



Residential satisfaction analysis of developer products

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ARTICLE INFO	ABSTRACT
Article history: Received Nov 25, 2022 Revised Des 12, 2022 Accepted Des 26, 2022 Keywords: Customer Satisfaction Index Importance Satisfaction Analysis Product Developer Satisfaction Level	In housing with the type of commercial house, a CSI value of 78.80% is obtained, meaning that the residents of the housing are satisfied with the developer's product. The results of the analysis of the ISA method, there are 5 attributes that are a priority for improvement/improvement, namely (1) drainage system; (2) Quality of the roof, ceiling of the house; (3) Quality of house walls; (4) The quality of the floor of the house; (5) The quality of the frames, doors and windows of the house. In public housing, the CSI value is 64.25%, meaning that residents of the housing are quite satisfied with the developer's product. The results of the analysis of the ISA method. there are 8 attributes that are a priority for improvement/improvement, namely (1) Quality of sills, doors, windows of the house; (2) Provision of green open space; (3) Quality of house walls; (4) drainage system; (5) The quality of the floor of the house; (6) Public transportation at residential locations; (7) Residential environment security services; (8) The quality of the roof, the ceiling of the house. <i>This is an open access article under the CC BY-NC license.</i> 

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1. INTRODUCTION

Housing as a collection of houses/dwellings provided for the community and is a basic need for the community (Cahyana & Fadlilah, 2021; Putriyanti, 2020; Razuli et al., 2020). Whereas settlements, have the definition of environmental unity between housing complete with all facilities, infrastructure and facilities supported by other activity centers in urban and rural areas (Farizki & Anurogo, 2017; Rachmah et al., 2018)

Housing development and settlements is the responsibility of the government and local government in creating facilities access to the community for adequate housing (Isnaini & Adnan, 2018; Sulaiman, 2017, 2021). Access to proper housing and settlements is very important because it can determine the quality of life of the people living in it (Febrion et al., 2020; Pratama & Niswah, 2021).

Batanghari Regency is an area with low population density in Jambi Province (Darma & Wulansari, 2021). However, with its location adjacent to Jambi City which has a high population growth and with the current level of development which shows development in a more advanced direction, it will lead to progress and an increase in the need for housing and settlements, especially for urban areas such as Muara Bulian City and its surroundings in Batanghari Regency. As a result, there is an increase in the number of houses and settlements. If spatial management is not carried out, it will result in irregular housing and settlements, which will result in the emergence of slum settlements (Prasetya & Handoko, 2015).

Law No. 1 of 2011 concerning Housing and Settlement Areas and Decree of the Minister of Public Housing of the Republic of Indonesia Number 12 of 2014 concerning "Guidelines for the

Development and Development of Housing and Settlements in Provinces and Regents / Urban Areas" (RP3KP), explains: Regional Government, as the organizer of activities development housing and settlements in the area, can organize and carry out housing affairs and settlements in the area (Emmi Rahmawita Nasution¹), 2022; Pujiwati & Rubiati, 2017; Suwarja, 2019).

Based on this, it is necessary to conduct research on "Analysis of Housing Occupants Satisfaction with Developer Products". It is hoped that this research will become an assessment of current housing conditions based on consumer feelings and provide input for the government and developers in preparing housing development plans.

2. RESEARCH METHOD

This research is categorized as a descriptive study, so the analysis of the information uses descriptive frequency analysis to obtain information about the availability of infrastructure, facilities, utilities, services, and locations.

This research was conducted at the Bulian Baru Regency Housing Complex and Pondok Berlian Indah Muara Bulian District, Batang Hari Regency. The data collection techniques use the following techniques

1. Interview

This technique is used to obtain data directly on housing residents who are the object of the research location. Data obtained directly from respondents in the form of answers to questions in the questionnaire.

2. Documentation

Documentation is something written, printed or recorded that can be used as evidence or information.

Some of these studies show that there are several factors that influence occupant satisfaction. As shown in the following table, the measurement of occupant satisfaction in this study was based on four factors, including 20 evaluation attributes. Building design factors 4 attributes (no 1 – 4), building quality factors 4 attributes (no 5 – 8), infrastructure factors 6 attributes (no 9 – 14), and location factors 6 attributes (no 15 – 20).

3. RESULTS AND DISCUSSIONS

Bulian Baru Regency housing complex

Characteristics of Respondents in Bulian Baru Regency Housing

The number of respondents in this housing as many as 33 people.

