

*Towards Sustainable Human Settlements Growth on Urban Fringe Areas  
(A Case Study of Semarang City – Indonesia)*

Bambang Setioko, Diponegoro University, Indonesia

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**Abstract**

Early urbanization generally took place within an urban core but in the last few decades the process has moved towards fringe areas. Urban core is eventually characterized by marginalities, but on the other hand fringe areas have central characteristics. The decreasing role of an urban core and the increasing role of fringe areas occur in almost all metropolitan regions. The growth of fringe areas is commonly predominated by the development of urban sprawl. Many empirical researches on urban growth have concerned on the fringe areas. Until recently, many research findings on urban growth still lack of the main element of the growth and to a larger extent fail to provide an explanation on why the phenomenon happens. This study will take the concepts and views of urban growth as a state of progressing, and not state of being and done with a qualitative approach within naturalistic paradigm umbrella. Semarang's urban fringe areas indicated dualistic characteristics, a mixing of formal and informal, urbanity and rurality, modern and traditional, planned and un-planned settlements. These conditions raise complicated social problems. This study explores whether the process of urban growth in fringe areas is specific and characterized by local wisdom. The integration process of several types of settlements will shape the urban form's future. The Semarang urban growth policy does not lead to the integration of spreading sprawl development on its fringe areas, and should be adjusted into the sustainability issues, in order to make livable city and to ensure the future generation meet their needs.

Keywords: urban fringe, sprawl, sustainable, dualistic characteristics, local wisdom.

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## **1. Introduction**

The location of growth on the fringe areas of the cities is becoming world-wide phenomenon. Fringe areas development occurred both in developed countries as well as in developing countries. It is a contradictory phenomenon. Ever-expanding metropolitan region; that is most suitable occurred in wealthy countries; is often portrayed as an inevitable feature of large cities in the developing countries. As a matter of fact, physical growth in fringe areas is dominated by sprawl development. The declining centrality of urban core and increasing fringe areas has occurred in most metropolitan cities.

Early urbanization generally took place within an urban core but in the last few decades the process has moved towards fringe areas. Urban core is eventually characterized by marginalities, but on the other hand fringe areas have central characteristics. The decreasing role of an urban core while increasing role of fringe areas occur in almost all metropolitan regions. The growth of fringe areas is commonly predominated by the development of urban sprawl. Many empirical researches on urban growth have concerned on the fringe areas. Until recently, many research findings on urban growth still lack of the main element of the growth and to a larger extent fail to provide an explanation on why the phenomenon happens.

## **2. Research Objectives and Methodology**

The objectives of the research are to reveal the existence of local wisdom that can be used as a reference to direct the growth of the settlements in the fringe area of Semarang city. The proper method to diagnose the problem of a city has to begin by recognizing the historical and social phenomena and starting the perspective to respect for local wisdom and indigenous urban characteristics. To obtain an authentic and original local wisdom, generalization manner cannot be employed. Therefore the research is conducted by employing qualitative approach within naturalistic paradigm umbrella.

## **3. Locus of the Research**

Since 2010 until 2014, along with 0.97% average population growth, the total population of Semarang was 1.723.988 inhabitants. The percentage of population growth in Semarang is considered low compared to other metropolitan cities for instance Bandung, Medan and Palembang. Meanwhile, the most populous sub-district is Pedurungan whereas the least populated sub-district is Tugu. In 1986, 62% of Semarang population was still concentrated in the city center, but in 1995 the population concentration shifted to sub-district fringe by 64%. The population data indicated that there was a population shift from the city center (Sub-districts of East Semarang and Central Semarang) to the fringe areas (Sub-districts of Mijen, Genuk, Tembalang and Ngaliyan). This tendency is predicted to continue since the gross density level of population and building in fringe areas is indeed low. The increasing interest of people to live in fringe areas is motivated by several factors, including the increasing number of real estates which build various types of new settlements; to embrace various social strata; and the easiness of house ownership process by the availability of many housing credit scenarios.



