Socioeconomic and Locational Determinants of House Buying Behaviour in Bintulu: A Micro-Level Urban Housing Analysis

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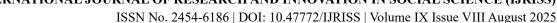
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ABSTRACT

This study explores the key determinants shaping consumer house buying behaviour in Bintulu, Sarawak, an urban area experiencing rapid development and rising property prices. Despite mid-range apartment prices exceeding RM400,000 and detached homes in prime locations priced above RM800,000, housing demand in the area remains high. Using a structured questionnaire distributed to 130 respondents, this research examined five core factors: price, location, environment, house features, and living space. Data were analysed through descriptive statistics, the Kruskal-Wallis H test, and Spearman correlation analysis. The findings reveal that location and environmental factors exert the greatest influence on purchase decisions, while price and living space were comparatively less significant. Moreover, income and occupation levels significantly affect how buyers evaluate housing attributes. Individuals with higher incomes and those working in the private sector or self-employed demonstrated stronger preferences for strategic location and spacious housing. These results suggest that lifestyle needs and urban convenience are taking precedence over traditional affordability concerns. The study contributes to a better understanding of housing market dynamics in secondary Malaysian cities and provides actionable insights for developers, urban planners, and policymakers. Recommendations include aligning housing developments with evolving consumer priorities, improving access to urban amenities, and offering financing strategies tailored to occupational segments. Limitations include the study's focus on a single location and its cross-sectional nature. Future research should expand the geographic scope and incorporate longitudinal and qualitative approaches to capture deeper behavioural insights.

Keyword: Bintulu, Buying behaviour, House, Preference.

INTRODUCTION

Understanding consumer buying behaviour in the housing market is essential for comprehending the socio-economic dynamics of rapidly developing regions. In the Malaysian context, Bintulu, located in the state of Sarawak, presents a distinctive case study. Bintulu's transformation into a major industrial hub-driven by oil and gas operations, petrochemical expansion, and large-scale manufacturing-has significantly impacted local demographics, increased household income diversity, and placed immense pressure on the residential property market (NAPIC, 2023).

Despite being a developing city, Bintulu now faces challenges typical of metropolitan centres land scarcity, surging construction costs, rapid population inflow, and speculative property investment. These forces have pushed housing prices to levels disproportionate to the average income of its residents, especially the B40 and M40 income groups. According to Bank Negara Malaysia (2021), the median multiple for housing affordability in many urban Malaysian towns, including Bintulu, has surpassed the internationally accepted threshold of 3.0,

signalling that residential property is increasingly unaffordable for the average household.

According to EdgeProp (2023), the average price for a double-storey terrace house in Bintulu is around RM500,000, depending on location and condition-significantly higher than the average household income. Corner houses detached and semi-detached homes in near city areas can easily exceed RM800,000. Even mid-range apartments are priced above RM400,000 to RM500,000. This pricing scenario creates an affordability gap, particularly for first-time buyers, civil servants, and low-to-middle-income families. Yet, paradoxically, demand for housing remains consistently high.

There are several logical explanations for this seemingly contradictory phenomenon. First, Bintulu's strategic role in the Sarawak Corridor of Renewable Energy (SCORE) and as a nucleus of petrochemical and energy-based industries attracts a steady influx of workers from both within and outside Sarawak (RECODA, 2020). These individuals, many of whom are employed in well-paying technical or managerial positions, seek long-term settlement and thus prioritise homeownership over rental options. Second, many buyers view property in Bintulu as an investment due to anticipated appreciation in value, driven by continuous industrial growth and infrastructure development. Third, cultural attitudes in Malaysia often associate homeownership with financial security and family prestige, further driving demand even amid affordability concerns (Hashim, 2010).

Additionally, the availability of bank financing and government-assisted housing schemes-such as PR1MA, My Home, and Rumah Mampu Milik-although limited in supply, have enabled some households to overcome affordability barriers (Ismail, 2019). However, such schemes are often oversubscribed, with limited units in high-demand industrial towns like Bintulu. As a result, many consumers are forced to navigate high private market prices, stretching their household budgets and relying on long-term mortgage financing.

This presents a critical issue for urban planners and policymakers. Housing is not only a basic human need but also a symbol of economic stability and social mobility (UN-Habitat, 2020; Mohamad et al., 2024a). The disconnect between demand and supply, especially for affordable housing, may lead to long-term socio-economic imbalances including increased household debt, delayed homeownership among younger populations, and community displacement (Styhre, 2022). The urgency to understand what drives purchasing decisions in such contexts is therefore both practical and policy related to affordable house.

