

EVALUATION OF RESIDENTS' QUALITY OF LIFE OF LOW COST HOUSING PROGRAMME IN TANGERANG CITY

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ABSTRACT

Low cost housing (Rusunawa) Programme in Indonesia has been intended to serve low income citizens and in the same time to eradicate slum and squatter settlements in city areas. Some studies about Rusunawa Programme in Indonesia found some problems in Rusunawa affecting Rusunawa residents' quality of life. This study is conducted to evaluate quality of life of Rusunawa residents in Tangerang City. Health, safety, convenience, income, education and social relation are indicators used to evaluate quality of life. The study used mix methods using survey and interviews. Interviews were conducted to city government officials, rusunawa management, rusunawa residents and people living around the rusunawa and survey questionnaires were distributed to 289 Rusunawa residents. The study shows that Rusunawa residents are satisfied with all aspects of quality of life but income. To overcome the problem, government needs to provide more empowerment programme for residents. Mean comparison between respondents in Rusunawa Manis and Rusunawa Gebang shows that Respondents in Manis are more convenient and have better social relation than that of in Gebang. On the contrary, respondents stated that Gebang is safer than Manis. There is no significant different in opinion between low and high income respondents.

Keywords: evaluation, quality of life, rusunawa, slums, squatter settlements

INTRODUCTION

Rusunawa Programme is part of Low Cost Housing Programme designed to provide livable housing for low income citizens living in slums and squatter settlements. It benefits low income citizens who currently live in the unlivable housings and citizens in general because it reduces numbers and areas of slum and squatters settlements in the city. Rusunawa Programme is important for some reasons. First, it serves low income citizens by providing affordable and livable housing for them. Second, it affects large number of citizens since the Rusunawa buildings have been and will be developed in many cities in Indonesia. Third, it improves the condition of the city by reducing slums and squatter settlement because it is intended to accommodate low income citizens previously living in those unlivable areas (Fitriani 2010; Ministry of PUPR 2012).

Rusunawa Programme in Tangerang city is intended to address housing problem in the city. Because capacity to build houses is lower than the demand, there is a backlog in Tangerang City which in 2015 was 28,539 houses. The number consists of 22,333 additional houses, existing 1,732 slum houses and 4,474 squatter settlements. City government has designed some policies to deal with the problems (City of Tangerang 2015). Table 1 shows City of Tangerang's strategy to deal with housing problem in the city.

Table 1: City of Tangerang's strategy to overcome slums and squatter settlements

Category	Strategy	Reason
Rent in decent rented house	Provide low cost flat for owned (rusunami)	They can afford to pay expensive rent in decent shelter, so the rent can be allocated to pay installment fee for the subsidized housing.
Live in their own unlivable house	Provide assistance to renovate their house, or exchange their land with a unit in low cost flat for owned	Government cannot force citizens to leave their legally owned land.
Live in squatter settlements or in slum housings	Provide Rusunawa (low cost flat for rent)	They have to leave their current houses because it causes problem for the city and for themselves

Source: City of Tangerang (2015)

Currently there are two Rusunawas in Tangerang which are Rusunawa Manis and Gebang. Both Rusunawas are managed by Local Technical Implementation Unit (UPTD) Rusunawa, a unit established by city government to manage the Rusunawas. Because Rusunawa is intended to overcome housing in Tangerang city, it is regulated that only Tangerang city residents can apply and live in the Rusunawas. Table 2 describes characteristics of Rusunawa Manis and Gebang in Tangerang city.

Table 2: Information about Rusunawa Manis and Gebang

Rusunawa and Buildings	No of blocks	Number of units	Size (M ²)	Year of Construction	Developer	Owner
Manis A and B	2	128	18	1996	Tangerang city	Tangerang city
Manis I, II, III and IV	4	192	21	2002	Perumnas	Perumnas*
Manis V, VI and VII	3	144	21	2003	Ministry of Public Works	Central government
Gebang A and B	4	198	24	2008	Ministry of Public Works	Tangerang city
Gebang C, D, and E	4	198	24	2010	Ministry of Public Works	Tangerang city
Total	17	860				

*Rusunawa Manis 1 to 4 are currently owned by PT Perumnas but are operated by UPTD with an agreement that after 25 years the Rusunawa will be granted to Tangerang city. Currently it is operated based on profit sharing mechanism.

The table shows that although Rusunawa Gebang A - E were completed in 2008 and 2010, they have been handed over to Tangerang city while the hand over process of Rusunawa Manis V-VII have not completed. According to Ministry Of Public Works and Housings, hand over process for Manis V-VII is currently under review in Ministry of Finance. Consequently, although they are managed by Tangerang city government, major repair and maintenance for Manis V-VII should use central government's budget because the buildings are recorded as central government's asset. Based on the conditions, this study aims to evaluate quality of Rusunawa Programme in Tangerang City from Residents' perspective.

Some studies and audits on Rusunawa Programme in Indonesia reveal many problems in the programme either in the occupancy, quality of building or management aspects of the

programme (BPK 2012, 2015; Respati & Marbun 2013). One of the most important problems in the Rusunawa Programme is idle Rusunawa. In some cities, Rusunawa buildings are idle and left unoccupied (Buchori 2014). There are also problem with wrong allocation of Rusunawa units where affluent people live in the Rusunawa.

