

Analysis Of Satisfaction Of Service Quality Designable House Using Importance Performance Analysis (Case Study: Banda Aceh City and Aceh Besar District)

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Abstract. The quality of livable housing services is the ability of the Aceh People's Housing and Settlement Area Office to meet the needs of livable housing in accordance with the expectations of the beneficiaries. In the literature review, there are 35 indicators which are part of the five dimensions of service quality for livable housing. The hypothesis in this study is that not all of the 35 indicators of service quality for livable housing in Banda Aceh City and Aceh Besar District are at performance levels that need to be maintained. This means that there are a number of indicators whose performance does not need to be maintained, performance needs to be increased at low priority, and performance needs to be improved at high priority. This study aims to evaluate the quality of livable housing services based on the level of satisfaction and interest of the beneficiaries, evaluate indicators of livable housing quality services that need to be improved in terms of performance, and evaluate the value of the beneficiary satisfaction index on the quality of livable housing services. This study uses a quantitative method approach through a questionnaire. The variables reviewed include 5 factors, namely tangible, reliability, responsiveness, assurance, and empathy. The sampling technique used is simple random sampling of 175 beneficiaries. Data analysis techniques used descriptive statistics, Importance Performance Analysis (IPA), and Customer Satisfaction Index (CSI). The results showed that the quality of livable housing services based on the level of beneficiary satisfaction was at the satisfaction level with a mean of 3.108 and based on the level of interest of the beneficiaries was at a very important level with a mean of 3.537. The indicators for the quality of livable housing services that need to be improved in terms of performance as a top priority are not leaving beneficiaries waiting for the requested information and understanding the wishes of beneficiaries. The beneficiary satisfaction index value for the quality of livable housing services was obtained at 77.72% which is considered satisfied.

INTRODUCTION

House, often referred to as a "shelter," is one of the basic human needs, alongside other primary needs such as "clothing" and "food." A house is a building structure designed as a habitable place, a means for family development, a reflection of the dignity and honor of its occupants, and an asset for its owner (Paramita, 2020). As a fundamental human need, ideally, every family should have a house, especially for low-income communities and those living in densely populated urban areas (Hartanto, 2018). Low-income communities face limitations in purchasing power, making it difficult for them to afford suitable housing. Livable housing is defined as a residence that meets building safety requirements, minimum space standards, and occupant health standards (Khairuni et al., 2022). In response to the inability of communities to own livable homes, the government takes on the responsibility of providing and facilitating accessible housing (Hartanto, 2018).

Banda Aceh, the capital city of Aceh Province, is not exempt from the issue of inadequate housing among its residents. Similarly, in the larger Aceh Besar Regency bordering Banda Aceh, there are also communities living in inadequate housing conditions. In the year 2022, a total of 135 livable housing units were constructed in the Banda Aceh area, while in the Aceh Besar Regency, 993 units were built (Aceh Housing and Settlements Department, 2022). The construction of livable housing units is one of the policies undertaken by the Aceh Government to alleviate poverty within its administrative region.

Eligible beneficiaries to receive livable housing must meet certain criteria, such as being impoverished, disabled, orphans, or vulnerable individuals. Those categorized as impoverished beneficiaries must be above 40 years old, unemployed, and responsible for supporting their children or extended families. Disabled beneficiaries lack the capacity to work, while orphaned beneficiaries are under 18 years old and lack a place of residence (Aceh Governor Regulation No. 145 of 2016 Regarding the Construction of Livable Housing in Aceh, 2016).

The provider of livable housing benefits is the Aceh Government, specifically through the relevant agency, the Aceh Housing and Settlements Department. This department bears the responsibility of facilitating and ensuring the quality of services provided to the beneficiaries. The quality of livable housing services is evaluated based on five dimensions: tangibility, reliability, responsiveness, assurance, and empathy (Bharmawan and Hanif, 2022). Using these five dimensions, the quality of livable housing services in Banda Aceh and Aceh Besar can be assessed through the Importance Performance Analysis (IPA) and Customer Satisfaction Index (CSI).

IPA is an analysis that evaluates the percentage of performance congruence, performance gaps, and the level of service quality performance. Based on a review of the literature, there are 35 indicators related to the quality of livable housing services. These 35 indicators can be evaluated using IPA to determine which aspects of service quality need to be maintained, which do not, and which require improvement, both at low and high priority levels, according to the beneficiaries' perspectives. The hypothesis of this study is that not all 35 indicators of livable housing service quality in Banda Aceh and Aceh Besar are performing at a level that needs to be maintained (already performing well). This suggests that there are indicators with excessive performance, low performance, and very low performance. Therefore, the quality of livable housing services in Banda Aceh and Aceh Besar should be evaluated using IPA, based on the importance and satisfaction levels of the beneficiaries.

