Mechanism of value capture on gated community housing by developers in Jakarta Metropolitan Area

E B CLubis¹ and A Gamal¹

¹Department of Architecture, Universitas Indonesia, Kampus UI Depok, Depok, West Java, 16424, Indonesia

Email: gamal@eng.ui.ac.id  ezra.benjamin@ui.ac.id

Abstract. We reviewed the state of the art on gated community development, property valuation, and value capture literature to discuss how gated housing serves as a mechanism for land value capture by developers. Land value capture, instead of measures such as urban fears and segregation, justifies developers' action to build impenetrable walls around their residential development projects. Previous works on housing markets in JMR suggests that housing products tend to be overpriced. We found early indications that enclosing physical boundaries on housing projects were positively correlated to residential price growth in Jakarta Metropolitan Regional (JMR). We used a study case embedded design for this initial research with mixed analysis data method. Our results show and argue that the real estate developers' motive to install walls and gates in their residential projects is to enhance the existing land value. The ratio of land value on housing inside the gated area is 1.5 up to 7 times more than the surrounding area outside the gate. Our study helps to develop an understanding of the motive behind the gating trends in housing development projects. All of the information is substantially useful to help public sector working on managed residential land sustainably.

1. Introduction

Gated community development has been the most popular model for newly built residential on low rise urban areas by the developers, especially in developing countries [1]. Nowadays, housing investors argue that many real-estates produced in the wrong size, position, and do not provide access to public transportation, which also supported by false marketing and promotion [2]. On real estate practices in Indonesia, some developers dominance to build massive land into luxury housing with a gated concept and sell it at high prices [3]. Some suggest the housing market in Jakarta Metropolitan area are facing overpriced situation [4]. Market failure at one level does imply failure at the other levels if the land used improperly. The central issues of residential sector are always about the affordability on what type and what kind of pattern the actors and regulations want to provide.

The development of gated community housing is considered as a representation in accordance with typical urban behaviors such as fears[5][6][7][8][9][10], social exclusion [11][12][13]and modern lifestyle[14][15][16]. But the proliferation of gating development is growing in societies by lower prevailing crime rates and higher levels of social cohesion [17]. This development has contributed to the urban and peri-urban spatial transformation in Jakarta Metropolitan Regional [18].Similarly, some researchers argued that developers recognize the opportunity to sell ‘safety’ and ‘security’ to a niche marketin many countries which customers have allowed to chooseany lifestyle[19].For those reasons, developers aim to sell the gated community to the upper and middle-upper social economy classes[20].

In the past decade, most research on the gated community has focused on social issues, spatial impact, and consumer preferences. There have yet specific researches that emphasize the economic motive of
residential developers, especially in the Jakarta Metropolitan Area (JMA). As a private sector, developers usually prioritize profit and the impact of the gating concept on the economic aspect. They will have a bigger chance to attract investors with a project that yield more profit even if it means they need to sacrifice the need of the community [21]. Unsurprisingly, there is a tendency among developers to copy top developers’ successful development model and implement it to their project [22]. At the societal level, developers as the housing providers may act intentionally or unintentionally to create value for society along with their necessity of creating what is valuable for themselves [23].

It remains unclear why such gating trend tends to be produced by residential developers by various scales randomly and unevenly on the Jakarta Metropolitan area. This research raises the question of what kind of mechanism that can justify developers’ decision to implement gating concept in most over low rise projects in JMA. The most critical aspect of housing development on real estate principles is the land value factor [24]. We argue that gating is only a way to jack up the land economic value by applying a set of reasoning to justify the use of that concept. In strategic management literature, value capture is one of the concepts to quantify values that exist in economic interests. Instantly, it can be used as the mechanisms that allow the creator of value to capture the new value as their profit orientation. The mathematics of value capture can be used to identify the blind-spots in the offer price product [25]. In this research context, we analyzed and estimated the real unit of economic value captured by developers, which inserted in the actual gated housing offered sales price.

