

## **The rental rate mechanism in Islamic Finance and its role in promoting housing affordability and Sustainable Development (SDGs) in Malaysia**

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### **Abstract**

Islamic finance holds strong potential to accelerate progress toward the Sustainable Development Goals (SDGs), particularly in addressing housing affordability. In Malaysia, the housing sector has been a major driver of economic and social development since independence. However, housing affordability remains a persistent issue, calling for innovative and inclusive policy solutions. This study investigates key barriers to housing affordability and examines the role of Islamic finance in enhancing access to affordable housing in Malaysia. Using panel data analysis, the study compares three regression models Ordinary Least Squares (OLS), Fixed Effects (FE) and Random Effects (RE) based on variables including household expenditure, population, interest rate, inflation rate and rental rate. The findings reveal that the rental rate in Islamic finance (RR) has a positive and significant impact on housing affordability, indicating its potential as an ethical and sustainable alternative to conventional interest-based mechanisms. By reducing financing costs and duration, the RR model enhances homeownership capacity and supports equitable housing access. The study offers policy implications for integrating Islamic finance instruments into national housing frameworks, contributing to SDG targets on sustainable cities, poverty alleviation and inclusive economic growth.

**Keywords:** Affordability, housing development, islamic finance, socioeconomics, welfare economics

### **Introduction**

Housing is an important element of the 2030 Agenda for Sustainable Development and an essential driver for achieving the Sustainable Development Goals or SDGs. Adequate and affordable housing leads to benefits in health, education and economic opportunities. The process of housing improvement is often a ladder out of poverty for families. These changes benefit the larger community, reducing inequality and building resilience against economic and natural disasters.

Along with this, housing is also considered the largest single lifetime investment for most people. Others, on the other hand, will simply consider housing as a refuge and a means to meet their needs along with food and clothing. This is a fact that cannot be refuted because a person cannot survive without a basic need in life. According to Ali Hisbullah in Tahir and Khan (2016), necessary aims on the foundation of earthly and religious life and if one loses it, its world will be deprived. Besides that, the necessity of homeownership from the Islamic point of views also can be explained in Maqasid al-Syari'ah. According to Sohaimi, Abdullah, Shuid and Ahmad (2015), Maqasid is an Arabic word which is the goals set by Shari'ah (a set of laws) to be carried out for the benefit of mankind. In general, the Maqasid al- Syariah has three objectives namely darurriyat (needs), hajiyyat (necessities) and tahsiniyyat (luxuries), which can be examined based on homeownership, housing, financial ability, and physical surroundings. As such, having a home is classified as darurriyat because it is one of the most basic human requirements. Besides that, the faith (ad-din), life (hifdh an-nafs), intellect (al-'aql), lineage (an-nasl) and property or wealth (al-mal) are also five aspects in the Maqasid al-Shari'ah that must be safeguarded and conserved. It also serves as a foundation and guides human life toward long-term sustainability. As a result, in the context of housing affordability, it has become vital for a leader, particularly in a family, to provide a house since it is a suitable place to stay connected with our families and others every day of our life.

Home affordability can be described as people's ability to save money depending on their salaries, not just for housing, but for other purposes as well (Mostafa, Wong & Hui, 2006). When one displays the ability to purchase a home, housing affordability can be determined (Torluccio & Dorakh, 2011). Usually, determining whether a person can afford a home means looking at their expenses, where they must pay for basic needs, the rest of the money is available to buy certain things. In this case, they are deemed to be capable of owning a home. Meanwhile, if they are unable to make the monthly payments and do not have enough money to buy other necessities, they are considered as not capable of owning a house (Bujang, Jiram, Zarin & Anuar, 2015). In addition, Baqutaya, Ariffin and Raji (2016) in their study stated that housing affordability concerns are particularly widespread in lower and middle-income households in most major Malaysian cities, with most of them having trouble purchasing a home. Most buyers, particularly first-time home buyers, are still unable to purchase newly launched homes. This is due to the fact that affordability has deteriorated in Malaysia, with the median multiplier rising to 4.7 times in 2020 from 3.4 times in 2000, making houses even more unaffordable (Musaddad et al., 2023). This is related to the fact that housing costs are rising faster than income. Furthermore, despite the government's requirement that private developers include affordable housing in their constructions, the cost of such housing remains high. Malaysians are taking on an increasing number of property loans because of rising house values, low or negative interest rates and speculative activity. There is considerable evidence that property prices and the ability to service home loans in Malaysia have been overstretched.