CSI, on the other hand, is an analysis that evaluates the satisfaction index of beneficiaries with the quality of services provided by the benefactors. Through CSI, the 35 indicators of livable housing service quality gathered within the five dimensions can determine the satisfaction index of beneficiaries, ranging from unsatisfied, less satisfied, moderately satisfied, satisfied, to highly satisfied. Hence, evaluating the satisfaction index of beneficiaries with the quality of livable housing services in Banda Aceh and Aceh Besar through CSI is necessary. Utilizing IPA and CSI can contribute to improving the performance of benefactors in the construction of livable housing in the following years.

LITERATURE REVIEW

The literature review aims to establish a relevant theoretical framework for the research and serves as the foundation for problem-solving. The theories incorporated in this study encompass performance evaluation, livable housing, quality of livable housing services, population and sample, sampling techniques, Likert scale, instrument validation, descriptive statistics, Importance Performance Analysis (IPA), Customer Satisfaction Index (CSI), and previous research.

RESEARCH METHODOLOGY

This research employs a quantitative methodology. The quantitative approach is utilized to study respondents through the collection of questionnaire data, followed by data analysis using statistical methods, resulting in numerical outputs. The research methodology encompasses various phases, including the implementation of the study, the research subject and location, instrument design, instrument testing, data collection techniques, population and sample determination techniques, and data analysis techniques.

Research Implementation Phases

Broadly, this research comprises three distinct phases: the research planning phase, the research implementation phase, and the research reporting phase. The research planning phase encompasses several key steps, including formulating the research title, defining the research problem, conducting a literature review, determining the research methodology, selecting the data type, designing research instruments, and establishing the target population and sample. The research implementation phase involves the collection of 30 questionnaires, instrument testing, the collection of 175 questionnaires, descriptive statistics, Importance Performance Analysis (IPA), and Customer Satisfaction Index (CSI). Lastly, the research reporting phase entails assessing the quality of livable housing services based on beneficiary importance and satisfaction levels, evaluating indicators of livable housing service quality that require high-priority performance enhancement, and presenting the results of the evaluation of the beneficiary satisfaction index regarding the quality of livable housing services in both Banda Aceh and Aceh Besar.

Research Object and Location

The object of this research is livable housing. The research is conducted in two locations: Banda Aceh City and Aceh Besar Regency, located in the province of Aceh, Indonesia. Banda Aceh City is situated between latitude 5°16'15" - 5°36'16" North and longitude 95°16'15" - 95°22'35" East. The city comprises 9 sub-districts with a total area of 61.36 square kilometers. Administratively, Banda Aceh City is bordered by the Malacca Strait to the north, Aceh Besar Regency to the east and south, and the Indian Ocean to the west. Aceh Besar Regency is located between latitude 5.05° - 5.75° North and longitude 94.99° - 95.93° East. The regency encompasses 23 sub-districts and covers an area of 2,903 square kilometers. Administratively, Aceh Besar Regency is bordered by the Malacca Strait and Banda Aceh City to the north, Pidie Regency to the east, Aceh Jaya Regency to the south, and the Indian Ocean to the west.

Instrument Design

The questionnaire instrument is structured into two parts. The characteristics of this instrument design can be elaborated as follows:

1. Part A - Respondent Characteristics: Questionnaire Part A is designed to gather information about respondent characteristics. This section comprises 6 indicators: gender, age, highest level of education, occupation, average monthly income, and the number of family members residing in the livable housing. Responses in Part A are measured based on the respondent's personal attributes.
2. Part B - Importance and Satisfaction Assessment: Questionnaire Part B is designed to assess the level of importance and satisfaction of beneficiaries regarding the performance of the quality of livable housing services in Banda Aceh City and Aceh Besar Regency. Part B is composed of 5 factors: tangibility, reliability, responsiveness, assurance, and empathy. The indicators for each factor are outlined in Table 2.1, pages 10–11. Each indicator is evaluated for both its level of importance (Y) and satisfaction (X). Responses in Part B are measured using a 4-level Likert scale model. For assessing the importance level (Y) of each indicator, the Likert scale includes options: "Not at all important" with a score of 1, "Not important" with a score of 2, "Important" with a score of 3, and "Very important" with a score of 4. For assessing the satisfaction level (X) of each indicator, the Likert scale includes options: "Very dissatisfied" with a score of 1, "Dissatisfied" with a score of 2, "Satisfied" with a score of 3, and "Very satisfied" with a score of 4.

Instrument Testing

Instrument Testing is conducted to evaluate the designed questionnaire for its suitability as a data collection tool in the research. The instrument testing involves validity and reliability tests using a sample of 30 respondents who are not part of the main research sample. This process serves to assess and refine the questionnaire design by eliminating certain indicators within the studied variables, based on the results of validity and reliability tests. The indicators that are excluded from the instrument represent aspects of livable housing service quality that are deemed irrelevant or non-representative in Banda Aceh City and Aceh Besar Regency. The following subsection outlines the steps involved in the instrument testing process.

