



Determinants of Auction Houses' Sales Decisions in the Banking Sector: A Binary Logistic Regression Approach

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Abstract

This study aims to investigate the factors influencing consumer purchase decisions for bank-auctioned residential properties, a market offering below-market prices but accompanied by distinct legal and occupancy risks. Using binary logistic regression, data from 130 transaction records at the BTN Surabaya Branch were analyzed to evaluate the impact of price, land area, residential status, and location on overall sales status. The results indicate that while these factors jointly affect purchasing decisions, location is the sole variable with a significant independent effect; specifically, properties in strategic areas are 4.491 times more likely to sell. Furthermore, the model demonstrated acceptable predictive performance with a 71.5% classification accuracy. These findings emphasize that strategic location is the dominant determinant in the bank-auction housing market, distinguishing it from conventional property transactions where price and size often carry more weight. Practically, banking institutions and auctioneers should prioritize highlighting location advantages in their marketing strategies, while future studies should incorporate larger datasets and additional behavioral variables to better capture the complexities of auction buyer decisions.

Keywords: *Auction House, Bank-Confiscated Property, Binary Logistic Regression, Classification, Consumer Purchase Decision, Housing Market.*

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1. INTRODUCTION

The rapid population growth in Indonesia creates opportunities for businesses to meet the population's needs, including necessities such as housing and a decent standard of living. A decent life is a desire for everyone; clothing and food are required, and board is a primary urgent need (Bárrios et al., 2020). It increases growth rates and housing demand, especially as vacant land becomes scarcer, driving up house prices each year. A residential house can be obtained by buying a new or a second house. In the context of purchasing a second house, one exciting option is to buy an auction house or a bank-foreclosed house (Vermeyleylen & van Ginhoven, 2025). A bank-foreclosure house is a property repossessed when the debtor fails to pay installments within the specified time (Bourron, 2023). So, auction-priced houses tend to be lower because banks need quick funds and sell at a loss (Boyle & Svec, 2022). In addition to low prices, when deciding whether to purchase auction houses, consumers usually consider several factors: cost, land area, location, and residential status.

Land area is an important consideration, as larger land parcels offer the potential for further development or long-term investment. The location of the home plays a vital role, as accessibility to public facilities such as schools, hospitals, and shopping malls can enhance the property's attractiveness (Gao et al., 2022). Additionally, a clear occupancy status, free from legal disputes, provides buyers with a sense of security, ensuring their investment is protected from future legal issues (Sadikoglu-Asan, 2022). These factors collectively affect the perception of value and consumers' final decisions in the auction-house purchase process.

Consumer behavior in making home purchase decisions is, of course, through alternative evaluation stages (Hadi et al., 2024). Consumers compare options based on price, land area, location, and occupancy status. The final decision to buy an auction house is often the result of an in-depth analysis and assessment of these factors (L. Liu et al., 2022). Consumers tend to consider the advantages and disadvantages of each available alternative, their financial condition, and the potential for future investment. The relationship between factors and consumer decision-making is an attractive area for the author to analyze in a case study of the sale of auction houses at the BTN Surabaya Branch, especially when sales are sluggish.

Earlier research on the classification of factors affecting consumer decision-making commonly used binary logistic regression because it effectively models the relationship between multiple independent variables and a binary outcome while providing interpretable estimates of each predictor's influence (Koo et al., 2022; Huang, 2022). Z. Liu (2024) used binary logistic regression to analyze key determinants influencing consumer behavior and buying decisions in the digital marketplace. The study employs the following indicators: consumer spending, market price competition, consumer confidence, product availability, and demand elasticity. The findings indicate that consumer expenditure indicators and online market price competition have a substantial impact on purchasing decisions in the online market. Next, Manandhar & Timilsina (2023) used binary logistic regression to analyze consumer smartphone purchasing decisions, controlling for price, brand, and feature indicators. The study's findings indicate that the product feature indicators are substantially more significant than the other indicators. Thus, product features are declared very important in smartphone consumer purchase decisions.

