a growth in the proportion of a population living in urban areas, is one of the major social changes sweeping the globe. Rapid Urbanization in Thailand without good control, the development without taking effective city plan principal into consideration. Hence, this causes many problems such as shortage of standard level residences, lack of good order and crowded areas in some district. This waste the budget and time in processing and solving this issues. This article aim to analyze urbanization context in regional city of Thailand and present the concept of ‘livable city’ to apply in the city in term of ‘New Urbanism’ which are relatively new approaches to urban design that deals with environmental problems, housing issues, and community well-being.

Keywords—Rapid urbanization, Liable city, well-being

Introduction

The rapid urbanization in many developing countries over the past half century seems to have been accompanied by excessively high levels of concentration of the urban population in very large cities. Some degree of urban concentration may be desirable initially to reduce inter- and intraregional infrastructure expenditures. But in a mature system of cities, economic activity is more spread out. Standardized manufacturing production tends to be deconcentrated into smaller and medium-size metropolitan areas, whereas production in large metropolitan areas focuses on services, research and development, and nonstandardized manufacturing. The costs of excessive concentration (traffic accidents, health costs from exposure to high levels of air and water pollution, and time lost to long commutes) stem from the large size of megacities and underdeveloped institutions and human resources for urban planning and management. Alleviating excessively high urban concentration requires investments in interregional transport and telecommunications to facilitate deconcentration of industry. It also requires fiscal deconcentration, so that interior cities can raise the fiscal resources and provide the services needed to compete with primate cities for industry and population.

Urbanization in Southeast Asia such as Indonesia, Malaysia, Singapore, the Philippines and Thailand has a high tendency. From the 2020 expectation, more than 56% or about 498 million people will live in cities, most in mega-urban regions. For low-income dwellers, they will still live in the outskirts in the industrial zones (McGee & Robinson, 1995). For Thai context, between 1990-2020, a period of 30 years (Table 1), the number of population will increase 14.9 million (5.4%) while in Bangkok and mega-urban areas 34.2% the highest increase. The growth of Thai population is related to urbanization process: an increase in poverty--from the rural poor to the urban poor. (Dhiravisit, 2009)

Within the next 20 years, more than half of the people in the Asia-Pacific region will live in cities. The Thai government focuses on addressing two challenges in cities and urban centers in Thailand. The first challenge is how to respond to the increasing growth of cities and improve the quality of life of local residents. This involves such issues as hardware infrastructure in improving intra-city mobility, reducing the risk of natural disasters, and ensuring sufficient energy supply. The second challenge is how to better manage and develop investments in people, resources, commodities, knowledge, and information within cities and between urban centers. It involves software issues, such as public participation, social inclusiveness, education, innovation, creativity, communication technology, and connectivity between urban areas.

Methods

This study used qualitative data analysis. Desk study with regard to Urbanization in Thailand. An interview was performed in 30 residents within the municipality area in Udon Thani city (Figure 1), government, and private sectors and NGOs and interpreted by content analysis.



Figure 1. Location of Udon Thani City in Thailand

Results

1. Rapid Urbanization in Thailand

There are many signs of increasing degrees of urbanization in Thailand as the country continues to act as a major global exporter and newly industrializing nation. (Baum, 2012) Successes in economic development in recent decades have occurred because of macroeconomic stability and a market-based economy. Asia and the Pacific region as a whole have been recognized as a highly dynamic economic region worldwide. With a current urbanization rate of 38% of the total population, the urban landscape is clearly changing. While poverty has decreased thanks to economic growth, inequality has increased with regards to income distribution. The more traditional rural culture of Thailand's agricultural sector sees the lowest income levels, though accounts for over half of the total labour force. Additionally, the increasing growth rates of the region has led to high demand for natural resources,

specifically water, which is quickly becoming one of the most important environmental concerns.