Some studies mention that moving to Rusunawa causes them to have lower income (Hartatik et al. 2010) because they can no longer conduct economic activities similar to what that they did in previous places. Some studies reveal that because some residents are not familiar each other and behave improperly, they have uneasy relationship with their neighbors (Subkhan 2008). In other studies, residents claim that living in the Rusunawa is not convenience because it is too noisy and residents have less privacy (Hartatik et al. 2010). There are also safety issues with the Rusunawa where some residents report that they miss some valuables including bicycles and electrical panels. In addition, indecent behavior also becomes a problem such as when residents commit adultery in the unit (Pancawati 2013).

As for Rusunawa in Tangerang City, it can be considered satisfactory. Interviews with government official, residents and people living around rusunawa also reveal that there is no serious problem about rusunawa and its residents. In addition, there has not been any negative coverage about the Rusunawa on newspapers. However, it is also noticed that there are many cars in the parking area that belong to Rusunawa residents, there are some broken facilities in Rusunawa and there are some violations to Rusunawa regulations that are not resolved. Some Rusunawa residents also mentioned that some Rusunawa residents are affluent people which are not supposed to live in Rusunawa. This study is intended to evaluate quality of life of Rusunawa Residents.

REVIEW OF LITERATURE

Housing is one of humans' basic needs and therefore is considered as important aspect of life (ADB 2008). Housing is important because when someone is homeless or lives in substandard housing they have physiological barriers to improve their live. Steady housing enables citizens to think about next achievement such as education and employment which will improve their productivity and eventually their overall well-being (Frontier Economics 2014).

For low income families, especially those living in the city, getting decent shelters in suitable and comfortable location are beyond their capability (Muhammad et al. 2015). Their limited income forces them to live either in slum or squatter settlements. Although the condition may not be ideal for them and their families, they can tolerate it because convenience is no longer becoming their priority (Taher & Ibrahim 2014). They only need to find a place to stay in certain period of time. Affordability and distance to work place matter, regardless the quality of the shelter (Susanto & Sugiyantoro 2013). They realized that living in the environment poses them with some risks. In the unlivable settlement, they have to face problems such as high crime rate, inadequate clean water supply and waste water facility and flooding. Their shelters are also prone to fire because most of them are not developed using appropriate standard material and measurement. Once the fire does take place, they have another problem because mitigation measures to the fire are difficult to do (Oktaviansyah 2012).

There are some strategies to deal with the problem. Taher and Ibrahim (2014) suggest that the squatter settlement is redeveloped. The strategy works if the area is intended for settlement. However, if it is not, the more appropriate strategy is to revive the place to its intended purpose. When government thinks that those indecent areas should be cleaned up,

there is a risk that the squatters will be homeless. This creates dilemma for government because objective of development is to improve quality of life of citizens. On the one hand, displacing the squatters using force, in the name of development, is against the objective. On the other hand, letting them live in squatter settlements is not an appropriate decision because it shows government's ignorance to residents' quality of life and general citizens' interest that are entitled to have good environment. To mitigate negative impact of the squatter relocation, subsidized housing is an appropriate strategy to help squatters get livable shelter and improve the condition of the city. Therefore, low cost housing is considered as the most appropriate strategy to overcome slums and squatter settlement problems because with limited land area, it can serve and accommodate many low income citizens (Taher & Ibrahim 2014).

Studies about public housing programme evaluate some components of Low Cost Housing Programmes consisting of input, process and result. Because objective of development is to improve citizens' welfare, residents' satisfaction becomes important factor that need to be evaluated. Information about residents' satisfaction is important for both people and government. For citizens, the information can be used to evaluate government's performance because residents' satisfaction, to some extent, represents the effectiveness of development programme. For government, the information can be used as feedback to improve its service to residents (Dye 2011; Setiadi 2014). The components provide general understanding on the focus of existing research.

Both physical and non-physical aspects of Low Cost Housing Programme need to be considered in evaluating the programme (Bakhtyar et al. 2013; CCEA 2015). Evaluation on housing policy should not only measure the quality of building and facilities of the programme but also examine its outcome. To measure outcome, Frontier Economics (2014), Hartatik et al. (2010) and Pourmohammadi and Farid (2011) state that residents' quality of life can be used as indicator for outcome.

Bakhtyar et al. (2013) state that some factors such as health, education, social participation, income and safety can be used to measure residents' quality of life. In Malaysia, quality of life is a combination of several factors such as health, income, education, environment, family life, safety, social participation and leisure (Bakhtyar et al. 2013). Other researcher discuss various aspects of quality of life including economic (CCEA 2015; Frontier Economics 2014; Hartatik et al. 2010), education attainment (ADB 2011; Hu & Chou 2016), health (CCEA 2015; Frontier Economics 2014; Hardiman 2009; Hartatik et al. 2010; Pourmohammadi & Farid 2011), safety (Frontier Economics 2014; Hartatik et al. 2010; Pancawati 2013; Pourmohammadi & Farid 2011) and social life (CCEA 2015; Frontier Economics 2014; Purwanto & Wijayanti 2012). Measuring socio economic aspects of the development programme is important (Muhammad et al. 2015) because it proves whether or not government programmes improve residents' quality of life (Marcano & Ruprah 2008). ADB (2011), CCEA (2015), and Purwanto & Wijayanti (2012) add that Low Cost Housing Programme is intended to provide livable housing for low income family, add to the beauty and splendor of the city and improve urban activity and crowd.