Validity Testing

Validity testing is conducted to determine whether the indicators in the questionnaire are valid or not, based on the perceptions of 30 respondents who are not part of the main research sample. The validity testing process involves the following steps:

1. Calculate the R_{hitung} Value: Calculate the R_{hitung} (calculated value) for each indicator within a variable using the assistance of SPSS software version 27.
2. Determine the R_{tabel} Value: Determine the distribution value of R_{tabel} (critical value). To obtain the R_{tabel} value, follow these steps:

- a. Determine the degrees of freedom (df) using the formula: total sample size (n) minus 2.
 - b. Decide whether to use a one-tailed or two-tailed test. A one-tailed test is used for hypotheses with a clear direction, while a two-tailed test is used for hypotheses with an unclear direction. Since the hypothesis direction is unknown, a two-tailed test is chosen.
 - c. Set the predetermined error level for the two-tailed test. In this case, an error level of 0.05 (5%) is used, following expert recommendations and the researcher's preference.
 - d. Determine the R_{table} value by referencing the df value against the chosen error level of 0.05 (5%) for the two-tailed test.
3. Compare R_{hitung} and R_{tabel} Values: Compare the calculated R_{hitung} value with the corresponding R_{tabel} value. If $R_{hitung} > R_{tabel}$ for an indicator, the indicator is considered valid. Conversely, if $R_{hitung} < R_{tabel}$ for an indicator, the indicator is not valid and should be eliminated from further consideration. Valid indicators proceed to the reliability testing phase.

Reliability Testing

Reliability testing is conducted to assess whether the variables in the questionnaire are reliable or not, based on the perceptions of 30 respondents who are not part of the main research sample. The reliability testing process involves the following steps:

1. Calculate Cronbach's Alpha: Calculate the Cronbach's Alpha coefficient for each variable using the assistance of SPSS software version 27. Cronbach's Alpha is a measure of internal consistency, indicating the degree to which the items within a variable are correlated.
2. Compare Cronbach's Alpha Value: Compare the calculated Cronbach's Alpha value with the predetermined criterion of 0.6. If a variable's Cronbach's Alpha > 0.6 , the variable is considered reliable. Conversely, if a variable's Cronbach's Alpha < 0.6 , the variable is not reliable. In such cases, it is necessary to re-evaluate and potentially revise the questionnaire by repeating the same steps.

Data Collection Techniques

Data is a collection of information, whether in oral or written form, that supports the research process. In this context, there are two types of data: primary data and secondary data.

Collection of Primary Data

Primary data refers to information obtained directly by the researcher from its source. In this study, the primary data consists solely of questionnaire data. The questionnaire data serves as an evaluation of the performance of livable housing service quality in Banda Aceh City and Aceh Besar Regency, based on the levels of importance and satisfaction of beneficiaries. Additionally, the questionnaire data is used to evaluate the Customer Satisfaction Index (CSI) regarding livable housing service quality in the same locations.

Based on the instrument testing, if all indicators are valid and variables are reliable, the instrument design can be directly used as a data collection tool for the research. However, if some indicators are not valid and variables are not reliable, the questionnaire instrument needs to be modified before being employed as a data collection tool. The modification process involves removing indicators that are not valid.

Collection of Secondary Data

Secondary data refers to information collected by the researcher from existing or available sources. In this study, the following secondary data sources are used:

1. Maps of Banda Aceh City and Aceh Besar Regency: These maps provide information about the geographical locations of the research areas. The data is obtained from the Regional Development Planning Agency (Badan Perencanaan Pembangunan Daerah - Bappeda) of Aceh Province.
2. Number of Livable Housing Constructions in Banda Aceh City in 2022: This data is used to calculate the proportion of beneficiaries of livable housing in each sub-district of Banda Aceh City. The data is

obtained from the Regional Housing and Settlement Agency (Dinas Perumahan Rakyat dan Kawasan Permukiman) of Aceh Province.

3. Number of Livable Housing Constructions in Aceh Besar Regency in 2022: Similar to the previous point, this data is used to calculate the proportion of beneficiaries of livable housing in each sub-district of Aceh Besar Regency.

Population and Sample Determination Technique

The population in this study refers to the beneficiaries of livable housing in Banda Aceh City and Aceh Besar Regency in the year 2022. According to data from the Regional Housing and Settlement Agency (Dinas Perumahan Rakyat dan Kawasan Permukiman) of Aceh Province, the population of beneficiaries of livable housing in Banda Aceh City and Aceh Besar Regency in 2022 totals 1,128 individuals. Subsequently, the sample size can be calculated using the Hair formula, which is 5 times the number of indicators under review. In this study, there are 35 indicators under review, and considering the instrument testing has been conducted, the sample size is calculated as 5 times 35 indicators, resulting in a sample size of 175 beneficiaries. The sampling technique employed is proportionate stratified random sampling. This method involves randomly selecting samples from each stratum of the population in proportion to its size. "Proportionate" signifies that the larger the population, the larger the sample size.

