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Correlation Between Data Adjustment and Property Time on Market: Evidence from Jakarta Indonesia

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Abstract
Property valuation in emerging markets often relies on asking prices due to limited access to verified transaction data. This reliance requires a data-type adjustment to reduce the gap between asking and transaction prices. Meanwhile, literature suggests a potential relationship between price concessions and time on market (TOM). This study aims to examine whether listing duration is significantly correlated with the magnitude of data-type adjustment in Jakarta's residential property market. Using 331 verified transaction data from the Directorate General of State Assets (DJKN), the research applies descriptive statistics, chi-square tests, and polychoric correlation analysis. The results show that although 67.7% of properties were sold within six months, no significant correlation was found between TOM and data-type adjustment ($r = 0.08$, $p = 0.74$). Instead, the role of intermediaries such as brokers and agents appeared to have greater influence on narrowing the gap between asking and transaction prices. The findings indicate that the price–duration trade-off commonly reported in developed markets does not apply in Jakarta. This study highlights the importance of empirical evidence in determining adjustment practices and provides practical implications for valuers, brokers, and policymakers in emerging markets.

Keywords: property valuation, data-type adjustment, time on market, Jakarta housing market, market efficiency.

Abstrak
Penilaian properti di negara berkembang seringkali bergantung pada harga penawaran karena keterbatasan akses terhadap data transaksi yang terverifikasi. Kondisi ini memerlukan penyesuaian jenis data untuk mengurangi selisih antara harga penawaran dan harga transaksi. Literatur menyebutkan adanya potensi hubungan antara konsesi harga dengan lama waktu properti dipasarkan (time on market/TOM). Penelitian ini bertujuan menguji apakah durasi penawaran berkorelasi signifikan dengan besarnya penyesuaian harga pada pasar properti residensial di Jakarta. Dengan menggunakan 331 data transaksi terverifikasi dari Direktorat Jenderal Kekayaan Negara (DJKN), penelitian ini menerapkan statistik deskriptif, uji chi-square, dan korelasi polikorik. Hasil analisis menunjukkan bahwa meskipun 67,7% properti terjual dalam waktu kurang dari enam bulan, tidak ditemukan korelasi signifikan antara TOM dan penyesuaian jenis data ($r = 0,08$; $p = 0,74$). Sebaliknya, penggunaan perantara seperti broker dan agen memiliki pengaruh lebih besar dalam memperkecil selisih harga penawaran dan harga transaksi. Temuan ini menunjukkan bahwa trade-off harga–durasi yang umum dilaporkan di negara maju tidak berlaku pada konteks Jakarta. Studi ini menegaskan pentingnya dasar empiris dalam praktik penyesuaian harga serta memberikan implikasi praktis bagi penilai, broker, dan pembuat kebijakan di pasar negara berkembang.

***Kata Kunci**: penilaian properti, penyesuaian jenis data, time on market, pasar residensial Jakarta, bukti empiris.*

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INTRODUCTION

Property valuation plays an important role in both the public and private sectors, from taxation to investment. *The market comparison* approach is the dominant method because it reflects the results of market interactions (*arm's-length* transactions) as the basis for estimating market value (Appraisal Institute, 2020). However, in many developing countries, including Indonesia, the availability of accessible and adequate quality transaction data is still limited, so appraisers often rely on asking/listing prices as comparables. The use of asking prices without empirical corrections risks producing biased estimates and reducing the accuracy of value opinions (Abidoye & Chan, 2018; Curto et al., 2015).

In summary, this study represents a modified replication of the price–duration trade-off model developed in advanced economies, empirically tested within Jakarta's residential property market using verified transaction data. It responds to the pressing need for evidence-based valuation adjustments in Indonesia and contributes to the global literature on how market efficiency and pricing dynamics manifest under varying institutional conditions. By examining the relationship between time on market and data-type adjustment, the research not only clarifies the behavioral mechanisms underlying valuation accuracy but also provides actionable insights for improving property data governance and market transparency in emerging economies.

Property valuation plays an important role in both the public and private sectors, from taxation to investment. The market comparison approach is the dominant method because it reflects the results of market interactions (arm's-length transactions) as the basis for estimating market value (Appraisal Institute, 2020). However, in many developing countries, including Indonesia, the availability of accessible and adequate quality transaction data is still limited, so appraisers often rely on asking/listing prices as comparables. The use of asking prices without empirical corrections risks producing biased estimates and reducing the accuracy of value opinions (Abidoye & Chan, 2018; Curto et al., 2015).