Although housing programme is intended to provide livable place for low income families, the programme may create some undesirable impact for residents. Hardiman (2009) states that residents of Low Cost Housing Programme often experience cultural shock. Most of them are not accustomed to live in high story building. Moreover, living in flats forces them to adapt to different life style and more regulated living. Without adequate guidance, residents will bring slum condition and habit into Rusunawa to create vertical slum. This requires management of the housing programme to help adaptation process (Hartatik et al. 2010; Respati & Marbun 2013). Good adaption process is shown in a study by Purwanto and

Wijayanti (2012) explaining that residents of Rusunawa Bandarharjo successfully adapt to the new environment in Rusunawa by using limited common spaces in the Rusunawa to interact with other residents.

Moving to high story building is not easy for some residents who accustomed to live on landed housing. Hartatik et al.(2010) mention that moving to Rusunawa causes them to have lower income because they can no longer conduct economic activities similar to what that they did in previous places. They also find that residents are not convenience living in flat because it is too noisy and residents have less privacy. Respati & Marbun (2013) add that sometimes residents cannot adapt to more regulated living in flat and bring their old habit to Rusunawa to create vertical slum in Rusunawa. Subkhan (2008) finds that some residents cannot get along nicely with their new neighbors. Because some residents are not familiar each other and behave improperly, they have uneasy relationship with their neighbors. Pancawati (2013) finds that Rusunawa is not very safe. Some residents report that they miss some valuables including bicycles and electrical panels. In addition, there are also problems related to convenience such as when residents commit adultery in the unit.

RESEARCH METHODOLOGY

Evaluation on Rusunawa Programme was conducted on each sub indicator. To evaluate quality of life, some indicators consisting of health, safety, convenience, income, education and social relations were used (Wibowo et al. 2018). Survey was used to evaluate various aspects of Rusunawa Programme. Based on the evaluation, conclusion was determined. Survey was conducted to evaluate various aspects of Rusunawa Programme from Rusunawa residents' perspective. The survey was conducted on September 2016 using stratified random sampling. In the survey, 320 questionnaires were distributed to residents of both Rusunawa Gebang and Manis. Because population for both Rusunawa was 763 residents consisting of 379 Manis residents and 384 Gebang residents, according to Krejcie and Morgan (1970), 256 residents are adequate to be taken as sample to represent the population.

From the weighting, taking samples as many as 127 respondents from Rusunawa Manis and 129 respondents from Rusunawa Gebang is adequate. To anticipate non-returning questionnaire, 160 questionnaires were distributed in each Rusunawa. From the 320 questionnaires distributed in both Rusunawas, 289 questionnaires were returned consisting of 155 questionnaires from Manis and 134 questionnaires from Gebang. Because collected samples were above the threshold of 256, and number of returning questionnaires were more than 127 from Rusunawa Manis and 129 from Rusunawa Gebang, these samples are considered adequate for analysis.

Survey data were analyzed using SPSS to do descriptive statistics and mean comparison. Descriptive statistics were used to identify mean and frequency of data. The frequency is important to identify number of respondents who agree or disagree, satisfied or dissatisfied to certain statement or condition. The responses are grouped into disagree, neutral and agree categories (Armstrong & Taylor 2012; Daniels et al. 2017; Gosavi 2015; Passe & Fitchett 2013). In this case, strongly disagree and disagree are grouped into disagree, agree and strongly agree are grouped into agree and neither agree nor disagree is categorized as neutral. Criterion used to measure satisfaction was set at 80% level, meaning that certain condition is considered acceptable when more than 80% of respondents agreed with the condition (OPONI 2017). In the criteria, neutral responses are considered not satisfied because otherwise respondents will state that they agree with the condition.

Mean was used to measure the degree of satisfaction or agreement to certain condition. Using parametric test to analyze likert scale data is possible (Sullivan & Artino 2013) because likert scale data can have mean and median and be treated like continuous data (Boone & Boone 2012). After mean value for certain category (construct) is calculated, the value is then evaluated with criteria as follows: respondents were considered satisfied when the score is above 3.67. This categorization used similar method with Azmariana Azman et al. (2013) where they grouped response into three categories: 1-2.33=low, 2.34-3.66=medium, 3.67-5=high. The standard means that when the average scores are below 3.67, they are considered unacceptable.

. Mean comparison between Rusunawa Manis and Gebang Raya, and between low income and high income residents were conducted using independent t test. Comparing means between two Rusunawas was conducted because they have different characteristics. Rusunawa Gebang has newer buildings, larger size of units and more expensive monthly rent fee than Rusunawa Manis. Although Rusunawa Gebang and Rusunawa Manis are located in different location, they are managed by same manager.

