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Analyzing The Impact of Quality Management on Housing Users' Perceptions Using Property SERVQUAL

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ABSTRACT

The history of Service Quality has appeared in several previous studies, but studies that discuss property SERVQUAL remain underexplored, particularly in relation to user satisfaction and housing quality in developing countries. The concept of quality management will support the success in developing the housing sector and will provide acceleration for the government to improve the local economy. Unfortunately, in many developing countries, the management of housing for the community tends not to meet the required quality because it always prioritizes quantity. There is the urgency of empirical and theoretical gaps is an opportunity for researchers to provide additional scientific references in the form of conceptual quality management of housing users' perceptions using property SERVQUAL in accordance with the expected impact. The method applied in this paper was carried out with a quantitative approach. The data obtained is through surveys. The survey data were processed using a model test tool, namely PLS-SEM. Respondents in this study were 150 housing users. The findings that will be obtained in this study are in the form of a conceptual description of quality management of housing user perceptions using property SERVQUAL and how it impacts housing characteristics and direct impacts for users in the form of subjective well-being. The implications of this research consist of two outputs, namely the first implication for science in the form of new references from the concept of quality management with novelty linking Property SERVQUAL, housing characteristics, and subjective well-being. The second is the consideration of practical strategies for housing stakeholders.

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Introduction

Economic uncertainty has driven this world to survive and thrive. The development of various sectors continues to run openly according to their respective roles. Both developing and developed countries continue to compete competitively to protect their respective countries. Consideration of welfare is an absolute thing for a country, including Indonesia. Indonesia, as an archipelago, has unique characteristics because it consists of various tribes. The government is well aware of the importance of welfare for its citizens. According to the results of research by (Suripto & Elita Permatasari, 2023)Welfare can be described, one of which it is achieved through the ownership of household assets of its citizens. Currently at the national level, Indonesia's Badan Pusat Statistik (BPS) also includes indicators of housing ownership and housing quality in measuring the People's Welfare Index (IKR) and poverty indicators.

The indicator of housing ownership has become so important to date, but the management of housing for the community tends not to meet the required quality because it always puts quantity first. Poor service quality can affect consumers' psychological and emotional well-being in addition to decreasing satisfaction when it comes to quality-of-life services like health or property (Diener & Seligman, 2004; OECD, 2013). When service only focuses on quantities such as speed or volume without paying attention to the quality of interactions and outcomes, it can reduce customer satisfaction and trust in the long run. (Aji & R A Nurlinda, 2024). In fact, stakeholders must consider management utilizing the quality management idea, which will help the housing sector expand successfully and speed up the government's efforts to boost the local economy.

The methodical process of raising the caliber of goods and services to either meet or surpass the expectations of consumers, in this case, the community, is known as quality management. One approach that is widely used in assessing service quality is the SERVQUAL model developed by (Parasuraman et al., 1988). The history of Service Quality has appeared in several previous studies, such as in research (Aji & R A Nurlinda, 2024; Baharum & Nawawi, 2009; Chiang & Perng, 2018; Jes She et al., 2022; Seiler & Reisenwitz, 2010). However, research that discusses the properties of SERVQUAL still has a gap to be developed. The number of studies that examine in depth the application of SERVQUAL in the context of residential property is still relatively small (Seiler & Reisenwitz, 2010). This points to a gap in the literature that future studies need to fill. Many studies have developed modified SERVQUAL to suit housing services, apartments, public housing, and housing complexes. These models refine the indicators to be more contextualised, as in the researcher's results or suggestions (Baharum & Nawawi, 2009; Chiang & Perng, 2018; Jes She et al., 2022).

