Gated community typology based on growth and development in Medan City, Indonesia

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Abstract. Theoretically there are three arguments against the gated community. First, gated community as a physical form and a real expression of post-revolutionary social change industry (fragmentation, individualism and increasing community). Second, gated community as a symptom of urban diseases including social classification. Third, the development of fragmentation and individualism is the emergence of elite private groups that contradict the welfare distribution system. So this situation provide the assumption that the allocation of public services is inefficient. The three arguments above are the background of why gated communities thrive in Indonesia. Based on the above arguments, the purpose of this study is to find the typology of gated community settlements based on its development in the Medan City starting from the 1980s until now. In the case of Medan City, the distribution of this settlements are seen by the growing number of gated communities in the South and West regions of Medan City. Even the social groups formed indirectly affect consumers' perceptions when choosing the housing locations. This research is a qualitative descriptive study with data collection methods in the form of observations and interviews. The method of data analysis is spatial analysis method. The results of this study are expected to find a typology of the form of gated community settlements based on housing size, the formation of public space and the characteristics of residents.

1. Introduction

The idea of gated community has existed for a very long time. From the Roman period with walled cities concept which transforms into walled medieval towns, Spanish fort towns and the early walled settlements of American Roanoke and Jamestown, mankind applied the idea of gate as protection [1]. Medieval walled towns was built for the purpose of maintaining social segregation at that time. As such, the early purpose of walled cities is was to limit and control urban migrants. On that period, there were two function of gated community: to protect its inhabitants from outside threat and to maintain current lifestyle inside the gate.

Concept of gated community then develops across the world. Development of gated housing emerges in Europe [2-4], America [5-8], Africa [9-11], Australia [12-13] and Asia [14-18]. This global phenomenon raise the awareness for researchers to research gated community further.

The development of gated community is caused by the increasingly high interest for people to live in a gated community. This raises the question on why people are interested to live in a gated community. Research [19] discovers that inhabitants of gated community prefers to live in a gated community to find certain values such as sense of community, prestige, lifestyle or security. In case of Alexandria city in Egypt, lifestyle values is the reason people choose to live in a gated community. Each gated community that develops around the world differs from one another. As such, gated
community becomes the new trend not only in housing markets but also in property markets, housing industries and retail markets both in developing and developed countries.

Theoretically, there are three arguments to a gated community mentioned by [20]. First, gated community is a form of physical and tangible expressions of social change after the industrial revolution (fragmentation, individualistic and the increase of population). Urban conditions in Indonesia as a developing country made the city most fragmented and individualistic. By referring to the development of cities in developed countries, we adopted the forms of urban development indirectly. The forms of gated community will reinforce the fragmentation and individualistic idea. Second, gated community is a symptom of the urban disease, including the social classification. Social categorization and segregation are growing rapidly in Indonesia’s city. This pattern also had been implanted by the Dutch colonial when Indonesia was colonized. Third, the development of fragmentation and individualism emerges private elite group opposed to the welfare distribution system which creates the assumption of inefficient public services. The third argument above is the main reason why gated community thrives in Indonesia. Gated community located in Southeast Asia can be seen as a mixture of social purposes, security and investment [21].

The third argument above shows that from the perspective of consumers, the form of a gated housing will give a sense of identity of a community which has a strong appeal, especially to established society. While the perspective of the government, the form of a gated housing provides better tax revenue and the responsibility of governments to provide public facilities already provided by the private developer.

2. Basic Concept of Gated Community

In a gated community housing, the concept of sharing becomes the main principle. Sharing between families, friends and neighbors creates caring interpersonal ties and a sense of community. In reality, sharing concept is not always applicable due to hindrance from modern urban citizens’ behavior with their increasingly high activities and limited time in social interaction, thus sharing concept and sense of community is not well developed. Some reasons as to why gated community are growing rapidly according to [1] are: security, social segregation, safety zone, prestige and lifestyle. Further researches on the typology of gated community based on their growth and development are required because of the varied condition of each gated community across the world. In many countries in Asia, gated community is growing because of security and social segregation reasons [21]. The objective of the research is to define the typology and characteristics of gated community during their growth and development phase in the last four decades in Medan, Indonesia.