Furthermore, Lyu et al. (2024) used binary logistic regression to assess variables affecting medical decision-making; they found that members' families' contributions significantly influence medical treatment decisions. Based on these previous studies, the binary logistic regression method was found to be effective for solving linear classification problems and to make it easy to interpret the influence of independent variables on the likelihood of events (Kılıç & Aydın, 2022). However, these studies were conducted in conventional consumer markets, where purchasing decisions are generally driven by product attributes, pricing strategies, and consumer preferences. In contrast, auction-house transactions represent a distinct property market characterized by below-market prices, legal and occupancy uncertainties, asymmetric information, and higher perceived investment risks. These characteristics are particularly relevant in Indonesia, where bank-confiscated properties often involve administrative and legal complexities that differ substantially from conventional housing transactions. Consequently, findings from previous studies cannot be directly generalized to auction-house purchases. Furthermore, binary logistic regression is considered more appropriate than many alternative classification approaches because the objective of this study is not only to

predict sales outcomes but also to quantify the influence of each property attribute through interpretable odds ratios, thereby providing practical insights for banking decision-makers and property managers.

Despite the growing body of literature on consumer purchasing decisions using binary logistic regression, empirical studies of auction-house transactions in Indonesia's banking sector remain limited. Existing studies largely focus on conventional housing markets or other consumer products, leaving insufficient evidence on how property characteristics influence consumer decisions in bank-confiscated housing auctions. This gap is important because auction properties exhibit unique market characteristics that call for evaluation criteria different from those for ordinary residential properties. Therefore, this study aims to analyze the determinants of auction house sales at the BTN Surabaya Branch using binary logistic regression to identify which factors significantly influence consumer purchasing decisions. The novelty of this research lies not only in applying binary logistic regression to bank-confiscated housing transactions but also in providing empirical evidence on consumer purchasing behavior within Indonesia's auction-based housing market, where legal certainty, accessibility, and property characteristics interact differently from those in conventional housing markets. By emphasizing model interpretability through odds ratios, this study offers both theoretical contributions to the consumer decision-making literature and practical recommendations for banks to optimize auction strategies, asset management, and location-based marketing policies.

2. LITERATURE REVIEW

Consumer decision-making in property purchasing can be explained by **consumer behavior theory**, which suggests that economic considerations, product attributes, and environmental factors influence purchasing decisions. Consumers typically go through several stages in the decision-making process, including problem recognition, information search, alternative evaluation, and purchase decision (Hadi et al., 2024). In conventional housing markets, purchasing decisions are generally influenced by property attributes such as price, location, and physical characteristics. However, auction-house transactions differ from conventional housing purchases because buyers must simultaneously evaluate financial attractiveness and potential legal or occupancy risks associated with bank-confiscated properties. Consequently, Perceived Risk Theory complements consumer behavior theory by explaining how uncertainty regarding ownership, occupancy status, and future legal issues may influence consumer decision-making (Sadikoglu-Asan, 2022; White et al., 2019). Integrating these theoretical perspectives provides a more comprehensive framework for understanding purchasing decisions in auction-based housing markets, where consumers balance economic benefits against perceived risks before making investment decisions.

2.1 Price and Consumer Purchase Decision

Price is one of the most important economic variables influencing consumer purchasing decisions. In economic theory, price represents the monetary sacrifice that consumers must make to obtain a product or service. In the housing market, price is closely related to affordability and perceived value. Auction houses often offer prices below market value because banks seek to recover funds quickly from non-performing loans (Boyle & Svec, 2022). As a result, lower prices may increase consumer interest in purchasing auction houses. Previous studies indicate that price plays a significant role in shaping consumer purchasing decisions, as it reflects both financial capability and perceived economic benefits (L. Liu et al., 2022). Nevertheless, findings from the housing sector indicate that lower prices do not always encourage purchasing decisions. Consumers may associate unusually low prices with greater uncertainty regarding property condition, ownership, or future investment prospects (Van der Kloet et al., 2023; Gaur & Lang, 2023). Therefore, the influence of price in auction-house transactions should be interpreted together with other property characteristics rather than as an isolated determinant.

2.2 Land Area and Consumer Purchase Decision

Land area is one of the important physical characteristics of property that influences consumer decision-making. From the perspective of property value theory, larger land areas offer greater utility, greater development flexibility, and higher potential for future investment returns. Larger land parcels also provide opportunities for property expansion and long-term asset appreciation (Braakman et al., 2021). Previous studies have also shown that land size positively affects perceived property

value and purchase decisions (Gao et al., 2022). However, empirical findings suggest that consumers do not always prioritize land size equally across different housing markets. Fernandez-Duran et al. (2021) emphasized that accessibility and spatial characteristics substantially influence property attractiveness, while Ferreira and Wong (2022) demonstrated that post-pandemic housing preferences increasingly consider neighborhood quality and accessibility alongside physical property characteristics. These findings indicate that, within auction-house transactions, consumers may prioritize strategic location and immediate usability over land size alone.

