PERFORMANCE MEASUREMENT MODEL ANALYSIS OF LOW COST FLATS MANAGEMENT IN SURABAYA

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Abstract: *The absence of parameter in assessing the low cost flats performance causing lack of evaluation and monitoring on low cost flats management. This is often generates difficulty for manager to determine solution on management problems. Therefore, this research aims to obtain performance measurement models that can be used as parameter of assessment in the evaluation and monitoring of low cost flats management in Surabaya. Stages of this research are formulation of the model according to the literature review and the existing condition, assessment of performance management, and fitness model evaluation. Results of the research showed performance measurement model with variable weights ratings as follows: effectiveness and efficiency (34.6%), institutional suitability and tenancy (26.5%), the risk of legal compliance (19%), physical condition (10.9%), sustainability (5.4%) and impact (3.5%). Based on performance assessment of 8 low cost flats buildings as a representative sample of low cost flats in Surabaya, found that 62.5% low cost flats had good performance and 37.5% low cost flatslow cost flats had sufficient performance. From the fitness model evaluation, known that the performance measurement models is relevant enough to be used as assessment parameter of low cost flats management in Surabaya*.

Keywords: *low cost flats, asset management, performance measurement model, pairwise comparison*

INTRODUCTION

The development of low cost flats is one option to solve the housing backlog, especially in urban areas where population continues to increase. Surabaya as the capital of East Java Province is experiencing rapid development. Various sectors are growing rapidly in Surabaya, encourage high urbanization and increase the emergence of problems in housing and settlements. In anticipation of the housing and settlement problems, The Government of Surabaya City and East Java Provincial supports the efforts in formulating and implementing policies of low cost flats.

According to data in 2016, from the Department of Public Works and Human Settlement Spatial of East Java Province (Dinas Pekerjaan Umum Cipta Karya dan Tata Ruang Provinsi Jawa Timur) and the Department of Building and Land Management of Surabaya (Dinas Pengelolaan Tanah dan Bangunan Kota Surabaya), there are 23 units of low cost flats in Surabaya. The management of low cost flats comes under the authority of several agencies, i.e. the Government of East Java Provincial, the Government of Surabaya City and PT. Grha Jatim Utama (state-owned company).

Furthermore, the low cost flats management in Surabaya does not separate from the problems and obstacles. One of the problems that often occur is the hardship of managers in dealing with late payment of rental cost and residential transfer to unauthorized residents. Operational and maintenance costs of low cost flats also become problem that no less complicated. The rental cost that adjusted to the financial ability of low income communities, can not cover the high cost of building physical maintenance. Any low cost flats in Surabaya still get subsidies from the Government currently. Limitations of subsidies and residents knowledge of living in vertical housing, reduced the quality of buildings maintenance. It decreased endurance age of the building, away from expectation.

Low cost flats management requires proper evaluation and monitoring in order to set strategic action plans to resolve the problems and to optimize the asset management. In present situation, this activity is rarely done by managers because the model of performance measurement as reference for optimizing management of low cost flats in Surabaya has not been determined.

The objective of this research is to determine the appropriate performance measurement models for assessing performance of low cost flats management in Surabaya, in accordance to ideal formulation of literatures and current stakeholder opinion and to evaluate the fitness of the model towards factual conditions of low cost flats management.

Based on the explanation above, the issues in this research, are:

1. How to determine performance measurement model of low cost flats management that can be used as assessment parameters in Surabaya?
2. How do the suitability of the model towards current conditions of low cost flats management in Surabaya?

METHODOLOGY

Logical and systematic research is expected to achieve the targets set. This research starts from the observation on existing conditions, then compared to ideal expectations of low cost flats management. It required several stages to achieve the research objectives as explained above. Flow chart dan research stages can be seen in figure 1.