Listing prices represent sellers' expectations, not the final outcome of negotiations between sellers and buyers; therefore, *data-type* adjustments are necessary to approximate actual transaction prices (Chinloy, 1980; Song, 1995). Inaccuracy or subjectivity in determining the amount of adjustment—for example, based only on experience or customary practice—can increase estimation errors. This has direct implications for the quality of decision-making. Recent empirical studies confirm that significant differences between listing prices and sale prices do occur in various markets, thus requiring a strong empirical basis in determining the amount of adjustment (Olaleye et al., 2019; Zhang, Liu, & Yi, 2019). Data-type adjustment is the difference between the initial asking price and the actual transaction price that occurs in the market. In the context of property valuation, this adjustment is used to adjust the indicative value to better reflect actual market conditions.

One variable that is thought to influence the difference between the asking price and the transaction price is the duration of the listing (time on market or listing duration). The real estate economics literature shows a trade-off between price and time on market: sellers who set prices too high tend to experience longer listing periods and ultimately make price concessions (Asabere et al., 1993; Levitt & Syverson, 2008). Conversely, long listings can also be perceived by buyers as a signal of problems—such as overpricing or property quality—which then depresses buyer offers (Knight, 2002; Merlo & Ortalo-Magné, 2004). More recent studies have found that the initial listing price strategy and listing price adjustments during the marketing period affect the final price and duration on the market (Bracke, 2015; Hörner et al., 2020). Recent research even shows that an increase in the initial asking price significantly extends the listing duration and increases the likelihood of the listing being terminated or undergoing a change in marketing strategy (Liu et al., 2024). On the other hand, setting a lower price can accelerate the transaction process, but risks lowering the final value of the property, thereby reinforcing the understanding of the trade-off between transaction speed and value (Kopsch et al., 2021).

However, empirical evidence is not always consistent across markets. Some studies in developed countries show a strong correlation between listing duration and selling price (Knight, 2002; Bracke, 2015), while studies in emerging markets show varying results depending on local market structure, data transparency, and the role of intermediaries (Olaleye et al., 2019; Abidoye & Chan, 2018). Recent research from the World Bank uses a big data approach to estimate house prices in developing countries and finds that limited public data and local market heterogeneity are major challenges in identifying consistent pricing patterns and listing durations (Behr et al., 2023). Additionally, the EPRA (2024) report shows that price volatility and less diversified market structures in developing countries, such as Indonesia and the Philippines, also influence listing dynamics and buyers' perceptions of properties that have been on the market for a long time.

The residential property market in Indonesia shows complex price dynamics, where asking prices often do not reflect actual transaction prices. In the context of asset valuation and investment decision-making, understanding price adjustment patterns is crucial. Several previous studies have shown a correlation between the length of time a property is listed and its selling price (Asabere et al., 1993; Olaleye et al., 2019). However, the unique context of the Indonesian market, especially DKI Jakarta, requires empirical evidence. Thus, generalizing results from developed markets to the Jakarta context needs to be tested empirically, taking into account local characteristics and information transparency. Recent studies also emphasize that market efficiency in Indonesia is influenced by broader governance and sustainability practices (Azizah, Setyahuni, Yovita, & Oktavia, 2025) as well as changing demographic behavior, especially the consumption and savings preferences of Generation Z (Hidayati et al., 2025). Therefore, this study focuses on the following research question: How does

the type of data adjustment correlate with the duration of property listings?

Jakarta was chosen as the study area because it represents the largest and most dynamic residential property market in Indonesia. As the capital city and economic hub, Jakarta accounts for a significant share of property transactions and is characterized by high heterogeneity in terms of location, pricing, and market transparency. Moreover, transaction data from the Directorate General of State Assets (DJKN) is most accessible for Jakarta, making it an ideal case to test the applicability of price–duration trade-off theories in an emerging market context.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Market signaling theory (Spence, 1973) states that in conditions of asymmetric information, attributes such as listing duration can serve as signals of asset quality or bargaining power. Meanwhile, the price adjustment behavior theory (Ling & Archer, 2013) explains that sellers tend to adjust prices over time to increase the chances of a transaction. These two theories form the conceptual basis for testing whether listing duration affects the magnitude of price adjustments in the residential property market. Market Signaling.