Thailand's urbanization rate is low and has stalled (Siam Commercial Bank, 2011). Thailand's urbanization rate (urban population as a percentage of the total population) is 31%, significantly below peers such as Indonesia (53%) and Malaysia (71%). More worrisome is that urbanization has stalled, increasing by only 0.8 percentage points between 2002 and 2009, compared to increases of over 7 and 8 percentage points in Malaysia and Indonesia, respectively. The momentum of urbanization is shifting towards cities outside Bangkok. The above is in contrast with urban areas in the top 10 provinces outside Bangkok and its vicinity which have continued to grow. Provinces which have seen particularly rapid growth in their urban populations include Songkhla; Nakhon Si Thammarat; Surat Thani; Ubon Ratchatani; Chonburi; Nakhon Ratchasim and Udon Thani Globally, between 1990 and 2025, (Food and Agriculture Organization,2014). the number of people who will live in urban areas is expected to double to more than 5 billion people; about 90% of this growth will occur in the developing world. The Asia-Pacific region will undergo a dramatic change from rural to urban; the trend will continue for several decades (Figure 2). In the least developed countries (Nepal, Bangladesh), urban growth rates are among the highest. Growth rates are also extremely high in the rapidly industrializing cities, located mostly in Southeast Asia. Already, ten of the world's larger mega-cities (with populations of 10 million or more) are in Asia; by 2015, the world will have 27 mega-cities of which 17 will be in Asia (Daniere &Takahashi, 1999)

Figure 2. Urbanization trends in the Asia-Pacific Region

Source: Food and Agriculture Organization. (2014)

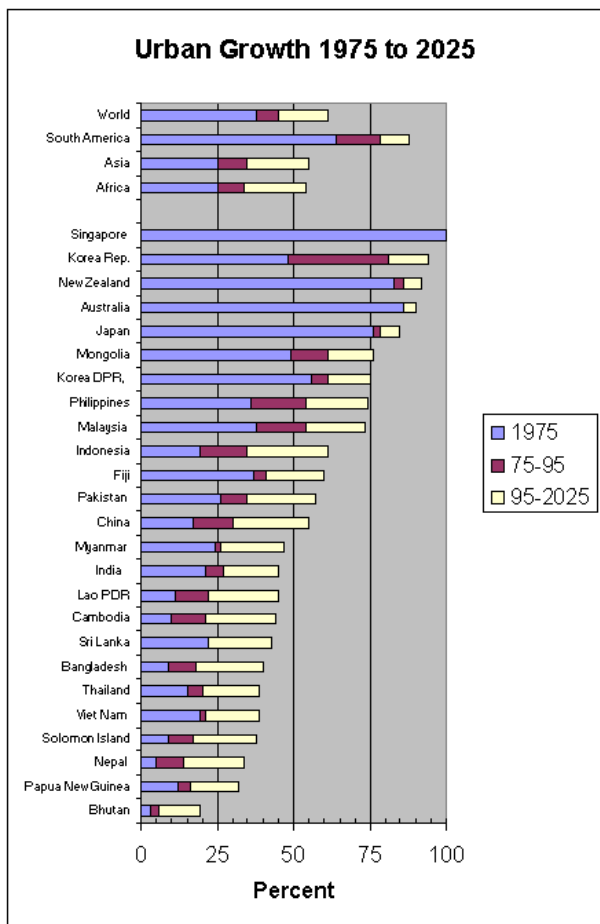
2. Rapid Urbanization in regional city: case study— Udon Thani city, Thailand.

Land use change. The rapid changes occurring in the urban area nowadays result in an increase in living density. Land is increasingly being used for commercial and residential purposes. The growth is causing high demand for land usage, especially in urban areas and land prices are much higher. Those who have low incomes can no longer afford to own land in urban areas. The land has been transferred to businessmen or investing groups who have come to the area with significant funding.

Economic and social change. Udon Thani's economy has expanded continuously since the United States had set up a military base there in 1965. However, the economic growth at that time was caused by U.S. military spending or for consumption purposes. It was not a self-sustaining production system. Considering the strength of economic growth, research has found that Udon Thani has a geographical advantage over other areas in the Northeast. It is the transportation hub of the northeastern region, which easily links the larger Indo-China region to neighboring countries such as Vietnam and Laos. The economic growth is currently displayed through the expansion of trade, more commercial buildings such as department stores or large retail stores, and more labor employment. In addition, policies established by both central and local government are also a factor which has propelled Udon Thani to become a logistics center and air transportation hub in this region.

Transportation problems. Traffic conditions are problematic, especially in the morning and evening which are the times during which many people who live outside the municipality are traveling to work and study in the urban area. The influx of people results in many vehicles on the road, which in turn leads to traffic jams. Traffic jams occur not only in the downtown area, but also in the suburbs, especially along the eastern bypass road, which is part of a suburban residential area. However, the appropriate authorities have tried to solve the problem, such as constructing more roads, to ease traffic problems along the Eastern bypass road. The construction will begin in 2017.