As a conclusion, it can be concluded that there are certain gaps, conflicts and incompatible links with housing affordability in Malaysia, which necessitates further research in this field. The housing affordability research is crucial, because being unable to acquire a home has severe consequences and can lead to societal instability. Against this backdrop, the objective of this paper is to examine the factors that influence housing affordability in Malaysia as well as to recognize the role of Islamic finance as an alternative mechanism in promoting the housing affordability in Malaysia.

## Literature review

### *Housing affordability and affordable housing*

The concept of housing affordability has gained prominence over the last two decades, replacing earlier discussions focused solely on “housing needs” (Whitehead, 1991). It reflects a household’s ability to acquire a home without straining their income, considering both property costs and associated living expenses (Hancock, 1993). Rising concerns over homelessness, mortgage defaults, declining neighborhoods and overheated housing markets have pushed housing affordability to the forefront of policy debates (Ndubueze, 2007). Scholars define affordable housing as homes that low- to middle-income households can access and pay for without undue financial hardship (Milligan et al., 2004; Gabriel et al., 2005). It emphasizes not just housing provision, but also maintaining essential living standards, including food, healthcare, education and other human capital expenditures (Kutty, 2005; Quigley & Raphael, 2004).

Housing affordability is influenced by multiple factors, including mortgage access, property prices, urbanization, income levels and location (Wilcox, 2003; Suhaida et al., 2011). To promote sustainable and inclusive housing, governments often provide affordable housing for low- and middle-income groups (B40 and M40) through public, private or joint development projects tailored to local needs (Ministry of Housing and Local Governance, 2019).

### *Housing and Sustainability Development Goals (SDGs)*

Affordable housing is more than just a place to live; it lies at the intersection of social equity, economic stability, and sustainable development. In today’s world, where communities face multiple challenges, access to affordable housing is critical particularly in achieving the Sustainable Development Goals (SDGs). Adopted by all United Nations Member States in 2015, the 17 SDGs replaced the Millennium Development Goals (MDGs) and provide a global roadmap for peace, prosperity and sustainability to be achieved by 2030. The SDGs tackle issues such as poverty, inequality, climate change, environmental degradation, and justice, and their achievement depends on coordinated action from governments, businesses, civil society and individuals (Habitat for Humanity, 2021).

Central to these goals is the right to adequate housing, which extends beyond mere shelter. Adequate housing encompasses privacy, sufficient space, accessibility, safety, structural stability, proper lighting and ventilation and access to basic infrastructure such as water, sanitation, and waste management. It should also be located conveniently for work and essential services, all at an affordable cost.

Housing contributes to all 17 SDGs, but it is especially critical for SDG 11: Sustainable Cities and Communities, which aims to make cities inclusive, safe, resilient, and sustainable. Affordable housing enables communities to thrive by providing decent living spaces, allowing households to allocate resources to other essential needs. Beyond social benefits, it strengthens economic stability by boosting workforce productivity, reducing commuting costs, creating construction jobs, stimulating demand for materials and services and supporting home-based businesses (Habitat for Humanity, 2021; Goal 8: Decent Work and Economic Growth).

Affordable housing also addresses SDG 1: No Poverty and SDG 10: Reduced Inequalities. Improving access to housing can lift families out of poverty and reduce social disparities, while fostering resilience against economic, health, social, and climate-related shocks (Shulla &

Kószeghy, 2021). Furthermore, it supports SDG 3: Good Health and Well-being, as adequate housing is essential for physical and mental health. In summary, housing is a foundation for household resilience and well-being, influencing health, education and living standards. Promoting affordable and adequate housing is therefore vital for achieving the SDGs. Addressing affordability barriers remains a key step toward sustainable, equitable development.

### *Determinants of housing affordability*

#### a. House price

Researchers agree that housing affordability is influenced by multiple factors, but house price is often cited as the most significant determinant (Peattie, 1987; Hancock, 1993; Lau & Li, 2006). In the United States, for example, housing affordability is shaped primarily by house prices, followed by household income, interest rates, mortgage instruments, property taxes, insurance and government interventions such as rent control and subsidies (Whitehead, 1991). The definition of house price varies depending on perspective. Developers and contractors may focus on market returns, while buyers consider the value in terms of affordability and personal financial capacity (Lee, 2009; Michele, 2012). Owning a house is widely regarded as a basic human need and a key life goal, making house price a central factor in housing decisions.