Figure 1: Map of Indonesia

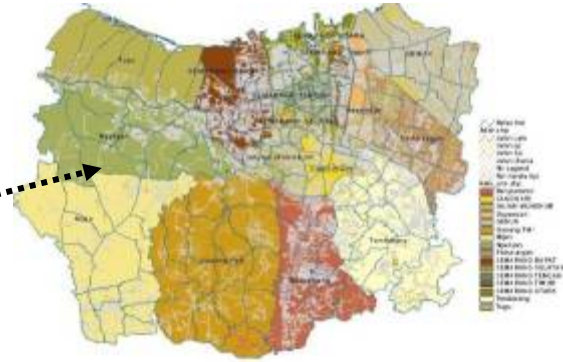


Figure 2: Map of Semarang Municipal Administrative area. 2005  
Source: Semarang Municipal Planning Development Board

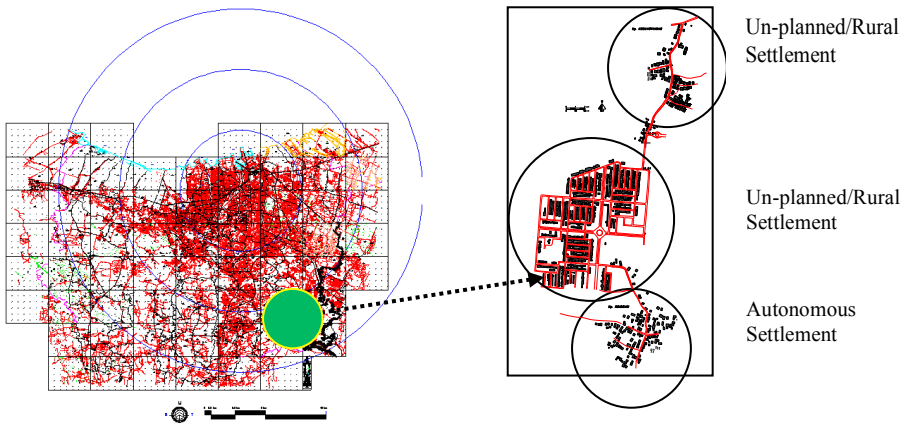


Figure3: Locus of the research  
Source: Semarang Municipal Planning Development Board.

This research was conducted in Meteseh village - Tembalang sub-district, one of the fastest growing urban fringes in Semarang city. The research area consists of three types of settlements i.e planned settlement in the form of housing estate, rural settlement in the form of Rejosari hamlet and autonomous settlement in the form of Kedungwinong hamlet (Setioko, 2011) (Figure.1,2,3).

#### 4. Discussions and Results

Nowadays, the roles of urban fringe areas turn to be more critical as one of the urban tendencies is the population movement from urban core to fringe areas (Kivel, 1993). Urban development no longer takes place in the city center but moves to fringe areas. Urban morphology undergoes a metamorphosis in the form of peripheral urbanization and growth from inside to outside, causing the presence of inverted metropolis so that the roles of fringe areas improve, whereas the roles of city center decrease and change. This phenomena causes urban landscape anomaly in which the characteristics of the city center is marginal while fringe area is central (Gillham, *et al* 2002; Soja, EW.2002). Therefore, there is an interest clash between accelerating urban development versus urban ecology threat.

According the data analysis of settlement growth pattern, Semarang undergoes a shift from united city form into scattered city form, namely the population settlement which in the beginning of its growth is located around urban core spreading to follow road growth pattern, towards fringe areas.

On Semarang urban fringe areas there are three typology of settlements: [1] Unplanned settlements. [2] Planned settlements and [3] Autonomous settlements. (See Figure: 3). Unplanned settlements which are indigenous housing. The people generally belong to the low social strata to middle income group. Social cohesion among the community categorized high level. Planned settlement generally is a housing estate, built and managed by developer which has three categories: [a] Big enterprise; people who live usually belong to middle income to high income groups, usually equipped with well urban infrastructure and luxurious facility. Community's social cohesion categorized low level. [b]. Small enterprise which is inhabited by mixed strata, from middle income to low income; and [c]. Public housing estate facilitated for low income groups. Autonomous settlements is mixed settlements, scattered and incrementally built around the planned settlements areas. They owned, equipped and maintained local urban amenities, like water, electricity by themselves.

Settlements in Semarang urban fringe areas have several characteristics as follows:

#### **a. Alienated Areas**

Alienated area is a remote, excluded and isolated area; not bound to a network of urban basic facility and infrastructure system; thus it is ignored and connoted backwardness and left behind.