Table 1. Population and Sample Proportion of Livable Housing Beneficiaries

No.	Housing Beneficiaries Location	Population	Proportion	Sample Proportion
1	Kota Banda Aceh			
a	Baiturrahman	14		$(14/1.128) \times 175 = 2$
b	Banda Raya	21		$(21/1.128) \times 175 = 3$
c	Jaya Baru	19		$(19/1.128) \times 175 = 3$
d	Kuta Alam	18		$(18/1.128) \times 175 = 3$
e	Kuta Raja	10		$(10/1.128) \times 175 = 2$
f	Lueng Bata	12		$(12/1.128) \times 175 = 2$
g	Meuraxa	6		$(6/1.128) \times 175 = 1$
h	Syiah Kuala	15		$(15/1.128) \times 175 = 2$
i	Ulee Kareng	20		$(20/1.128) \times 175 = 3$
2	Kabupaten Aceh Besar			
a	Baitussalam	41		$(41/1.128) \times 175 = 6$
b	Blang Bintang	25		$(25/1.128) \times 175 = 4$
c	Darul Imarah	81		$(81/1.128) \times 175 = 13$
d	Darul Kamal	24		$(24/1.128) \times 175 = 4$
e	Darussalam	33		$(33/1.128) \times 175 = 5$
f	Indrapuri	152		$(152/1.128) \times 175 = 24$
g	Ingin Jaya	58		$(58/1.128) \times 175 = 9$
h	Kota Jantho	23		$(23/1.128) \times 175 = 3$
i	Krueng Barona Jaya	23		$(23/1.128) \times 175 = 3$
j	Kuta Baro	62		$(62/1.128) \times 175 = 10$
k	Kuta Cot Glie	85		$(85/1.128) \times 175 = 13$
l	Kuta Malaka	23		$(23/1.128) \times 175 = 4$
m	Lembah Seulawah	15		$(15/1.128) \times 175 = 2$
n	Leupung	4		$(4/1.128) \times 175 = 1$
o	Lhoknga	31		$(31/1.128) \times 175 = 5$
p	Lhoong	30		$(30/1.128) \times 175 = 5$
q	Mesjid Raya	27		$(27/1.128) \times 175 = 4$
r	Montasik	132		$(132/1.128) \times 175 = 20$
s	Peukan Bada	28		$(28/1.128) \times 175 = 4$
t	Pulo Aceh	1		$(1/1.128) \times 175 = 0$
u	Seulimeum	70		$(70/1.128) \times 175 = 11$

v	Simpang Tiga	5	$(5/1.128) \times 175 = 1$
w	Suka Makmur	20	$(20/1.128) \times 175 = 3$
	Jumlah	1.128	175

Data Analysis Techniques

Data Analysis is a process of simplifying data into a form that is easy to read, understand, and interpret. Data analysis in this research involves the use of descriptive statistics, Importance Performance Analysis (IPA), and Customer Satisfaction Index (CSI).

Descriptive statistics

Descriptive statistics involve summarizing and presenting data using various measures, such as mean, median, mode, standard deviation, and frequency distributions. These statistics provide a clear overview of the characteristics and patterns within the data. In this research, descriptive statistics will help describe the demographic characteristics of the respondents and provide insights into the levels of importance and satisfaction related to livable housing service quality.

Importance Performance Analysis (IPA)

IPA is a technique used to assess the significance of different attributes or indicators by comparing their importance and performance ratings. It helps identify areas where improvements are needed or where the service quality is exceeding expectations. By plotting attributes on a grid, researchers can categorize them into quadrants, guiding decision-making for resource allocation and improvement strategies.

Customer Satisfaction Index (CSI)

The CSI is a metric used to measure overall customer satisfaction based on the levels of importance and satisfaction with various attributes or factors. It helps gauge the overall satisfaction level of beneficiaries with livable housing service quality. The CSI is calculated by summing the satisfaction ratings of all attributes and dividing by the sum of the importance ratings.

RESULTS AND DISCUSSION

In this study, the questionnaire was distributed twice. The first distribution consisted of 30 questionnaires for pilot testing, while the second distribution involved 175 questionnaires for data collection. Based on the collected questionnaire data, the following section presents the results and discussion.

Instrument Testing

The questionnaire instrument, which had been designed based on various sources, was initially distributed to 30 respondents who were not part of the research sample. Further details regarding the instrument validation through validity and reliability tests are elaborated below.

