

The Influence of Balcony Railing Form Quality Visual Fasade of Flat House

by Dyan Agustin

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The Influence of Balcony Railing Form Quality Visual Fasade of Flat House

¹Erwin Djuni *, ¹Dyan Agustin, and ¹Niniek Anggriani

¹ Architecture, Faculty of Architecture and Design, Universitas Pembangunan Nasional “Veteran” Surabaya, East Java

Abstract

In the flats the government provides a balcony or a back porch on each dwelling that serves to relax with the family to enjoy the outside view as well as a place for entry of fresh air from outside. From the results of the questionnaire it was found that the most frequent activities of residents on the balcony were drying clothes (38%), then cooking (28%) and bathing (24%). While the smallest are eating (5%) and sitting sitting (5%). This is due to the unavailability of a place for drying clothes so that most residents use balconies for drying clothes. The condition of flats, especially balconies, has decreased in quality and occurs in the technical, functional, and aesthetic aspects of the building, as seen from the condition of the balconies that have experienced a lot of changes in shape and function. From the observations it was found that the decrease in balcony quality was due to the shape of the railing. This study uses a rationalistic approach with a qualitative deductive method conducted on balcony railings in several flats. The purpose of this study is to find answers about the effect of balcony railing shape on the visual quality of the Flats facade. From this research, the results show that balcony railings with vertical arrangement have a worse influence on the visual quality of the apartment facade compared to the horizontal arrangement. This is because the horizontal arrangement of residents cannot put their clothesline out of the balcony (on the outside). Thus, the visual quality of the apartment vasade will remain awake and avoid the impression of slums due to the hanging clothesline.

Keywords: railing, balcony, facade, flats

Introduction

The Government's policy in constructing flats is to provide housing for middle and lower class people. According to Law No.20 of 2011 states that Flats are multi-storey buildings built in an environment, which are divided horizontally or vertically and are units that can each be owned and used separately, especially for residential areas, which are equipped with shared-parts, shared-objects, and shared-ground. The space inside the house consists of a sleeping area, a living room, a bathroom and another room. The other space is the support room of one of the balcony. Buildings with vertical design are usually equipped with a balcony on each floor with a variety of functions. In the process of inhabiting the condition of flats has decreased including the condition of the balcony. Quality degradation occurs in the technical, functional and aesthetic aspects of the building. This condition can be seen from the many changes in the shape and function of the balcony itself. According to Prasojo (2014) the level of occupant satisfaction with building quality is very low in terms of comfort and spatial organization. Change balconies in terms of form, for example, with the addition of balcony railings. Whereas in terms of

Correspondence Author
Email Address: erwindw.ar@upnjatim.ac.id

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function, it changes the original function from the balcony to another function. The presence of a balcony for flats is very important, it can be used as a lounge or a room to put plants that can provide coolness to the building (Septyadinda L, 2013). While in terms of aesthetics, the appearance of the building looks dirty because it is used to dry clothes and store goods. The role of the balcony is the face of the facade of the apartment building, so if the balcony changes its function and shape, it will also change the facade of the building. The purpose of this study was to determine the effect of balcony railing shape on the visual quality of the apartment façade. The facade is the first element of the building that is appreciated by observers. Therefore, paying attention to visual facade elements in the design of flats is absolute. The main priority of facilities that must exist in flats is one of which is the availability of sunbeds (Hapsari, 2006). This happens because the visual quality of a building complex will affect the image of the area, and subsequently affect the overall city image (Anindya A, 2016). Next, the researcher took the case that represented the balcony of 18m² type flats in Surabaya, namely Penjaringan Sari I flats Surabaya, Wonorejo flats representing 24m² type and Penjaringan Sari III flats represented 36m² type, the selection was based on existing conditions, namely the average occupancy time above 10 year and most balconies undergo a change in form and function.

Research Method

This study uses a rationalistic approach with a qualitative deductive method conducted on balcony railings in several flats. Some theories are used to find problems in the field which then made a research framework and processed data obtained qualitatively. Rationalistic approach is an approach that sees a truth through empirical facts and arguments that are part of the construction of thinking. Deductive research is carried out on the basis of deductive logic which begins with a general theory (major premise) to test something (minor premise). In this study the major premise is the function and shape of the balcony will affect the quality of the apartment facade. While the minor premise is the effect of balcony railings on the physical changes of the balcony. The data used in the qualitative method is imperfect, vague, but empirical consisting of documentation of various events, specific behavior, written documents and various visual images.