The first step of value creation activities has the marketing teams with the support of business development and field sales teams to identify, manage, and potentially create the value for the customer. The value has yet to be captured during the step. The second step of the value management process is value quantification [26]. Developer’s ability to capture value is inseparable from the principles of real estate development that used as the tools to quantified the previous value. The goals are to achieve economic profit from less profitable to more profitable settings and to use social demands as a set of value as resources towards investment in the housing sector. We chose the private developers as our qualitative unit of analysis toward other providers. The myriad value creation opportunities available to them [25], and the value that they ‘actually’ produce, and the requirement to apply gating concept are the actual conditions that were our reason.

The framework in Figure 1 explains that developers have an intention to re-create the value that arises from a specific set of gating development. Because it can increase the land economic value as their shares on the next transaction price, that is essential to shedding some light on land value capture mechanisms. Thus, gating concept as the “gateway” to merely fulfill the society demands also complements the imaging process of the residential urban land as a typical land-use model. Social values are essential for developers’ practical need to achieve land development goal. It is necessary to shed some light on the mechanism that allegedly produces this trend. We need comprehending the developers’ reasons and the residual land value that arises.

![Figure 1. Theoretical framework.](image-url)

**2. Methods**

We conducted an embedded single case study with multiple units of analysis. We employed the developers as our units of analysis to obtain qualitative data through in-depth interviews. We used the
gated development housing project which the developers' produced as an object of the question for our discussion. We implemented simulation with purposive sampling to generate the quantitative data through property valuation method on housing. We analyzed the value of the findings from qualitative and quantitative concurrently to establish the conclusion.

2.1. Interviews
We interviewed seven experts from seven difference developers in a different level who have experience of building a gated community for landed housing projects around Jakarta Metropolitan area. We conducted in-depth interviews to identify developers’ motive to gate on low rise residential development in various locations. We categorized the answers through two stages of analysis. On the first stage, we analyzed data to categorize developer’s reason as an economic production aspect or a non-economic production aspect. On the second stage, we collected data of developers' amount target on estimating the ratio of the project land value to surrounding land value. Then the estimated development cost for the housing unit, the amount of build land area, and the time needed for the development.

We chose the specific respondent number 1 whose build the object of this research study case base on their legal division, which more reliable on data. We conducted initial interviews with landowners and real estate agents — this research required to collect the housing unit sales price and other economic value of each unit of analysis and comparative unit data.

| No | Level | Subject | Scale Organization | Interview Duration |
|----|-------|---------|--------------------|--------------------|
| 1  | Legal | Analysis | Tbk                | ±40 Minutes        |
| 2  | Technical Planner | Tbk | ±30 Minutes |
| 3  | Marketing Planner | Tbk | ±15 Minutes |
| 4  | Marketing Planner | PT | ±20 Minutes |
| 5  | Technical Planner | PT | ±20 Minutes |
| 6  | Technical Planner | Tbk | ±30 Minutes |
| 7  | Principal | PT | ±40 Minutes |

2.2. Simulation
We purposely chose the GPV Residence, which was built in 2002 and has been marketed since 2004 as our ideal case study. It is also located in Kelapa Gading region of North Jakarta, which has the most significant land value-gap ratio between topmost and bottommost area within the same region [3]. Despite that fact, regional economic growth in this area shows an uneven-development. We purposefully took one house with the type of 153 m² (9-meter x 17-meter) in the gated area as our unit of analysis and one house with the type of 135 m² in the outside of the gated area as a comparative unit. We conducted field observation at case study object by observing, comparing, and measuring the physical attributes. We implemented a model simulation (Figure 2) to guide the quantitative analysis method to seek the amount of indicative land value within this case study area.