Validity Testing

The validity test was conducted to determine whether the indicators of importance level and satisfaction level within the dimensions of tangibles, reliability, responsiveness, assurance, and empathy were valid. This assessment was based on the perceptions of 30 beneficiaries of livable housing in Banda Aceh City and Aceh Besar Regency. The evaluation criteria were as follows: if an indicator had a calculated value of R (R_{hitung}) greater than the tabulated value of R (R_{tabel}), the indicator was considered valid. Conversely, if the calculated value of R (R_{hitung}) was less than the tabulated value of R (R_{tabel}), the indicator was considered invalid.

The comparison of the calculated value (Rhitung) and the tabled value (Rtabel) shows that all indicators of importance level and satisfaction level for each factor have Rhitung values greater than Rtabel. This implies that all of these indicators can be considered valid. This means that all indicators of importance level and satisfaction level for each factor, which were asked to 30 beneficiaries of habitable houses in Banda Aceh City and Aceh Besar District, have been appropriately assessed. In light of the validity of all indicators, the next step of testing reliability can be pursued.

Reliability Testing

Reliability testing is used to determine whether the factors of tangibility, reliability, responsiveness, assurance, and empathy are reliable or not in terms of their level of importance and satisfaction, based on the perceptions of 30 beneficiaries of livable housing in Kota Banda Aceh and Kabupaten Aceh Besar. The assessment criterion is that if a factor has a Cronbach Alpha value > 0.6 , then the factor is considered reliable. Conversely, if a factor has a Cronbach Alpha value < 0.6 , then the factor is considered unreliable. Reliability indicates that the indicators of level of importance and satisfaction within a particular factor as a whole can accurately reflect that factor. In other words, there is consistency and alignment between a set of indicators and the underlying factor.

The results of the reliability test indicate that all levels of importance and satisfaction for each factor have Cronbach's Alpha values > 0.6 , thus all of these factors can be considered reliable. This means that all indicators of importance level and satisfaction level, which were asked to 30 beneficiaries of habitable houses in Banda Aceh City and Aceh Besar District, are aligned with the factors under consideration. The instrument test shows that all indicators are valid and all factors are reliable, therefore the questionnaire design does not need to be modified and can be directly used as a data collection tool for the remaining 175 respondents in the study.

Respondent Characteristic

The respondents are targeted towards 175 beneficiaries of livable housing in Kota Banda Aceh and Kabupaten Aceh Besar. In this case, the criteria for selecting respondents for the study are beneficiaries of livable housing categorized as impoverished in 2022, aged > 40 years, actively monitoring the construction of livable housing, and capable of comprehending the questionnaire questions effectively. The identified characteristics of respondents include gender, age, highest level of education, occupation, average monthly income, and number of family members residing in the livable housing.