In Malaysia, rising house prices have become a major barrier to homeownership, particularly for lower- and middle-income groups. While increasing property values stimulate the housing market and attract new residential developments, they also contribute to unaffordability (Osmadi et al., 2015). Combined with stagnant incomes and higher living costs, many households struggle to purchase homes, highlighting the critical role of house price in shaping overall housing affordability. Governments play an essential role in regulating prices to ensure housing remains accessible relative to income levels.

#### b. Household income

Household income is widely recognized as a key determinant of housing affordability, shaping the ability of families to purchase a home (Beyer, 1958). Income levels are influenced by work opportunities and the types of employment within the household. Typically, for married couples, household income is calculated from both spouses' earnings, while the income of adult children living at home is excluded, as they are expected to eventually leave the household (Clark et al., 1997). Supporting this, the National Association of Realtors (1990) reported that 93% of homebuyers rely on their household income to finance home purchases.

In Malaysia, particularly in Kuala Lumpur, housing affordability is influenced by three main factors: house price, housing type, and household income level. Recent trends show that most new developments are high-rise apartments priced at RM 500,000 and above, making affordability a challenge for many households (Melati et al., 2019). Research indicates that demographics and income or wealth are dominant factors affecting housing demand and affordability (Nakajima, 2011). Similarly, studies in Hong Kong found that house prices are influenced by population growth and income levels, with households adjusting savings behavior in response to income volatility (Ho & Ganesan, 1998; Nakajima, 2011). However, some evidence suggests that household income has a relatively small direct effect on house price movements, highlighting the complex interplay of factors shaping affordability (Sutton, 2002). Overall, household income

remains a critical consideration in determining whether families can access affordable housing, emphasizing the need for policies that align income levels with housing costs.

#### c. Household expenditure

Household expenses, including both housing-related and non-housing expenditures, play an important role in determining housing affordability (Mostafa, 2008). Housing expenditures such as taxes, rates, maintenance fees, and management costs directly reduce the portion of income available for paying rent or mortgage. As a result, higher housing expenses can significantly constrain a household's ability to afford a home. Similarly, Bujang et al. (2015) highlight that a household's capacity to purchase a home depends on what remains after meeting essential expenses. If sufficient income remains after covering necessities, a household is considered capable of homeownership; if not, affordability is limited.

However, some studies suggest that for medium-income households, certain variables, such as household expenditure, monthly payments, occupation, and education level, may have little influence on housing affordability (Md. Sani @ Abd. Rahim, 2015). For instance, in Kuala Lumpur, medium-income earners, many employed as clerks, operators, or service workers, typically have sufficient income to cover both household expenditures and housing payments, making these factors less constraining in their homeownership decisions. Overall, while household expenses are a key determinant of housing affordability, their impact varies depending on income levels and household composition, underscoring the importance of considering both income and expenditure in affordability assessments.

#### d. Interest rate

Previous studies by Trofimov, Aris and Xuan (2018) and Kok, Ismail and Lee (2018) have found a relationship between interest rates and house prices (2018). According to these findings, a decrease in interest rates could result in a lower mortgage or home loan. As a result, there is more demand for housing, which drives up housing costs. One of the causes of the quick increase in property prices, according to Zainuddin and Yusof (2020), is the interest rate. Many people qualify for mortgages when interest rates are low, which increases demand for homes.

Higher interest rates, on the other hand, could have ramifications for homeowners and the economy, as evidenced by a large drop in property prices, according to Gan and Hill (2008). If property prices are already considered inflated, this phenomenon will be magnified. A higher interest rate means a greater mortgage repayment, and the home buyer will be unable to borrow money. This will reduce housing demand and, as a result, home costs. Furthermore, Zandi et al. (2015) found that homeowners pay attention to interest rate changes since they have a direct impact on house values, with the Base Lending Rate (BLR) showing a positive and significant relationship with housing prices.

Besides that, Pinjaman et al. (2020) found that real interest rate shocks have a negative connection with home prices, with a decrease in real long and short-term interest rates leading to a rise in house prices. Other researchers such as Craig and Hua (2011) have also noted that a drop in interest rates will result in a rise in house prices. These findings consistent with Sutton (2002) that interest rates are identified to have an inverse relationship with house prices where an increase in the said macroeconomic factor causes house prices to fall and thus increase the level of affordability.