2.3. Valuation
We used the indicative value for adjusting the present value for each unit of analysis and unit comparative because of the complexity, and the uncertainty of the real investments are. Not all real
investments are equally risky and promise similar payoffs each period[27]. The residual method and the contractor’s cost method are the traditional method in property valuation to seek the indicative land value in the residential sector[28]. The residual land value that remains after its evaluated could operate as the land indicative value if the land value within the area were substantially equal. At first, we produced the measurement of the residual land value by calculating the estimated income for the developed land then subtract all expenses from production associated with the gating development such as hard costs, soft costs, and the remained expense development land cost [29]. The equations of the above functions are described as the following formula below:

\[
\text{Estimated residual land value} = \{\text{total revenue value - total cost of expenses value}\} \tag{1}
\]

For we observed a single study case object, we counted all the average repeated sales price for every type unit to calculate the present worth of the project. There are three types of house unit inside the GPV Residence area, namely: Type A (153 m²) has 43 units with an average market price around IDR 6,850,000,000; Type B (180 m²) has 57 units with an average market price around IDR 7,450,000,000; Type C (216 m²) has 38 units with an average market price around IDR 11,000,000,000. We calculated that data to show the total revenue value that works as the present worth of the project value with this following equation two (2):

\[
PW = \sum_{n=3}^{n=3}(T_{\text{unit}} \times SP_{\text{n}}) \tag{2}
\]

Where \(PW\) is present worth of the project of object study case, \(T_{\text{unit}}\) is for total units amount per type in a gated area, and \(SP\) is for an average sales price of type unit. The present worth shows in equation two (2) obtained from the accumulated total sellable unit housing price within the gated project area. This variable applied as the divider number, which works as the total amount of gated housing development economic value and charged into each base price unit of analysis on the next component valuation.

There are two fundamental properties of expenditure in real estate practices, the land costs factors, and the non-land costs factors. Besides, hard costs and soft costs are the two types that included for calculating the total cost of production expenditure of a development project. The net saleable area is the portion of the gross buildable area, which can be sold to generate revenue. The revenue for one unit housing of analysis is the selling price, which we named as the gross value in equation two (2) below. As a note, we used the average market prices as the gross value of the 153 m² unit of analysis with an amount of IDR 6,850,000,000. To seek a residual land value, we used the residual or development method as formulated as below:

\[
RLV = \{GV_{n} - (SL\text{cost}_{n} + H\text{cost}_{n} + S\text{cost}_{n} + DF\text{cost}_{n} + DP\text{cost}_{n} + LF\text{cost}_{n})\} \tag{3}
\]

Where ‘RLV’ is residual land value, ‘\(GV\)’ is gross value of unit analysis upon completion, ‘SL\text{cost}’ is sales costs, ‘\(H\text{cost}\)’ is hard costs, ‘\(S\text{cost}\)’ is soft costs, ‘DF\text{cost}’ is development financing costs, ‘DP\text{cost}’ is the developer’s profit cost, ‘LF\text{cost}’ is land financing costs, and \(n\) is for type house of unit analysis within study case area.

In component equation three (3), residual land value is explained as the remaining amount of land economic value after the total cost of all development expenses subtracts the gross value of one unit housing that analyzed. The residual land value result only operates in this valuation period to indicate the indicative land value for each unit of analysis and comparative unit. The result also used to determine the necessary amount of land economic value that has been enhanced intentionally or unintentionally by implementing the gating concept on a residential project.
Calculations of gross value unit of analysis upon completion in component equation three (3) summarized from the average sales price in the secondary housing market of this unit type within this study case area. The gross value divided with sellable land area works as a present worth of unit price per square meters for each unit of analysis and the comparative unit, which sold as the units offering price within this study case area.