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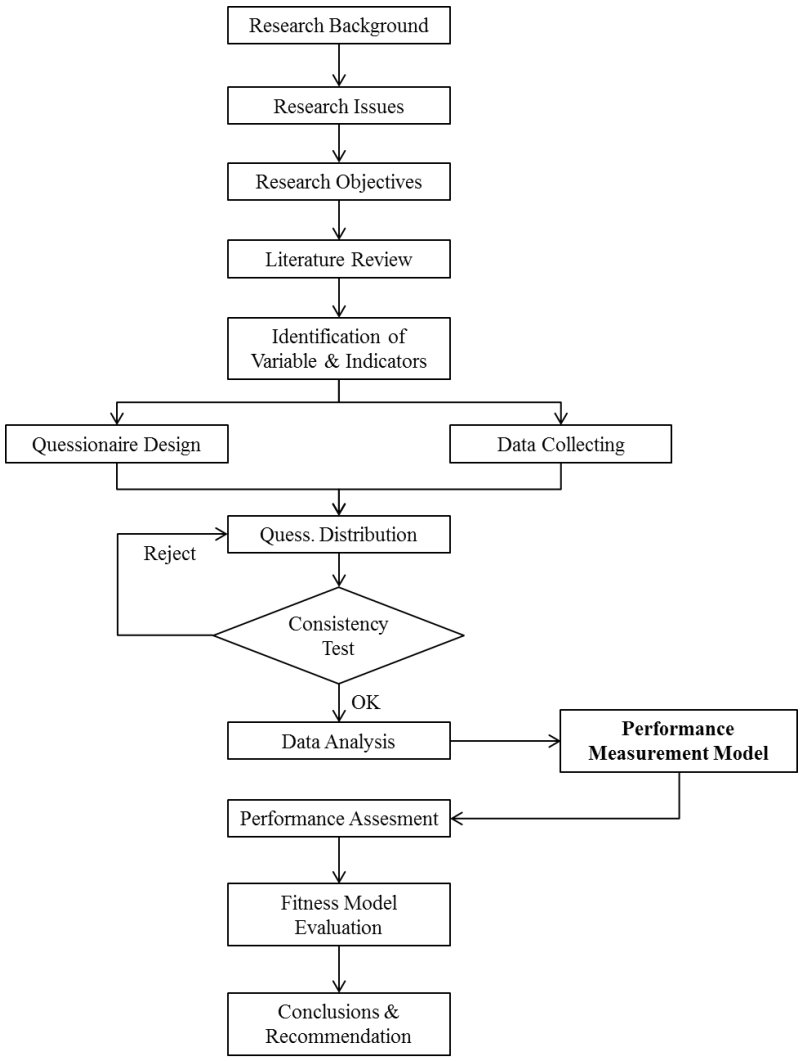

Figure 1. Research Flow Chart

The first research objective is to determine performance measurement model of low cost flats management. It is done by several stages as follows:

1. Data Collection

Secondary data were collected through instantional survey conducted in reports forms or studies related to the research topic. Secondary data that required in this research include:

a. Technical data of low cost flats, obtained from the Department of Building and Land Management of Surabaya (Dinas Pengelolaan Tanah dan Bangunan Kota Surabaya) and Public Works Department of Human Settlements and Spatial of East Java Province (Dinas Pekerjaan Umum Cipta Karya dan Tata Ruang Provinsi Jawa Timur)
b. Policies related to the management of low cost flats in Surabaya
c. The literature review related to performance assessment of government asset management, to determine baseline of variables and indicators

Primary data were collected through interviews, questionnaires, and direct observation in the field. The primary data collection aims to:

a. Interviews were conducted with experts / managers low cost flats Surabaya to evaluate the suitability of the assessment variables and indicators that have been obtained through literatures review towards existing conditions low cost flats management on the object of research. Another purpose of the interview is to find out the benchmark assessment items on the model of performance measurement low cost flats
b. Distributed questionnaires to 8 respondents was conducted to determine the level of interest among variables and indicators, then used as the basis for calculation with pairwise comparison method.
c. Observations obtained through cursory observation of the physical condition of the low cost flats and its surroundings.

2. Data Processing

Data processing is done by several stages as follows:

a. Descriptive analysis
Descriptive analysis of the results of interviews with the managers of low cost flats in Surabaya used to determine the variables and indicators of research and assessment benchmarks item on the performance measurement model.
b. Pairwise comparison analysis
The questionnaire submitted to the respondents adjusted and calculated using pairwise comparison. The calculation obtained weight of each of the

variables and indicators of performance measurement model assessment.

c. Determination of assessment rating

The hierarchical scale used in the research to provide performance value for the assessment. Performance results indicators will be grouped into 5 levels, from level 1 to level 5. Level 1 indicates the lowest performance, level 5 indicates the highest performance.

The second research objective is determining the suitability of models towards existing management condition in the field. It is done by several stages as follows:

1. Performance Assessment

After the performance measurement model is obtained, performance assessment are the next steps to do using determined model to 8 research object. The selection of research objects conducted by cluster random sampling of 22 low cost flats buildings in Surabaya. The results of performance assessment determined low cost flats performance with the highest and lowest values.