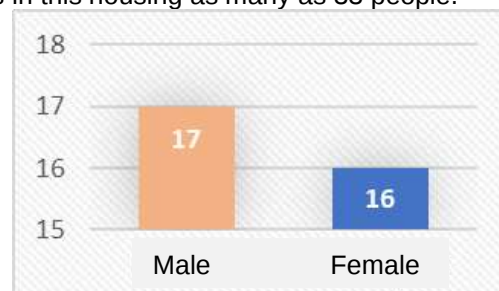


Figure Characteristics of Respondents Based on Gender Housing in Bulian Baru Regency
Perceptions of Housing Occupants Bulian Baru Regency

Based on the results of the tabulation of data on the level of satisfaction of housing residents, the data obtained from the results of calculating the average value of satisfaction and the average value of the importance of each attribute are as follows

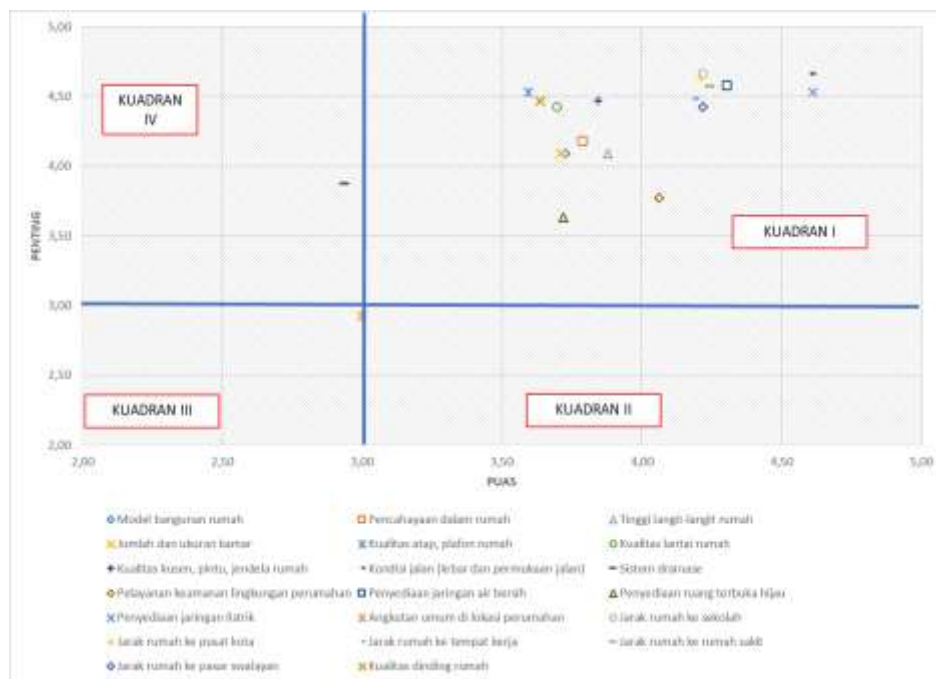
Table 1. Average Level of Satisfaction and Interest Bulian Baru Regency housing complex

No	attributes	Average value	
		Satisfaction Level	Interest Level
BuildDesign			
1	House building models	3.73	4.09
2	Indoor lighting	3.79	4,18
3	High ceilings of the house	3.88	4.09
4	Number and size of rooms	3.71	4.09
Build Quality			
5	Top quality, home ceiling	3.59	4.53
6	Wall quality	3.64	4.47
7	Floor quality	3.70	4,42
8	The quality of the frames, doors, windows of the house	3.84	4.47
Infrastructure			
9	Road conditions (road width and surface)	4.61	4.67
10	Drainage system	2.94	3.88
11	Residential security services	4.06	3.77
12	Provision of clean water networks	4.30	4.58
13	Provision of green open spaces	3.72	3.63
14	Provision of electricity network	4.61	4.53
Location			
15	Public transportation in residential areas	3.00	2.92
16	Home to school distance	4,22	4.67
17	Distance from house to city center	4,21	4.64
18	Distance from home to work	4,19	4.48
19	Distance from home to hospital	4,24	4.58
20	Distance from house to supermarket	4,22	4,42