In equation three (3), sales costs explain as the expenses required for selling real estate products by agents. It includes items such as commissions, legal fees, and marketing costs. We used 1% as a percentage fee of sales cost for property unit valued above one billion rupiahs in this formula. In equation three (3), hard costs explained as an expenses production cost non-land factor. We used the contractors’ cost method to calculate the total economic value of the expense cost of each countable building component separately based on field observation previously. This variable has two categories of economic value associated with construction costs. The first is an expense to build one house unit which analyzed, and the second is all the infrastructures and facilities building accumulated inside the gated housing area. Infrastructure costs consist of all construction expenses for installing a gate, walls, road and street, security posts, building facilities such as a sports club, outdoor area, water treatment system, and polder system in this residential development project. All of the infrastructures building cost summed up then divided with the total land sellable area of the gated housing area. Furthermore, the accumulated result then multiplied by the gross land area of the analysis unit and shown as the total infrastructure cost in the group of analysis valuation. However, this variable did not include in the comparative unit valuation that has been undeveloped with the gated concept.

Soft costs in equation three (3) explained as the overhead of wage cost associated with the development process as consultant fees design like architects, engineers, et cetera. We used three percents (3%) divided from the total present worth of the study case object as the percentages of the soft costs. Then the amount of total soft costs shared with the all buildable development land area. Next, the result multiplied by the land area of the unit of analysis charged.

In equation three (3), the development’s financing costs are explained as debt financing for a large portion of the development costs. The typical cash-flow scenario for a big scale of development uses a construction loan to supply funds for all expenses during the time of and until the project development completed. We estimated two percentages (2%) of financing costs are divided from the total worth of the study case object. On this point, the amount remaining from all subtraction of expense of non-land factors above must be enough to cover the cost of purchasing land plus a profit for the developer. A developer’s profit explained in equation three (3) as some percentages that valued as the developer’s effort in providing the domestic supply. We estimated there were thirty percentages (30%) of gross of total net value on completion calculated.

In equation three (3), the land financing costs explain as land acquisition costs at the early stage of development. A developer must purchase the entire plot of land before they begin their gated development residential project. We did interviews specifically with the developer who built this case study object to collect that data used for this component valuation. We assumed there was no down payment provided by the developer, and the purchase price of the land presented at a 100% total to makes the calculation slightly easier.

The residual method can attain in combination with other methods using a comparable properties method, a revenue-generating method, and cost method as classified as the mixed approach on property valuation [29]. We formulated the ratio of each residual land value with the logical function equation as can be seen below:
From the logical equation four (4) above, we calculated the total amount of the ratio indicative land value by using the following formula:

\[
\text{Ratio } ILV_n = \left( \frac{ILV \text{ unit } GC_n - NJOP \text{ area } GC_n}{m^2} \right) \div \left( \frac{ILV \text{ unit } C_n - NJOP \text{ area } C_n}{m^2} \right)
\]  

(5)

The amount appeared on the ratio indicative land value (Ratio ILVn) only works for this research valuation period. The total amount of ‘land value captured’ by the developers substantially contained in the early ratio indicative land value calculation period upon the first selling price offered. So, we formulated the early ratio of indicative land value (Ratio ILV0) by this equation below:

\[
\frac{\text{Ratio ILV}_0}{\text{Ratio ILV}_n} = \left( \frac{(%RLV\text{ unit } GC_n \times SP_0 \text{ unit } GC_n)}{(%RLV\text{ unit } C_n \times SP_0 \text{ unit } C_n)} \right) \div \left( \frac{RLV \text{ unit } GC_n}{RLV \text{ unit } C_n} \right)
\]

(6)

We collected the valuation data by acquiring the latest unit price from the Indonesian National Standard (SNI) and Unit Price Journal of Building and Construction from Recapitulation of Job Analysis based on DKI Jakarta province standard price. We obtained the fair value of the land from the Land and Building Tax Imposition Base (PBB) or tax object sales value (NJOP) as a unit of economic value on the comparative approach. We conducted initial verification with some property consultant to evaluate the scope of work to be done and its proper costs. The account in this analysis operates as land indicative value only for this object study case. The quantitative data analyzed in this research were only for present value. We processed our data collection and technique on data analysis then cross-checked with interviews result.