2. Fitness Model Evaluation

To evaluate the suitability of the determined model, conducted Focus Group Discussion (FGD) for low cost flats which has the highest and lowest values. The participants are managers and heads of associations of low cost flats concerned. The FGD will result the relevance of the performance measurement model to existing conditions of low cost flats management.

ANALYSIS AND RESULTS

Research Objects

Object of this research are low cost flats located in the city of Surabaya, both within the management of the government of Surabaya and East Java Provincial, that reserved for low-income communities (MBR) and the citizens affected by the slums relocation.

For assessment samples, low cost flats that built between the years of 1983-2013 and managed by the government of Surabaya has selected randomly with balanced proportion based on the amount of low cost flats managed. In order to get the objective results, research object must contain low cost flats under the age of 10 years and more than 10 years. For low cost flats managed by the Provincial Government of East Java, the performance assessment was automatically performed on Rusunawa Gunungsari because only those located in Surabaya. Sample of research objects for performance assessment are as shown by Table 1.

Analysis of Performance Measurement Model

Identification of variables and indicators was done according to literatures review in advance, using synthesis theory of reference related to low cost flats management and performance assessment of state-owned assets. The first steps to determine performance measurement models was interviews with 8 respondents of low cost flats managers in Surabaya, to compare variables and indicators obtained from literature review towards the current management situation. From the conclusion of the interview, obtained variables and indicators of assessment in AHP hierarchy model. The variables and indicators are shown by Table 2.

As the variables and indicators of assessment obtained, questionnaires was distributed to determine the level of interest among variables and indicators. The calculation results of questionnaire using pairwise comparison by AHP obtained as shown on Table 3.

Table 1. Research Objects for Performance Assessment

No.	Object Name	Location	Year Built	Units Type (m^2)	Total Occupants
UPTD Rusunawa I (South & Center Surabaya)					
1	Urip Sumoharjo	Jl. Urip Sumoharjo	1983	21	120
2	Grudo	Jl. Grudo V/2 Kel. Dr. Soetomo Kec. Tegalsari	2011	24	99
UPTD Rusunawa II (North & West Surabaya)					
3	Sombo	Jl. Sombo Kel. Simolawang Kec. Simokerto	1993	18	600
4	Pesapen	Jl. Pesapen Selatan No. 27 Kel. Krembangan Selatan Kec. Krembangan	2011	24	49
UPTD Rusunawa III (East Surabaya)					
5	Penjaringan sari Tahap I	Jl. Penjaringansari Timur Kel. Penjaringansari Kec. Rungkut	1995	18	240
6	Penjaringan sari Tahap II	Jl. Penjaringansari Timur Kel. Penjaringansari Kec. Rungkut	2003	21	288
7	Penjaringan sari Tahap III	Jl. Penjaringansari Timur Kel. Penjaringansari Kec. Rungkut	2009	24	99
Public Works Department of Human Settlements and Spatial of East Java Province					
8	Gunungsari	Jl. Gunungsari Kel. Sawunggaling, Kec. Wonokromo	2012	34	268

Tabel 2. Variables and Indicators of Research

Variables	Indicators	References
Suitability of Institutional and Tenancy	Institutional	preliminary survey
	Government Policy	BAPF
	Occupant Target	preliminary survey
	Occupant Identity	preliminary survey
Physical Suitability	Units Capacity	preliminary survey
	Physical Condition	BAPF; Hariyono (2007)
	Functional	BAPF; Hariyono (2007)
Effectiveness and Efficiency	Financial	BAPF
	Physical Maintenance	PP No. 27/2014; Permenpera No. 14/2007
	Human Resources	
	Service to Occupants	preliminary survey
Impact	External Impact	PP No. 27/2014; Permendagri No. 17/2007
	Internal Impact	
Sustainability	Assets Development	PP No. 27/2014; Permendagri No. 17/2007
	Resident Participation	
Risk of Legal Compliance	Level of Law Disobedience	BAPF
	Level of Procedures Implementation	preliminary survey
	Level of Sanctions Implementation	BAPF
	Occupants Coaching	preliminary survey

