Increasing the private investment scheme effectiveness of Indonesia public housing through institutional integration

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Abstract. Indonesia is predicted to have 305 million of citizen by 2035 from the demographic bonus. Number of houses needed increases as well as its worthiness. Alternative ways of funding with private sector investment become top priority to provide public housing. However, some issues raise, i.e. project preparation period, hard to get financially feasible, and coordination complexity. Literature review and qualitative analysis are conducted. Main topics of the literature are public housing, infrastructure, private investment project, institutional, government effectiveness, and Indonesia existing condition. The qualitative analysis is used to find the relationship between literature to result the conclusion. Project preparation period and financially feasible should be solved by the function of private investment institutional which are central consultation and government support. Meanwhile, institutional integration can simplify the coordination complexity. The less the stakeholder number, the simpler the coordination.

Keyword: private investment, scheme, effectiveness, public housing, institutional

1. Introduction

Indonesia gets demographic bonus as its citizens’ number soars to 305 million of people in 2035 while the current number is 271 million [1]. It results to more than 71 million household nowadays with the assumption of a household may consists of three or four family members. Through the modernize basic needs approach, people are not only looking for food (including water), shelter (house) and clothes, but also sanitation and healthcare [2]. Therefore, a decent house for household is urgently necessary and the demographic bonus phenomenon makes the Indonesia housing provision is highly more complicated.

People or household with homeless condition is called backlog. In 2019, there are 10.63% homeless household in Indonesia [3]. It is predicted to be increasing because of the demographic bonus. By 2025, the backlog number may reach more than 15% of total Indonesia household population. In addition, 34.36% and 28.76% of household does not have any access to a decent sanitation and clean water, respectively [4]. Since sanitation is mentioned as a modernize basic needs and one of the healthcare basic requirements is clean water accessibility [2], Indonesia is facing serious issue to be solved.
Government of Indonesia through the Ministry of Public Works and Housing (MPWH) is the main responsible institution of the backlog and housing inadequacy [5]. However, its fiscal capacity is limited. Public housing is not the only basic infrastructure that need to be provided by the MPWH. It also responsible for other basic infrastructure needs e.g. road, water resources, bridge, highway, and human settlement. Hence, the MPWH is only able to fund up to 30% of total MPWH infrastructure needs [5].

Indonesia have been intensively focusing on infrastructure provision through alternative ways of funding - mostly with private sector involvement [6]. Nevertheless, it comes with several issues. Effectiveness of project preparation including tendering is the biggest constraint. Bureaucracy from stakeholders is layered. It often makes the preparation and tendering process too long. Project initiator – in the case of public housing sector is the Minister of Public Works and Housing or the Director General of Housing – should coordinate and maintain the expectation of least 7 stakeholders. The number is counted based on a common flow of private investment project realization. If there any technically project issue, the number will increase. Thus, the expectation is more complicated to be handled by the project initiator.

This situation described on Indonesia ranking of Government Effectiveness Index. Indonesia is in 73rd of 193 countries [7]. On ASEAN level, Indonesia’s ranking is still behind Singapore, Brunei Darussalam, Malaysia, and Thailand. Quality of public service and bureaucracy transformation are a few parameters of the index. Goes along with it, Indonesia’s number of infrastructure project funded by private sector also does not meet the needs – only 74 projects by 2020 [8]. There is no public housing project from the number meanwhile the needs are increasing.

A revolutionary solution is needed. Private investment scheme should be as effective and efficient as possible. Simplification of stakeholders’ expectation may enhance its effectiveness [9]. Nonetheless, integrate stakeholders may come as a form to simplify their expectations. A central unit to execute and monitor the whole investment project life cycle can be the solution needed. Therefore, this paper aims to analyze how the central unit is proposed to increase the private investment scheme effectiveness through institutional integration. In addition, the contextual of public housing sector will be added into the analysis.

2. Institutional of Indonesia public housing investment project

2.1. Indonesia public housing

House is one of basic needs [2]. MPWH needs to provide this basic infrastructure for public, especially for low-income community [5]. Main goal of public housing development is to reduce backlog number. In general, backlog is the accumulation of unfinished work [10]. Meanwhile in public housing context, backlog means the number of people who does not have any place to live is called backlog, whether it is leased or owned [11].