#### e. Rental rate in Islamic finance

Research indicates that Islamic finance can play a pivotal role in supporting affordable housing initiatives, contributing to social equity and economic stability (Mokhtar et al., 2025). One of the indicators in Islamic Finance is rental rate action in increasing the level of homeownership. Basically, individuals fulfil this need by building a home on their own, buying it or leasing it from others (Kameel et al., 2006). Hanafi (2012) indicates that the availability of mortgage loans is one way to ensure homeownership since individuals are not able to pay for their houses in a lump sum. Therefore, to prevent interest while reducing the cost and the financing duration period of houses, at the same time increase the level of housing affordability, previous studies suggested to use rental rate as alternative to interest rate in Islamic home financing in Malaysia (Musaddad et al., 2023; Mohd Yusof et al., 2016; Mohd Yusof et al., 2011; Kameel et al., 2006).

Besides that, Mohd Yusof et al. (2016) stated that by having rental rate as a benchmark, the bank will have the opportunity to charge a justifiable pricing charge towards the parties involved in the contract since the index value differs according to locality. By doing so, it is also in accordance with the objectives of shariah which is to establish justice and fairness in financial transactions (Musaddad et al., 2024). In addition, establishing a benchmark also may help the regulator to ensure fraud and manipulation do not occur in the market and in line with the principle of shariah. Furthermore, having a benchmark for pricing is also supported by the fact that Islam honors the ownership of individual property and the freedom to utilize it whilst not violating the rights of others. In efforts to understand the relevance of rental rate as a benchmarking for home financing and how it is affecting the housing affordability, this study reviews the current practices and some issues of Islamic home financing in Malaysia. Besides that, this study also reviews previous study on rental rate that includes the rental rate determination. The reviews on these aspects of rental rates would provide the basis for the variables included and method employed in this study.

#### *The role of Islamic finance*

Islamic Islamic finance plays a key role in promoting housing affordability through principles that emphasize equity, fairness, and risk-sharing. Unlike conventional finance, which relies on interest-based transactions, Islamic finance adheres to Shariah law, prohibiting *riba* (interest) and promoting asset-backed, profit-sharing arrangements (Musaddad et al., 2024). Instruments such as *Musharakah* (partnership) and *Mudarabah* (profit-sharing) allow financial institutions to partner with homeowners, sharing both risks and rewards of property ownership. This alignment of incentives encourages sustainable homeownership while providing equitable financing solutions. Another prominent model is *Ijara* (leasing), where the financial institution purchases the property and leases it to the homeowner, who gradually acquires ownership. This approach enables structured, transparent, and interest-free financing, making homeownership accessible for diverse income groups while sharing the risks and benefits between the institution and homeowner (Musaddad et al., 2023).

By emphasizing risk-sharing and ethical principles, Islamic finance mitigates financial vulnerability and supports low- to moderate-income households in acquiring homes (Hasan & Dridi, 2010). Additionally, many Islamic financial institutions integrate social responsibility into their operations, offering products that support affordable housing initiatives, such as subsidies or partnerships with government programs. Overall, Islamic finance provides innovative and ethical

alternatives to conventional housing finance, making it a promising tool for addressing housing affordability challenges while contributing to social and economic sustainability.

## Methodology

This study employs a quantitative research approach to examine the determinants of housing affordability in the East Coast Region of Malaysia, specifically Kelantan, Terengganu, and Pahang, over a 21-year period from 2000 to 2020. The focus on the East Coast Region is guided by data availability and the distinctive characteristics of the regional housing market. Accordingly, the analysis reflects housing affordability dynamics that are specific to this region and does not seek to generalize the findings to the national level. This study used panel data, including several variables, namely, household expense (HE) interest rate (IR), inflation rate (IF) and rental rate (RR). The panel data regression models, namely, the ordinary least square (OLS) model, fixed effects (FE) model and random effects (RE) model, were assessed. Panel data sets have a few advantages which is it gives significantly bigger data sets with greater variability and less collinearity across variables than cross-section or time series data alone, according to Hsiao (2003). Panel data sets are also more informative and can compensate for individual variability. Individual heterogeneity must be controlled since it might induce estimation bias. Because panel data is a mix of cross section and time series data, it can have cross sectional, temporal, or both impacts. It is preferable to assume differences in intercepts across cross sectional or temporal series in a FE model, but in a random effect model, it is more important to investigate differences in error variances.