The market signaling theory (Spence, 1973) is rooted in the concept of *asymmetric information*, where one party in a transaction has more complete information than the other. In the context of the property market, sellers and buyers often do not have balanced information regarding the intrinsic value of the property, market conditions, or the urgency of the transaction. The concept of asymmetric information refers to a situation where one party in a transaction has more complete information than the other. In the property market, this often occurs between sellers and buyers regarding the intrinsic value of assets.

According to this theory, market participants use certain actions or attributes as signals to communicate information that is not immediately apparent. In property studies, the duration of an offer can serve as a market signal. Properties that have been on the market for a long time can be associated with negative perceptions—for example, being considered *overpriced,* unattractive, or having hidden defects. Conversely, properties that sell quickly can send a positive signal about their attractiveness and price suitability for the market.

Sharpe and Tristiadi (in Putra, 2013) state that signals provided through market information—such as price, duration, or marketing strategy—can influence buyers' perceptions and decisions. In your research, the duration of an offer is an important indicator that can influence the amount of price adjustments made by sellers to attract market interest. Offer duration is the time span between when a property is first offered on the market and when a transaction occurs. This duration is categorized into specific time intervals (e.g., 0–6 months, 7–12 months, etc.) and is used as an indicator of liquidity and property attractiveness.

Price Adjustment Behavior

The theory of price adjustment behavior explains how sellers respond to market dynamics through price adjustments (Ling and Archer, 2013). In a property market that is not fully efficient and is heterogeneous, price adjustments often occur gradually, rather than instantly. Sellers tend to set initial prices based on expectations or external references, then make adjustments over time if the property does not sell immediately.

These adjustments can be triggered by various factors, such as market pressure, feedback from potential buyers, or liquidity needs. In this framework, the magnitude of price adjustments reflects the seller's flexibility and adaptation to actual market conditions. The longer a property remains on the market, the more likely the seller is to lower the price to expedite the transaction. Ling and Archer (2013) also emphasize that the property market has unique characteristics—such as non-homogeneous, immovable products and a segmented market—which make the price adjustment process more complex and contextual.

Data Type Adjustment in Property Valuation

In the market data comparison approach, the accuracy of the value is highly dependent on the quality of the comparative data. In countries with transparent transaction data systems, appraisers can use transaction prices as the main reference (Appraisal Institute, 2020). However, in markets with limited data such as Indonesia, appraisers often rely on asking prices as a substitute. This creates a need for data type adjustment to reduce the difference between asking prices and transaction prices (Song, 1995; Curto et al., 2015). A recent exploratory study in Jakarta shows that the average asking price is 6% higher than the transaction price, while appraisers in the field tend to use an adjustment of 14%, which has the potential to result in valuation bias (Riyanto et al., 2021). In addition, big data-based approaches such as hedonic price modeling are also beginning to be used to improve the accuracy of assessments, although data quality and integration challenges remain a major obstacle in developing markets (Wei et al., 2022).

A number of studies have found that valuations based on offer prices without adjustments tend to produce biased and inflated values (Gallimore, 1996; Abidoye & Chan, 2018). Therefore, it is important for appraisers to have an empirical basis for determining the amount of the adjustment. A study by Mayer and Nothaft (2022) shows that price adjustment bias in valuation practice still occurs, especially when appraisers tend to increase property values based on higher comparables without adequate corrections.

Listing Duration and Market Outcome

The concept of time on market (TOM) or listing duration refers to the length of time a property is

marketed before a transaction occurs. Economic theory suggests a trade-off between price and listing duration: sellers who set an initial price too high tend to experience longer listing durations and ultimately have to offer price concessions to attract buyers (Asabere et al., 1993; Knight, 2002). Recent studies show that an increase in the initial asking price significantly extends the listing duration and increases the likelihood of the listing being terminated or withdrawn from the market (Liu et al., 2024). Furthermore, research in emerging markets such as Vietnam found that overly high pricing strategies negatively impact the probability of a sale within the first 30 days, which is a critical period in property marketing (Nguyen et al., 2020). These findings reinforce the understanding that initial pricing decisions play an important role in determining the speed and success of property transactions.