3. Gated Community Growth Effect on City Growth

The gated community growth effect on city growth and development can be observed from two scale: macro scale, which is city scale and micro scale which is neighborhood scale. On macro scale, there were no definite results from past research that suggested gated community affecting social and spatial segregation in urban area. Gated community as private community is a response towards local and national government inabilities to provide facilities in a rapidly growing area. On micro scale, the existence of gated communities tends to create undesirable effects such as eviction of local villages and local communities [22]. On longer term, gated community brings about consequences into public spaces because of gate existence and legality status.

Public space is being privatized so that gated community inhabitants can control its usage. Land usage becomes exclusive for gated community behind their gate. Gated community affects policy making because it is legal for a community with economic and social power to develop their own territory. There are four reasons that gated community promotes social segregation. First, physical
separation between gated community and local communities and villages. Second, economic gap between gated community and local community. Third, gated community discourage vertical social interaction. Professional work requires education levels and expertise specifications, which often form a barrier to village communities and will subsequently produce inequalities between the two community groups. Fourth, private governance inside gated community widen the gap between gated community and local community because government legitimize both private governance and local governance. This situation prevents institutional contacts between government officials and communities.[23]

4. Gated Housing characteristics in Indonesia
Gated community in Indonesia has been developing rapidly similar to other countries around the world. Jakarta, as the capital of Indonesia, experience the fastest gated community development. After the riot on May 1998, most of housing area for mixed class community were walled and gated all around. These walls were not only applied in housing area for Chinese ethnicity such as Downtown area, Mangga Dua, Kelapa Gading and Pluit but also in areas such as Tomang and Central Jakarta. In the 1990’s era, security becomes the main issue in developing housing area. There were four consideration regarding security in housing development in Jakarta. First, bordering the housing perimeter with walls and gates continues the existing security system from Rukun Warga, local community, in the form of Siskamling (Sistem keamanan lingkungan, a form of neighborhood watch). Second, the existence of walls and gates were likely intimidate outsider, who was actually forbidden to enter the housing area, especially with security staff deployed in the gates. Third, in newer gated community housing, there were extra communal gates inside the gated housing area to separate houses for middle to higher income class. Fourth, gated housing were favored by people with middle and higher income class. Gated community housing prices rose dramatically because of the implied sense of security in there [22].

Gated housing actually cre created four issues. First, physical border created physical, economic and social differences between gated community and local community. Gated community have various ethnicity but similar in statuses and social class whereas local community is similar by ethnicity and religion. This physical and spatial boundaries reflected cognitive difference between communities and affected interaction between communities. Second, interaction between gated community and local community were mainly on economical function, namely employer and worker relationship. On one hand, economic interaction reduced social segregation by creating tolerable differences for local community. In reality, economic interaction does not reduce social segregation because of pattern emerges suggesting social segregation. Third, an open gates for the community creates insecurities in the communities. One act of criminal occurred in the community will likely spread the insecurities to the local community living near the gated community. Fourth, walls and gates around the housing area will reduce interaction between communities because of private governance system. This system emphasize administrative division legally from the existing local community system. Since the legalization of private governance system, which is on par with local governance system, gated communities will feel legitimize to privatizing public space and limits the use of facilities for outsider [23].

In Jogjakarta, Gated community were not only developed for higher class people but also for middle to lower class people. This social dynamics created more complex social problems. Gated communities in Indonesia develops different symptoms in each places [21]. This symptoms is similar with housing grouping, rather than community development process. Interaction between people inside the gated community is not significantly different from people’s interaction outside the gated community. In Jogjakarta, small scale gated community is also develop widely. Lack of theoretical platform promotes lack of response from the institution responsible for city planning and development. With no clear direction and clear policy, this rapid development are feared to create new problems such as urban sprawl, uncontrolled land usage, disintegration between rich and poor and creates new hierarchy in community [24]. Research results suggests that there is a tendency for housing to be
developed below 50 units. This research identifies three types of gated housing structure. First, cul-de-
sac gated housing, typically has one access point that is heavily controlled. Second, tunnel housing
which usually has two access point. One is used as primary access point while the other is used as
secondary access point. Both of them are controlled albeit with different degree. Third, open housing
which typically has many access points with one being the main access point and others is used as
alternatives access points.

5. Gated Housing characteristics in Medan

Indonesian people experience transition from low income economic to middle income economic
during 1970 until 2011 [25]. This economic condition affects social structure in people. Grouping in a
housing community is based on values and choices in the environment. In terms of settlement pattern,
Indonesia tends to have heterogeneous pattern with groupings on socio economic factors in people
[26].