Result and Discussion

The balcony is an additional space for residents who are located at the back of the residence. Although as an additional space apparently many activities carried out on the balcony. From the results of the questionnaire it was found that the most frequent activity of residents on the balcony is drying clothes (38%). Then cooking (28%) and bathing (24%). Clothes drying is done by residents on the balcony due to the unavailability of a place to hang clothes individually. While in the cooking activities of several flats, for example in Penjaringan Sari I, there is a shared kitchen that is used for cooking activities. But the shared kitchen is not functioned as a place to cook but as a warehouse.

Table 1. Occupant Activity Data on the Balcony

Aktivitas Activity	amount	%
Drying	16	38
Cooking	12	28
Bathing	10	24
Eat	2	5
Sit	2	5
amount	42	100

Source: *Questionnaire results with respondents, 2019*

Characteristics of Respondents

Based on the questionnaire data, it was found that the highest number of occupants in each of the towers was 3-4 people.

Table 2. Data on the number of residents in one family

No	Flats	Number of occupants (people)		
		1-2	3-4	>5
1	Penjaringan Sari I	37%	50%	13%
2	Wonorejo	17%	66%	17%
2	Penjaringan Sari III	17%	50%	33%

Source: *Questionnaire results with respondents, 2019*

Whereas in the employment data it was found that the dominance of the work of the respondents were private employees (80%), then followed by entrepreneurs such as traders, tire patches etc. (20%). Most jobs, especially occupants in Penjaringan Sari I and III flats, are factory employees because of the location of the towers located around the factory. The workers certainly look for a place to stay that is close to where they work. For the average amount of income each month is quite large more than Rp 3,000,000 (94%). The amount of revenue is included in the applicable UMR in the Surabaya area, which is Rp. 3,200,000.

Table 3. Occupant Income Data

Income	amount	%
1. 750.000- 1.500.000	10	25
2. 1.500.000- 3.000.000	9	21
3. More than 3.000.000	23	54

Source: *Questionnaire results with respondents, 2019*

Visual Quality of Flats Facade

The facade is part of a building that shows the function of a building. A facade can add value to the aesthetic elements of the building, provide protection to the interior of the building from heat, rain, wind and so on and provide privacy for activities that occur in interior spaces (Kesik, 2014). Building facade assessment can be done by assessing and evaluating the building's performance over a certain period of time. Performance is assessed based on the level of satisfaction and expectations of building users for various facade elements such as building materials used, installation systems and other components, as well as maintenance (Kesik, 2014).

Visual Quality of Penjaringan Sari I Flats Facade

The design of Penjaringan Sari I Flat facade is quite simple with an open balcony covered only by iron trellises. In the type of double loaded corridor the existence of an open balcony is very helpful in the condition of a comfortable air temperature in the residential unit (Mascai, 1980)

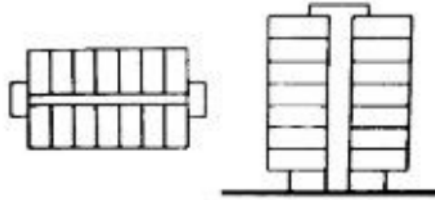


Figure 1. Double loaded corridor (Source. Mascai (1980))