At the microeconomic level, housing decisions are rarely made in isolation. They reflect an interplay of income levels, employment status, family structure, lifestyle preferences, and socio-cultural norms. Internationally, housing preferences are shaped by multidimensional factors including financial capacity, location convenience, perceived safety, environmental quality, and housing features (Green & Malpezzi, 2003; Rameshkumar et al., 2024). In Malaysia, empirical studies have found that buyers in urbanised centres prioritise proximity to amenities, availability of public transport, and perceived property value appreciation potential (Yap et al., 2021; Mundher, et al., 2023). Yet, such studies often focus on metropolitan contexts, with limited insights into non-metropolitan industrial cities like Bintulu.

Moreover, consumer perceptions of value are often shaped by emotional, psychological, and social factors in addition to purely financial considerations (Kotler et al., 2011). Housing is both a consumption and investment decision, subject to long-term expectations of asset appreciation and socio-cultural status. The marketing literature suggests that residential choice is affected not only by economic rationality but also by symbolic consumption, peer influence, and aspirational lifestyles (Mathur, 2024).

Given this context, it becomes imperative to explore how residents of Bintulu make their housing decisions, and which factors weigh most heavily in shaping their behaviour. This study seeks to address this gap by examining five key factors-price, house features, environment, location, and living space-that are likely to influence purchasing behaviour in Bintulu's residential property market. It applies a consumer behaviour theoretical framework and utilises robust statistical techniques to evaluate how these factors influence decision-making. By contextualising the findings within the industrial dynamics of Bintulu, this research offers original insights into the evolving patterns of housing consumption in non-metropolitan Malaysia and proposes actionable implications for developers, financial institutions, and regulatory agencies.

LITERATURE REVIEW

The rapid growth of Bintulu as a strategic industrial centre has given rise to a unique housing market characterised by high demand amid increasing unaffordability. This situation necessitates a deeper understanding of the drivers behind consumer behaviour in residential property purchases. While macroeconomic indicators and government policies partly explain the surge in housing demand, individual-level preferences, motivations, and socio-cultural norms are equally pivotal in shaping home-buying patterns. Therefore, it is crucial to review existing literature on housing preferences within this dual context of economic pressure and high consumer interest.

Understanding consumer behaviour in residential property decisions requires a multidimensional approach, integrating perspectives from economics, sociology, urban studies, and marketing. According to Vincent Jaiwant (2023), consumer buying behaviour reflects a process of decision-making influenced by internal and external stimuli, including price, perceived value, social influence, and product attributes. In the context of the housing market, these stimuli are represented by variables such as affordability, location, physical features of the property, neighbourhood characteristics, and emotional attachments (Sani et al., 2023).

Price remains a universally acknowledged determinant of property purchase decisions. Lee and Reed (2014) underscore that price sensitivity influences whether individuals can enter the housing market or delay ownership. The ability to secure housing loans, the availability of subsidies, and long-term income prospects shape perceptions of affordability (Galster & Lee, 2021). In Malaysia, affordability remains a persistent concern, especially for the B40 group (Hashim, 2010). Chia et al. (2016) note that in urban city, where prices have increased due to industrial expansion, price becomes a barrier even for middle-income earners. Price is not only about upfront cost but also long-term mortgage burden, interest rates, and perceived value-for-money, particularly in rapidly urbanising towns.

Location is another core factor in housing decisions. Numerous studies have documented how proximity to essential services such as schools, hospitals, shopping centres, and workplaces increases property desirability (Daly et al., 2003; Ho et al., 2019). Kaynak and Stevenson (1982) and García-Magarino and Lacuesta (2017) argue that location serves not only practical convenience but also social signalling. Buyers tend to favour low-crime areas and neighbourhoods with robust transport links and community amenities. In Bintulu, the location near the town centre or industrial parks plays a pivotal role in home choice due to daily commuting needs and property appreciation potential. Accessibility is further linked to future infrastructure investments, which influence long-term property value.