Urbanization in Indonesia during 1970’s until 1980’s was quite low. However this condition helped
developed satellite cities in Jakarta and other cities in Indonesia such as Surabaya, Bandung and
Medan. The emergence of middle social class represents people with average income. During the
1980’s, city development in four big cities in Indonesia begins to parallel the development of big cities
in other countries in Southeast Asia. Industrialization develops slowly in Jakarta, Surabaya, Bandung
and Medan. This condition can be deducted through the rapid development of real estate for middle
class community such as gated housings, shopping centers, malls and department stores as a new
lifestyle choices for middle class people [27]. From city space structure viewpoint, Medan undergoes
growth and development by experiencing several inequalities in economic, social and environment
qualities, which can be described in Figure.1 below. The development of planned housing spread in
can be seen in Table.1 below.

Table 1. Planned housing spread in Medan

| Districts in Medan          | Total of Private Housing Complex |
|-----------------------------|----------------------------------|
| Kecamatan Medan Amplas      | 12                               |
| Kecamatan Medan Johor       | 92                               |
| Kecamatan Medan Tuntungan   | 27                               |
| Kecamatan Medan Helvetia    | 41                               |
| Kecamatan Medan Belawan     | 0                                |
| Kecamatan Medan Marelan     | 19                               |
| Kecamatan Medan Deli        | 2                                |
| Kecamatan Medan Perjuangan  | 4                                |
| Kecamatan Medan Tembung     | 13                               |
| Kecamatan Medan Denai       | 20                               |

Source : [28]
Economic inequalities

Social inequalities

Infrastructure inequalities

Figure 1. Growth and development space structure in Medan
Source: [29]

Location of gated housing are mainly located in Southern part of Medan because economic, social and infrastructure development were better in this region compared with other region. Gated housing characteristics in Medan can be classified into three groups. First, Large scale gated housing with more than 100 housing units and equipped with supporting facilities and public facilities. Second, Middle scale gated housing with 20-100 housing units, equipped with fewer facilities such as religion or sport facilities. Third, small scale gated housing with less than 20 housing units. In the last decade, small scale housing were developed more frequently in southern part of Medan.

6. Tipology on gated housing growth and development
Development of gated housing in Medan can be categorized on four decades: 1980 on which gated housing were starting to be developed, 1990, 2000 and 2010. [16] yaitu tahun 1980an dimana mulai muncul perumahan gated, tahun 1990an, tahun 2000an dan tahun 2010an. The first step in 1980’s is marked with the growth of gated community in the suburban area. The gated community also began to appear in Medan city. Taman Setia Budi Indah Housing estate is one of the pioneers of gated community. In the era of 1990s, the gated community is growing rapidly, especially in the suburban area. In the era of 1990s has developed housing estates in Medan city, accordance with the growth of real estate market in Indonesia. In the era of 2000s, there has been a transformation in the urban settlements. In the 2000s, has developed dozens of gated housing in Medan city. In 2010 era, gated housing with green concepts developed widely because in this era, many housing development adopt green movement for sustainable development.
7. Research method
The research approach is descriptive qualitative which is more concerned with the focus of investigation variable. Then the variables are described in each the process of the variable. The determination of 40-years’ time frame which is from the 1980s until 2010s because at this time frame, marks the rising of gated community in the city of Medan. The study of the physical condition of gated community is Taman Setia Budi Indah Estate as a case study of mass formal housing in the era of 1980s. Then it was followed by Bumi Asri Estate in the era of 1990s, Graha Helvetia Metropolitan Estate in the era of 2000s and Citraland Bagya City in the era 2010s.

The data of housing growth is unique because it can capture the combination of demographic trends (population growth, migration, family formation, trends settlements in urban, urbanization) and indicate the location and concentration of the human impact on the surrounding environment. The uniqueness allows estimating historical settlement patterns based on existing housing. [30] Data analysis is conducted by classifying based on housing land area, site plan, road pattern, total housing units and housing facilities [31]. Classifying is done based on the housing first development and housing size. Research framework can be seen in Figure 2 below.