Comparing means between low and high income was conducted because the Rusunawa is intended for low income citizens, but not all residents are from low income category. The categorization uses 3 million Rupiah threshold agreed by Tangerang city government official. For the comparison respondents with income 0-1.5 million and 1.5 million – 3 million are grouped in low income category and those with income 3-4.5 million, 4.5-6 million and above 6 million are grouped in high income category. Similar comparisons have been conducted by Zairul N. Musa et al. (2015) where they compare perception of residents of low cost and medium cost housing, and perception of owners and tenants of the housings.

In addition to survey, interviews were conducted to rusunawa residents, rusunawa management and government official at Public Housing office having responsibility to oversee rusunawa operation. The interviews were used to support and validate survey result to get better understanding on relevant issue.

RESEARCH FINDINGS

i) Demographic information

Survey data show that 91% of respondents work as factory workers and the rest work as government officials, students, have own business and other. For those who stated other, some stated that they are self-employed, freelance worker, contract worker, do not have particular job, work on project based job, motor taxi driver (ojek), and unemployed (just laid off). For residents' educational attainment, only 10% of the respondents are college graduates, 78% of the respondents are high school graduates and 12 % have education lower than high school.

More than three quarter of respondents (81.31%) stated that they lived in rented houses before they moved to Rusunawa. Other respondents lived in parents' house (11.42%), relatives' house (4.84%) and the rest stated they live in their own house and company's dormitory. Survey data also show that main reason for leaving their previous places is expensive rent (27.68%). Other reasons are overcrowding (24.57%), need independence (18.34%), poor environment condition (10.03%), far from work place (9.34%), poor housing conditions (6.23%), health reason (3.11%) and told to leave (0.69%).

Some respondents stated that their old place was crowded because they lived in densely populated rent houses. As city official stated, in such rented houses, sometimes one bathroom is shared for many families. Some respondents stated that they lived with their parents or relatives and they needed to live separately, especially after they have kids.

Rusunawa management confirmed condition that most of Rusunawa residents are factory workers. They also stated that there are no Rusunawa residents who previously lived in squatters. They stated that city government has tried to relocate squatters but they refused to be relocated to Rusunawa. To avoid idle Rusunawa facilities, they decided to allocate Rusunawa for general citizens.

For length of occupancy, survey data show that more than half of respondents (55.71%) have stayed in the Rusunawa for more than allowed time, as stated in contract, which is three years. Five of them even have stayed for more than 12 years in the Rusunawa. Further inquiry reveals of the five respondents, two of them have been staying for 13 years, one for 14 years and two for 16 years.

Because Rusunawa is intended to serve low income family, it is important to know respondents' economic conditions, particularly income. From income side, survey data show that 62.28% of respondents state that their family incomes are below Rp3.000.000,00 while 37.72% of them stated that their family incomes are more than Rp3.000.000,00. Among those having income above Rp3 million, there are even some respondents whose family incomes are above Rp6.000.000,00. City government stated that income for Rusunawa residents should not be more than Rp3 million a month, which is minimum regional wage in the city.

ii) Quality of life of rusunawa residents

Table 3 summarizes respondents' opinion about various aspects of quality of life. The table shows that overall quality of life for the respondents is satisfactory. Health, safety, convenience, kids' education and social relation are good. For economic condition, respondents state that it has not been satisfactory.

Table 3: Mean of respondents' satisfaction on the result of Rusunawa Programme

Description	N	Mean	Std. Deviation	criteria average >3.67
Quality of Life	289	3.9149	.31836	pass
Health	289	3.8633	.49424	pass
Safety	289	4.3588	.30494	pass
Convenience	289	3.7814	.51557	pass
Income	289	3.5063	.44342	fail
Education	167	3.9541	.45261	pass
Social Relation	289	4.0420	.46702	pass

Source: Survey result, 2016

Following parts are discussion about each aspect of quality of life.

(a) Health

Respondents stated that their health condition is generally good. However, as shown in table 4, not many respondents agree that the quality of health service in Rusunawa is adequate and that their health condition after moving to Rusunawa is better than in their previous places. From interviews, some residents stated that they got dengue fever while staying in Rusunawa because there are many mosquitos in their units and in Rusunawa. Although fogging is conducted in Rusunawa, they stated that management and local government should conduct more frequent fogging and eliminate puddles (breeding ground for mosquitos).

Currently clinic is not available within Rusunawa and residents have to go quite far to reach government health facilities. However, respondents stated that some health related programmes are conducted within Rusunawa and health facilities are available around the Rusunawa. Most respondents also agreed that Rusunawa brings positive impact to their health because some conditions such as sanitation, garbage, drainage, room ventilation, wastewater treatment and clean water facilities are better than that of in their previous places.