2.3 Residential Status and Consumer Purchase Decision

Residential status refers to the legal and occupancy condition of a property, such as whether the house is vacant, occupied, or involved in legal disputes. According to perceived risk theory, consumers tend to avoid investments that contain high uncertainty or legal complications. Properties with unclear occupancy status may pose risks of eviction proceedings, ownership disputes, or additional legal costs (Sadikoglu-Asan, 2022). However, previous studies on consumer behavior suggest that purchasing decisions are influenced not only by perceived risk but also by consumers' evaluation of expected benefits and available information (White et al., 2019; Hadi et al., 2024). Consequently, buyers participating in bank-conducted auction markets may perceive legal uncertainty differently because institutional credibility and the opportunity to obtain properties below market value may reduce perceived risk. Therefore, the influence of residential status requires empirical verification rather than being assumed to be universally significant.

2.4 Location and Consumer Purchase Decision

Location is widely recognized as one of the most important determinants of property value and housing demand. According to spatial economic theory, location determines accessibility to public facilities, transportation infrastructure, workplaces, and commercial centers, all of which affect property attractiveness and investment potential. Strategic locations often increase the likelihood of property sales by providing better accessibility and long-term economic value (Gao et al., 2022). Empirical studies also show that location significantly affects housing demand and property valuation, as buyers prefer properties located in areas with good infrastructure and access to urban facilities (Fernandez-Duran et al., 2021; Ferreira & Wong, 2022). Nevertheless, most previous evidence was generated from conventional housing markets. Limited studies have examined whether location remains the dominant determinant in auction-house transactions, where consumers simultaneously evaluate discounted prices, legal certainty, and occupancy risks. Van der Kloet et al. (2023) further demonstrated that location remains an important consideration even in high-risk residential areas, as buyers continue to evaluate long-term investment potential despite existing uncertainties. Accordingly, this study extends previous literature by examining whether strategic location outweighs other property attributes in influencing purchasing decisions within Indonesia's bank-auction housing market.

3. RESEARCH METHOD

3.1 DATASETS

Auction sales data from 2019 to 2024 comprise the data utilized in this investigation, sourced from Bank BTN Surabaya Branch. With this data, it will be identified that price, land area, housing status, and location influence consumer decisions in purchasing auction houses. This data helps identify patterns in home sales based on the studied factors. The data used is as follows:

Table 1 | Auction Sales Data 2019 – 2024

Status of Auction House Sales	Price	Land Area	Residential Status	Location
Y	X ₁	X ₂ (M ²)	X ₃	X ₄
Not Selling	150,000,000	90	Empty	Strategic travel distance < 30 minutes
Not Selling	172,170,000	72	Empty	Strategic travel distance < 30 minutes
Not Selling	138,000,000	84	Empty	Strategic travel distance < 30 minutes
⋮	⋮	⋮	⋮	⋮
Selling	324,000,000	105	Empty	No strategic travel distance > 30 minutes
Selling	165,000,000	90	Empty	Strategic travel distance < 30 minutes

Status of Auction House Sales	Price	Land Area	Residential Status	Location
Y	X ₁	X ₂ (M ²)	X ₃	X ₄
Selling	126,250,000	90	Empty	Strategic travel distance < 30 minutes

Source: Data Processed (2025)

3.2 BINARY LOGISTIC REGRESSION

Binary logistic regression is a statistical classification model used to estimate the probability of an event occurring, typically represented as success or failure (Farida et al., 2022). This model applies a logistic function to ensure that the predicted probability values remain within the range of 0 to 1. Logistic regression has been widely applied in consumer behavior studies to identify significant factors influencing decision-making processes (Koo et al., 2022; Huang, 2022). Moreover, logistic regression provides interpretable results that enable researchers to evaluate how each independent variable affects the likelihood of a particular decision outcome (Kılıç & Aydın, 2022). Therefore, binary logistic regression is considered an appropriate method for analyzing the influence of price, land area, residential status, and location on consumers' decisions to purchase auction houses. The mathematical form of binary logistic regression can be expressed as follows (Khan et al., 2022):

$$\pi(x) = \frac{\exp(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n)}{1 + \exp(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n)} \quad (1)$$