Waste disposal problems. The study found that citizens who live along the road to the landfill facility complain frequently about the garbage trucks, which often have a problem with the leachate that flows out of them during the carrying process. The causes significant problems for those who use the road because it makes the surface slippery, which leads to accidents. In addition, people who live in nearby areas have to endure the smell of garbage. The study found that, currently, waste disposal systems have been installed only in some businesses. Most businesses still use the services provided by the local municipality to remove waste and do waste disposal. Big business produces significant amounts of garbage each day, but the agencies that manage waste disposal remain limited, and the odor of garbage pollutes urban areas. Similarly, industry produces large amounts of waste in its factories each day, mostly electronic waste or waste from industrial activities that are is very dangerous to the environment. Unfortunately, Udon Thani does not have a garbage disposal system for these waste categories, which are currently being forwarded to large industrial waste disposal systems in other provinces. However, electronic waste is produced so frequently that plants are unable to load and forward the waste to disposal areas faster than they create it. It is, therefore, necessary to secure a place to store the waste while it awaits transportation to the disposal area.



3. The principles of urbanism

Urbanism is the characteristic way of interaction of inhabitants of towns and cities with the built environment or the character of urban life, organization, problems as well as the study of that character, or of the physical needs of urban societies, or city planning. Urbanism is also movement of the population to the urban areas. In contemporary urbanism, also known as urban planning in many parts of the world, there are as many different ways of framing the practice as there are cities in the world. According to American architect and planner Jonathan Barnett (Barnett, 2011; Askew, 1996) the approach of defining all the different ‘urbanisms’ in the world is an endless one.

The principles of urbanism can be applied increasingly to projects at the full range of scales from a single building to an entire community.

- 1) **Walkability.** Most things within a 10 minute walk of home and work. Pedestrian friendly street design (buildings close to street; porches, windows & doors; tree-lined streets; on street parking; hidden parking lots; garages in rear lane; narrow, slow speed streets) and pedestrian streets free of cars in special cases.
- 2) **Connectivity.** Interconnected street grid network disperses traffic & eases walking. A hierarchy of narrow streets, boulevards, and alleys and high quality pedestrian network and public realm makes walking pleasurable.
- 3) **Mixed-Use & Diversity.** A mix of shops, offices, apartments, and homes on site. Mixed-use within neighborhoods, within blocks, and within buildings. Diversity of people - of ages, income levels, cultures, and races.
- 4) **Mixed Housing.** A range of types, sizes and prices in closer proximity.
- 5) **Quality Architecture & Urban Design.** Emphasis on beauty, aesthetics, human comfort, and creating a sense of place; Special placement of civic uses and sites within community. Human scale architecture & beautiful surroundings nourish the human spirit.
- 6) **Traditional Neighborhood Structure.** Discernable center and edge. Public space at center. Importance of quality public realm; public open space designed as civic art. Transect planning: Highest densities at town center; progressively less dense towards the edge. The transect is an analytical system that conceptualizes mutually reinforcing elements, creating a series of specific natural habitats and/or urban lifestyle settings. The Transect integrates environmental methodology for habitat assessment with zoning methodology for community design. The professional boundary between the natural and man-made disappears, enabling environmentalists to assess the design of the human habitat and the urbanisms to support the viability of nature. This urban-to-rural transect hierarchy has appropriate building and street types for each area along the continuum.
- 7) **Increased Density.** More buildings, residences, shops, and services closer together for ease of walking, to enable a more efficient use of services and resources, and to create a more convenient, enjoyable place to live. New Urbanism design principles are applied at the full range of densities from small towns, to large cities
- 8) **Green Transportation.** A network of high-quality trains connecting cities, towns, and neighborhoods together. Pedestrian-friendly design that encourages a greater use of bicycles, rollerblades, scooters, and walking as daily transportation.

- 9) **Sustainability.** Minimal environmental impact of development and its operations. Eco-friendly technologies, respect for ecology and value of natural systems, Energy efficiency, Less use of finite fuels, More local production, More walking, less driving.
- 10) **Quality of Life.** Taken together these add up to a high quality of life well worth living, and create places that enrich, uplift, and inspire the human spirit.