Analysis of Residents' Satisfaction in Bulian Baru Regency Housing

Importance Satisfaction Analysis (ISA) method

Quadrant Method

**Figure 1.** Cartesian Diagram Quadrant Method for Housing in Bulian Baru Regency

Gap Method

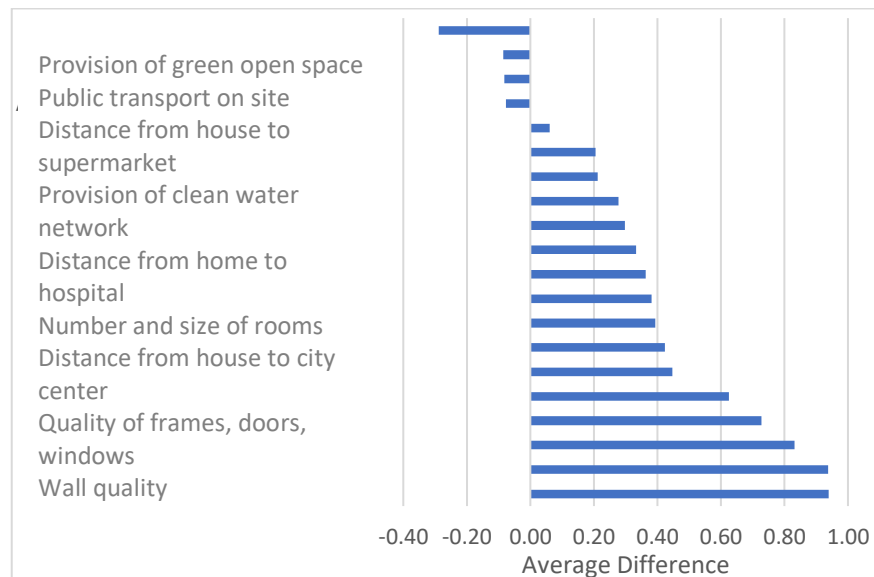


Figure 2. GAP Analysis of Bulian Baru Regency Housing Complex

The two methods have very basic differences, including the quadrant method which considers the position of the attributes in the quadrant, while the gap method prioritizes attributes with a gap between the value of importance and customer satisfaction. In the case if the attribute is in quadrant I, and the items in this quadrant indicate factors or attributes that are considered important and meet occupant expectations, but can appear as high priority items in the gap method. For example attribute item the quality of the roof, the ceiling of the houseworth satisfaction 3.59 and interest 4.53. In the quadrant method it will be in quadrant I (maintain achievement) and in the gap method, the gap item value is positive 0.94

Customer Satisfaction Index (CSI)

The calculation of the CSI value can be seen in the table below:

Table 2. CSI Calculation Results for Bulian Baru Regency Housing

No	Attribute	Mean Performance Score (MPS)	Mean Importance Score (MIS)	Weight Factor (WF)	Weight Score (WS)
Building Design					
1	House building models	3.73	4.09	4.81%	0.18
2	Indoor lighting	3.79	4.18	4.91%	0.19
3	House ceiling height	3.88	4.09	4.81%	0.19
4	Number and size of rooms	3.71	4.09	4.81%	0.18
Build Quality					
5	The quality of the roof, the ceiling of the house	3.59	4.53	5.32%	0.19
6	Wall quality	3.64	4.47	5.25%	0.19
7	Floor quality	3.70	4.42	5.20%	0.19
8	The quality of the frames, doors, windows of the house	3.84	4.47	5.25%	0.20
Infrastructure					
9	Road conditions (road width and surface)	4.61	4.67	5.48%	0.25
10	Drainage system	2.94	3.88	4.55%	0.13
11	Residential security services	4.06	3.77	4.43%	0.18
12	Provision of clean water network	4.30	4.58	5.38%	0.23
13	Provision of green open space	3.72	3.63	4.27%	0.16
14	Provision of electricity network	4.61	4.53	5.32%	0.25

No	Attribute	Mean Performance Score (MPS)	Mean Importance Score (MIS)	Weight Factor (WF)	Weight Score (WS)
Location					
15	Public transport in residential locations	3.00	2.92	3.43%	0.10
16	Home to school distance	4.22	4.67	5.48%	0.23
17	Distance from house to city center	4.21	4.64	5.45%	0.23
18	Distance from home to work	4.19	4.48	5.27%	0.22
19	Distance from home to hospital	4.24	4.58	5.38%	0.23
20	Distance from house to supermarket	4.22	4.42	5.20%	0.22
Total			85.12	100.00%	
Weighted Total CSI					3.94 78.80%

After conducting research and calculating the CSI, the CSI value for the quality of Bulian Baru Regency housing was 78.80%. In accordance with the table, the CSI value ranges from 0.66-0.80, which means that residents are satisfied with the quality of housing in Bulian Baru Regency Housing.