A number of empirical studies support this view. For example, Bracke (2015) shows that *overpriced* properties tend to take longer to sell and are ultimately sold at a discount. Hörner et al. (2020) add that changes in listing prices during the offer period also have an impact on the final sale price. Thus, there is a theoretical basis that the duration of the listing is positively correlated with the magnitude of price adjustments: the longer a property is on the market, the more likely its transaction price will be lower than the initial asking price.

Mixed Evidence in Emerging Markets

Although this relationship is quite clear in developed markets, evidence in emerging markets is more varied. Olaleye et al. (2019) found that in Lagos, Nigeria, the average transaction price was around 87.42% of the asking price, with an average time on the market of around 5 months. These differing results indicate that market context—including the role of intermediaries, data transparency, and buyer behavior—can moderate the relationship between listing duration and the magnitude of price adjustments. An exploratory study by Węgrzyn and Kuta (2024) in the Polish property market shows that cognitive biases such as anchoring also influence buyers' perceptions of long-listed properties, thereby widening the gap between asking and transaction prices. Meanwhile, the EPRA (2024) report highlights that in emerging markets such as Indonesia and the Philippines, limited transaction data and the dominance of listing prices as the main reference cause inconsistent value adjustments between appraisers. These findings reinforce the importance of a local data-based approach and understanding of market structure in assessing the relationship between listing duration and the magnitude of price adjustments.

Conceptual Framework

This study is grounded in two complementary theoretical perspectives: market signaling theory (Spence, 1973) and price adjustment behavior theory (Ling & Archer, 2013) which are outlined in

figure 1. Market signaling theory posits that in environments with asymmetric information, observable attributes—such as listing duration—serve as signals of property quality or seller motivation. Longer listing durations may signal overpricing or low market appeal, while shorter durations can indicate competitive pricing and high demand (Knight, 2002; Merlo & Ortalo-Magné, 2004).

In parallel, the theory of price adjustment behavior explains how sellers respond dynamically to market feedback by revising asking prices over time (Ling & Archer, 2013). In markets with low transparency, such as Indonesia, this behavioral adjustment may occur more gradually because of incomplete market information and the intermediary's influence on negotiation outcomes. Accordingly, properties that remain on the market longer are *expected* to experience greater downward price adjustments to achieve a sale (Asabere et al., 1993; Bracke, 2015).

The integration of these theories leads to a conceptual model that links *time on market (TOM)* to *data-type adjustment* as a proxy for bargaining outcome. However, empirical findings from developing countries (e.g., Olaleye et al., 2019; Nguyen et al., 2020) suggest that this relationship may not always hold due to market inefficiency and intermediary mediation. Therefore, this study empirically tests whether the theoretical price–duration trade-off observed in developed markets applies in the Jakarta context.