$\pi(x)$ (odds) is the probability of the desired outcome ($Y = 1$), with a probability value of $0 \leq \pi(x) \leq 1$.

$$g(x) = \ln \left[\frac{\pi(x)}{1 - \pi(x)} \right] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n \quad (2)$$

with:

$g(x)$: the logit x of the odds of the desired outcome event

β_0 : the constant (intercept)

$\beta_1, \beta_2, \dots, \beta_n$: regression coefficients

$X_1, X_2, \dots, X_n$: independent variables

G Test. The simultaneous testing of parameters using the G test or Likelihood Ratio test aims to evaluate the suitability of the logistic regression model by simultaneously assessing the effects of the independent variables on the dependent variable (Williams & Maskell, 2021). The hypothesis of the simultaneous test is as follows:

H_0 : $\beta_1 = \beta_2 = \dots = \beta_n$ (no influence of independent variables on dependent variables)

H_1 : $\beta_j \neq 0$ (the dependent variable is influenced by at least one independent variable); $j = 1, 2, 3, \dots, n$

Rejection criteria H_0 : If $P - value < \alpha$ it can be concluded that at least one influential independent variable exists.

Wald Test. Partial parameter testing using the Wald test assesses each independent coefficient against the dependent variable in the model (Rosida et al., 2023). The hypotheses and formulas used are as follows:

H_0 : parameter $\beta_j = 0$ (the i th parameter does not contribute significantly to the model)

H_1 : parameter $\beta_j \neq 0$ (the i th parameter contributes considerably to the model)

With test statistics:

$$W^2 = \frac{\hat{\beta}_j^2}{[SE(\hat{\beta}_j)]^2} \quad (3)$$

with:

W : Wald test statistics

$\hat{\beta}_j$: estimated value of the j parameter

$SE(\hat{\beta}_j)$: standard error of the estimated parameter $\hat{\beta}_j$

The Wald statistic conforms to a Chi-square distribution with a single degree of freedom. The test determines the p-value by comparing the estimated Wald statistic with the Chi-square critical value. When the p-value is below 0.05, or

equivalently if $W > \chi_{0.05;1}^2$, then H_0 is rejected, implying that the parameter β_1 differs significantly from zero and exerts a meaningful influence on the model.

Odds Ratio Test. Odds ratios are employed to quantify the extent to which the independent variable corresponds to the dependent variable (Yulis Wulandari & Amelia, 2022). The formula used is as follows:

$$OR = \frac{\pi(1)/[1-\pi(1)]}{\pi(0)/[1-\pi(0)]} = \frac{e^{\beta_0+\beta_j}}{e^{\beta_0}} = e^{\beta_j} = \exp(\beta_j) \quad (4)$$

Information:

OR : value odds ratio

β_0, β_1 : parameter estimator

$\pi(1)$: chance of occurrence $Y = 1$

$\pi(0)$: chance of occurrence $Y = 0$

e : increased risk

Goodness of Fit Test. The objective of Goodness of Fit is to ascertain the extent to which a statistical model corresponds to the observed data set. This test also assesses the frequency of observed events with the expected frequency. The test was evaluated using the Hosmer and Lemeshow test, with the following hypotheses applied (Chechile & Barch, 2022):

H_0 : the data observed according to the model (no statistically significant difference exists between the observed frequencies and the expected frequencies)

H_1 : The observed data are inconsistent with the model (indicating a significant difference between the observed and expected frequencies)

The formula for the Hosmer and Lemeshow test conformance test is:

$$\hat{C} = \sum_{k=1}^g \left[\frac{(O_k - n_k \pi_k)^2}{(n_k \pi_k (1 - \pi_k))} \right] \quad (5)$$

If the statistical value of the test $\hat{C} > X^2(a, g - 2)$ or a p-value below the chosen level of significance (e.g. 0.05), H_0 is rejected, indicating that the model is not compliant.