Based on the mindset stated in the introduction, it can be explained that the empirical gap in service quality is something important, but management is still considered not optimal. This is also supported by the first theoretical gap, namely Property SERVQUAL, where there are still few studies that apply SERVQUAL in the context of Property. The second gap is that SERVQUAL research has been utilized extensively to assess customer satisfaction and service quality, not many studies have explicitly linked service quality (SERVQUAL) with occupant well-being, especially in the context of property or housing services. The gap in the connection between service quality or SERVQUAL and Well-Being is supported by the results of research (Zhao & Wei, 2019). It is clear that the urgency of empirical and theoretical gaps is an opportunity for researchers to provide additional scientific references in the form of conceptual quality management of housing users' perceptions using property SERVQUAL in accordance with the expected impact. This research can provide implications for science in the form of new references to the concept of quality management with novelty linking property servqual, housing characteristics, and subjective well-being. The basis that can be used in obtaining novelty in this study is supported by references from previous studies, namely (Chiang & Perng, 2018; Li et al., 2019; Mouratidis, 2020), which have each interest that can be used as a unitary concept.

Literature Review

SERVQUAL

Managing quality includes identifying the customer's quality expectations and establishing procedures and guidelines to identify and satisfy them (Heizer et al., 2017). When it comes to products, services, people, processes, and the environment, quality is a dynamic state that either meets or exceeds expectations and contributes to the creation of superior value, according to (Goetsch & Davis, 2014). The SERVQUAL model was introduced by (Parasuraman et al., 1988) It is the method most commonly employed to evaluate the caliber of services. An approach for assessing service quality compares the expectations of customers with their perceptions of the actual service they received. The specific questions in the SERVQUAL model may vary depending on differences in service quality, as well as differences in socio-economic conditions in different regions (Alam & Mondal, 2019). Over time, this model has been adapted and modified for various types of services, including in the property sector (Yangailo & Sichinsambwe, 2024; Yusoff & Ismail, 2008).

The SERVOUAL model was developed in the context of property services by emphasizing more specific aspects such as the physical condition of the building, maintenance system, level of environmental safety, and the speed of the manager's response to residents' complaints. This service quality comes from good management. Operational managers play an important role by prioritizing aspects of service quality. Research conducted by (Yoo & Bai, 2013) revealed that the tangibles and reliability dimensions have a dominant influence on occupant satisfaction with apartment services, while (Kuo et al., 2011) revealed that the reliability and assurance dimensions have a dominant influence on apartment service quality. In addition, (Chua Chow & Luk, 2005) added that aspects of comfort and safety are important factors that can be included in the development of SERVQUAL dimensions in the property sector. In accordance with the research gap presented in the introduction, further research is needed because the context of residential property is still relatively small (Seiler & Reisenwitz, 2010). The literature review also points out the research gap that SERVQUAL research has been widely used to measure service quality and its relationship with customer satisfaction, not many studies have explicitly linked service quality (SERVQUAL) with occupant well-being, especially in the context of property or housing services. The gap in the relationship between service quality or SERVQUAL and Well-Being is supported by the results of research (Zhao & Wei, 2019).

Furthermore, technological developments have played a role in influencing property services, especially in the digitalisation of property management systems. The integration of digital services, such as online complaints or facility management applications, expands the scope of the responsiveness and assurance dimensions. Recent research combines SERVQUAL with other models, such as to more thoroughly assess the connection between resident happiness, service quality, and loyalty to property management, uses the Customer Happiness Index (CSI), and Customer Loyalty Models (Teng et al., 2012).

Housing Characteristics

Users can get the suitability of housing expectations that are characterized through the Housing Characteristics variable (Li et al., 2019). The Housing Characteristics variable is described by living space per capita, housing quality, and housing design used. Per capita living space describes the differences in residential elements considered in choosing a home environment (Chen et al., 2013). Occupancy satisfaction studies generally split into two categories: those that view it as a predictor of behavior, such as intention to stay or move out, and treat it as an indicator of housing quality, if satisfaction influences occupants' decisions to modify or move out of their current occupancy (Weidermann & Anderson, 1985). Environmental factors such as the physical quality of the building are key determinants of overall resident satisfaction, while the social aspects of the housing project have little or no impact on resident satisfaction

(Etminani-Ghasrodashti et al., 2017). Housing quality, particularly in terms of size, influences residents' subjective well-being positively for those aged young to 79, but hurts individuals aged 80 and above (Herbers & Mulder, 2017). Reassessing the housing design of existing housing units and the provision of services and public facilities is essential to identify improvements in housing design, which in turn can enhance overall satisfaction in future public housing developments (Mohit & Azim, 2012).