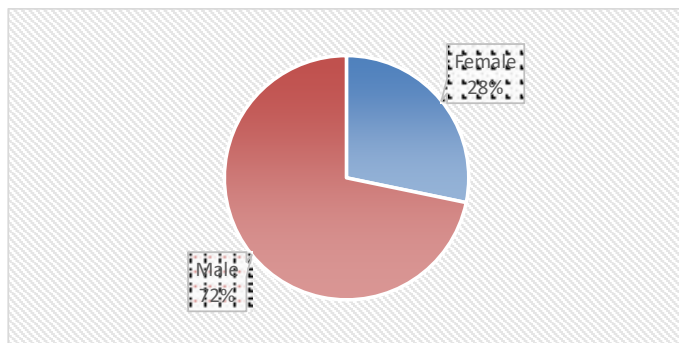


FIGURE 1. Percentage of Respondents' Gender

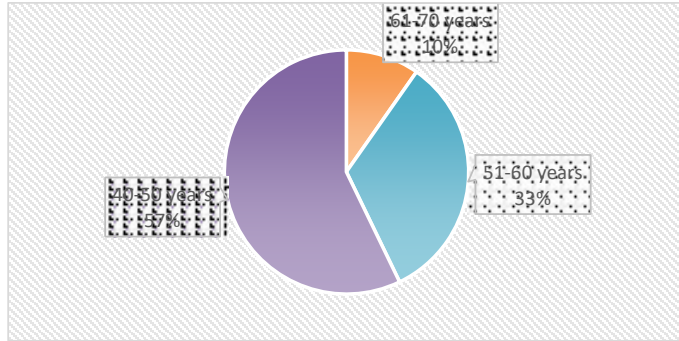


FIGURE 2. Percentage of respondents Age

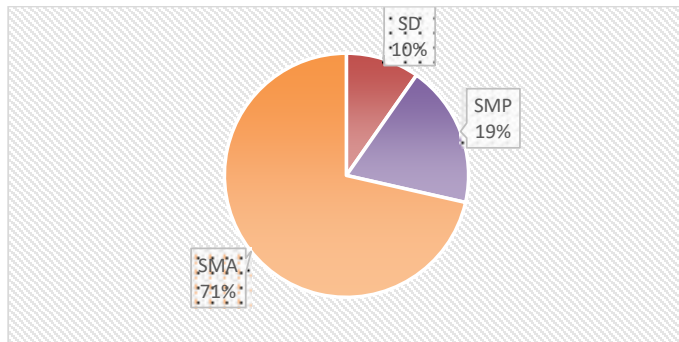


FIGURE 3. Percentage of Respondents' Highest Level of Education

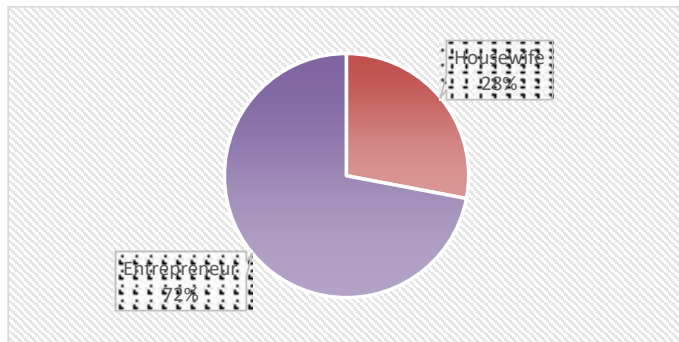


FIGURE 4. Percentage of Respondents' Occupation

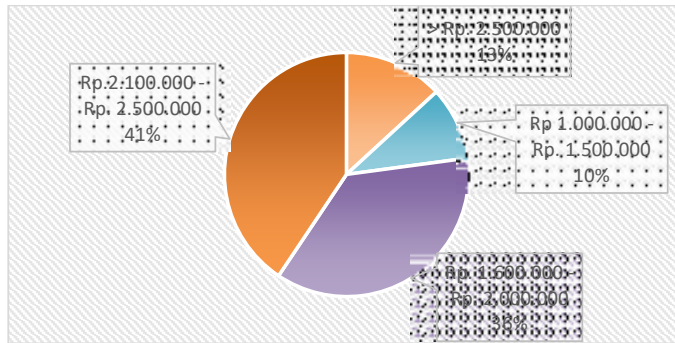


FIGURE 5. Percentage of Respondents' Average Monthly Income

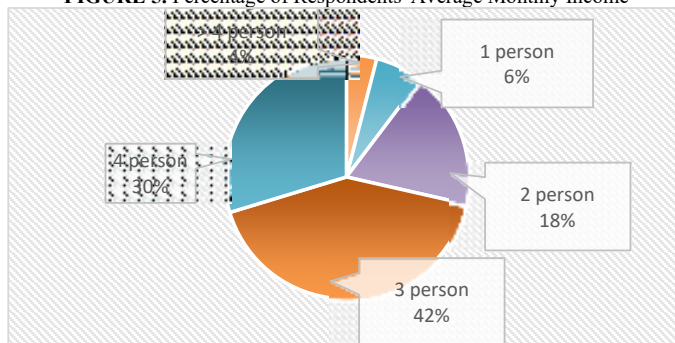


FIGURE 6. Percentage of Respondents' Number of Family Members

Respondent Perception

The service quality of livable housing is measured using the five dimensions of service quality known as Servqual. These five Servqual dimensions consist of tangibles, reliability, responsiveness, assurance, and empathy. Beneficiaries of livable housing have their own assessments of the level of importance and satisfaction for each Servqual dimension. This is because an individual's perception is influenced by subjective thoughts and feelings.

Respondents' perceptions of the level of importance

Respondents' perceptions of the level of importance of the quality of livable housing services in Kota Banda Aceh and Kabupaten Aceh Besar are categorized into four levels: Very Unimportant (STP), Unimportant (TP), Important (P), and Very Important (SP).

Based on the results of the analysis, it is found that out of the 5 Servqual factors examined in this study, there are 3 important factors and 2 very important factors perceived by the respondents. The factors perceived as important by the respondents are reliability with a mean of 3.303, assurance with a mean of 3.461, and empathy with a mean of 3.206. Meanwhile, the factors perceived as very important by the respondents are tangibles with a mean of 3.626 and responsiveness with a mean of 3.608. Overall, respondents perceive that all Servqual factors have an important level of importance with a mean of 3.441.

Importance Performance Analysis (IPA)

IPA has three main functions. The first function of IPA is to determine the percentage of congruence in the performance of the quality of housing services in Kota Banda Aceh and Kabupaten Aceh Besar, based on the level of importance and satisfaction of the beneficiaries through the Importance Performance Analysis (IPA) score. The second

function of IPA is to identify the performance gaps in the quality of housing services in Kota Banda Aceh and Kabupaten Aceh Besar, based on the level of importance and satisfaction of the beneficiaries through the gap score. The percentage of congruence and performance gap can be displayed that out of the 35 surveyed Servqual indicators, there are 3 indicators whose satisfaction levels are able to exceed the level of importance. These indicators are as follows:

Indicator	Gap Score
24	0.903
33	0.469
30	0.086

Additionally, the Servqual indicator with satisfaction levels closely aligned with the level of importance is Indicator 31: "Courteous behavior from staff/guidance," with a gap score of -0.086. On the other hand, the Servqual indicator with satisfaction levels deviating the most from the level of importance is Indicator 34: "Understanding beneficiaries' desires," with a gap score of -0.886.