Alienated area tends to be separated from the main flow of urban life, either economically, socially and culturally. Several facts found in the field indicate that basic environmental scale facility and infrastructure including roads, consumed water, electricity, sanitation, garbage and public transportation are very minimal and even unavailable in several locations. Fringe areas do not have enough attention and always be positioned as the last priority by the stakeholders in every urban bureaucracy level. Even though it has been identified that the percentage of population growth is higher than the urban core, the mindset change on accelerating priority scale in planning, preparing and managing basic urban facility and infrastructure has not been accomplished.

#### **b. Brotherhood-based Areas**

A strong social cohesion considers that all people within a settlement area is a "family" although it does not necessarily mean that they have blood relation. Hence, this research employs the term brotherhood because it tends to have connotation of friendship rather than kinship. This brotherhood is formed by two groups, namely [1] low social strata villagers and [2] middle strata newcomers. There is neither domination nor exploitation of particular people by other people groups, by reciprocal relationship or solid collaboration. Empirical facts are found in the villagers of Rejosari and Kedungwinong with brotherhood attitude having meaning of strong friendship which resembles biological brotherhood relationship.

#### **c. In Transition Areas**

The presence of large scale planned settlement alongside the distribution of rural settlement which later on evoking the growth of autonomous settlement, is a relatively new urban fringe areas growth phenomena. Traditional and informal social structure which has existed for so long suddenly has to adapt to a distinct new situation. There are several emerging assumptions, namely 1) A stronger social structure will dominate; 2) The integration of two different types of entity which co-existents one another; 3) Segregation between traditional and informal social structure (standing on

its own). Several facts indicate that in this areas there is a process of integration, as seen from the intensity of communication and interaction among villagers and newcomers.

These conditions become evident in the presence of the main road entering rural areas which unintentionally converge with planned settlement, and brings positive implications for the relationship between society, so that it can improve meeting frequency among society. The increase of meeting frequency between society is able to shorten social distance and horizontal distance among them. Furthermore, in later development, there is a new center of gravity in the form of instant market functioning as a meeting place between planned settlement, unplanned settlement and autonomous settlement. Besides, societies with different culture find it comfortable to live side by side, without any physical segregation.

Semarang's urban fringe areas indicated dualistic characteristics, a mixing of formal and informal, urbanity and rurality, modern and traditional, planned and un-planned settlements. These conditions raise complicated social problems. This study explores whether the process of urban growth in fringe areas is specific and characterized by local wisdom.

## 5. Conclusion

This research has revealed the behavior of three groups of urban spatial doers living alongside, interdependent in developing concessions to cooperate in fulfilling joint interests and aims which are interrelated with the way to share roles and experiences. The urban spatial fragmentation in Mateseh apparently does not trigger social structure segmentation of its spatial doers (Figure 4).

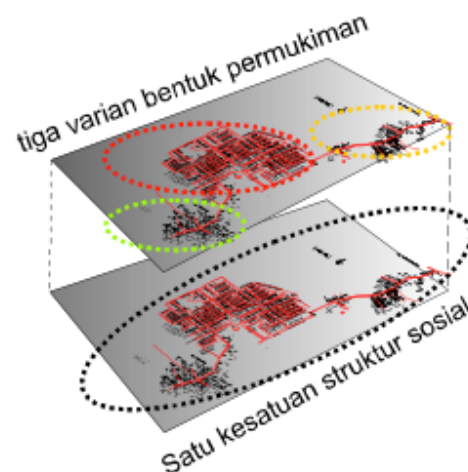


Figure 4: overlay of the spatial and social configuration

Three variants (planned settlement, rural settlement and autonomous settlement) which are not identical to social structure configuration of united spatial doers.

In several settlements located in fringe areas, there is a growing center of gravity in the form of instant market where the occupants living in planned settlement,

unplanned settlement or autonomous settlement interact. They collaborate based on each role and ability. This local wisdom-based activity plays a big role in forming social unity towards settlement groups which are physically scattered.

As a matter of fact, the formal planning on the settlements in fringe areas tends to employ cluster pattern which does not enable its occupants to integrate freely.

In fact the integration process of several types of settlements will shape the urban forms future. Recently Semarang urban growth policy does not lead to the integration of spreading sprawl development on its fringe areas, and it should be adjusted into the sustainability issues, in order to make livable city and to ensure the future generation meet their needs. In an increasingly globalized society, solving by relying on local wisdom is not a backwards step, even perhaps it is a strategic policy.

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