Pondok Berlian Indah Housing Complex

Characteristics of Pondok Berlian Indah Housing Respondents

The number of respondents in this housing as many as 45 people.

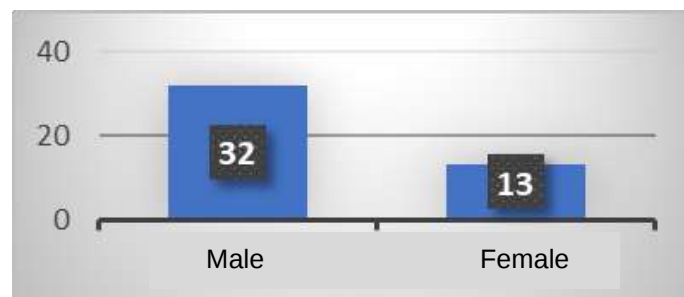


Figure 3. Characteristics of Respondents by GenderPondok Berlian Indah Housing Complex

Resident PerceptionPondok Berlian Indah Housing Complex

Based on the results of the tabulation of data on the level of satisfaction of housing residents, the data obtained from the results of calculating the average value of satisfaction and the average value of the importance of each attribute are as follows

Table 3. Average Level of Satisfaction and InterestPondok Berlian Indah Housing Complex

No	attributes	Average value	
		Satisfaction Level	Interest Level
	BuildDesign		
1	House building models	3,47	4,44
2	Indoor lighting	3,47	4.58
3	High ceilings of the house	3.76	4.58
4	Number and size of rooms	3,27	4,41
	Build Quality		
5	Top quality, home ceiling	2.58	4.53
6	Wall quality	2,18	4.53
7	Floor quality	2.36	4.56
8	The quality of the frames, doors, windows of the house	2.02	4.60
	Infrastructure		
9	Road conditions (road width and surface)	3,20	4.80
10	Drainage system	2.47	4.67
11	Residential security services	2.66	4.73
12	Provision of clean water networks	4.04	4.73

No	attributes	Average value	
		Satisfaction Level	Interest Level
13	Provision of green open spaces	2.07	4.58
14	Provision of electricity network	4.09	4.76
	Location		
15	Public transportation in residential areas	2.61	4.13
16	Home to school distance	3.93	4.62
17	Distance from house to city center	4.04	4.64
18	Distance from home to work	4.02	4.64
19	Distance from home to hospital	4.00	4.58
20	Distance from house to supermarket	4.91	4.51