The third function of IPA is to determine the level of performance in the quality of housing services in Kota Banda Aceh and Kabupaten Aceh Besar, based on the level of importance and satisfaction of the beneficiaries, using a Cartesian quadrant.

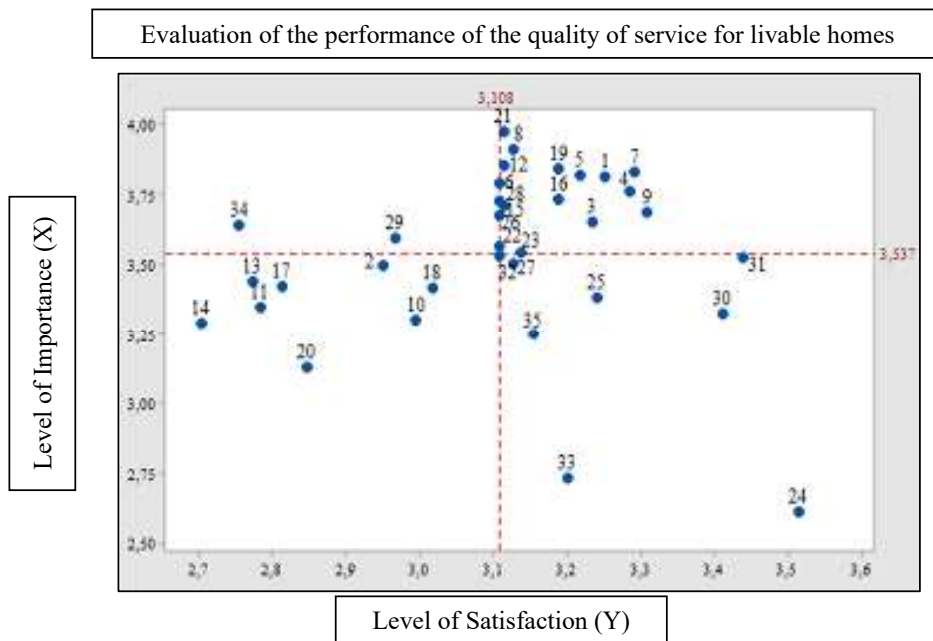


FIGURE 7. The evaluation of the performance of each Servqual indicator

This figure illustrates the distribution of Servqual indicators across different quadrants, quadrant A contains 2 indicators, quadrant B contains 17 indicators, quadrants C and D each contain 8 indicators. This distribution indicates that 2 indicators require primary performance improvement (Quadrant A), 17 indicators need to maintain their current performance (Quadrant B), 8 indicators require performance improvement with a lower priority (Quadrant C), 8 indicators do not require performance improvement (Quadrant D). To enhance beneficiary satisfaction, the focus of performance evaluation will be on Quadrants A and C, where the primary and lower-priority performance improvement indicators are located. This approach ensures that efforts are concentrated on areas with the highest potential impact on improving the quality of service for livable homes and enhancing beneficiary satisfaction.

Customer Satisfaction Index (CSI)

The Customer Satisfaction Index (CSI) is used to determine the satisfaction index value of beneficiaries regarding the quality of service for livable homes in Kota Banda Aceh and Kabupaten Aceh Besar. In other words, CSI is utilized to ascertain the satisfaction index value of beneficiaries for all Servqual indicators simultaneously (collectively). The CSI consists of several components, including:

1. Mean importance level of indicators.
2. Total mean importance level of indicators.
3. Weighting Factor (WF).
4. Total Weighting Factor (WF).
5. Mean satisfaction level of indicators.
6. Weighting Score (WS).
7. Weighting Total (WT).
8. Total number of Likert scale levels used.
9. CSI value.

These components are employed to calculate the Customer Satisfaction Index, which provides a comprehensive assessment of beneficiary satisfaction with the quality of service for livable homes. The CSI takes into account both the importance levels and satisfaction levels of the Servqual indicators to generate a meaningful and informative index value.

Based on the analysis results, it is determined that the Customer Satisfaction Index (CSI) value of beneficiaries' satisfaction with the quality of service for livable homes in Kota Banda Aceh and Kabupaten Aceh Besar is obtained at 77.72%. This indicates that, overall, the beneficiaries are satisfied with the quality of service for livable homes in Kota Banda Aceh and Kabupaten Aceh Besar.

Discussion

Based on the research findings obtained in the previous subsection, this subsection will provide several discussions in accordance with the research objectives.

The quality of service for livable housing based on the levels of importance and satisfaction of the beneficiaries

The quality of service for livable housing is measured using five aspects of service quality, also known as the Servqual framework. These five factors consist of tangibles, reliability, responsiveness, assurance, and empathy.