MPWH has its own flagship program to reduce backlog number, namely A Million House Program [12]. They aim to build a million new house every year. It has been carried out since 2015. In its first year, the target of a million house has yet to be realized. However, the realization number increases. By 2019, MPWH has provided not less than 1,250,000 houses [12]. Beside of providing houses, MPWH is also responsible to ensure the decent of house.

Four parameters of a decent house comprise of following points: (1) space adequacy; (2) access to sanitation; (3) access to clean water; and (4) house physical resistance. Access to sanitation and clean water are the two bottom parameters attainment of Indonesia’s public housing. Meanwhile, the space adequacy and home physical resistance have been achieved by the Indonesia’s public housing with the number of 80,59% and 95,97% [3].

To provide decent housing and meet the demand, MPWH needs a huge amount of state budget. However, MPWH can only provide 30% of total funding needs [12]. This mostly used to cover its flagship program, i.e. A Million House Program. The backlog number is increasing periodically by up to 0,79% each year. Therefore, it is predicted to become 15,35% in 2025 (projection number).
### Table 1. Indonesia backlog percentage

| Year  | Year (Projection number) | Year (Projection number) | Year (Projection number) |
|-------|--------------------------|--------------------------|--------------------------|
| 2017  | 10.87%                   | 2020*                    | 11.42%                   |
| 2018  | 10.63%                   | 2021*                    | 12.20%                   |
| 2019  | 10.63%                   | 2022*                    | 12.99%                   |
|       |                          |                          |                          |
|       | 12.00%                   |                          |                          |

**Figure 1. Indonesia’s Backlog Projection and Funding Availability**

2.2. Private investment infrastructure

Government of Indonesia claim that private investment becomes top priority scheme of infrastructure provision [13]. The need why a project should be carried out by private investment are the following points: (1) lack of finance; (2) need for modern technology; and (3) effective and efficient management skills [14]. Indonesia have been promoting their infrastructure projects vigorously since the last six years to get the above-mentioned benefits.

Private investment infrastructure projects need an initiator. It oftentimes the government which traditionally the responsible stakeholder to provide infrastructure. The initiator should arrange the whole project life cycle although the project cost will be funded by private.

In public housing context, private investment scheme faces serious issue. The public housing project is hardly to get financially feasible. The scheme often needs to be injected by some fund to boost up the financial feasibility. Otherwise, the government support may be the solution. Therefore, the government commitment and effectiveness are crucial.

2.3. Institutional

Institutional is defined as set of rules to manage the relationship pattern between stakeholders involved [15]. In more specific definition, institutional is a human relationship pattern which governed by the regulation, law, politic and management [16]. Many projects or country use effective institutional model as the important factor for innovation [17]. From those definition, it can be concluded that
institutional model is human (stakeholders) relationship based on law, politic and management to generate innovation.

Private investment scheme is considered as priority alternatives for the Government of Indonesia to provide infrastructure [13]. Effectiveness of government and stakeholder dialogue are important to ensure a successful infrastructure private investment project. Those factors derived from the understanding that less stakeholder is better for an institutional model, if the function of each stakeholder remains [9].

Project initiator needs several functions from private investment project institutional within Government of Indonesia [6], i.e. (1) central consultation; (2) government support to project; (3) Special Purpose Vehicle (SPV) of private sector transaction / tendering; (4) debottlenecking; and (5) project promotion from government to investor. Those functions are derived to different stakeholders. Thus, the project initiator should coordinate to at least five different stakeholders. This often yield to a long project preparation time.

3. Methodology
This research’s analysis uses literature review and qualitative analysis as methodologies. The literature was taken from academic journal, conference proceedings, institution or government publications, and basic data from the Indonesia Central Bureau of Statistics. Main topics of the literature are public housing, infrastructure, private investment project, institutional, government effectiveness, and Indonesia existing condition. Considering the rapid update of infrastructure provision scheme, publication year of literature is limited to 20 years behind. Lastly, the qualitative analysis is used to find the relationship between literature to result the conclusion.