Analysis of Occupant Satisfaction of Pondok Berlian Indah Housing

Importance Satisfaction Analysis (ISA) method

Quadrant Method

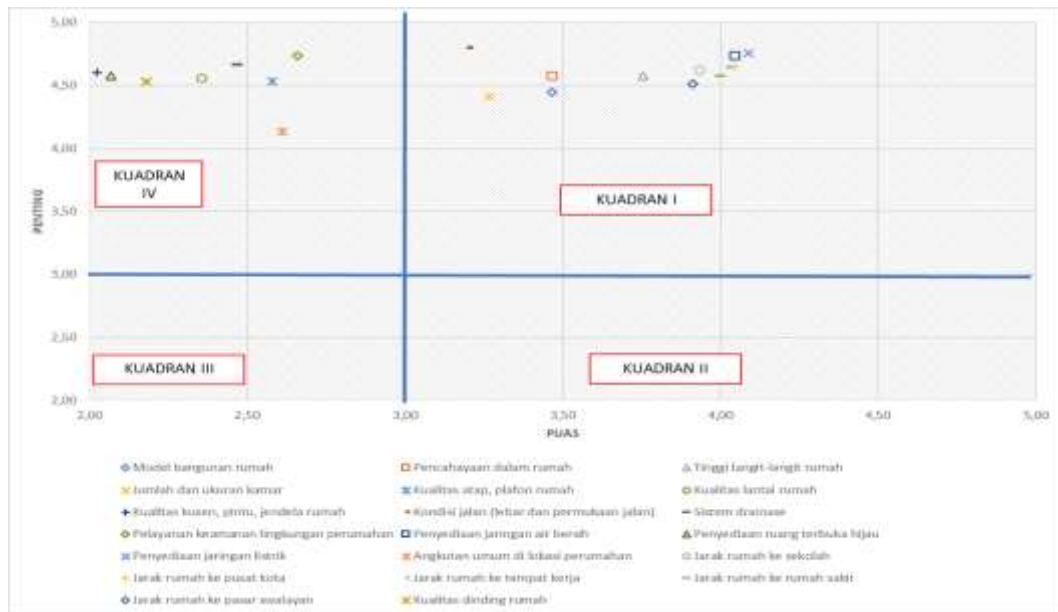


Figure 4. Cartesian Diagram of the Quadrant MethodPondok Berlian Indah Housing Complex

Gap Method

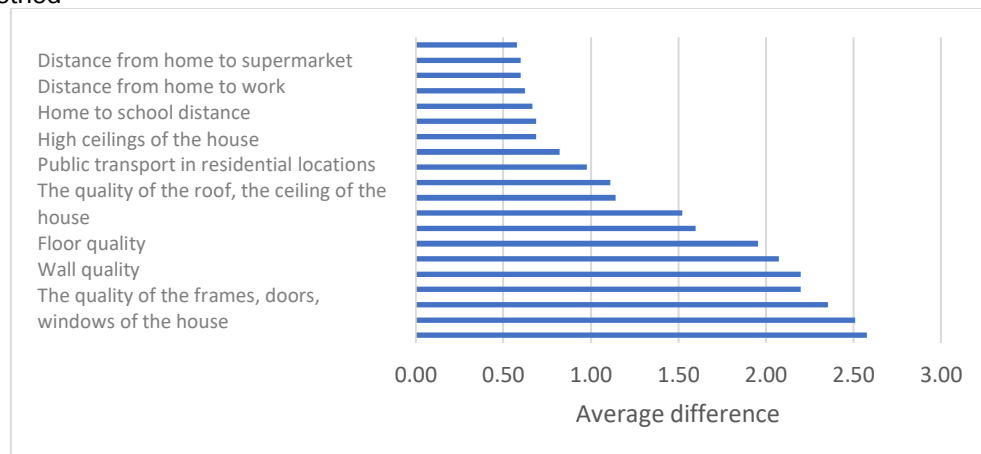


Figure 2. GAP Analysis ImagePondok Berlian Indah Housing Complex

In both methods we can see the similarity of the results, where the frame of the house, the quality of doors and windows are the focus of improvement. However, even though in this analysis, almost all attribute values are in the same quadrant, the two methods have very fundamental differences, including the quadrant method which considers the position of the attribute in the quadrant, while the gap method prioritizes attributes with a gap between the value of importance and customer satisfaction. In the case if the attribute is in quadrant I, and the items in this quadrant indicate factors or attributes that are considered important and meet occupant expectations, but can appear as high priority items in the gap method. For example attribute items road conditions (road width and surface) worth satisfaction 3.20 and interest 4.80. In the quadrant method it will be in quadrant I (maintain achievement) and in the gap method, the value of the gap item is quite large positive, namely 2.07.

Customer Satisfaction Index(CSI)

The calculation of the CSI value can be seen in the table below:

Table 4. CSI Calculation Results for Pondok Berlian Indah Housing

No	Attribute	Mean Performance Score (MPS)	Mean Importance Score (MIS)	Weight Factor (WF)	Weight Score (WS)
Building Design					
1	House building models	3,47	4,44	4.85%	0.17
2	Indoor lighting	3,47	4.58	5.00%	0.17
3	House ceiling height	3.76	4.58	5.00%	0.19
4	Number and size of rooms	3,27	4,41	4.81%	0.16
Build Quality					
5	The quality of the roof, the ceiling of the house	2.58	4.53	4.95%	0.13
6	Wall quality	2,18	4.53	4.95%	0.11
7	Floor quality	2.36	4.56	4.97%	0.12
8	The quality of the frames, doors, windows of the house	2.02	4.60	5.02%	0.10
Infrastructure					
9	Road conditions (road width and surface)	3,20	4.80	5.24%	0.17
10	Drainage system	2.47	4.67	5.09%	0.13
11	Residential security services	2.66	4.73	5.17%	0.14
12	Provision of clean water network	4.04	4.73	5.17%	0.21
13	Provision of green open space	2.07	4.58	5.00%	0.10
14	Provision of electricity network	4.09	4.76	5.19%	0.21
Location					
15	Public transport in residential locations	2.61	4,13	4.51%	0.12
16	Home to school distance	3.93	4.62	5.04%	0.20
17	Distance from house to city center	4.04	4.64	5.07%	0.20
18	Distance from home to work	4.02	4.64	5.07%	0.20
19	Distance from home to hospital	4.00	4.58	5.00%	0.20
20	Distance from house to supermarket	3.91	4.51	4.92%	0.19
Total			91.63	100.00%	3,21
Weighted Total CSI					64.25%