Subjective Well-Being

Subjective well-being, which involves both cognitive and emotional assessments of one's life, has emerged as a common benchmark for evaluating quality of life and serves as an indicator for measuring urban livability from a personal perspective (Mouratidis, 2020; Sirgy, 2012). Subjective well-being is considered an important goal for humans, so studying the factors that influence it, including the relationship between housing and well-being in old age, is especially relevant in the context of ageing (Herbers & Mulder, 2017). The Property SERVQUAL has an important role in the eyes of its users, according to the literature. Users can get the suitability of housing expectations that are characterised through the Housing Characteristics variable (Li et al., 2019) and will ultimately increase Subjective Well-Being from the perspective of home users (Mouratidis, 2020). To determine the subjective well-being variable, several indicators are used, which include life satisfaction, happiness, anxiety, and eudaimonia (Mouratidis, 2020). Life satisfaction and eudaimonia represent the cognitive aspects of subjective well-being, while happiness and anxiety indicate its affective components; however, despite domain satisfaction being theoretically more aligned with cognitive evaluations, prior studies have revealed a significant link between satisfaction across life domains and affective responses like happiness and anxiety (Mouratidis et al., 2019).

The literature requires further research to develop SERVQUAL poverty through the hypothesis below:

H₁: There is an effect of Property SERVQUAL on Housing Characteristics.
H₂: There is an effect of Housing Characteristics on Subjective Well-Being.
H₃: There is an effect of Property SERVQUAL on Subjective Well-Being.

H₄ : There is an effect of Property SERVQUAL on Subjective Well-Being through Housing

Characteristics.

Methodology

This research is quantitative, based on (Creswell & Creswell, 2017). Testing the connection between variables is one way that quantitative research is used to examine certain ideas. The objects of this research are housing users or users who have occupied their homes for a minimum of 1 year, located in 2 city districts, namely Karawang and Bekasi. The population of this study is all housing users. The type of sample data is included in Non-Probability Sampling, collected by purposive sampling (Sugiyono, 2016). The number of samples, according to (Hair & Alamer, 2022; Sarstedt et al., 2021), following the number of research indicators. The number of variable indicators in this study was 12 so the minimum number needed was 120 respondents. In the end, the number of respondents in this study was 150. Direct distribution of questionnaires to consumers was the approach used to obtain the data. The questions or questions given to respondents are, of course, based on the theory with the variables used, namely Property Servqual, housing characteristics, and subjective well-being. Causality is the statistical model and scientific analysis method used in this investigation. Quantitative research, according to (Hair & Alamer, 2022), can use PLS-SEM. PLS-SEM is commonly applied to show respondents' perceptions. As for some previous studies that

used this PLS-SEM, such as (Dellby et al., 2024; Fauziah Ramadhany, 2024; Sokhiful Jannah & Indra, 2024) so this research also uses SEM-PLS.

The model that will be assessed in this investigation is tailored to the stated hypothesis. The model image tested is as follows:

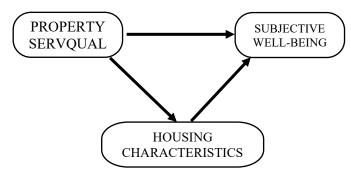


Figure 1. Research Model

Source: Author (2025)

Results and Discussion

Results

The two models that comprise the PLS-SEM model are the measurement model, also known as the outer model, and the structural model, also referred to as the inner model. The structural framework explains the relationship between constructs, whereas the measurement model explains the connection between constructs and indicators. For the PLS-SEM model estimate to offer an empirical assessment of the correlation between latent. Evaluating the measure's quality and determining if the model adequately explains and predicts the target construct are made feasible by PLS-SEM model estimation. (Hair & Alamer, 2022). Thus, the model evaluation carried out consists of the Examination of the measurement and structural models.