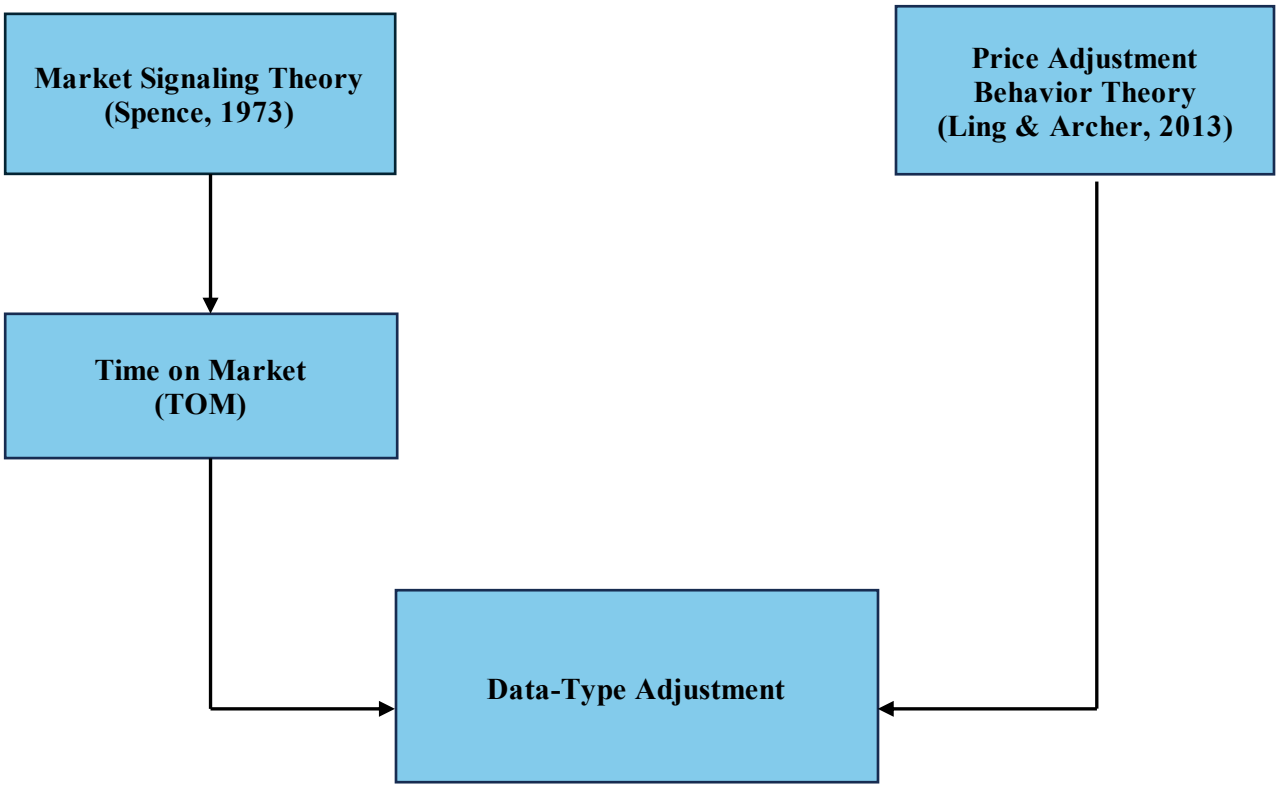

Figure 1. Conceptual Framework

Hypothesis Development

The conceptual framework implies that the longer a property is exposed to the market, the greater the potential deviation between the listing price and the final transaction price. This assumption is consistent with both *market signaling theory*, which interprets listing duration as a signal of property desirability, and *price adjustment behavior theory*, which predicts seller concessions over time.

However, empirical studies in emerging markets reveal mixed outcomes. While Bracke (2015) and Hörner et al. (2020) found a significant negative relationship between listing duration and transaction price in Europe, research by Olaleye et al. (2019) in Nigeria and Nguyen et al. (2020) in Vietnam showed that intermediary influence and buyer behavior could weaken or obscure this relationship. Given Jakarta's market structure - where over 80% of transactions involve intermediaries - the hypothesized relationship is tested empirically rather than assumed.

Therefore, the study formulates the following hypotheses:

H_0: There is no significant correlation between the duration of property listing (*time on market*) and the magnitude of *data-type adjustment* in Jakarta's residential property market.

H_1: There is a significant correlation between the duration of property listing (*time on market*) and the magnitude of *data-type adjustment* in Jakarta's residential property market.

Summary

In summary, the conceptual framework integrates behavioral theory and market information theory to test whether the observed listing duration can serve as a reliable indicator of adjustment behavior in Jakarta's housing market. By doing so, this study contributes to the refinement of valuation models in emerging markets where data transparency and intermediary effects play dominant roles. The explicit hypothesis formulation and reversed order presentation ensure methodological rigor and clarity in hypothesis testing.

RESEARCH METHOD

This study was designed with a quantitative and explanatory approach, aiming to examine the relationship between property listing duration and the magnitude of data type adjustments in the context of the residential market. The data collection process was carried out through a field survey that recorded information on the initial asking price, actual transaction price, listing duration, and other property attributes such as location, land and building area, and the use of intermediary services. After the data was collected, a selection and validation process was carried out to ensure completeness and accuracy. Only verified transaction data that met the completeness standards was used in the analysis. The dependent variable in this study was the amount of price adjustment, which was

calculated as the percentage difference between the offer price and the transaction price. Meanwhile, the independent variable, namely the duration of the offer, was categorized into several specific time intervals.

This explanatory quantitative study uses DJKN survey data on 331 residential transactions in Jakarta. The dependent variable is the amount of price adjustment (% difference between the asking price and the transaction price). The independent variable is the duration of the offer, which is categorized into time intervals.

The analysis was conducted using:

1. Descriptive statistics.
2. Cross-tabulation with chi-square test.
3. Polychoric correlation to test the relationship between ordinal variables.

The significance level is set at $\alpha = 0.05$.