### *Empirical model*

The panel data regression model was the regression model used in this investigation. Panel data may be used to account for heterogeneity and resolve endogeneity issues, resulting in unbiased results. This empirical model is consistent with earlier scholars' empirical models (Giese et al., 2019). The model is intended to examine HAI while controlling economic factors (HE, PL, IF, IR and RR). The panel data model for empirical estimation can be articulated as follows:

$HAI_{it}$  = Housing Affordability Index for state  $i$  in year  $t$  (3 states in Malaysia)

$IF$  = Inflation rate

$IR$  = Interest rate

$RR$  = Rental rate

The robust assessment was undertaken to further eliminate numerous sources of abnormalities that might affect the empirical model's affordability level. To account for abnormalities, autocorrelation and heteroscedasticity of the structure in the panel data set, robust standard errors were used.

### *Estimation procedure*

Generally, panel data necessitates a multi-step estimate process. To begin, the variance inflation factor (VIF) test was used to see whether there was an issue with multicollinearity. Second, the groupwise heteroskedasticity test, a modified Wald statistic, was used to see if this model had any heteroscedasticity. The panel data regression models were also evaluated. Furthermore, the Wooldridge autocorrelation test is the most effective method for identifying autocorrelation in panel data models with FE and RE. As a result, this study used a user-written software called *xtserial* in STATA package analysis to assess the presence of first-order correlation in panel data.

Meanwhile, the Hausman test and the Breusch Pagan Lagrange Multiplier were used as statistical tests to choose the best acceptable model for this investigation. These tests will establish which model is best for panel data estimation. In addition, robust standard errors were used in this study to produce more reliable results. As a result, all sources of anomalies relating to autocorrelation, multicollinearity, and heteroscedasticity issues that may impair model estimates were avoided. Researchers have previously used robust standard error to solve issues with heteroskedasticity and autocorrelation (Qoyum et al., 2022).

## **Results and discussion**

### *Descriptive and correlation analysis*

Table 1 shows the descriptive analysis of 63 observations in Malaysia's East Coast Region (Kelantan, Terengganu, and Pahang) from 2000 to 2021. The level of housing affordability index (HAI) varies from 3.6 to a maximum of 6.0 with an average (mean) 4.32 and a standard deviation 0.43 which indicates that housing was unaffordable towards population in this region since it surpassed the affordability of 3.0, especially in Kelantan (4.32), compared to (4.29) in Pahang and Terengganu (4.27), respectively.

**Table 1.** Descriptive statistics of East Coast Region

	<b>HA</b>	<b>HE</b>	<b>IR</b>	<b>IF</b>	<b>RR</b>
N (Observation)	63	63	63	63	63
Mean	4.32	1957.15	6.43	2.00	3.23
Standard Deviation	0.43	819.55	0.41	1.36	0.67
Minimum	3.6	950	5.49	100	2.00
Maximum	6	3835	6.91	120.6	4.87

Source: Table by authors

Even though Kelantan has the lowest average house prices (RM120,960.89) in the East Coast Region, the HAI remains high due to the lowest mean family income (RM2,121.42). Not just for the East Coast Region, but Kelantan residents have the lowest yearly median income compared to the rest of Malaysia (National Property Information Centre, 2019). As a result, according to Mohamed Osman et al. (2020), the median house price in Kelantan generally surpasses the three times median annual household income barrier, indicating that houses in all Kelantan districts are unaffordable.

Next is the average household expenses stated at RM1957.15 with the minimum amount of RM950 and maximum RM3835. The average percentage of interest rate varies from high of 6.91 to low of 5.49 with a standard deviation 0.41, resulting in the interest rate in the east coast region fluctuating within a horizontal rate. In terms of inflation rate, the average CPI reported in this study is 2.00 with a standard deviation of 1.36 ranging from a minimum of 100 points to a maximum of 120.6 points annually. Finally, the rental rate varies from the highest value of 5.14 to the lowest value of 2.33 with an average of 3.83 and a standard deviation 0.74, indicating that the average amount is lower than interest rate, which is a better measurement in increasing the level of housing affordability.