1. The model of measurement

a) Indicator reliability

Verifying the outer loading value on each indication is how indicator dependability is determined. A high outer loading number means that the latent variable describes the associated indicators as having a lot in common. Indicators with an outer loading value higher than 0.7 are considered important indicators, meaning they are valuable to retain, according to (Hair & Alamer, 2022). If the value is 0.4 < outer loading < 0.7, further evaluation is needed, namely, Internal Consistency, Reliability, and convergent validity. If both evaluations meet the threshold, the indicator can be maintained. Conversely, if both evaluations do not meet the threshold, the indicator can be removed by considering the impact on its substance validity. If the outer loading value is less than 0.4, the indicator can be removed. Table 1 shows the outer loading value for every indicator for every construction:

Table 1. Testing of Stage 1 and Stage 2

| Latent Variables (Constructs) | Indicator | Outer Loading | |
|--------------------------------------|-------------------------|----------------------|--|
| Stage 1 | | | |
| Property Servqual | Tangibles | 0,836 | |
| | Reliability | 0,928 | |
| | Responsiveness | 0,931 | |
| | Assurance | 0,940 | |
| | Empathy | 0,919 | |
| Housing characteristics | Per Capita Living Space | 0,853 | |
| | Housing Design | 0,913 | |
| | Housing Quality | 0,936 | |
| Subjective well-being | Life Satisfaction | 0,947 | |
| | Eudaimonia | 0,935 | |
| | Happiness | 0,937 | |
| | Anxiety | 0,131 | |
| Stage 2 | | | |
| Property Servqual | Tangibles | 0,836 | |
| | Reliability | 0,928 | |
| | Responsiveness | 0,931 | |
| | Assurance | 0,940 | |
| | Empathy | 0,919 | |
| Housing characteristics | Per Capita Living Space | 0,853 | |
| C | Housing Design | 0,913 | |
| | Housing Quality | 0,936 | |
| Subjective well-being | Life Satisfaction | 0,947 | |
| - - | Eudaimonia | 0,935 | |
| | Happiness | 0,937 | |

Source: Author (2025)

Since Stage 2 shows that all of the indicators' outer loading values are greater than 0.7, it may be concluded that they are all reliable. Thus, it can be concluded that the indicator reliability criteria of the measurement model are fulfilled.

b) Internal Consistency Reliability

The statistic used to evaluate the reliability of internal consistency is called Cronbach's Alpha. The composite reliability value may also be used to evaluate internal consistency reliability requirements in addition to Cronbach's Alpha. Cronbach's Alpha and composite reliability criteria, in particular, for values of 0.6 to 0.7 are still acceptable in an exploratory study, while a value of 0.7 to 0.9 can be deemed suitable in subsequent research, according to (Hair & Alamer, 2022). The results of the

internal consistency reliability measurement model examination study based on data processing using SmartPLS 3 are shown in Table 2:

Table 2. Evaluation Of Criteria Measurement Tools

| Latent Variables (Constructs) | Cronbach Alpha | Composite Reliability | Result |
|--------------------------------------|----------------|--------------------------|----------|
| Property Servqual | 0,949 | 0,955 | Reliable |
| Housing characteristics | 0,884 | 0,892 | Reliable |
| Subjective well-being | 0,934 | 0,935 | Reliable |

Source: Author (2025)

Table 2 reveals that for Property Servqual factors, home attributes, and subjective well-being, both Cronbach's Alpha and composite reliability criterion have values over 0.7. Therefore, it may be concluded that all latent variables or constructs have strong internal consistency reliability.

c) Convergent Validity

According to (Hair & Alamer, 2022), the measurement model evaluation findings for the Convergent Validity criterion based on data processing using SmartPLS 3 are shown in Table 3.

Table 3. Evaluation Results of the Measurement Model for Convergent Validity Criteria

| Latent Variables (Constructs) | Average Variance Extracted (A | VE) Crite | eria Result |
|--------------------------------------|-------------------------------|-----------|-------------|
| Property Servqual | 0,831 | 0,5 | Valid |
| Housing characteristics | 0,812 | 0,5 | Valid |
| Subjective well-being | 0,883 | 0,5 | Valid |

Source: Author (2025)

The three variables of Property Servqual, home features, and subjective well-being are all valid, according to the assessment findings of the convergent validity criterion, with the AVE value displayed in Table 3. As a result, it may be stated that the three variables are reliable.