Figure 2. Research Framework

8. Result and discussion
The growth and development of large-scale housing began in the 1980s in the southern part of Medan City. Likewise in the 1980s, the development was still in the southern part of Medan City. At that time large-scale land was still mostly in the southern part of Medan city. It was only in the 2000s and 2010s that large-scale gated community housing was built in peri-urban area of the eastern and western parts of Medan. (see table 2). The property is located in the southern district of Medan City because at the same time the area is still undeveloped as it is today [16]. In the era of 1990s, the gated housing is growing rapidly accordance with the growth of real estate market in Indonesia. In the era of 2000s, appear housing cluster based on ethnicity and social segregation. The formation of housing clusters in a large scale housing is also characterized by different types of occupancy in each cluster.
### Table 2. Typology of Large Scale Gated Housing

| Year  | Site Plan          | Housing Profile                                                                 | Typical Floor Plan |
|-------|--------------------|---------------------------------------------------------------------------------|--------------------|
| 1980s | Taman Setiabudi Indah | Taman Setiabudi Indah built on a 220 hectare land targeted for middle-higher class consumers. Total Housing units: 2,220 units. Facilities: mosque, shops, school and sport field | ![Taman Setiabudi Indah](image) |
| 1990s | Bumi Asri          | Built on a 70 hectare land. THU: 879 units. Facilities: Mosque, Shops, public open fields and swimming pool | ![Bumi Asri](image) |
| 2000s | Graha Helvetia     | Built on 250 hectare land. THU: 613 units. Facilities: Swimming pool, golf course, shops and school | ![Graha Helvetia](image) |
| 2010s | Citraland Bagya City | Built on 211 hectare land. THU: 218 units. Facilities: lake, swimming pool and shops. | ![Citraland Bagya City](image) |

Middle-scale gated community housing in the 1980s also began in the southern region. Changes that occurred from the era of the 1980s to the era of 2010 on medium-scale housing were the types of public facilities and types of dwellings built. Medium-scale housing locations are also in the southern area. Because medium scale gated housing does not require extensive land, many gated community housing locations are located in the southern region of Medan. (see table 3)
Small scale gated housing has not been seen in the 1980s because the land is still available in the city and the price is not too expensive. In line with the increase of population and limited land within the city of Medan, small scale gated housing began to emerge in the era of the 1990s. The city government does not anticipate the pattern of providing housing built by individuals so that this pattern starts to grow in the city of Medan. (see table 4). It turns out that this pattern of housing provision does not only occur in but also in other big cities in Indonesia.[24]

Table 3. Typology of Middle Scale Gated Housing

| Year | Site Plan | Housing Profile | Typical Floor Plan |
|------|-----------|-----------------|--------------------|
| 1980s | Johor Indah Permai | THU: 800 units, Housing types: type 90, type 144 and type 180. Facilities: Mosque, sport field | ![Typical Floor Plan 1980s](image) |
| 1990s | Citra Wisata | Built on 20 hectare land, THU: 516 units. Facilities: Mosque, shops, school and sport fields | ![Typical Floor Plan 1990s](image) |
| 2000s | Graha Tanjung Sari | THU: 228 units. Facilities: Mosque and sports field | ![Typical Floor Plan 2000s](image) |
Table 4. Typology of Small Scale Gated Housing

|          | SITE PLAN | HOUSING PROFILE                                      | TYPICAL FLOOR PLAN |
|----------|-----------|------------------------------------------------------|--------------------|
| 1990s    | ![Regency Setia Budi Indah](image)                   | Built on 7,600 m² land. Housing type: 45/75, 50/75, and 60/80. THU: 47 units | ![Regency Setia Budi Indah](image) |
|          |           |                                                      |                    |
| 2000s    | ![Golden Seroja estate](image)                       | THU: 35 units of couple houses with the same type. | ![Golden Seroja estate](image) |

2010s

THU: 655 units. Facilities: Swimming pool, outdoor fitness, park.

Villa Setia Budi Flamboyan

2010s

Villa Setia Budi Flamboyan

THU: 655 units. Facilities: Swimming pool, outdoor fitness, park.
9. Conclusion
The planning of formal housing especially gated housing are changes in the last four decades. Factors transformed in gated housing in Medan City are public space privatization, exclusivities, security needs and social segregation.

The typology of gated housing based on the growth and development in the city of Medan can be classified into three groups, namely large-scale gated housing, medium-scale gated housing and small-scale gated housing. Privatization and exclusivity are very visible in small scale gated housing. Even in its development, large-scale gated housing forms smaller residential clusters within its housing area. The symptoms of this phenomenon if not controlled by government policy, will increasingly and forming social segregation in each of the groups of housing. It is recommended to the government as the manager of housing development in Indonesia to immediately issue a policy to anticipate this phenomenon.

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