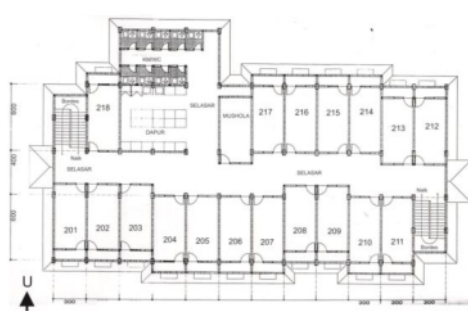


Figure 2. 2, 3, 4 floor plan of Penjaringan Sari I Surabaya



Figure 3. Penjaringan Sari I flats facade Surabaya

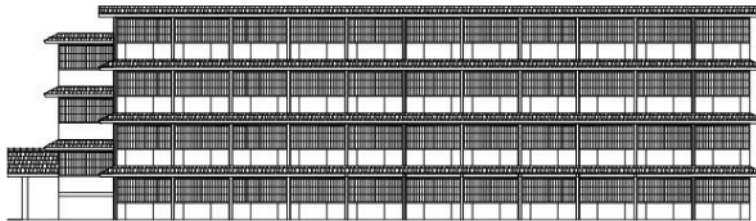


Figure 4. Penjaringan Sari I flats facade Surabaya

In the results of the questionnaire obtained data that most respondents rated the visual facade of Penjaringan Sari I flats in the very poor to normal range. They argue that the facade of the apartment building looks dirty because the function of the balcony used to dry is visible from the outside and looks dirty. From the picture, it can be seen that the balcony dominates most of the facade of Penjaringan Sari I Surabaya flat building. So that if the function of the balcony is not as it should be, namely as a clothesline and visible from the outside, it also affects the visual quality of the building facade.

Table 4. Factors affecting the visual quality assessment of Penjaringan Sari I flat façade

judgment	Value	Element																
		Roof	Wall paint	Balcony	Ornaments	Material	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Very bad	1	1	1	10	10	20	20	2	2	6	6							
bad	2	2	4	10	20	2	4	12	24	14	28							
normal	3	20	60	4	12	2	6	10	30	2	6							
good	4	1	4	0	0	0	0	0	0	0	0							
Very good	5	0	0	0	0	0	0	0	0	0	0							
Total		24	69	24	42	24	30	24	56	24	40							
Assessment		2,8 = 3		1,7 = 2		1,2 = 1		2,3 = 2		1,7 = 2								
Information		normal		bad		Very bad		bad		bad								

Description: * 1 = very bad; 2 = bad; 3 = normal; 4 = good; 5 = very good

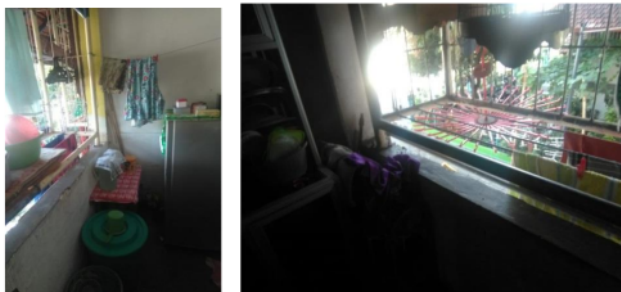


Figure 5. Trellis shape protruding outwards is used as a medium for drying clothes

The visual quality of the Wonorejo Flats facade

The design of the Wonorejo Flats facade is relatively simple with an open balcony that is flush with a wall partition or non-protruding.



Figure 6. Wonorejo Flats Facade



Figure 7. Floor plans 2,3,4 Wonorejo Flats

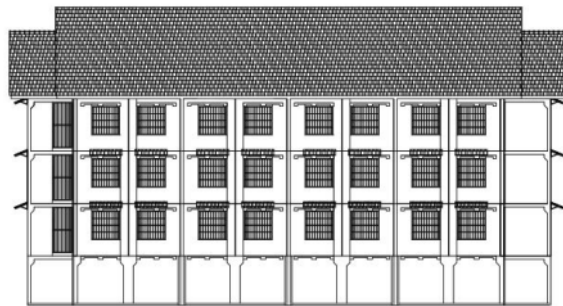


Figure 8. Wonorejo Flats Facade

The following analysis of factors that influence the visual quality of the Wonorejo Flats facade:

Table 5. Factors influencing the assessment of the visual quality of the Wonorejo flat facade

judgment	Value	Element									
		Roof		Wall paint		Balcony		Ornaments		Material	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Very bad	1	0	0	0	0	0	0	0	0	0	0
bad	2	1	2	0	0	5	10	3	6	4	8
normal	3	5	15	6	18	4	12	6	18	5	15
good	4	4	16	3	12	0	0	0	0	0	0
Very good	5	0	0	0	0	0	0	0	0	0	0
Total		9	33	9	30	9	22	9	24	9	23
Assessment		3,6 = 4		3,3 = 3		2,4 = 2		2,6 = 3		2,6 = 3	
Information		normal		bad		Very bad		bad		bad	

Description: * 1 = very bad; 2 = bad; 3 = normal; 4 = good; 5 = very good

In the results of the questionnaire obtained data that the majority of respondents rated the visual facade of Wonorejo flats in the range of very ugly to normal. They argued that the apartment building looked shabby.