Classification Accuracy. Classification accuracy is used to assess a classification model's performance. This precision measures how often the model makes correct predictions relative to the total predictions (Duraj & Duczynski, 2023). The confusion matrix often has the following model when it comes to binary classification precision:

Table 2 | Confusion Matrix

	Predicted Positive	Predicted Negative
Actual Positive	TP	FN
Actual Negative	FP	TN

Source: Data Processed (2025)

Information:

True Positive (TP) : the number of instances that are actually positive and correctly predicted as positive.

False Negative (FN) : the number of instances that are actually positive but incorrectly predicted as negative.

False Positive (FP) : the number of instances that are actually negative but incorrectly predicted as positive.

True Negative (TN) : the number of instances that are actually negative and correctly predicted as negative.

The resulting confusion matrix can be computed using the following formula:

$$Accuracy = \frac{TP+TN}{TP+TN+FP+FN} \quad (6)$$

4. RESULTS AND DISCUSSION

4.1 RESULTS

In this study, the binary logistic regression method was employed to analyze 130 data points. The results of the binary logistic regression, including independent variables such as price, land area, housing status, and location, are presented. The table presents the regression coefficients (B), standard errors (S.E.), Wald statistics, degrees of freedom (df), significance levels (Sig.), and odds ratios (Exp(B)) for each variable. This table identifies which variables are significant in influencing auction-house sale decisions. Here is the generated table:

Table 3 | Result Variable in the Equation

		Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1 ^a	Price (X ₁)	0.000	0.000	0.964	1	0.326	1.000	1.000	1.000
	Land Area (X ₂)	-0.003	0.006	0.181	1	0.671	0.997	0.985	1.010
	Status Hunian (X ₃) (1)	-1.127	0.754	2.234	1	0.135	0.324	0.074	1.420
	Location (X ₄) (1)	1.502	0.529	8.064	1	0.005	4.491	1.593	12.662
	Constant	-0.231	0.680	0.115	1	0.734	0.794		

Source: Data Processed (2025)

Table 3 illustrates that, according to the study results, the logistic regression model incorporating all independent variables includes the following:

$$g(x) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$$

Thus, the binary logistic regression equation formed is as follows:

$$g(x) = -0.231 + 0.000X_1 - 0.003X_2 - 1.127X_3 + 1.502X_4$$

$$g(x) = -0.231 + 0.000\text{Price} - 0.003\text{Land Area} - 1.127\text{ResidentialStatus} + 1.502\text{Location}$$

G Test. The test results were obtained simultaneously from the Omnibus Test Coefficient Table. This table displays the results of the Omnibus test for the model coefficients, which evaluate the overall significance of the logistic regression model. The outcomes of this test present the Chi-square statistic, degrees of freedom (df), and the significance level (Sig.), which help determine whether the model used fits the analyzed data. So, the following results were obtained:

Table 4 | Results in Omnibus Tests of Model Coefficients

		Omnibus Tests of Model Coefficients		
		Chi-square	df	Sig.
Step 1	Step	10.135	4	0.038
	Block	10.135	4	0.038
	Model	10.135	4	0.038

Source: Data Processed (2025)

Table 4. shows that the significant value is 0.038, so it is declared $0.038 < 0.05$ rejected H_0 . So, it can be concluded that at least one predictor affects the target variable, which explains the status of auction house sales.

Wald Test. The next stage is partial testing. This test used the Wald test to determine which independent variables significantly influence auction sale status. The results of the analysis are obtained from Table 3. The significant Wald test value is found in the Location variable (0.005), so $0.005 < 0.05$. It is stated that the Location variable partially has a notable influence on the target variable or model.

Odds Ratio. Based on Table 3. The odds ratio calculation reveals that the Location variable captures the independent factors in the model. The value of Exp(B) in the location variable is 4.491. Thus, it can be stated that the house's location will have a 4.491 times greater influence on the occurrence of $Y = 1$ (i.e., the sale of auction houses).

Goodness of Fit. In this step, a test is performed to assess how well the binary logistic regression model fits the observed data. The logistic regression model's suitability for the analyzed data is assessed using the Hosmer-Lemeshow goodness-of-fit test results, which are presented in a table. In this table, the Chi-Square value and its significance are used to assess the model's fit to the existing data. The results obtained are as follows:

Table 5 | Result in Hosmer and Lemeshow Goodness of Fit Test

Hosmer and Lemeshow Goodness of Fit Test			
Step	Chi-square	df	Sig.
1	8.338	8	0.401

Source: Data Processed (2025)

Table 5. The above shows that the p-value is 0.401, exceeding the critical level of 0.05. So, it fails to reject H_0 or accept H_0 ; with 95% confidence level, it can be stated that the binary logistic regression model used is consistent with the data being observed or tested.