Tabel 3. Weighting Result of Variables and Indicators

Variables	**Indicators**	**Weight**	**CR**
Suitability of Institutional and Tenancy		0,265	
	Institutional	0,348	0,030
	Government Policy	0,443	
	Occupant Target	0,133	
	Occupants Identity	0,075	
Physical Suitability		0,109	
	Units Capacity	0,160	0,006
	Physical Condition	0,559	
	Functional	0,281	
Effectiveness and Efficiency		0,346	
	Finance	0,231	0,020
	Maintenance	0,403	
	Human Resource	0,302	
	Service to Occupants	0,064	
Impact		0,035	
	External Impact	0,631	0,000
	Internal Impact	0,369	
Sustainability		0,054	
	Assets Development	0,274	0,000
	Residents Participation	0,726	
Risk of Legal Compliance		0,190	
	Level of Law Disobedience	0,202	0,020
	Level of Procedures Implementation	0,261	
	Level of Sanctions Implementation	0,426	
	Occupants Coaching	0,110	

Through calculation by Expert Choice, it is known that inconsistencies index (CR) among variables is 0.04 ($CR \leq 0.1$) while the value of CR of pairwise comparisons among indicators also <0.1. Therefore, the result of this calculation is considered valid to be used for performance measurement model. Variables with biggest weight found in the effectiveness and efficiency (34.6%) followed by institutional suitability and tenancy (26.5%), the risk of legal compliance (19%), physical condition (10.9%), and sustainability (5.4) and the last is the impact (3.5%).

The next step of the research was to determine the rating of measurement and benchmarking assessment items. Levels of performance will be explained with appropriate assessment benchmarks items adapted to existing condition of current management. Follow-up interview with the same respondents as a previous

interview are conducted to obtain the assessment benchmarks items.

Fitness Model Evaluation

After further model specified, performance assesments at 8 research object was conducted. Stages of assessment method for performance measurement model was as follows:

1) to obtain the value of performance indicators, the rating must be multiplied by the weight of each indicators.
2) to obtain the value of assessment variable, the total value of all indicators in one variable will be multiplied by variables weight.
3) the value of performance management low cost flats on the research objects are the sum of the value of each variable assessment.

After each research object assessed, the management performance criteria value determined as follows:

- Values from 0.0 to 1.0 = very poor performance
- Values from 1.1 to 2.0 = bad performance
- Values from 2.2 to 3.0 = sufficient performance
- Values from 3.1 to 4.0 = good performance
- Values from 4.1 to 5.0 = very good performance

Tabel 1. Recapitulation of Performance Assessment Calculation Result

Object Name (year built)	Assestment Variables						Total Score	Performance
	1	2	3	4	5	6		
Rusunawa Gunungsari (2012)	0,62	0,34	0,63	0,14	0,05	0,45	2,24	Sufficient
Rusunawa Penjaringansari I (1995)	1,06	0,33	1,00	0,14	0,16	0,64	3,33	Good
Rusunawa Penjaringansari II (2003)	1,06	0,36	1,11	0,13	0,16	0,64	3,45	Good
Rusunawa Penjaringansari III (2009)	1,15	0,47	1,14	0,18	0,20	0,74	3,87	Good
Rusunawa Urip Sumoharjo (1983)	0,83	0,33	0,98	0,14	0,12	0,44	2,84	Sufficient
Rusunawa Grudo (2011)	1,06	0,47	1,12	0,18	0,16	0,66	3,64	Good
Rusunawa Sombo (1993)	0,81	0,30	0,96	0,11	0,16	0,52	2,85	Sufficient
Rusunawa Pesapen (2011)	1,15	0,47	1,22	0,15	0,17	0,74	3,90	Good

Note:

1. Suitability of Institutional and Tenancy
2. Physical Suitability
3. Effectiveness and Efficiency
4. Impact
5. Sustainability
6. Risk of Legal Compliance

From the above results, known that Rusunawa Pesapen had the highest value of performance management (3.90), while Rusunawa Gunungsari had the lowest value (2.24). Based on the assessment results, there are 62.5% low cost flats have good performance and the other 37.5% have adequate performance. Low cost flats with good performance is managed entirely by the government of Surabaya. Low cost flats that built more than 10 years tend to have a low value in the physical suitability.