After conducting research and calculating the CSI, the CSI value for Pondok Berlian Indah housing quality was 64.25%. The calculation results can be seen in table 16. In accordance with table 15, the CSI value ranges from CSI between 0.51 – 0.65, which means that residents are quite satisfied with the quality of Pondok Berlian Indah residential housing.

4. CONCLUSION

Provision of adequate housing for residents is one of the main problems experienced by cities in Indonesia, especially cities in the world that are experiencing population growth. Providing satisfactory housing for residents is an important task that must be achieved by all relevant stakeholders. This study seeks to identify occupant satisfaction. This research seeks to determine

the satisfaction of residents, so that in the future stakeholders can be provided with information and input to design better housing provision policies that match the needs of the population.

The Customer Satisfaction Index (CSI) method and the Importance Satisfaction Analysis (ISA) method used have been able to measure the level of satisfaction of housing residents with product developers. Research on two (2) types of housing classifications based on the type of constituent houses, namely Public Houses and Commercial Houses. Bulian Baru Regency Housing is classified as a commercial housing type and Pondok Berlian Indah Housing is classified as a public/subsidized housing type.

Residents of the Bulian Baru Regency housing complex are satisfied with the developer's product, with a satisfaction index / CSI (Customer Satisfaction Index) value of 78.80% and Residents of the Pondok Berlian Indah housing complex are quite satisfied with the developer's product with a satisfaction index / CSI (Customer Satisfaction Index) value of 64.25%.

Out of a total of 20 attributes used in this research, for Bulian Baru Regency Housing there are five attributes that have the opportunity to increase occupant satisfaction if quality improvements/improvements are prioritized by the Bulian Baru Regency housing developer, namely (1) drainage system ; (2) The quality of the roof, the ceiling of the house; (3) Quality of house walls; (4) The quality of the floor of the house; (5) The quality of the sills, doors, windows of the house and for Pondok Berlian Indah Housing there are eight important attributes, but residents consider that it has not met expectations and housing developers can prioritize improving/improving the quality of these attributes, namely (1) Quality of sills, doors, windows House; (2) Provision of green open space; (3) Quality of house walls; (4) drainage systems; (5) The quality of the floor of the house; (6) Public transportation at residential locations; (7) Residential environment security services; (8) The quality of the roof, the ceiling of the house.

In these two housing classifications, there is no difference in the attribute that gets the highest level of importance. The attribute that has the highest level of importance by the two residents of the housing is the road condition (road width and surface).

Based on 4 aspects, namely building design, building quality, facilities, infrastructure and location which are the basis for determining research attributes. Aspects that greatly affect the level of satisfaction of the two housing occupants are aspects of building quality and aspects of facilities and infrastructure.