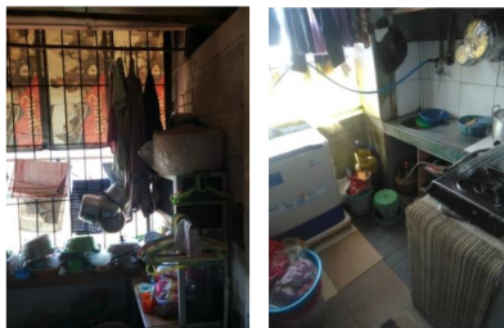


Figure 9. Balcony used as a sunroom and kitchen

The area of the balcony in the Wonorejo flats is 1.5m² which is located at the back of the house next to the bathroom. Most of the activities carried out on the balcony by residents at Wonorejo Flats are activities in drying clothes and cooking. They make a private kitchen on their balcony because there is no separate kitchen room. Whereas the place to hang out is also not available so the occupants use the balcony as a drying area. Balcony trellis shapes are also arranged vertically so that residents can hang clothes out of the balcony railing. The flat shape of the balcony facade makes the facade look less good and hot. Canopies attached to the balcony above each impressed not integrated with the facade

Visual Quality of Penjaringan Sari III Flats Facade

The design of Penjaringan Sari III Flat facade is quite dynamic with an open balcony that stands out from the wall partition. In the results of the questionnaire, it was found that most respondents rated the visual quality of Penjaringan Sari III flat facade as good. The paint color is also good with the use of

gray as a neutral color. Window ornaments also still look good with the room window pliers can be opened.



Figure 10. Photograph of Penjaringan Sari III Flats

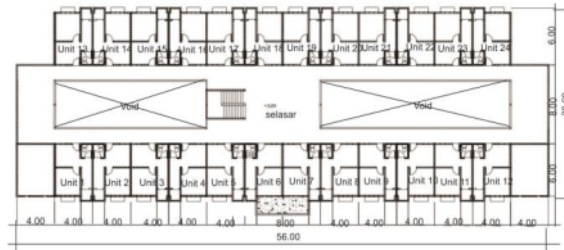


Figure 11. Floor plans 2,3,4,5 Flats Penjaringan Sari III



Figure 12. Picture of Penjaringan Sari Flats Facade III

Table 6. Factors affecting the assessment of the visual quality of Penjaringan Sari III flats facade

judgment	Value	Element									
		Roof	Wall paint		Balcony		Ornaments		Material		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Very bad	1	0	0	0	0	0	0	0	0	0	0
bad	2	0	0	0	0	0	0	0	0	0	0
normal	3	2	6	2	6	1	3	6	18	1	3
good	4	7	28	6	24	7	28	3	12	8	32
Very good	5	0	0	1	5	1	5	0	0	0	0
Total		9	34	9	35	9	36	9	30	9	35
Assessment		3,7 = 4		3,8 = 4		4		3,3 = 3		3,8 = 4	
Information		good		good		good		normal		good	

Description: * 1 = very bad; 2 = bad; 3 = normal; 4 = good; 5 = very good

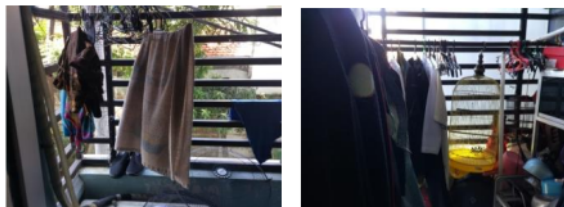




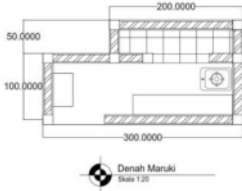

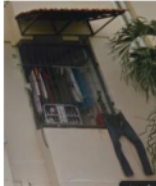
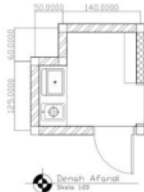