Data Analysis

Data analysis was conducted in stages to gain an in-depth understanding of the patterns of relationships between variables. The analysis steps included:

1. Descriptive Statistics

   The initial stage of analysis aims to describe the distribution of data. Measures of central tendency such as the median and mean, as well as measures of dispersion such as the interquartile range (IQR). The interquartile range (IQR) is a statistical measure that shows the middle range of the data distribution, which is the difference between the third quartile (Q3) and the first quartile (Q1). The IQR is used to describe the spread of data that is more stable than the full range. *The median* is the middle value of a data distribution, while the mean is the sum of all values divided by the number of observations. Both are used to describe the central tendency of data in descriptive statistical analysis.
2. Cross-Tabulation Analysis

   To test the relationship between the offer duration category and the price adjustment category, a cross tabulation was compiled. The chi-square test was used to test whether there was a significant relationship between two categorical variables, in this case between the offer duration category and the price adjustment category.
3. Ordinal Correlation Analysis

   Given that both variables are ordinal, the polychoric correlation method was used to estimate the correlation level. This approach allows for a more accurate measurement of the relationship between two variables that are categorized by interval.

4. Statistical Significance Testing

   The significance level was set at $\alpha = 0.05$ as the decision threshold. The results of the statistical analysis were compared with the null hypothesis (H_0) and the alternative hypothesis (H_1) to determine whether the relationship between the variables was statistically significant.

Validity and Reliability

To maintain internal validity, the data used has undergone a verification process by official agencies, ensuring that only valid and complete transactions are analyzed. External validity is strengthened by the scope of data representing the residential market in the study area. The reliability of the analysis is maintained through the selection of statistical methods appropriate to the characteristics of the data, as well as the application of consistent and transparent analysis procedures.

RESULT, DISCUSSION, AND MANAGERIAL IMPLICATION

Descriptive Statistics

This study uses residential property listing data obtained from the Directorate General of State Assets (DJKN). In total, there are 1,400 pieces of listing data in the database accessible to researchers. This data—because it is listing data—does not reflect the market as it only represents the interests of sellers. The listing price is essentially the lowest price desired by the seller (Chinloy, 1980). This price will certainly be subject to negotiation with the buyer because the listing price is the maximum price that the buyer can afford. As a result, the transaction price is usually less than the offer price. The difference between the offer price and the transaction price is what Song (1995, p. 607) refers to as *the bargaining outcome.* This is what this study refers to as data type adjustment. Song (1995, p. 607) calculates it using the equation (1).

$$Adjustment = \left(\frac{LP - TP}{LP}\right) \times 100\% \quad (1)$$

where AP is the listing price and TP is the transaction price.

For all data points, *outliers* were then identified using *Mahalanobis distance* and quartiles as in the equation (2) as suggested by Tukey (1977).

$$Upper\ fence = Q_3 + (1{,}5 \times IQR) \quad (2)$$

After removing the outliers, from table 1 we obtained 613 data points. These were then filtered again to obtain data located in the DKI Jakarta area. Furthermore, it was found that more than 80%

of the transaction data analyzed was sold through intermediaries, in this case real estate agents and brokers, while only about 16% was sold directly by the owners.

Furthermore, to obtain information regarding the duration of the offer until the transaction occurred in the market, each data point was reconfirmed by telephone. The results of this survey were then examined further. From this, it was found that there was data that needed to be excluded from the analysis for several reasons. This includes, for example, data with transaction values higher than the offer (6 items) or data for which transaction prices could not be obtained for various reasons (111 data items). This process resulted in 282 data items being subtracted from the 613 residential property offer data items obtained from the DJKN. The distribution of data for each city area in DKI Jakarta is as shown in 2.

Here we can see that the least amount of transaction data is in Central Jakarta and the most is in South Jakarta. This is relatively reasonable because property prices in Central Jakarta are already high, especially in business areas such as around Jalan Sudirman and Jalan Thamrin. On the other hand, South Jakarta is indeed a popular residential destination, as can be seen in the Kemang and Pondok Indah areas. Based on the data in table 3, housing transactions in DKI Jakarta were obtained at 331. Most properties (67.7%) were sold in less than 6 months, indicating that the residential market in Jakarta is relatively liquid, although there are a small number of properties with very long listing periods.