REFERENCES

- Cahyana, R., & Fadlilah, A. (2021). Pengembangan Aplikasi Perumahan Berbasis Mobile. *Jurnal Algoritma*, 18(1), 113–118. <https://doi.org/10.33364/algoritma/v.18-1.862>
- Darma, B., & Wulansari, K. Y. (2021). Pengaruh Jumlah Penduduk Terhadap Pertumbuhan Ekonomi Kabupaten Batang Hari Tahun 2010-2020. *J-MAS (Jurnal Manajemen Dan Sains)*, 6(2), 444. <https://doi.org/10.33087/jmas.v6i2.309>
- Emmi Rahmawita Nasution¹, D. (2022). Pelaksanaan Program Bantuan Stimulan Perumahan Swadaya Kepada Masyarakat Miskin Terkait Undang-Undang Nomor 1 Tahun 2011 Tentang Perumahan Dan Kawasan Permukiman (Studi Di Kota Tanjungbalai). *Citra Justicia: Majalah Hukum Dan Dinamika Masyarakat*, 23(1), 1–13.
- Farizki, M., & Anurogo, W. (2017). Pemetaan kualitas permukiman dengan menggunakan penginderaan jauh dan SIG di kecamatan Batam kota, Batam. *Majalah Geografi Indonesia*, 31(1), 39. <https://doi.org/10.22146/mgi.24231>
- Febriani, C., Wijaya, K., & Sugandi, D. (2020). Identifikasi Bangunan Kumuh Yang Mempengaruhi Kualitas Lingkungan Permukiman Tamansari Kota Bandung. *Jurnal Arsitektur ARCADE*, 4(3), 314. <https://doi.org/10.31848/arcade.v4i3.584>
- Isnaini, A. M., & Adnan, L. (2018). Hak Warga Negara Dalam Pemenuhan Lingkungan Tempat Tinggal yang Layak Ditinjau dari Perspektif Hukum Hak Asasi Manusia. *Jurnal Jatishwara*, 33(1), 1–13. <https://doi.org/10.29303/jatishwara.v33i1.158>
- Prasetya, J., & Handoko, S. (2015). Perkembangan Spasial Permukiman Di Kawasan Tumbuh Cepat Studi Kasus Desa Umbulmartani, Kecamatan Ngemplak Kabupaten Sleman. *Jurnal Teknik Sipil Dan Perencanaan*, 17(1), 7–16.
- Pratama, F. A. K., & Niswah, F. (2021). Strategi Peningkatan Kualitas Hidup STRATEGI PENINGKATAN KUALITAS HIDUP MELALUI PROGRAM TAHU PANAS (TAK TAKUT KEHUJANAN , TAK TAKUT KEPANASAN) OLEH DINAS SOSIAL KOTA SURABAYA Filandita Ananda Kusuma Pratama Fitrotun

- Niswah Abstrak. *Publika*, 9(1), 295–306.
- Pujiwati, Y., & Rubiati, B. (2017). Alih Fungsi Lahan Pertanian Untuk Pembangunan Rumah Bagi Masyarakat Berpenghasilan Rendah (Mbr) Ditinjau Dari Undang-Undang Nomor 1 Tahun 2011 Dan Undang-Undang Nomor 41 Tahun 2009. *Acta Diurnal Jurnal Ilmu Hukum Kenotariatan Dan Ke-PPAT-An*, 1(1), 19. <https://doi.org/10.24198/acta.v1i1.64>
- Putriyanti, E. D. (2020). Tinjauan Penerbitan Efek Beragun Aset Berbentuk Surat Partisipasi (Eba-Sp) Dalam Pembiayaan Sekunder Perumah. *Prosiding "Dari Riset Menuju Advokasi,"* 25–47.
- Rachmah, Z., Rengkung, M. M., & Lahamendu, V. (2018). Kesesuaian Lahan Permukiman di Kawasan Kaki Gunung Dua Sudara. *Jurnal Spasial*, 5(1), 118–129. <https://ejournal.unsrat.ac.id/index.php/spasial/article/view/19285>
- Razuli, M., Sugiarto, S., Sipil, M. T., Kuala, S., Aceh, B., Sipil, J. T., Teknik, F., Kuala, U. S., & Aceh, B. (2020). Faktor-Faktor Keputusan Penduduk Masuk. *Jurnal Arsip Rekayasa Sipil Dan Perencanaan*, 3(1), 10–18.
- Sulaiman. (2017). Tinjauan Yuridis Terhadap Tanggung Jawab Pemerintah Daerah Dalam Penyediaan Tanah Bagi Pembangunan Perumahan Masyarakat Berpenghasilan Rendah. *Hakam*, 1–29.
- Sulaiman, A. L. (2021). Proses Kolaborasi Penanganan Permukiman Kumuh Melalui Program Kota Tanpa Kumuh (Kotaku) di Kota Bandung (Studi Kasus : Kelurahan Tamansari Kecamatan Bandung Wetan). *Majalah Media Perencana*, 2(1), 1–23. <https://mediaperencana.perencanapembangunan.or.id/index.php/mmp/article/view/10>
- Suwarja, H. M. (2019). Implementasi Undang-Undang Pemerintah Republik Indonesia Nomor 1 Tahun 2011 Tentang Perumahan Dan Kawasan Permukiman Dalam Rangka Peningkatan Kualitas Infrastruktur Kawasan Permukiman Kumuh Kota Medan Di Kecamatan Medan Marelan. *Jurnal Publik Reform Undhar Medan, Edisi 5*, 52–60.