d) Discriminant Validity

Discriminant validity, as defined by empirical standards, describes how distinct one construct is from another. Therefore, a construct must be distinct and capture phenomena that other constructs in the model do not describe to be considered discriminantly valid. It is possible to assess discriminant validity criteria using Fornell-Larcker (Hair & Alamer, 2022). Table 4 presents the results of evaluating discriminant validity using the Fornell-Larcker criteria:

Table 4 Fornell-Larcker Criteria

| Variable | Property Servqual | Housing characteristics | Subjective well-being |
|-------------------------|--------------------------|-------------------------|-----------------------|
| Property Servqual | 0,912 | | |
| Housing characteristics | 0,770 | 0,901 | |
| Subjective well-being | 0,748 | 0,822 | 0,940 |

Source: Author (2025)

Table 4 shows that the root AVE value exceeds the correlation between other constructions and the constructs themselves, so it can be said that discriminant validity is met. This means that both property SERVQUAL variables, housing characteristics, and subjective well-being are unique so that they can capture the phenomena represented by each construct.

2. The Structural Model's Evaluation

The model used in this investigation, Figure 1, has passed the measurement model evaluation. There is an anxiety indicator before the measurement model assessment since the outer loading value is not met, making it impractical and excluded from this model. Following the assessment of the measurement model to figure out the validity and reliability of the construct measurements, the structural model is evaluated. Some evaluations that need to be done on the structural model are collinearity testing, structural model significance testing, and model strength testing. The VIF value may be used to test the structural model's collinearity. To guarantee that collinearity does not significantly impact the structural model estimate, the predictor construct's VIF value must be less than 5, and ideally less than 3. The Inner VIF Values findings are shown in Table 5:

Table 5. Inner VIF Values

| Variable | VIF |
|---|-------|
| Property SERVQUAL → Housing characteristics | 1,000 |
| Property SERVQUAL → Subjective well-being | 2,455 |
| Housing characteristics → Subjective well-being | 2,455 |

Source: Author (2025)

Table 5 indicates that all VIF values are below 3, and no VIF value on the Property Servqual variable, housing characteristics, or subjective well-being is higher than 5. This suggests that the structural model is free of collinearity, and it may even be concluded that collinearity has little impact on the estimate of the structural model.

The t-statistic test statistic value or the P values on the path coefficient from the bootstrapping results can be used to test the path coefficient. The null hypothesis (H_0) is rejected if the absolute t-statistic value is higher than the two-tailed t-table value of 1.96 or if the P values are less than the 5% significance level (α) . In this study, path coefficient testing was carried out to see the direct effect of Property Servqual on Subjective well-being and the indirect effect between Property Servqual variables on Subjective well-being through housing characteristics. The results of assessing both the direct and indirect effects on the path coefficient are shown in Table 6.

Table 6. Results of Testing the Direct and the Indirect Effect Path Coefficient

| Hypothesis | coefficient value | t-statistic | P values | Result |
|---|----------------------|-------------|----------|-------------|
| Direct | | | | |
| Property SERVQUAL → Housing characteristics | 0,770 | 17,962 | 0,000 | Significant |
| Property SERVQUAL → Subjective well-being | 0,283 | 2,936 | 0,003 | Significant |
| Housing characteristics → Subjective well-being | 0,604 | 6,339 | 0,000 | Significant |
| Indirect | | | | · · |
| Property SERVQUAL → Subjective well-being | 0,465 | 6,404 | 0,000 | Significant |

Source: Author (2025)

Table 6 shows the results of variable tests, both directly and indirectly. The test table shows results that are in accordance with the initial hypothesis, namely, significantly. All variables show that each is related to the variable being linked.