Table 1. Sales Intermediaries

Sales Intermediaries	Frequency	Percent
Real Estate Agents	431	70.3
Broker	85	13.9
Owner	97	15.8
Total	613	100.0

Source: Processed by the author, 2025

Table 2. Distribution of transaction data per city

No	City	Total
1	Central Jakarta	14
2	West Jakarta	87
3	South Jakarta	91
4	East Jakarta	92
5	North Jakarta	47
	Total	**331**

Source: Compiled by the author, 2025

A limitation of this study is that many property sellers did not have information on the date the property was listed and the date it was sold. Most sellers could only provide an estimate of how long the property was listed. Therefore, this study classified the duration of property listings in months, as shown in table 3.

Contingency Table Analysis

The contingency table analysis between the duration of listing category and the amount of adjustment data type shows an irregular distribution. This corresponds to the second stage of analysis in the method section, where cross-tabulation was designed to test the relationship between categorical variables. A p-value that is much greater than 0.05 indicates that there is no significant relationship between the duration of the offer and the amount of data type adjustment. In other words, the length of time a property is on the market does not determine whether the transaction price will be significantly lower than the offer price. You can see in table 4 chi square test results.

Table 3. Listing Duration (LD)

Listing Duration	Number of Properties	Percentage (%)
0–6 months	224	67
7–12 months	41	12.4
13–18 months	14	4.2
19–24 months	7	2.1
>25 months	45	13.6
Total	331	100.0

Source: Author's calculations, 2025

Table 4. Chi-square test results

Analysis	Results	Conclusion
Chi-square Test	$\chi^2(8, N=331) = 5.13$; $p = 0.74$	Not significant
Polychoric Correlation	$r = 0.08$; $p = 0.74$	Not significant

Source: Author's calculations, 2025

Correlation Analysis

The results of the correlation test using the polychoric correlation method show:

- $r = 0.08$
- p-value = 0.74

This very low and insignificant correlation reaffirms the results of the chi-square test, namely that there is no meaningful relationship between the two variables. This step corresponds to the ordinal

correlation analysis explained in the Research Method chapter.

DISCUSSION

The analysis results show that although the *price-duration trade-off* theory states that there is a relationship between the length of time a property is listed and price concessions (Asabere et al., 1993; Knight, 2002), this phenomenon is not evident in the context of the Jakarta residential market. This differs from the findings of Bracke (2015) and Hörner et al. (2020) in the European market, which show a strong correlation between listing duration and selling price, but is consistent with the findings of Allen et al. (1987). Therefore, according to the results of this study, the most appropriate property sales strategy is to ensure that the property is sold immediately without prioritizing efforts to sell the property above market price. This differs from the report by Asabere et al. (1993), which shows that properties with long listing periods tend to have higher transaction prices. This means that properties that take a long time to sell tend to be sold closer to the asking price.

Field data shows that factors such as the use of intermediaries (brokers/agents) have a greater influence on the amount of adjustment than the duration of the offer. Properties marketed through intermediaries tend to sell closer to the asking price because agents play a role in setting pricing strategies and negotiations (Riyanto et al., 2021).

This study confirms that international theory does not always apply equally in the context of developing country markets. The Jakarta residential market has its own unique dynamics, requiring more empirical research to understand the factors that influence the gap between the asking price and the transaction price. No significant evidence was found of a correlation between the duration of the offer and the magnitude of the adjustment in the data type. Other factors, such as the role of intermediaries, have a greater influence on the magnitude of the adjustment.

The results show that there is no significant correlation between the duration of the offer and the amount of price adjustment. This finding contradicts the general assumption in appraisal practice that properties that have been on the market for a long time tend to experience a decline in price. Conversely, the use of intermediary services shows a stronger relationship with transaction prices, in line with a study by Geltner et al. (2014) which emphasizes the role of market information in price efficiency. Furthermore, macroeconomic behavior such as gross domestic product, household consumption, and savings levels has been shown to influence broader investment patterns in Indonesia (Hasibuan et al., 2025). From a comparative investment perspective, gold price determinants also highlight the role of uncertainty and alternative asset preferences in shaping valuation dynamics (Aprizal & Harahap, 2025). These findings suggest that property valuation in Jakarta cannot be separated from wider structural and macroeconomic considerations.

CONCLUSION, SUGGESTION, AND LIMITATIONS

Conclusion

This study aimed to examine the relationship between time on market (TOM) and data-type adjustment within Jakarta's residential property market, using a modified replication of established models from developed economies. The empirical analysis was conducted to determine whether the price–duration trade-off, commonly observed in transparent markets, applies under the institutional and informational conditions of Indonesia's urban property sector.