Classification Accuracy. In this test, the table presents the model's prediction accuracy for auction house sales, showing the counts of correct and incorrect predictions for the categories "selling" and "not selling," along with the overall accuracy percentage. This table is essential for assessing the effectiveness of the model in predicting the desired outcomes, with the results presented as follows:

Table 6 | Result in Classification Accuracy

	Sales Status		Percentage Correct
	Not Selling	Selling	
Not Selling	83	6	93.3
Selling	31	10	24.4
Overall Percentage			71.5

Source: Data Processed (2025)

Based on Table 6, classification accuracy was obtained across 89 data sets, of which 83 were predicted not to sell well at auction houses. Hence, the classification accuracy value was 93.3%. Meanwhile, 41 data sets are predicted to sell at auction houses, yielding a classification accuracy of 24.4%. Thus, the overall percentage is 71.5%, indicating that this research model is 71.5% accurate.

4.2 DISCUSSION

The results of this study indicate that location is the most significant factor influencing consumers' decisions to purchase auction houses. At the same time, other variables such as price, land area, and residential status do not show statistically significant effects. This finding highlights that consumers prioritize accessibility, strategic positioning, and proximity to public facilities when evaluating auction properties.

4.2.1. Location

The significance of the location variable is consistent with prior studies emphasizing the importance of spatial factors in property decisions. Fernandez-Duran et al. (2021) found that location strongly influences both housing prices and consumer purchase intentions, as properties in strategic areas tend to have higher market value and faster sales turnover. Similarly, Gao et al. (2022) demonstrated that access to infrastructure and urban facilities significantly enhances property attractiveness. Furthermore, Van der Kloet et al. (2023) highlighted that location is particularly crucial in risk-prone areas, where environmental considerations affect purchasing decisions. These findings reinforce the results of this study, which show that location increases the likelihood of auction-house sales by 4.491 times.

From a practical perspective, these findings suggest that banks should prioritize the marketing of strategically located

auction properties and emphasize accessibility to transportation, commercial centers, educational facilities, and healthcare services in promotional materials. For housing regulators, improving infrastructure accessibility around auction properties may increase their marketability and accelerate the disposal of non-performing assets.

4.2.2. Price

Although auction houses generally offer items at lower prices, the results show that price does not significantly influence purchasing decisions. This finding contrasts with economic theory and previous studies that emphasize price as a key determinant of consumer behavior (L. Liu et al., 2022). One possible explanation is that in the context of auction houses, low prices may be associated with higher perceived risks, such as legal uncertainty or property condition issues. Therefore, consumers may prioritize safety and location over affordability.

This finding supports the notion that consumers evaluate auction properties using a trade-off mechanism, balancing expected financial benefits against perceived transaction risks (White et al., 2019). Consequently, price alone is insufficient to encourage purchasing decisions unless accompanied by confidence regarding the property's legal status and future investment prospects. Therefore, banks should avoid relying exclusively on price reductions as a marketing strategy and instead provide transparent information regarding property conditions and legal certainty to reduce buyers' perceived risk.

4.2.3. Land Area

The land area variable is also found to be statistically insignificant. This result differs from studies such as Braakman et al. (2021) and Gao et al. (2022), which suggest that larger land areas provide greater utility, development opportunities, and long-term investment value. However, in the case of auction houses, consumers may focus more on immediate usability and accessibility rather than expansion potential, especially when purchasing for residential rather than investment purposes.

This finding is consistent with Ferreira and Wong (2022), who reported that contemporary housing preferences increasingly consider neighborhood characteristics and accessibility alongside physical property attributes. Accordingly, land area becomes a secondary consideration when a strategic location already satisfies buyers' primary objectives.

4.2.4. Residential Status

Residential status, which reflects the property's legal and occupancy conditions, also does not significantly affect purchasing decisions in this study. This finding contrasts with perceived risk theory, which suggests that unclear occupancy status may deter buyers due to potential legal complications (Sadikoglu-Asan, 2022). One possible explanation is that consumers participating in auction markets may already have a higher risk tolerance or access to information that reduces perceived uncertainty. Additionally, institutional credibility, such as bank-conducted auctions, may increase consumer trust despite potential risks.