3. Results and discussions

3.1. Qualitative results

Two critical questions are why developers implement the gated community concept yet, and how it tends to apply to landed house model on the Jakarta Metropolitan area? We analyzed mix variables on economic and non-economic production aspects to show what the essential factors of gating concept to typically housing developers around Jakarta Metropolitan area. Social demand can be easily quantified as valuable resources by practical reason to easier the marketing and sales works. Whereas the developer’s reasons on gating as a concept reference is easily unexplained to gating trends as what it is mean on table 2.

| Table 2. Analysis of developers’ rationale on producing gated community landed housing. |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| Q Stage 1       | Developers’ Reasons | Non-Economy Production Aspects | Security & Safety Level (7) | Amenity Level (7) | Concept references (5) | Social Control (2) |
| Economy Production Aspects | Land Value (6) | Easy to Build (3) | Ease marketing & sales (7) | Low risk (2) | 3 | 5 | 5 | 3 |
|                  | Easy to Build (3) | Ease marketing & sales (7) | Low risk (2) | 7 | 4 | 7 | 5 | 4 |
|                  | Ease marketing & sales (7) | Low risk (2) | 7 | 1 | 2 | 4 | 6 |
Based on the above numbers in Table 2 shown that the developers’ motives on implementing a gating concept on the low-rise residential project have more emphasized on the economic production aspect. All selected respondents answered security, safety, and amenity levels are essential to facilitate successful marketing and sales of this gated property product. Existing land value and easy to sell are the two key factors that most required and desirable from the economy production aspects. Gating concept is primarily meant to mediate modern society demands. But instead, it is moreover about the developers’ typically desire to quickly to fetch on profitably selling their refined products. To confirm our findings, we conducted the next interview to examine the developers’ target on developing a gated community for landed housing projects in various scales of development. The data have informed in Table 3 below.

### Table 3. Lists of developers’ target scale on gated development housing projects in JMA.

| Variable         | Dimension          | P 1  | P 2  | P 3  | P 4  | P 5  | P 6  | P 7  |
|------------------|--------------------|------|------|------|------|------|------|------|
| Organization scale | Tbk                |      |      |      |      |      |      |      |
| Project location  | North Jakarta      | Tbk  | Tbk  | Tbk  | PT  | PT  | Tbk  | PT  |
| Target ratio land value | Times          | 6x  | 10x  | 7x  | 5x  | 6x  | 5x  | 3.5x |
| Time period      | Year              | 4    | 7    | 2    | 3   | 3   | 2   | 1    |
| Area             | Ha                | 5.5  | 12   | 3.5  | 4   | 4   | 3   | 0.5  |
| Average unit expenditure cost | IDR/m² | 5 mill | 8 mill | 6 mill | 5 mill | 6.75 mill | 4.5 mill | 4.5 mill |

Notes: P: developer; PT: Limited Company; Tbk: Public Company; Ha: Hectare; IDR: Indonesian Rupiah

As shown in Table 3, this result suggests that the gating concept has effects on providers’ act to count their profit by intentionally targeting on land value ratio. We reasonably argue the opportunity to increase the target on the land value ratio and to recognize the users’ financial ability can accommodate developers’ expectations — the expectation of deriving certain advantages which cause recurrent gating trend. But the result shown are varied, and it appears higher in certain places, specifically in peri-urban such Tangerang region. The project location related to the housing unit price based on the land expenses cost of the current land value. Another reason that correlated with this result is when is the time the land has been owned. In the previous decades, the landowning practice in JMA flourished during specific periods when people could purchase a massive land area with lower price and more easily [3]. The last observed findings that correlated with developers’ economic tendencies to use gating concept as a principal instrument to achieve a profit margin by the land value ratio. Profit opportunities on value creation stage shape the value capture first if the project valuation is feasible, and the competition for every group is made fair and consistent [25].