Fitness model evaluation is required to determine whether the model obtained is quite relevant in assessing the existing conditions of low cost flats management in Surabaya. Therefore Focus Group Discussion (FGD) are held to evaluate the determined model. FGD was conducted with participants from managers of low cost flats who scored the highest and the lowest in the previous stage, which are Rusunawa Pesapen and Rusunawa Gunungsari. The results of the FGD are here as follows:

1. Institutional Compliance and Tenancy

a. The performance assessment of institutional indicators averagely high enough, except on the assessment of Rusunawa Gunungsari, Sombo and Urip Sumoharjo. The participants expressed this judgment is relevant because the form of the organizational structure is not proper enough and follow-up to problems solution on Rusunawa Gunungsari are quite slow; the presence of specific social issues has reduced the occupants obedience on Urip Sumoharjo; moreover the management problems in Sombo is quite difficult to be solved because of the lack of occupants obedience towards policy of manager.
b. Low cost flats managers has prioritized the government's policy on the management of low cost flats. The low performance obtained by Gunungsari is caused by the lack of synergy between the institution and manager in implementing government policies. The assessment of occupant target and occupants identity indicators considered quite appropriate because few numbers of low cost flats occupants are not low-income communities, the low cost flats occupants data are also not 100% consistent to the lease agreement.

2. Physical Suitability

a. Low scoring on indicators of physical condition, especially in low cost flats that aged more than 10 years is caused by several things including: the lack of occupant participation in the maintenance of low cost flats, and the decreasing quality of the buildings caused by climate factors and weather. This assessment is known very relevant to the existing conditions of low cost flats.
b. Low scoring on indicators of units capacity and functional are caused by the number of dwelling units that inhabited more than 4 people. In Sombo, there are even 1 dwelling unit occupied by 12 people. It also caused by residential units that are used for commercial activites on several low cost flats. This violates a provision stating that residential units should not be used for commercial activities. The

participants expressed a judgment on the two indicators is enough represent actual conditions.

3. Effectiveness and Efficiency

a. The FGD participants expected that financial indicators should not emphasize to the independence of financial management, due to every low cost flats in Surabaya is still supported by the government subsidies. They suggested that the assessment benchmarks should emphasize to the continuity of financial management and the funding priorities for the maintenance of low cost flats.
b. The low scoring on the indicators of human resouces, maintenance and service to the occupants in several low cost flats caused by the lack of manpower especially janitors and security guards, and the dependence of infrastructure maintenance on government subsidies. The performance assessment indicators above was sufficient to represent actual conditions.

4. Impact

Most of the low cost flats in Surabaya did not cause an adverse impact to the surrounding environment, and vice versa. The environment is also not adversely impact the occupant comforts. Therefore, the performance of the variable impact assessment was sufficient to represent actual conditions.

5. Sustainability

Low cost flats development and occupants participation indicators get fairly low scoring in some places. Land constraints factors are the main reason for management limitations to do the development of low cost flats. The lack of interaction with the managers often caused occupants feel reluctant to participate in building maintenance. This is the reason that causes low scoring on occupants participation indicator. Therefore, the assessment of sustainability performance is considered quite appropriate to represent actual conditions.

6. Legal Compliance Risk

a. Low performance on level of law disobedience and level of sanctions implementation in some low cost flats, especially Gunungsari are caused by several things, i.e: occupant awareness is still low in executing the tenancy regulations; sanctions for law disobedience such as key revocation to illegal rented units, has never been done; the application of strict sanctions also need high budget to hire Security Forces to help the curb. The government need to make proper budget planning and allocation for the implementation.
b. Implementation of procedures and occupants couching had run quite well on several low cost flats. As for low cost flats with low performance on this indicator is caused by the lack of occupants coaching and compliance to order. The low implementation of procedures in the management also caused low scoring for this indicator.

CONCLUSIONS AND RECOMMENDATION

Conclusions

Based on the research objective, there are some things that can be drawn as a conclusion, as follows:

1. Based on data obtained, performance measurement model of low cost flats management in Surabaya used 6 assessment variables with biggest weight rate on the variable of effectiveness and efficiency (34.6%) followed by institutional and tenancy suitability (26.5%), the risk of legal compliance (19%), physical condition (10.9%), sustainability (5.4%) and the smallest is the impact (3.5%). Performance measurement model assessment focuses on the effectiveness and efficiency of the low cost flats management that includes financial management, human resource management, maintenance of infrastructure and service to the occupants.
2. Based on the FGD and assessment using determined model, obtained that the model is quite relevant to existing conditions of low cost flats management. Slight improvement is only required on the benchmarks item of financial indicators. This indicates that the model is relevant enough to be used to measure performance management of low cost flats in Surabaya.

Recommendation

From the results of the assessment, it is known that several low cost flats has good performance and the others still require to improve the performance management. Low cost flats managers can improve the performance management by focusing on low rates indicators. Further research are expected on strategies for improving performance on low cost flats management that have been assessed using the model.

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