According to consumer behavior theory, purchasing decisions are determined not only by perceived risk but also by consumers' evaluation of expected benefits and available information (Hadi et al., 2024; White et al., 2019). Because auction properties are marketed through regulated banking institutions, institutional credibility may reduce perceived legal uncertainty and increase buyers' confidence. Consequently, consumers may perceive occupancy status as a manageable risk rather than a decisive barrier, explaining why residential status does not significantly influence purchasing decisions in this study.

Overall, the findings suggest that location remains the dominant determinant of auction-house purchasing decisions, while other variables play a secondary role. This indicates that consumers in the auction housing market are more concerned with long-term value, accessibility, and strategic positioning rather than short-term financial considerations or physical attributes. These findings extend the literature on consumer decision-making by highlighting that purchasing behavior in bank-auction housing reflects a balance between expected economic benefits and perceived transaction risks. From a practical standpoint, banks should strengthen location-based marketing strategies, improve transparency around property information, and prioritize auction portfolios with stronger locational advantages to accelerate asset recovery and enhance the effectiveness of auction programs.

5. CONCLUSION

This study examined the factors influencing consumers' decisions to purchase auction houses using binary logistic regression. The results show that the independent variables jointly affect auction-house sales; however, only **location** has a significant partial effect. With an odds ratio of 4.491, properties in strategic locations are substantially more likely to be sold, indicating that accessibility is the primary consideration in consumers' purchasing decisions. Meanwhile, price, land area, and residential status are not statistically significant, suggesting that consumers in the auction housing market prioritize location over other property attributes. The model achieves an overall classification accuracy of 71.5%, indicating acceptable predictive performance.

These findings suggest that purchasing behavior in bank-auction housing differs from conventional housing markets, where price and physical attributes are often the main determinants. In practice, banks should prioritize location-based marketing strategies by highlighting accessibility and local infrastructure, while providing transparent property information to strengthen buyer confidence and improve auction performance. This study is limited to auction-house data from the BTN Surabaya Branch and a limited number of explanatory variables. Future research is encouraged to include broader datasets, additional behavioral factors, and comparative analyses using advanced predictive models to improve the generalizability and robustness of the findings.

6. LIMITATION AND IMPLICATION

This research has several limitations that need to be taken into account when interpreting the findings. First, the research data are restricted to auction-house sales at the BTN Surabaya Branch during 2019–2024, potentially limiting the generalizability of the findings to other areas or banks with distinct market characteristics. Second, the analysis includes only a limited number of explanatory variables: price, land area, housing status, and location. In contrast, consumer decisions in purchasing auction houses may also be influenced by other factors such as macroeconomic conditions, interest rates, legal certainty, neighborhood safety, and individual consumer preferences that were not included in the model. Third, although the binary logistic regression model achieved an overall classification accuracy of 71.5%, the relatively low accuracy in predicting the "selling" category suggests class imbalance and suggests that the model's predictive performance could be further improved by including additional variables or adopting alternative modeling approaches.

Despite these constraints, the findings from this research have several important implications. From a theoretical perspective, the results strengthen empirical evidence that consumer decisions in purchasing auction houses are not equally influenced by all property attributes, with location emerging as the most dominant factor. This supports decision-making theories that emphasize spatial and accessibility considerations as key determinants of perceived property value. Methodologically, the study confirms that binary logistic regression is an effective and interpretable approach for modeling consumer purchase decisions in the property and banking context. From a practical perspective, the findings imply that banks, particularly BTN, should prioritize auction houses in strategic, accessible areas to accelerate sales performance and reduce the accumulation of non-performing assets. Marketing strategies can be more focused on highlighting location advantages rather than competing solely on price reductions. For consumers, the results guide in evaluating auction houses by emphasizing the importance of location as a determinant of long-term value and resale potential. Furthermore, for policymakers and housing practitioners, spatial considerations should be integrated into asset management and housing distribution strategies. Future research is encouraged to expand the dataset across multiple regions, incorporate additional economic and legal variables, and compare logistic regression with advanced machine learning models to improve predictive accuracy and policy relevance.

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