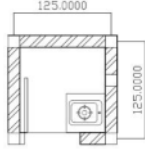
Figure13. A balcony that is used for sunbathing

The extent of the balcony in the Penjaringan Sari III flats is 2.6 m² which is located jutting at the back of the house next to the bedroom. Most of the activities carried out on the balcony by residents in the Wonorejo flats are clothes drying activities. While cooking activities carried out in the area next to the bedroom. Places for drying are also not available, so residents use a balcony as a drying area. The balcony trellis is arranged horizontally with sufficient density so the occupants cannot put their clothesline outside the balcony trellis. According to the interview results the clothes they were drying in the sun can still dry because the wind can still enter through the gaps in the railings. Besides that, their balconies do not feel hot because the protruding shape of the balconies provides shade for the balconies below

Analysis of the Effect of Balcony Shape on the Quality of the Flats Facade

From the analysis results of the assessment of the quality of the facade of the flats found that Penjaringan Sari III flats got the best value, while the Penjaringan Sari I flats got the worst value. This according to the analysis is also influenced by the shape of the balcony. The results of the analysis of the effect of the shape of the balcony on the quality of the apartment facade can be seen in the table below:

Table 8. Balcony Shape Analysis of the beauty of the facade

	Penjaringan Sari I Flats	Wonorejo Flats	Penjaringan Sari III Flats
Balcony Shape	  	  	  
	<ul style="list-style-type: none"> • The shape of the balcony jutting out • Trellis shape arranged vertically with a less dense distance • There is a canopy attached to the balcony 	<ul style="list-style-type: none"> • Form a flat wall balcony • Trellis shape arranged vertically with a less dense distance • There is a canopy attached to the balcony 	<ul style="list-style-type: none"> • The shape of the balcony jutting out • Trellis shape arranged horizontally with a fairly dense distance • Canopy into one with a balcony
Beauty Assessment	Less beautiful	Less beautiful	Indah beautiful

Analysis	With the form of a vertical trellis railing arranged in a tenuous distance making the occupants can dry up to the outside of the balcony, this can reduce the visual quality of the flat facade	With the form of a vertical trellis railing arranged in a tenuous distance making the occupants can dry up to the outside of the balcony, this can reduce the visual quality of the flat facade	With horizontal trellis railing that is arranged horizontally and tightly, the occupants cannot dry outside the balcony, so that the clothesline is not visible from the outside and can still maintain the visual quality of the flat facade.
Safety Assessment	Unsafe	Unsafe	safe
Analysis	<p>With the distance of the trellis that is not too tight and the trellis protrusion makes the occupancy less secure, for example items placed on the top floor may fall</p> <p>Besides that, the thickness of the trellis can reduce the security of residents, especially those located on the upper floor</p>	With the distance of the trellis that is not too tight and the trellis protrusion makes the occupancy less secure, for example items placed on the upper floor may fall. Besides that the thickness of the trellis can lessen the sense of security of residents, especially those on the upper floor.	With a fairly dense trellis distance and thick increase the security of residents

Conclusion

The visual presence of balconies in flats can improve the quality of building facades and provide psychological and emotional influence both for residents and surrounding communities. The results showed the balcony has the most important role and greatly influences the quality of the apartment facade compared to other elements such as the color of the wall paint and the shape of the roof. Because most visually the presence of a balcony dominates. The shape of the balcony security partition is the main element of the character of the balcony that most influences user ratings in the design of the apartment facade. The use of a trellis or a balcony guard that is arranged horizontally gives more beauty in a longer period of time than vertically arranged because in a horizontal trellis position the occupants cannot lay their clothesline out, only inside and aerated. While the area of the residential unit also affects the visual quality of the apartment facade, because the greater the unit area, the activities will be contained within the residential unit and not carried out in the balcony area. Especially if the apartment provides a shared sun area so that the balcony can be used optimally as an area for relaxing and holding together with family. Thus, an increase in the quality of the visual facade of the flats and an increase in the quality of the inhabitants of the flats will be achieved.

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