Table 4: Percentage of respondents' opinion on health

Description	Total			Criteria
	Disagree	Neutral	Agree	Agree >80%
Quality of health service in the Rusunawa is better than that of in your previous dwelling	3.81%	22.84%	73.36%	fail
Your health condition is good	1.04%	16.26%	82.70%	pass
Your health condition now is better than it is in your previous dwelling	2.42%	27.34%	70.24%	fail
Rusunawa condition brings about a good impact to health condition of your family	1.04%	19.38%	79.58%	fail

Source: Survey result, 2016

Some residents stated that cleanliness of Rusunawa shall be improved because some residents were caught by dengue fever few years back. They also requested that government provides public health service facilities (clinics) near the Rusunawa to serve not only the Rusunawa residents but also people around the Rusunawa. Although private clinics are available, they charge more than government's health facilities. Currently people in the area need to travel quite far to reach government health facilities.

(b) Safety

In general, respondents state that Rusunawa is safe. There are two indicators used to measure safety, first is crime incidence within Rusunawa and second is respondents' perception on their safety. Table 5 shows that occurrence of crimes in both Rusunawas are low, either it is theft, robbery, gambling, drug or prostitution.

Table 5: Percentage of respondents' opinion on occurrence of crime

Description	Total			Criteria
	Often	Neutral	Rarely	Agree >80%

Description	Total			Criteria
	Often	Neutral	Rarely	Agree >80%
Theft	4.50%	12.80%	82.70%	pass
Robbery	0.00%	1.04%	98.96%	pass
Gambling	1.04%	3.11%	95.85%	pass
Drug use/transaction	0.00%	0.35%	99.65%	pass
Prostitute	0.00%	0.35%	99.65%	pass

Source: Survey result, 2016

Some residents and citizens living around Rusunawa said that currently security condition in Rusunawa is much better than long time ago. Only 12 respondents stated that they experienced theft within Rusunawa area. However, currently there are no such problems because management implements stricter measure to deal with the problems. Rusunawa management stated that in the past, there were some incidences in Rusunawa Manis, such as prostitute, drug, gambling, etc. Currently, when management identifies that some residents create problems in the Rusunawa, management gives them warning and if the problems persist, they are told to leave immediately. A community leader who lives near Rusunawa, confirmed this information by stating that in the past, Rusunawa was not safe and crime happened occasionally, but currently the safety has improved considerably.

Some residents also mentioned that relationships among residents and between residents and management officers are good. It improves safety because when there are problems or suspicions on anything, residents will report to management and security officers immediately. For management, this social control is also beneficial to avoid illegal contract shifting because when there is new person in their blocks, residents will ask the person and confirm it to management.

Table 6 shows that respondents feel safe being alone inside their units and within Rusunawa areas. They also feel safe parking their vehicles in Rusunawa parking area and mention that security of Rusunawa is better than in their previous place. However, they do not feel safe leaving their valuable belongings inside their units.

Table 6: Percentage of respondents' opinion on safety

Description	Total			Criteria
	Disagree	Neutral	Agree	Agree >80%
You feel safe being alone at night inside your unit,	1.38%	9.34%	89.27%	pass
You feel safe being alone at night in the area right outside your unit—such as in the parking area	4.84%	14.88%	80.28%	pass
You feel safe leaving behind your valuable belongings inside your unit while you are away	6.23%	16.26%	77.51%	fail
You feel safe parking your vehicle in the Rusunawa parking area.	4.15%	14.53%	81.31%	pass
Security of your place is better than that of in your previous dwelling	1.73%	14.53%	83.74%	pass

Source: Survey result, 2016

From interviews, some Rusunawa Manis residents mentioned that there were some theft and motorcycles stolen incidences within Rusunawa areas. Although currently the safety is improved, residents are worried if the incidences recur in the future. To improve the security, there is also cooperation and coordination with local police officers to oversee and monitor security of both Rusunawas. In addition, in Rusunawa Manis, since there are only six security officers who give more attention and spend more time on monitoring the gate, residents also conduct community security activities within Rusunawa. Management stated that when there is anything suspicious, such as non-residents staying within Rusunawa until late or behave suspiciously, those who are scheduled to conduct monitoring will report to security officers.

(c) Convenience

For convenience aspect, table 7 shows that air quality in Rusunawa is good while cleanliness, quietness and public lighting of the Rusunawas need serious improvements. Nevertheless most respondents agreed that Rusunawa condition is more convenient than their previous place. Although most respondents state that air quality is good, sometimes it is polluted by industrial dust and smell from small home industries and chicken farms located around Rusunawa. This is particularly troublesome for residents whose units are located near the industries. However this problem only happens in Manis because it is located near industrial complex.

In both Rusunawas, cleanliness becomes problem because residents' garbage is stacked in the rear part of Rusunawa. Some residents expected that management encourages local government to remove the garbage more frequently. They also stated that cleaning officer within Rusunawa should work harder because they can find trash littered in various places including stairs and public areas. Problems also happen with feral animal in both Rusunawas. In Rusunawa Manis, the problem is with feral cats that defecate at stairs and other public places, while in Rusunawa Gebang the problem is with rats causing smell problem from their urine and feces.