Environmental factors, such as the cleanliness of the neighbourhood, green spaces, and noise levels, also significantly influence purchase intent (Chan & Liu, 2018; Tan & Goh, 2018). Modern homebuyers, particularly younger cohorts, are increasingly concerned about air quality, proximity to natural disaster zones, and the presence of recreational facilities (Naeem & Rana, 2025). In Bintulu, balancing industrial development with environmental sustainability becomes critical. Environmental quality not only improves liveability but also mitigates health-related risks, which are gaining importance among urban consumers post-COVID-19 (Meyrick & Newman, 2023; Mohamad et al., 2024b).

House features, including design aesthetics, size, floor layout, number of rooms, and quality of construction materials, have been widely acknowledged in buyer behaviour models (Biswas & Mukerji, 2025; Aini et al., 2025). Families with children, for example, are likely to prefer landed properties with ample living space and private outdoor areas. Marcus & Sarkissian (2023) link these preferences to social capital and long-term stability. In Bintulu, where multi-generational living is common, buyers often look for flexible designs that accommodate extended families, future renovations, or rental potential.

Living space is often evaluated based on square footage, interior functionality, and future expandability. Peng et al. (2021) note that spatial comfort directly affects perceived value and lifestyle quality. For instance, a home with well-ventilated and spacious living areas often commands a price premium. In rapidly urbanising towns like Bintulu, buyers may favour double-storey houses or semi-detached units that offer more room for family

expansion and leisure activities. Moreover, perceptions of space are not just physical but psychological, influenced by layout efficiency and design innovation.

In addition to these conventional factors, emotional and aspirational values play an increasingly prominent role. Nikezić et al. (2001) argue that housing choices reflect not just needs but identity, lifestyle, and future aspirations. In Malaysia, this is reflected in cultural values surrounding family stability, ownership pride, and intergenerational wealth transfer. In Bintulu, where many workers migrate for long-term employment, the decision to buy a home is often tied to notions of permanence, belonging, and upward mobility (Ismail et al., 2021). In sum, housing decisions are shaped by an intricate set of interrelated factors, and this literature provides a robust foundation for exploring these dynamics in the unique context of Bintulu, Sarawak.

METHODOLOGY

Sampling Frame

This study focuses on understanding the determinants of consumer buying behaviour for residential property in Bintulu, Sarawak. The target population includes adult residents who are either current homeowners or prospective homebuyers in the Bintulu area. Based on an estimated urban population size and using Krejcie Morgan Table (Chuan, 2006) for determining sample size, a minimum of 100 participants is typically required for a moderately sized population; however, a total of 130 valid responses were collected to enhance the robustness and representativeness of the findings. A purposive sampling technique was adopted to ensure that the respondents had direct knowledge and experience regarding housing selection and purchase. The unit of analysis was the individual consumer in the Bintulu residential market, and each respondent's input was treated as an independent data point in statistical analysis.

Questionnaire Design and Data Collection Procedure

The research instrument was a structured questionnaire consisting of two main parts: demographic profile and determinants of housing choice. The second part assessed five key constructs influencing property purchasing decisions: price, house features, environment, location, and living space. Each construct comprised five Likert-scale items, with response options ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

The questionnaire was distributed both physically and via online channels, including email and messaging platforms. To capture a wide cross-section of residents in Bintulu, surveys were disseminated in residential areas, commercial zones, and workplaces with a high concentration of potential homebuyers. Data collection spanned over four weeks to ensure a sufficient response rate. The combination of physical and digital outreach enabled efficient access to a representative group of respondents, covering different income levels, housing types, and neighbourhoods.

Reliability Test

The internal consistency of the questionnaire items was evaluated through Cronbach's Alpha, a statistical coefficient used to assess the reliability of psychometric instruments (Mohamad & Wahid, 2017; Mohamad et al., 2024b). This test determines whether multiple items measuring the same construct produce consistent results. Cronbach's Alpha values range from 0 to 1, with higher values indicating greater internal consistency. In social science research, a value of 0.70 and above is typically deemed acceptable for reliable measurement.

In this study, each of the five constructs Price, Location, Environment, House Features, and Living Space consisted of five Likert-scale items. The reliability scores ranged from 0.721 to 0.879, demonstrating a high degree of consistency across the measured items. The construct 'Environment' recorded the highest reliability at 0.879, suggesting strong agreement among respondents on environmental preferences when purchasing residential property. 'Living Space' had the lowest but still acceptable score of 0.721, which may indicate a slightly broader range of perceptions regarding space requirements among different household types. Overall, the results affirm that the measurement tool employed in the study is dependable for assessing the targeted behavioural factors.