4. Benefits of Urbanism

Benefits to “RESIDENTS”. Higher quality of life; Better places to live, work, & play; Higher, more stable property values; Less traffic congestion & less driving; Healthier lifestyle with more walking, and less stress; Close proximity to main street retail & services; Close proximity to bike trails, parks, and nature; Pedestrian friendly communities offer more opportunities to get to know others in the neighborhood and town, resulting in meaningful relationships with more people, and a friendlier town; More freedom and independence to children, elderly, and the poor in being able to get to jobs, recreation, and services without the need for a car or someone to drive them; Great savings to residents and school boards in reduced busing costs from children being able to walk or bicycle to neighborhood schools; More diversity and smaller, unique shops and services with local owners who are involved in community; Big savings by driving less, and owning less cars; Less ugly, congested sprawl to deal with daily; Better sense of place and community identity with more unique architecture; More open space to enjoy that will remain open space; More efficient use of tax money with less spent on spread out utilities and roads.

Benefits to “BUSINESSES”. Increased sales due to more foot traffic & people spending less on cars and gas; More profits due to spending less on advertising and large signs; Better lifestyle by living above shop in live-work units - saves the stressful & costly commute; Economies of scale in marketing due to close proximity and cooperation with other local businesses; Smaller spaces promote small local business incubation; Lower rents due to smaller spaces & smaller parking lots; Healthier lifestyle due to more walking and being near healthier restaurants; More community involvement from being part of community and knowing residents

Benefits to “DEVELOPERS”. More income potential from higher density mixed-use projects due to more leasable square footage, more sales per square foot, and higher property values and selling prices; Faster approvals in communities that have adopted smart growth principles resulting in cost / time savings; Cost savings in parking facilities in mixed-use properties due to sharing of spaces throughout the day and night, resulting in less duplication in providing parking; Less need for parking facilities due to mix of residences and commercial uses within walking distance of each other; Less impact on roads / traffic, which can result in lower impact fees; Lower cost of utilities due to compact nature of New Urbanist design; Greater acceptance by the public and less resistance from NIMBYS; Faster sell out due to greater acceptance by consumers from a wider product range resulting in wider market share

Benefits to “MUNICIPALITIES”. Stable, appreciating tax base; Less spent per capita on infrastructure and utilities than typical suburban development due to compact, high-density nature of projects; Increased tax base due to more buildings packed into a tighter area; Less traffic congestion due to walkability of design; Less crime and less spent on policing due to the presence of more people day and night; Less resistance from community; Better overall community image and sense of place; Less incentive to sprawl when

urban core area is desirable; Easy to install transit where it's not, and improve it where it is; Greater civic involvement of population leads to better governance

Discussion

These fast growing social, economic, and ecological problems are very challenging for stakeholders who are involved with urban development in emerging countries like Thailand. Well-managed cities do not happen by chance, but are achieved with clear development objectives that are generated through cooperation between government agencies and local people.

“..Rapid urbanization has brought many challenges to city leaders to improve the quality of life for citizens, from creating jobs to providing affordable housing...”

The goal must be to create sustainable cities that include the needs of local people, which are based on resource allocation, reviewing existing development guidelines, and development of an integrated infrastructure. In addition, encouragement of public private participation (PPP) is essential to developing a city (O'connor,1995). The planning process should focus on requirements of the people in developing the city over the next 10 to 15 years. Both private and public sectors should cooperate to develop the city. In addition, resource allocation should be focused on constructing the rapid-growth city sustainably or on enabling the private sector to address other infrastructure challenges. Collaboration between the government and the private sector is also necessary to advise the city how to keep on track in the planning stages.

Our current form of growth is unsustainable: a continuous outward expansion of development and the ever-increasing need for more transportation capacity, despite the fact that regional population and employment are fairly stable. These trends threaten both the quality of life, as motorists spend more and more time in their cars and auto-dependency increases, and the quality of the environment, as green space continues to vanish while air quality and other environmental problems persist. The problem of constant traffic congestion is quite serious, and is reaching dangerous, epic proportions as our mobility is rapidly decreasing along with our quality of life.

New urbanism is an urban design movement to create pedestrian-oriented settlements (Trudeau,2013) that also advance social equity and mitigate the environmental impacts of development. Proponents of the movement have suggested it offers a model of sustainable development. New urbanism (Haas, 2012) promotes the creation and restoration of diverse, walkable, compact, vibrant, mixed-use communities composed of the same components as conventional development, but assembled in a more integrated fashion, in the form of complete communities. These contain housing, work places, shops, entertainment, schools, parks, and civic facilities essential to the daily lives of the residents, all within easy walking distance of each other. New Urbanism promotes the increased use of trains and light rail, instead of more highways and roads. Urban living is rapidly becoming the new hip and modern way to live for people of all ages.

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