Table 7: Percentage of respondents' opinion on convenience

Description	Total			Criteria
	Disagree	Neutral	Agree	Agree >80%
Your block is clean	9.00%	24.57%	66.44%	fail
Overall Rusunawa is clean	9.00%	28.03%	62.98%	fail
The Rusunawa is not too noisy	9.00%	25.26%	65.74%	fail
Air quality is good	2.77%	13.49%	83.74%	pass
Lighting in public areas is adequate	5.54%	14.88%	79.58%	fail
Condition of environment is better than that of in your previous dwelling	2.42%	14.53%	83.04%	pass

Source: Survey result, 2016

From the observation, it is also noticed that some residents dried their washes in front of their units which should become public areas. Although no resident complains the condition, it reduces the livability of the Rusunawa. If everybody does so, this will create

vertical slums. Management stated that they have reminded residents not to use public space for their personal use, including drying clothes.

Noise pollution also becomes a problem in both Rusunawas because some residents talk too loud or have their TVs too loud which disturb neighbors. Because the size of the units is small and quality of wall insulation in the unit is not very good, the noise is unavoidable problem. However, this problem actually can be avoided when residents respect each other. In Rusunawa Manis, noise problem is bigger than in Gebang because in addition to noise from within Rusunawa, it also gets problem from industries around the Rusunawa. There are also some concerns about lighting of public facilities because currently lighting for common room, parking space and open space are not adequate. Some residents stated, and management agreed, that improving the lighting in public space will improve both convenience and security aspects of Rusunawa.

(d) Income

Survey results, as presented in table 8, show that most respondents agree that rental cost in the Rusunawa is lower than rental cost outside Rusunawa. R35, R36, R37, R38 and R39 confirmed this condition because they live around Rusunawa. However, despite lower rent expense, moving to Rusunawa does not necessarily reduce their monthly family expenses because their family needs also increase.

Some residents stated that they have more kids after moving to Rusunawa or their kids go to school after they move to Rusunawa. Thus, the decrease in monthly rent is compensated with the increase in other items of family expenditures. However, although their family expenses do not decrease, they agreed that their total current family expenses are less than if they live outside Rusunawa. Exception exists for those who did not have to pay anything in their previous places; because they lived either in factory housing or in parents' house.

Only few of the respondents state that their income is adequate (38.75%) and even fewer who state that their income after moving to Rusunawa is higher than their income in previous dwelling (29.76%). Although 46.7% respondents state that their current economic condition is better than economic condition in their old places and 49.5% state that economic condition is similar, more than half (56.06%) agree that living in Rusunawa brings positive impact to their economic condition. Thus, in general, Rusunawa improves most of residents' economic condition by reducing family expenses, not improving income.

Table 8: Percentage of respondents' opinion on family income

Description	Total			Criteria
	Disagree	Neutral	Agree	Agree >80%
Your current family income is adequate	10.38%	50.87%	38.75%	fail
Your current family income is higher than yours in previous dwelling	12.11%	58.13%	29.76%	fail
Rental cost in the Rusunawa is lower than outside Rusunawa	1.38%	10.73%	87.89%	pass
Your monthly family expenditure is lower than if you live outside the Rusunawa	10.38%	40.83%	48.79%	fail
Your family's economic condition is better than yours in previous dwelling	3.81%	49.48%	46.71%	fail
Your moving to the Rusunawa has positive impact to economic condition of your family	2.08%	41.87%	56.06%	fail

Source: Survey result, 2016

Some respondents stated that their incomes are improved because they get new jobs with better salary, get promoted or get salary raise after they move to Rusunawa. Some of respondents stated that their economic conditions worsen after their moving to Rusunawa because they were laid off, resigned from work after moving to Rusunawa and could not make additional income in Rusunawa. For those who lost their jobs, the reason of their current unemployment is not related to their moving to Rusunawa. Some of them mentioned about job cuts in their companies and other stated that their companies went bankrupt. For those quitting job after moving to Rusunawa, they stated that they decided to quit working because they have new babies or focus on taking care of families. Other respondents stated that they cannot make additional income in Rusunawa, like they did in previous places, such as selling food or groceries because when they moved in, all available business units in Rusunawa have been occupied. In general, respondents are not very happy with their economic condition.

(e) Education

Table 9 shows that there are 167 (57.8%) respondents stating that they have school aged kids living with them in Rusunawa. They agree that their kids are diligent, discipline and well behaved. However, only 68% stated that their kids have satisfactory educational achievement. Although less than 80% of respondents stated that diligence, discipline, achievement and behavior of their kids are better than that of in their previous places, 77% of the respondents agree that Rusunawa conditions bring about positive impact to educations of their kids. Rusunawa conditions improve quality of kids' education by providing safe environment and convenient condition for kids to study. However, parents also play a very important role to educate their kids in the Rusunawa because some parents stated that some kids in the Rusunawa behave improperly and they bring negative impact to their kids. Overall, most parents think that they are somewhat satisfied with their kids' education and believe that Rusunawa conditions bring positive impact to education achievement of their kids.