### 3.2. Quantitative results

We conducted an initial interview with sales agents and landowners to obtain the properties data that required and shown in Table 4 below. The latest selling price shows the average amount of sales price.

### Table 4. Property objects economic value data

| Property object | Tax object sales value (NJOP) | Latest selling price (2016-2019) | Early selling price (2004) |
|-----------------|-------------------------------|----------------------------------|--------------------------|
| Unit of Analysis on area BL 115 (gated housing development) | IDR 13,600,000 per m² to IDR 14,095,000 per m² | IDR 6,850,000,000 | IDR 1,350,000,000 |
| Comparative Unit on area BD 129 (outside the gated) | IDR 7,790,000 per m² to IDR 8,145,000 per m² | IDR 3,625,000,000 | IDR 350,000,000 |
This research’s object study case has a total worth as the estimated present value at IDR 1,137,200,000,000 as calculated with equation two (2). We used a residual method on the unit of analysis to seek the residual land value on the gated area that calculated by using the following equation three (3) as shown below:

\[
\text{Table 5. Residual land value of unit of analysis in gated area.}
\]

| No | Income(+) | Expenses (−) | Dimension | Total |
|----|------------|--------------|-----------|-------|
| 1. | \(GV_{\text{unit of analysis}}\) (price per unit) | \(SL\text{cost}\) (1%) | IDR 6,850,000,000 |
| 2. | \(H\text{cost}_1. \text{Unit Const.}\) (price per unit) | \(H\text{cost}_2. \text{Infra. Const.}\) (price per unit) | IDR 1,659,890,664 |
| 3. | \(S\text{cost}\) (3%) | \(D\text{Fcost}\) (2%) | IDR 133,982,836 |
| 4. | \(D\text{Pcost}\) (30% of margin) | \(L\text{Fcost}\) (source data) | IDR 459,956,710 |
| 5. | \(R\text{L}_V_{\text{unit of analysis}}\) | | IDR 3,049,786,440 |

Notes. Type unit of analysis is 9 x 17 m² in GPV Residence (gated community housing)

Component nine (9) in Table 5 above explained IDR 3,049,786,440 as a total amount of the residual land value of the unit of analysis in the gated housing area. Then, we shared that total residual value with the unit land area (153 m²) to get the unit price for each square meter and cost by IDR 19,933,245 per m². We used comparable equations to achieve the actual value on this gated area with the code BL 115 based on tax object sales value (NJOP 2018) shown in Table 4 above.

We conducted a comparative approach to seeking the gap of the indicative land value between each unit of analysis. We assumed that equals the type, construction quality, and even on regional development characteristic. The comparative unit was undeveloped with a gated concept, so fewer variables do not appear in this valuation like infrastructure construction costs, development finance, and developer’s cost. As we use the residual method on the previous valuation, we calculated the subunit comparatively by using the following equation:

\[
\text{Table 6. Residual land value of comparative unit outside the gated area.}
\]

| No | Income(+) | Expenses (−) | Dimension | Total |
|----|------------|--------------|-----------|-------|
| 1. | \(GV_{\text{unit of comparative}}\) (price per unit) | \(SL\text{cost}\) (1%) | IDR 3,625,000,000 |
| 2. | \(H\text{cost}_1. \text{Unit Const.}\) (price per unit) | \(H\text{cost}_2. \text{Infra. Const.}\) | IDR 1,659,890,664 |
| 3. | \(S\text{cost}\) (6.48%) | \(D\text{Fcost}\) | IDR 107,560,915 |
| 4. | \(D\text{Pcost}\) | \(L\text{Fcost}\) (source data) | IDR 220,000,000 |
| 5. | \(R\text{L}_V_{\text{unit of comparative}}\) | | IDR 1,601,298,421 |