Apart from that, Kelantan had the lowest average rental rate (2.96) in this region demonstrating that the ratio of the median annual rental yield to the median house price in Kelantan has decreased in all districts, resulting in an increase in the level of affordability to buy a house. This is in line with Mohd Yusof et al. (2016) stating that rental rate index is a better alternative and it is found to be impervious to short-term economic volatility, yet it is indicative of economic fundamentals in the long run to determine the level of affordability.

Table 2 shows the correlation matrix for all variables. The degree of the relationship between variables is just as significant as the direction of the variables in correlation analysis. The purpose of the correlation matrix analysis is to see if there is any evidence of multicollinearity (Kovalenko, 2021). There was a positive association between the variables, as shown in Table 3's correlation matrix. When one variable declines as the other falls, or when one variable grows as the other increases, this indicates a positive correlation. In addition, prior to declaring the regression results genuine, the level of multicollinearity and the impact of the results should be evaluated. The intercorrelation of the independent variables are referred to as multicollinearity, and it limits the capacity to predict the measure and establish the relative contribution of each independent variable.

The computed regression coefficient is unreliable due to a high degree of multicollinearity between independent variables. In this study, the presence of multicollinearity was determined using the correlation matrix (r) for bivariate analysis of the independent variables and the VIF. Multicollinearity may be a concern if the correlation value in the correlation matrix containing all independent variables is greater than 0.80. The correlation in Table 2 between all variables, however, is less than 0.80, resulting in no multicollinearity issue.

**Table 2.** Pearson correlations matrix of study variables

	LGHE	IR	IF	RR
LGHE				
IR	63			
IF	4.32	6.43		
RR	0.43	0.41	1.36	

Source: Table by authors

Where: p-value <0.10, 0.05, and 0.01, respectively. LGHP= Logarithm of House Price, LGHI=Logarithm of Household Income, LGHE=Logarithm of Household Expenses, IR=Interest Rate, IF=Inflation Rate, RR=Rental Rate.

*Diagnostic test*

The correlation matrix alone is insufficient to detect multicollinearity, and that the variance inflation factor (VIF) test is required to confirm that the variables are not collinear. The second collinearity test between the independent variables is the variance inflation factor (VIF). An acceptance value of greater than 0.1 or a VIF value of less than 10 are acceptable collinearity values and confirm no multicollinearity. A VIF score of more than ten, on the other hand, frequently suggests that multicollinearity may impact regression estimations. As a result, a high VIF value and a small acceptance value indicate multicollinearity. Because the VIF values in Table 3 are all less than 10, there are no difficulties with multicollinearity.

**Table 3.** Multicollinearity tests for Housing Affordability Index in East Coast Region

Variables	Collinearity statistics	
	VIF	1/VIF
LHE	3.51	0.284745
IF	3.27	0.306195
RR	2.61	0.382693
IR	1.18	0.846583
Mean VIF	2.59	

Source: Table by authors

This study then discovers the problem of heteroscedasticity using the modified Wald test for heteroskedasticity. Consistency of variance is the null hypothesis in this test, which is accepted when there is a high probability. If the p-value is larger than 0.05, the hypothesis is rejected. The results of the modified Wald test, as shown in Table 4, are 0.000, which is  $p < 0.05$ . The null hypothesis of homogeneity of variance (all error variances are equal) can be rejected because the stated p-value is less than 5% significance level, implying that the data are heteroscedastic.

**Table 4.** Wooldridge test for autocorrelation in panel data

<b>F (1, 2)</b>	<b>2.653</b>
Prob > F	0.2449

Table by authors

Furthermore, the Wooldridge autocorrelation test is the most effective method for identifying autocorrelation in panel data models with FE and RE. The null hypothesis can be rejected if the probability F value in the Wooldridge test in Table 4 is less than the 5% significance level, indicating that there is no first order connection. As a result, there appears to be an autocorrelation issue. Hence, the result reveals 0.003, which is ( $p < 0.05$ ), implying that there is an autocorrelation in this study. It shows that autocorrelation is a severe problem that needs remediation. The robust standard error estimator was used to solve this problem.

**Table 5.** Hausman test for Housing Affordability Index in East Coast Region

Test	Prob > F
Hausman Test	0.047

Table by authors

If the p-value is significant (i.e., less than 0.05), fixed-effects should be applied. However, if the p-value is insignificant, random-effects can be safely used (Wooldridge, 2010). As a result, in this study, since the p-value is less than 0.05 ( $p < 0.05$ ), the fixed effect is used to measure the housing affordability index model.