Table 9: Percentage of respondents' opinion on education

Description	Total			Criteria
	Disagree	Neutral	Agree	Agree >80%
Your kids go to school every day	0.60%	1.80%	97.60%	pass
Your kids never come late to school	2.40%	5.39%	92.22%	pass
Your kids have satisfactory achievement	1.80%	29.94%	68.26%	fail
Your kids have good manners	0.60%	8.38%	91.02%	pass
Your kids' diligence is better than that of in your previous dwelling	1.20%	28.74%	70.06%	fail
Your kids' discipline is better than that of in your previous dwelling	1.20%	29.94%	68.86%	fail
Your kids' achievement is better than that of in your previous dwelling	1.80%	34.13%	64.07%	fail
Your kids' manners are better than that of in your previous dwelling	1.20%	26.95%	71.86%	fail
Rusunawa environment has bring about positive impact to your kids' education	1.20%	20.96%	77.84%	fail

Source: Survey result, 2016

Both Rusunawas are located near public school and for Rusunawa Manis there is a pre-school facility within Rusunawa owned and managed by Rusunawa resident. The school serves both kids living in and outside Rusunawa. The proximity of the schools from Rusunawa benefits residents because kids do not have to spend much time to go to school and parents can monitor their kids' education more easily.

(f) Social relations

Respondents stated that, as shown in Table 10, Rusunawa residents have good relationship, respect and help each other and spend some time together with their neighbors. They also stated that they never experienced any discrimination and racism in their social interaction and that they have good relationship with people outside Rusunawa. However, only 70% agree that their relationship with their neighbors is better than in their previous place while 27.7% state that relationship with their neighbors is similar to that in their previous place.

Although relationship among residents is generally good, it is not always smooth because, according to some respondents, some residents have bad behaviors which disturb their neighbors. Other residents do not interact and comingle with neighbors as well as participate in social programmes held in Rusunawa. There was also a case where residents from certain tribe only interact with other residents with similar tribe. Management stated that they have tried to overcome the situation by mixing the composition of residents in certain block or floor. R29 stated that to avoid gang situation, there is an unwritten policy that residents with similar race or place of origin are not located next to each other so that there is no group of certain tribes in Rusunawa. Thus, currently, there is no cultural segregation in the Rusunawa because people from various cultural backgrounds interact nicely and respect each other.

Table 10: Percentage of respondents' opinion on social relation

Description	Total			Criteria
	Disagree	Neutral	Agree	Agree >80%
You have a good relationship with your neighbor	0.35%	7.96%	91.70%	pass
People in this Rusunawa respect each other	0.69%	11.76%	87.54%	pass
People in this Rusunawa help each other	0.35%	12.11%	87.54%	pass
You spend some time together with your neighbor	0.35%	14.88%	84.78%	pass
You have never experienced any racism or discrimination since you moved in	3.46%	8.30%	88.24%	pass
Tenants have good relationship with people living around the Rusunawa	0.00%	10.73%	89.27%	pass
Your relationship with your neighbor is better than that of in your previous dwelling	2.08%	27.68%	70.24%	fail

Source: Survey result, 2016

Evaluation on respondents' opinion about their quality of life shows that generally respondents have good quality of life and that Rusunawa condition improves their life. Respondents also stated that their life in Rusunawa is better than that of in their previous places. However, this study shows that some aspects of quality of life particularly about

health facilities and income do not meet threshold, and thus warrant serious attention for improvement.

To compare opinion between respondents living in Gebang and those living in Manis and between low income and high income respondents, mean comparison was conducted among respondents in those categories. Table 11 shows mean difference between respondents living in Rusunawa Manis and those living in Rusunawa Gebang. The table indicates that Rusunawa Gebang is safer than Rusunawa Manis. Although in general residents feel safe living within Rusunawa area, the table shows that there is significant difference between opinions of Rusunawa Manis and Gebang residents on safety issue. Discussion with management, security officers and residents revealed that there are some causes for this. They mentioned that security officers in Gebang are more active in watching Rusunawa environment because they often patrol inside Rusunawa location. In Manis, numbers of security officers are less than that of in Gebang, and they rarely conduct patrol inside Rusunawa. Another cause is past crime incidents happened in Rusunawa where number of incidents in Manis is higher than that of in Gebang. The incidents affect respondents' perception on the safety of Rusunawa.

There is also concern about visiting time in Rusunawa Manis. Some residents stated that visitors can come in and out of Rusunawa areas freely. This makes crime prevention and detection difficult. They also mentioned that people outside Rusunawa visit Rusunawa quite often whether they want to see family and friend, use Rusunawa facilities such as to escort their kids to preschool facility or to attend free health service programme, play inside Rusunawa (for kids) and hang out (for teenage and elderly). On the one hand the visits improve the relationship between Rusunawa residents and surrounding citizens, but on the other hand, it may reduce security for Rusunawa residents. Some residents said that they feel insecure when there are outsiders in Rusunawa area until late.

In terms of convenience and social relation, Rusunawa Manis is better than Rusunawa Gebang. Despite the complaints addressed by Rusunawa Mani's residents about some inconvenient conditions in the Rusunawa, the table reveals that respondents living in Rusunawa Manis are more convenient than those living in Rusunawa Gebang. Interviews with some Rusunawa Manis residents revealed that most of them work in factories around Rusunawa Manis. Before moving to Rusunawa, they lived in rent houses around the Rusunawa that have worse condition than Rusunawa. Therefore, although they feel that air and noise pollution in Rusunawa make them inconvenient, they currently live in a much better condition than in their previous places.