Notes. Type comparative unit is 9 x 15 m² outside the gated area

Component nine (9) on Table 6 explained as the residual land value of comparative unit outside the gated area at IDR 1,601,298,421. Then, we shared it with a total sellable comparative unit land area (135 m²) per square meter and cost by IDR 11,861,470, per m². We used comparable equations to achieve the actual value on this gated area with the code BD 129 based on tax object sales value (NJOP 2018) shown in Table 4 above. We subtracted the indicative land value on each unit with the fair value land-based to get an equal comparable equation. Then we compared each unit value to result in an actual value within this area.
By equation five (5), we calculated the ratio for indicative land value with the highest fair land value threshold, as shown below:

\[
\text{Ratio } ILV_1 = \frac{(\text{IDR } 19,933,245 - \text{IDR } 14,095,000)/m^2}{(\text{IDR } 11,861,470 - \text{IDR } 8,145,000)/m^2};
\]

\[
\text{Ratio } ILV_1 = 1.57 \text{ times bigger than the highest fair value ;}
\]

And the ratio with the lowest fair land value threshold shown below at:

\[
\text{Ratio } ILV_{1*} = \frac{(\text{IDR } 19,933,245 - \text{IDR } 13,600,000)/m^2}{(\text{IDR } 11,861,470 - \text{IDR } 7,790,000)/m^2};
\]

\[
\text{Ratio } ILV_{1*} = 1.56 \text{ times bigger than the lowest fair value ;}
\]

As we assumed, the ratio between the total indicative value land on the unit analysis with the total indicative land value on the comparative subunit enlightens the amount of the land value captured by developers by implementing gated development on GPV Residence.

\[
\text{Ratio } LVC_1 = 1.56 \text{ to } 1.57 \text{ times bigger than the existing land value}
\]

As a respondent, the developer involved in developing the GPV Residence claimed that the target ratio on surrounding land value is at 1.25 times to 1.5 times more significant. This indicative land value applies only to this valuation period analyzed. The amount of aggregate value captured must be counting less than or equal to the amount when it first times offered. The constraint is we did not get any data of the base fair land value at the time this project begin in 2002 to 2004. We calculated with an extrapolation method to seek the amount of early indicative land value ratio at the beginning development stage of this project with the following equation six (6) below:

\[
\text{Ratio } LVC_0 = \frac{(44.52 \% \times \text{IDR } 1,350,000,000)}{(44.17\% \times \text{IDR } 350,000,000)} = \frac{\text{IDR } 3,049,786,440}{\text{IDR } 1,601,298,421};
\]

\[
\text{Ratio } LVC_0 = 3.20 \text{ times bigger than its initial land value before development}
\]

So the amount of the initial indicative land value is described as the actual value of land that developers captured is 3.2 times more significant than the initial pre-developed land value. The developer’s respondent claimed that they targeted the ratio on initial land value is around five (5) to seven (7) times more significant by the land acquisition cost data. The results data shown in Table 7:

| Result                  | Initial LVC (2004)     | Latest LVC (2019)    |
|-------------------------|------------------------|----------------------|
| Qualitative data        | 5 – 7 times            | 1.25 – 1.5 times     |
| Quantitative data       | 3.2 times              | 1.56–1.57 times      |

The relatively small difference in the latest LVC result with the respondent's answer can justify that developers aiming their profit orientation on enhancing the ratio to existing land value. However, the significant differences in the initial LVC results might be caused by the real value of the initial land cost bound at the beginning is cheaper than our data. Referring to the results, we argued that the capital gain estimation on the land value by implementing a gated concept affecting developers’ act in JMA nowadays.
4. Conclusions

- The results revealed that all factors lead towards developers’ motive on economic profit orientation of gating trends. Even, moreover, we indicated that the developers tried to duplicate this gating development concept without any innovating ideas on the concept that is more concern on the land value increases. The behavior of developers in major cities in Indonesia tend to present a popular residential model produced by large-scale developers and then duplicated by smaller-scale developers without elaborating the regional plan, Its align with Hapsariniaty et al. argued [22].