Discussion

The Effect of Property SERVQUAL on Housing Characteristics

The results of testing show that in testing the Property Servqual coefficient on Housing characteristics, the t value and P value show significant meaning. Thus, at the 5% significance level, it can be stated that the Property Servqual statistically affects Housing Characteristics positively by 0.770. The test results in this study are in accordance with the initial hypothesis. In general, service quality can affect the character of the house occupied, as the results of research according to (Martin et al., 2020) Quality can be described in terms of product character. The analyses that we can get from the results of this study are in line with previous researchers in perception, namely that there is an effect of service quality on Housing Characteristics or Housing Construction. (Forsythe, 2008). Then, the analysis that we can do on the findings and previous research (Aji & R A Nurlinda, 2024; Baharum & Nawawi, 2009; Chiang & Perng, 2018; Jes She et al., 2022; Seiler & Reisenwitz, 2010)SERVQUAL, in the context of property, can affect Housing Characteristics from a user perspective. Research shows that Property SERVQUAL (property service quality based on five dimensions: tangibles, reliability, responsiveness, assurance, empathy) has a close relationship with residents' perceptions of housing characteristics. In other words, quality property services can strengthen positive assessments of housing characteristics, both in terms of physical comfort, security, social environment, and ease of access.

The Effect of Property SERVQUAL on Subjective Well-Being

Further, the t value and the P value are used to test the coefficient of Property SERVQUAL on subjective well-being, therefore reject H₀. Statistically, Property SERVQUAL has a positive influence of 0.283 on Subjective well-being at the 5% significance level. Service quality in the perception of housing users in the context of property shows a significant relationship to subjective well-being. In this study, valid indicators in the subjective well-being variable are life satisfaction, eudaimonia, and happiness. There were previously indicators of anxiety, according to research (Mouratidis, 2020).

However, the results show the anxiety indicator is invalid. According to the findings of this study, we can analyze that the anxiety indicator does not get more attention from users because the housing they have allows anxiety to be much more subsided. Previous research conveyed that the gap in the connection between service quality or SERVQUAL and Well-Being is supported by the results of research (Zhao & Wei, 2019), what distinguishes previous research from the findings is that in this study, the Subjective Well-Being variable is only based on valid indicators.

Then the second analysis is that this strong link is generally in line with the opinion of (OECD, 2013) which states that the value of service quality will have a positive impact on Subjective Well-Being. Each SERVQUAL dimension contributes directly to the Subjective Well-Being component. The better the residents' perception of property service quality, the higher their Subjective Well-Being level. Therefore, property managers who focus on improving the five SERVQUAL dimensions as a whole have the potential to improve the quality of life and happiness of residents.

The Effect of Housing Characteristics on Subjective Well-Being

In testing the coefficient of housing characteristics on Subjective well-being, the t-statistic and P value indicate a significant relation. Hence, at the 5% significance level, it can be concluded that housing qualities statistically positively impact subjective well-being by 0.604. The Housing Characteristics in this study were taken from previous study conducted by (Li et al., 2019);, compromising components such as housing tenancy and physical circumstances compose the housing characteristics components. The results of research on the relationship between Housing and Subjective Well-Being are an extension of (Herbers & Mulder, 2017). The background of this research is almost in line that there is a positive relationship between Housing Characteristics to Subjective Well-Being. Interestingly and certainly in line with the findings of the research, according to (Herbers & Mulder, 2017) good housing not only fulfils physical functions, but also contributes to psychological stability, positive emotions, and long-term life satisfaction. Actually, previous research, one of which (Etminani-Ghasrodashti et al., 2017) research on service quality and housing is more familiarly associated with satisfaction, but the findings of this study provide additional information that Housing characteristics not only affect the physical aspects of life, but also have a direct impact on a person's psychological and emotional well-being. Therefore, the development of quality and sustainable housing is essential to support the improvement of people's overall quality of life.

The Effect of Property SERVQUAL on Subjective Well-Being through Housing Characteristics

The coefficient test for the indirect effect of Property SERVQUAL on Subjective well-being, as shown in Table 6, yielded a significant t and P value, leading to the rejection of H0. Thus, at the 5% significance level, the Property Servqual statistically has a positive indirect impact on subjective well-being, with a coefficient score of 0.465. This significant relationship is supported by (Forsythe, 2008; Herbers & Mulder, 2017; OECD, 2013).