1. **Tangibles (Berwujud):** This aspect refers to the physical appearance of facilities, equipment, personnel, and communication materials that contribute to the overall perception of service quality. Tangibles encompass the visual and tangible elements that customers or beneficiaries interact with when receiving a service.
2. **Reliability (Keandalan):** Reliability pertains to the ability of service providers to deliver accurate and consistent services as promised, ensuring dependability, accuracy, and fulfillment of commitments. It reflects the level of trust beneficiaries have in the service provider's capability to meet their needs.
3. **Responsiveness (Ketanggapan):** Responsiveness relates to the willingness and ability of service providers to promptly assist and respond to beneficiaries' inquiries, requests, or concerns. This factor highlights the speed and effectiveness of addressing beneficiaries' needs.
4. **Assurance (Jaminan):** Assurance encompasses the service providers' competence, courtesy, credibility, and ability to convey trust and confidence to beneficiaries. It involves creating an atmosphere of trust, safety, and professionalism in the service encounter.
5. **Empathy (Empati):** Empathy involves understanding, caring, and showing compassion towards beneficiaries' individual needs and concerns. Service providers demonstrate empathy by actively listening, showing understanding, and tailoring services to meet beneficiaries' unique requirements.

The perception of the 175 beneficiaries regarding the level of importance and satisfaction with Servqual indicators varies. This variation in perception is due to the fact that individuals are influenced by their subjective thoughts and feelings. These differing perceptions can be accommodated through the use of means, which are calculated using descriptive statistics. In this case, the combined mean of the importance level of Servqual indicators is 3.537, while the combined mean of the satisfaction level is 3.108. This indicates that the beneficiaries perceive the quality of service

for livable housing in Kota Banda Aceh and Kabupaten Aceh Besar as being highly important in terms of importance level and satisfactory in terms of satisfaction level.

The Performance of the Quality of Service for Livable Housing

To enhance beneficiary satisfaction, the provider of the service, namely the Dinas Perumahan Rakyat dan Kawasan Permukiman Aceh, needs to maintain and improve the performance of the Servqual indicators. Specifically, efforts should be directed towards enhancing the performance of Servqual indicators falling within the high-priority category (Quadrant A) and low-priority category (Quadrant C).

Satisfaction Level of Beneficiaries Regarding the Quality of Livable Housing Services

The Customer Satisfaction Index (CSI) can be used to evaluate the satisfaction of beneficiaries regarding the quality of livable housing services in Kota Banda Aceh and Kabupaten Aceh Besar. The CSI analysis reveals that out of the 35 Servqual indicators examined, the satisfaction index score obtained is 77.72%. This indicates that overall, beneficiaries are satisfied with the quality of livable housing services in Kota Banda Aceh and Kabupaten Aceh Besar. In this context, there is a gap of 22.28% between the importance and satisfaction levels.

The gap between importance and satisfaction levels signifies areas where the quality of livable housing services in Kota Banda Aceh and Kabupaten Aceh Besar can be improved by the service provider. This improvement is aimed at maximizing the satisfaction of beneficiaries. By addressing the identified gaps and focusing on enhancing the performance of specific Servqual indicators, the service provider can work towards achieving a higher level of satisfaction among beneficiaries.

CONCLUSION

1. The quality of decent housing services in Banda Aceh City and Aceh Besar District, based on the level of beneficiary satisfaction, is at a satisfactory level with a mean of 3.108. Furthermore, based on the level of beneficiary importance, it is at a highly important level with a mean of 3.537.
2. Indicators of decent housing service quality that require performance improvement as a top priority in Banda Aceh City and Aceh Besar District are "not keeping beneficiaries waiting for requested information" and "understanding beneficiaries' desires."
3. The Customer Satisfaction Index (CSI) for the quality of decent housing services in Banda Aceh City and Aceh Besar District is obtained at 77.72%, indicating a satisfactory level of satisfaction among beneficiaries.

RECOMMENDATIONS

1. Beneficiaries of decent housing in Banda Aceh City and Aceh Besar District need to enhance the performance of two Servqual indicators that fall under the top priority, namely "not keeping beneficiaries waiting for requested information" and "understanding beneficiaries' desires."
2. Beneficiaries of decent housing in Banda Aceh City and Aceh Besar District need to enhance the performance of eight Servqual indicators that fall under the low-priority category, which includes "all foundations embedded in the ground," "sufficient lighting," "adequate ventilation (air circulation)," "quantity and size of rooms within the house," "quality of walls," "quality of flooring," "quality of ceilings," and "appearance of the house (front, sides, and rear)."
3. Subsequent researchers can expand on this study by evaluating the performance of decent housing service quality in other districts or cities within the Aceh Province, aiming to identify indicators requiring performance enhancement in the respective regions.

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