- We argue that the developers have more intention to continuously apply the gated concept on their residential project because of the profitability that was created still promising until now. With only 5% to 6% of the total expenditure costs to apply the gated concept, the makers able to double up even triple up much more to get the capital gain on land value. They tried to re-create the same feature on this gated concept with some similar target on the ratio to the existing land value over the 15 years passed. The findings of this study positively show that the developer’s aim on implementing the gated concept for the housing sector is similar to value capture sequences direction. This result develops an understanding of the value capture concept works as a mechanism in gating trends in housing development in JMA with real estate principles.

- Moreover, the selling price they offered become the new land value that impacted the land value enhancement improperly within their residential project area. Residential land use supply will be managed appropriately with any alternative program on land value management, respectively land as a space-economic for all actors. We hope this research might help any policymakers to consider how to control this gating trends that lead to a chaotic escalation on the residential land value of the urban area.

- Our research was limited by the availability of more specific corporate data. We also acknowledge that the developers’ answers might differ from their actual actions. This situation provides an opportunity for future study on more sample cases and the higher-level subject of the interviewee.

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References

[1] Firman, T 2004 Habitat International 28 349-368
[2] Pw C and the Urban Land Institute 2018 Emerging Trends in Real Estate Asia Pacific 2019
[3] Elmanisa A M et al 2017 Geoplanning: Journal of Geomatics and Planning 4 53-62
[4] Rahadi A 2016 International Journal of Property Science 6 19–39
[5] Ginting W Sand Sakinah R 2018 IOP Conf. Ser.: Earth Environ. Sci. 202 012057
[6] Ruiu M L 2014 Sociological Inquiry 84 316-355
[7] Cséfalvay Z and Webster C 2012 Regional Studies 46 293-308
[8] Low S M 2003 Housing, Theory and Society 21 139-140
[9] Leisch H 2002 Cities 19 341-450
[10] Blakely E J and Snyder M G 1998 Separate Places: Crime and Security in Gated Communities (USA:Urban Land Institute) p 53-70
[11] Hishiyma K 2015 RC21 International Conference On “The Ideal City: Between Myth And Reality. Representations, Policies, Contradictions And Challenges For Tomorrow’s Urban Life”
[12] Vesselinov E and Le Goix R 2012 GeoJournal 77 203-222
[13] Grant J and Mittlesteadt L 2004 Environment and Planning B Planning and Design 31 913-930
[14] La Grange A 2018 International Journal of Housing Markets and Analysis 11 520-540
[15] Roitman S and Scopes J 2012 Proceedings of the Institution of Civil Engineers-Urban Design and Planning 165 189-189
[16] Pow C P 2009 A Radical Journal of Geography 41 371-390
[17] Atkinson R and Blandy S 2005 Housing Studies 20 177–186
[18] Winarso H et al 2015 Habitat International 49 221-229
[19] Paul W and Fridah T 2015 Int. Journal of Humanities Soc. Sci. Edu (IJHSSE) 2 124-132
[20] Baycan-Levent T and Gulumser A A 2005 Gated Communities from the perspective of developers: Europian Regional Science Association Conference Papers
[21] Mardhotillah HandGamal A 2018 International Journal of Technology 9 1346-1354
[22] Hapsariniaty A W, Sidi B S, Nurdini A 2013 Procedia: Soc. And Behavioral Sci. 101 394-403
[23] Lepak D and Smith K 2007 Academy of Management Review 32 180-194
[24] Winarso 2000 Residential Land Developers Behaviour in Jabotabek, Indonesia.
[25] Gans J and Ryall M 2016 Strategic Management Journal 38 17-41
[26] Liozu S M 2017 Journal of Creating Value 3 200–209
[27] Shilling J D 2002 Real Estate 13th edition (England : South-Western Educational)
[28] Xiao Y 2017 Urban Morphology and Housing Market (Springer: Singapore) p 11-40
[29] Andrzej S 2006 Technological and Economic Development of Economy 12 253-256