Based on survey results and observation, Rusunawa Mani's residents have more tendencies to spend time together with their neighbors than Rusunawa Gebang residents. The observation also reveals that business units in Rusunawa Manis play significant role as place of meeting and interaction for residents. In Rusunawa Manis, business units are fully occupied and are used for grocery stores, food courts, cell phone accessories stores, preschool facilities and grocery stores where residents meet and talk with other residents and with people from outside Rusunawa. Thus, social interactions occur not only during social programmes and activities conducted in the Rusunawa. In Rusunawa Gebang, only few business units are rented for food courts and there are not many people sit and talk in the canteens. Rusunawa Gebang residents talk to each other when there are social programmes and activities held by residents or management such as when there are cleaning activities or health service for toddlers.

Table 11: Mean difference of respondents' opinion on overall quality of life between Rusunawa Manis and Gebang

Description/Rusunawa/ Income		Group Statistics				Levene's Test for Equality of Variances	
		N	Mean	Std. Deviation	Std. Error Mean	F	Sig.
avgQOL	Manis	155	3.9307	.29546	.02373	3.181	.076
	Gebang	134	3.8966	.34317	.02965		
avghealth	Manis	155	3.8903	.49106	.03944	1.104	.294
	Gebang	134	3.8321	.49791	.04301		
avgsafetycrime	Manis	155	4.3019	.34140	.02742	14.341	.000
	Gebang	134	4.4246	.24137	.02085		
avgconvenience	Manis	155	3.8366	.46620	.03745	8.833	.003
	Gebang	134	3.7177	.56241	.04858		
avgincome	Manis	155	3.5215	.44125	.03544	.009	.923
	Gebang	134	3.4888	.44693	.03861		
avgeduc	Manis	105	3.9397	.43199	.04216	.553	.458
	Gebang	62	3.9785	.48821	.06200		
avgsocialrelation	Manis	155	4.0829	.41117	.03303	5.597	.019
	Gebang	134	3.9947	.52186	.04508		

Source: Survey result, 2016

Comparing between low income and high income respondents, table 12 shows that there is no significant difference in Respondents' opinion between low and high income respondents. The data indicate that low and high income respondents have similar expectation on their quality of life. This can also be seen that Rusunawa management treats and serves residents equally, regardless their income level.

Table 12: Mean difference of respondents' opinion on overall quality of life between low and high income

Description/Rusunawa/ Income		Group Statistics				Levene's Test for Equality of Variances	
		N	Mean	Std. Deviation	Std. Error Mean	F	Sig.
avgQOL	Low	180	3.9039	.34001	.02534	1.844	.176
	High	109	3.9331	.27954	.02678		
avghealth	Low	180	3.8944	.50275	.03747	.131	.717
	High	109	3.8119	.47769	.04575		
avgsafetycrime	Low	180	4.3617	.31272	.02331	.351	.554
	High	109	4.3541	.29298	.02806		
avgconvenience	Low	180	3.7685	.52628	.03923	.129	.720
	High	109	3.8028	.49906	.04780		
avgincome	Low	180	3.4491	.43905	.03273	.277	.599
	High	109	3.6009	.43628	.04179		
avgeduc	Low	108	3.9352	.46154	.04441	.597	.441
	High	59	3.9887	.43754	.05696		
avgsocialrelation	Low	180	4.0222	.49736	.03707	1.579	.210
	High	109	4.0747	.41221	.03948		

Source: Survey result, 2016

CONCLUSION

This study concludes that, overall, respondents are satisfied with their quality of life. Evaluation on each aspect of quality of life shows that all aspects of quality of life, but economic condition, have been satisfactory. Residents are most satisfied with safety aspects of rusunawa. They are also happy with social relation, kids' education, health and convenience aspects of rusunawa.

However, this study shows that respondents are not satisfied with their economic condition. Further discussion with some respondents reveals that the problem stems from their limited income. They admitted that Rusunawa improves their economic condition by charging lower monthly rent fee than surrounding rent house, but they expect that they could earn more income to cover their expenses. This condition shows that although Rusunawa has positive impact to residents, government needs to improve economic aspect of residents' life. Government needs to design appropriate empowerment strategy to improve economic condition of Rusunawa residents.

This study shows that improvements need to be conducted in Rusunawa. Government should provide more empowerment programme for Rusunawa residents, especially those having low income. In addition, government should provide public health facilities within or near Rusunawa.

Comparing satisfaction of respondents in Rusunawa Gebang and Manis, overall, there is no significant different between those rusunawas. However, respondents in Rusunawa Gebang feel safer than that of in Rusunawa Manis. Lack of security officer and Rusunawa Manis' more lenient access to outsiders are two main causes for security concern in Rusunawa Manis. Apart from that, respondents in Rusunawa Manis state that they are more convenient than that of in Rusunawa Gebang although Rusunawa Gebang's buildings and facilities are newer. The survey shows that there is no significant different in respondents' opinion on quality of life between low income and high income respondents.

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