*Empirical analysis*

The regression results show that it is significant that F-statistics that explain the overall significance of the model are found to be significant at 0.0000. Overall R-Squared of 0.5523. The statistics indicate that the model explains 55.23% of the variance in housing affordability index. Further, the rental rate (RR) is found to have a positive and significant impact towards housing affordability while the rest variables have no impact on housing affordability in Malaysia.

Variables	HAI pooled OLS		HAI random effect		HAI fixed effect	
	Coeff.	Prob.	Coeff.	Prob.	Coeff.	Prob.
LHE	0.258	0.240	0.258	0.235	0.072	0.127
RR	0.430	0.238	0.430	0.233	4.822	0.010
IR	-0.176	0.178	-0.176	0.173	-0.090	0.492
IF	0.022	0.091	0.022	0.086	0.010	0.429
Observation	63		63		63	
R-squared ( $R^2$ )	0.2705		0.2705		0.5523	
Multicollinearity ( <i>vif</i> )	2.95					
Breusch-Pagan			0.000			
LM Test ( <i>xttest0</i> )						
Hausman test					0.0470	
Heteroskedasticity ( <i>xttest3</i> )					0.3464	
Serial Correlation ( <i>xtserial</i> )					0.2449	

Table by authors

The rental rate (RR) is found to have a positive and statistically significant relationship with the Housing Affordability Index (HAI) in Malaysia. This indicates that an increase in rental rates leads to a higher HAI value, which conventionally reflects lower housing affordability, implying that more households may face difficulties in purchasing a home. Conversely, a lower rental rate is associated with a lower HAI, indicating reduced affordability pressure and improved housing accessibility. This finding is consistent with the standard interpretation of the HAI measure and confirms the sensitivity of housing affordability to rental price dynamics.

However, this result should not be interpreted to suggest that higher rental costs directly improve housing affordability. Rather, the significance of rental rates highlights the role of rental-based mechanisms, particularly within Islamic housing finance as an alternative housing access

pathway. In Shariah-compliant financing arrangements, rental rates are typically structured to remain moderate and predictable, emphasizing risk-sharing and flexibility rather than profit maximization. Such features may support housing access for households excluded from conventional interest-based mortgage systems, even when affordability pressures exist. This interpretation is consistent with Musaddad et al. (2024), who find that rental-based financing structures can contribute positively to housing affordability when rental levels remain within an affordable range.

Besides that, individuals basically fulfil this need by building a home on their own, buying it or leasing it from others. This indicates that the availability of mortgage loans is one way to ensure homeownership since individuals cannot pay for their houses in a lump sum. Therefore, RRs can be better used to save interest while lowering the cost and length of the financing period for houses, hence increasing the capability level to own a house (Musaddad et al.,2023). In addition, it is also stated that by having RR as a benchmark, the bank will have the opportunity for a justifiable pricing charge towards the parties involved in the contract since the index value differs according to locality.

From this result, we can see how the Islamic finance plays a vital role in promoting housing affordability. The concept of rental rates instead of relying on interest rate in home financing is approached differently compared to conventional finance due to the prohibition of interest (riba) and adherence to Sharia principles. Islamic finance operates under the principles of Sharia, which emphasize ethical and equitable financial transactions. One key prohibition is the charging or paying of interest (riba). As a result, Islamic institutions can use rental rate in financing mode as an alternative structure to facilitate transactions that resemble conventional leasing but are structured to comply with Sharia and it is also in line with SDG goals.

## **Conclusion**

In conclusion, the findings indicate that rental rates play a significant role in shaping housing affordability, as reflected by the positive relationship between rental rates and the Housing Affordability Index (HAI). Consistent with the conventional interpretation of HAI, higher rental rates are associated with increased affordability pressure, while lower rental rates contribute to reduced housing affordability constraints. Importantly, this study does not suggest that higher rental costs directly improve housing affordability. Rather, the results highlight the relevance of rental-based mechanisms, particularly within Islamic housing finance as alternative housing access pathways that emphasize flexibility and risk-sharing. When rental structures are maintained within affordable levels, such mechanisms may support broader access to housing, especially for households excluded from conventional interest-based mortgage systems.

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