The strength of this indirect relationship suggests that the present study provides a theoretical foundation of SERVQUAL research, pa in the context of property. The relationship that tips is passed through the impact of service quality with certain characteristics of the house, so that the end achieved is the highest expectation of the user, namely, Subjective Well-Being. As stated earlier, many studies link service quality to satisfaction, such as those conducted (Etminani-Ghasrodashti et al., 2017). The difference is that the results of the research conducted here prioritize Subjective Well-Being, and there is sufficient evidence that Subjective Well-being can be initiated from service quality.

The coefficient of determination (R^2) is commonly used to assess the explanatory power of a model. For determining how much of the response variability can be captured by the independent variables, the coefficient of determination (R-squared) is useful. A model is considered strong if the R^2 value ≥ 0.75 , considered moderate if the value is $0.25 > R^2 < 0.75$, and considered weak if the R^2 value ≤ 0.25 ; it can be said to be a weak or poor model. In the structural model formed, the coefficient of determination (R^2) for the Housing characteristics model is 59.3%, which indicates that the model formed is moderate. While a coefficient of determination of 59.3%, the Property Servqual variable could contribute to the diversity of the Housing characteristics variable, and other factors outside the model explain the remaining portion. Based on the subjective well-being model's coefficient of determination (R^2) of 70.7%, the model generated is moderate. Having a 70.7% coefficient of determination, the Property Servqual and housing characteristics variables can explain the variety of the subjective well-being variable.

Effect size (f^2) can be used to evaluate the predictor model's strength in addition to the coefficient of determination (R^2) . In order to determine if the impact of exogenous latent variables on endogenous latent variables has a significant effect, (Hair & Alamer, 2022) state that effect size (f^2) may be used to

quantify changes in R² value. There is a mild, moderate, and large influence of the exogenous latent variable, according to the effect size (f²) values of 0.02, 0.15, and 0.35. While the effect size (f²) value is less than 0.02, it means that the measurement model has no impact. The Property Servqual variable has a significant impact on housing features, as evidenced by the model's effect size (f²) value of 1.455 for the effect of Property Servqual on housing characteristics. The effect size (f²) value of 0.111 in the Property Servqual model on subjective well-being suggests that Property Servqual has modest effects on subjective well-being. The effect size (f²) value of 0.508 in the housing characteristics model on subjective wellbeing suggests that housing variables have significant effects on subjective well-being. Although the model has proven that it has significance and the percentage of variable involvement is quite high, future research needs to be strengthened with additional conceptual variables and needs to reconcile the conceptual on previous references such as (Baharum & Nawawi, 2009; Chiang & Perng, 2018; Forsythe, 2008; Herbers & Mulder, 2017; Jes She et al., 2022; Martin et al., 2020; OECD, 2013; Seiler & Reisenwitz, 2010), especially in the context of property and real end impact in the form of subjective well-being.

Conclusion

This research obtained conclusions in accordance with the research hypothesis presented in the literature review, namely the first property SERVQUAL variable has a significant influence on Housing Characteristics. Second, there is a significant influence of Housing Characteristics on Subjective Well-Being. Third, there is a significant influence between Property SERVQUAL on Subjective Well-Being. Fourth, there is an influence of Property SERVQUAL on Subjective Well-Being through Housing Characteristics. In this study, it can also be concluded that the model involving Property Servqual, Housing Characteristics, and Subjective Well-Being variables is in the moderate model category. This conclusion provides additional space for further research in order to complement the existing results in this study; further researchers can strengthen the existing model in this study by adding interrelated variables. The limitation in this study is the use of additional variables, such as the satisfaction variable, before describing the relationship to the Subjective Well-Being variable. It would be very interesting for future research to be able to add variables that can strengthen the Property SERVQUAL model. The implications of this research consist of two outputs, namely the first implication for science in the form of new references from the concept of quality management with Property SERVQUAL, housing characteristics, and subjective well-being. The second is the consideration of practical strategies for housing stakeholders.

Author's Contribution

All authors in this research have clear contributions according to their expertise. The first and third authors have expertise interests in operations management, especially quality management, so that their research contributions are involved from start to finish until they find a model concept that can be published in this study. The second author has expertise in data analysis, so his research contribution is in the form of accurate data analysis that can make this research model more accountable.

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Declaration of Competing Interest

The research task was completed without any financial or commercial ties that may be seen as a conflict of interest, the author states.

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