4. Results

4.1. Private investment project delivery and the issues
Preparation often becomes constraint of Indonesia private investment project. It may need more than 18 months to prepare Preliminary Study (PS), Feasibility Study (FS) and Special Purpose Vehicle (SPV) Transaction, without the Detailed Engineering Design (DED) [18]. In fact, the FS sometimes divided into two phases, i.e. Pre-FS and FS itself. Compared with the conventional infrastructure procurement scheme through state budget, it just needs up to 12 months of preparation or 16 months including DED.

Infrastructure provision is government’s responsibility while their main function is to serve public needs. Therefore, traditionally they do not need any revenue from the infrastructures. However, it does not apply to the private investment project. It indeed requires more aspects to be discussed in the study. As discussed before, one of the most important is how the project can generate revenue. Project preparation time could reduce if the lesson learned of similar project or sector available. Nevertheless, public housing sector has currently no success story of project private investment.

The duration of project preparation time and no success story are the two main constraints of public housing private investment project. In addition, basically a housing project is hardly to get financially feasible. To solve the issues, each functions of private investment project institutional should be well obtained by the project initiator.
Table 2. Function and benefit of private investment project institutional

| Function                  | Benefit                                                                 |
|---------------------------|-------------------------------------------------------------------------|
| Central consultation      | To give lesson learned from another project – even though it comes from different sector |
| Government support        | To get project financially feasible                                      |
| Government guarantee      | To ensure the project risks to be handled and do not affect the project   |
| SPV Transaction           | To get assisted in SPV tendering                                         |

Benefits mentioned on Table 1 may solve majority of problems from private investment projects. However, the project preparation period may not reduce if the institutional still the same as the existing. Too many stakeholders involved results to too long coordination time. In fact, a solid project institutional may increase the effectiveness of the functions. Therefore, an institutional integration may raise as a solution.

Government of Indonesia have been initiated a Joint Office (JO) of private investment project. It comprises of stakeholders from public party to increase the private investment in infrastructure projects, including public housing. However, the JO do not bind stakeholders into an entity and only provide a place to work together. Thus, every stakeholder may still have their own importance. To combine every interest into a common goal, they need to be in a same unit e.g. a central unit.

4.2. Central unit

Project initiator, central or regional government, to offer their project to private needs to obey the bureaucracy from various regulation. It also comes from various stakeholders. The project initiator should coordinate with all related stakeholders separately. Even though there is a JO, the effectiveness has yet to meet the expectation. Considering that Indonesia consists of hundreds of regional governments which can become project initiator, delivering the functions and benefits from institutional effectively is crucial.

![Figure 2. Central unit as institutional integration](image-url)
A central unit, described on figure 2, is the integration institutional to reduce the stakeholder involved. However, all functions should be transferred. Working unit within stakeholders which its main tasks related to private investment scheme may re-placed to the central unit. Project initiator therefore only require coordinating with one stakeholder to get all functions and benefit needed. It can accelerate the coordination required time. Thus, efficiency of project preparation will increase.

5. Conclusion

Indonesia is facing demographic bonus nowadays and required more housing for their citizen. Homeless household or backlog number increases. Accessibility to sanitation and clean water of household needs to be evaluated to deliver a decent public housing. Meanwhile, Indonesia state budget for infrastructure is limited. Private investment therefore becomes priority scheme in infrastructure provision.

The scheme comes with some issues, i.e. project preparation period, hard to get financially feasible, and coordination complexity. The first two issues should be solved by the function of private investment institutional which are central consultation and government support. Stakeholders can give consultation to project initiator in terms of project substantial. Meanwhile government support can boost up the financial feasibility. However, there is one remaining issue to be addressed.

Institutional integration can simplify the coordination complexity. The less the stakeholder number, the simpler the coordination. However, the most important thing of institutional integration is that the functions are not eliminated. Working unit within stakeholders which its main tasks related to private investment scheme may re-placed to the central unit. Therefore, Project initiator only require coordinating with one stakeholder to get all functions and benefit needed.

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