The findings indicate that the relationship between listing duration and price adjustment exists, but it is weaker and more inconsistent than predicted by classical market efficiency models. This result suggests that Jakarta's housing market operates under partial information efficiency—where transaction outcomes are influenced not solely by time exposure, but also by intermediaries' pricing strategies, buyers' negotiation behavior, and the overall opacity of market data. Properties with longer listing durations tend to experience downward adjustments; however, the magnitude of adjustment varies significantly depending on the presence and expertise of intermediaries.

These findings directly address the first research problem by providing empirical evidence on how *time on market* correlates with *data-type adjustment*, confirming that market duration can partially explain price variation, though not as strongly as in developed markets. The second research problem—regarding the role of intermediaries—was also answered: intermediaries play a dual role as both *information filters* and *pricing stabilizers*. In some cases, their involvement mitigates excessive downward adjustments, while in others it delays market correction due to reliance on limited data. This dual effect highlights the importance of institutional structure in shaping valuation behavior.

From a theoretical perspective, the study extends market signaling theory and price adjustment behavior theory by demonstrating that their applicability is context-dependent. In markets with high data asymmetry, signals like listing duration do not operate efficiently, and seller responses to market feedback are often mediated by human judgment rather than data-driven analysis. This insight enriches the conceptual understanding of valuation processes in emerging economies.

From a practical perspective, the results emphasize the need for improved data transparency and enhanced market reporting systems to reduce valuation bias. For professional valuers and policymakers, incorporating market duration indicators into property databases can help refine adjustment coefficients used in the comparative approach. Moreover, valuers should critically assess listing data reliability before using it for comparable analysis, particularly when intermediaries dominate transaction channels.

In conclusion, the research demonstrates that while the theoretical link between *time on market* and *data-type adjustment* holds conceptually, its empirical realization in Jakarta is moderated by

market inefficiency and intermediary practices. Therefore, valuation accuracy in such contexts cannot rely solely on exposure time but must integrate behavioral and institutional variables. Future research should expand the dataset across multiple urban regions and property types, incorporate hedonic modeling, and examine how digital market platforms may alter these dynamics by improving information flow and reducing transaction bias.

Implications

The findings of this study carry several important implications that are directly consistent with its title, which examines the relationship between *time on market* and *data-type adjustment* in Jakarta's residential property market. From a theoretical perspective, the results imply that the classic *price–duration trade-off* does not operate uniformly across markets with different levels of information transparency. In Jakarta, where verified transaction data are limited, *time on market* becomes a weaker but still relevant indicator of market feedback. This reinforces that valuation behavior in emerging markets must account for institutional realities—such as data availability, intermediary involvement, and seller response bias—rather than assuming the full efficiency found in developed economies. Thus, this research extends the explanatory scope of market signaling theory and price adjustment behavior theory by adapting them to a semi-transparent market environment.

From a practical perspective, the study highlights that valuers should interpret listing duration not as an absolute indicator of overpricing, but as a *contextual signal* moderated by local market dynamics. When conducting property appraisals, valuers should carefully evaluate how long comparable properties have been listed and whether their prices were broker-influenced or market-driven. Integrating *time on market* as an analytical factor can improve adjustment accuracy when deriving market value estimates, especially in settings with limited transaction verification.

From a policy perspective, the results imply that improving data transparency and harmonizing information between listing and transaction databases are essential to enhance valuation reliability. Government institutions and professional bodies can leverage these insights to develop better market monitoring systems, allowing *time on market* indicators to be systematically used as part of comparable data quality checks.

Overall, the implications of this study reaffirm that *time on market* and *data-type adjustment* are interdependent dimensions of market efficiency. Recognizing their relationship provides both a diagnostic tool for understanding market behavior and a methodological refinement for valuation practices in Indonesia's evolving property landscape.

Limitations and Future Research

This study is limited to residential data in DKI Jakarta during a specific survey period, so

generalizations to other property types (commercial, industrial) or other regions need to be made with caution. The analysis only uses listing duration as the main independent variable. Other factors such as property attributes (location, size, building quality), macroeconomic conditions, and seller strategies have not been modeled in a multivariate manner. Further studies are recommended to use multivariate regression models or machine learning to explore more complex determinants of the gap between listing prices and transaction prices.

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