Table 1. Reliability Test

Construct	Cronbach's Alpha	No. of Items
Price	0.732	5
Location	0.761	5
Environment	0.879	5
House Features	0.743	5
Living Space	0.721	5

The reliability test provides assurance that the data collected from the instrument are both consistent and valid for drawing inferences on consumer housing behaviour in Bintulu. It also contributes to the overall methodological rigour of the study.

Data Analysis

All responses were processed and analysed using IBM SPSS Statistics software to ensure comprehensive and rigorous examination of the dataset. The data analysis process was structured into three sequential stages to enhance the clarity and interpretability of the findings.

Descriptive Statistics.

This initial stage involved computing frequencies, percentages, means, and standard deviations to provide a summary profile of the respondents' demographic characteristics and their responses to each survey construct. This helped in understanding the general trends and central tendencies within the dataset. Variables such as age, gender, income level, occupation, and educational background were summarised, offering an overview of the respondent pool in Bintulu.

Inferential Statistics

The Kruskal-Wallis H test, a non-parametric method for comparing more than two groups (Okoye and Hosseini, 2024), which in this study used to evaluate whether there were statistically significant differences in housing preferences based on demographic groupings such as income, occupation, and education. This test was selected over ANOVA due to the ordinal nature of Likert-scale data and the absence of assumptions regarding normality or homoscedasticity (Jones et al., 2025).

Spearman's rank correlation coefficient was employed to examine the relationships between the independent variables (price, location, environment, house features, and living space) and the dependent variable (consumer buying behaviour). The correlation coefficients allowed identification of the strength and direction of these associations, ranging from -1 to +1, thereby indicating whether certain factors positively or negatively influence purchasing decisions.

These analytical techniques were deemed appropriate given the structure of the data and the objectives of the study. The use of non-parametric methods accounted for the non-normal distribution of responses and allowed for robust interpretation. Moreover, this layered approach provided insights not only into overall consumer preferences but also into how demographic differences shaped those preferences. Through this multi-step analysis, the study ensured the validity and reliability of conclusions drawn about the key determinants influencing residential property decisions among consumers in Bintulu.

RESULTS

Descriptive Analysis

A total of 130 valid responses were analysed. Most of the respondents were in the age group of 26 to 35 years

(43.1%), followed by 18 to 25 years (26.2%). In terms of gender, 54.6% were female and 45.4% male. Most respondents reported monthly incomes between RM2,001 and RM4,000 (36.9%), with 23.8% earning below RM2,000, and 17.7% between RM4,001 and RM6,000. Occupationally, 41.5% were private sector employees, followed by government servants (30%) and self-employed individuals (15.4%). This demographic distribution reflects the working population in Bintulu, with a significant portion falling in the middle-income group.

Table 2. Demographic Profile of Respondents

Demographic	Category	Frequency	Percentage (%)
Age	18–25 years	34	26.2
	26–35 years	56	43.1
	36–45 years	25	19.2
	Above 45 years	15	11.5
Gender	Male	59	45.4
	Female	71	54.6
Monthly Income	Below RM2,000	31	23.8
	RM2,001–RM4,000	48	36.9
	RM4,001–RM6,000	23	17.7
	Above RM6,000	28	21.5
Occupation	Government servant	39	30.0
	Private sector	54	41.5
	Self-employed	20	15.4
	Others	17	13.1

Kruskal-Wallis H Test

The Kruskal-Wallis test revealed significant differences in housing preferences across income and occupation groups. Respondents with higher income levels (>RM4,000) showed stronger preferences for housing location and environmental factors compared to those with lower income. Likewise, private sector and self-employed individuals placed more emphasis on location and living space than government employees. These findings suggest that income stability and job flexibility influence consumers' evaluation of housing attributes. Location convenience and residential space may be particularly attractive to those with unpredictable schedules or growing families (Almusaed et al., 2023).

Table 3. Kruskal-Wallis H Test Results for Income and Occupation Groups

Factor	Group Comparison	H-Statistic	p-value	Significant?
Location	Income: >RM4,000 vs <RM4,000	12.763	0.005	Yes (p < 0.01)
Environment	Income: >RM4,000 vs <RM4,000	11.382	0.010	Yes (p < 0.05)
Location	Occupation: Private/Self vs Govt	13.209	0.003	Yes (p < 0.01)
Living Space	Occupation: Private/Self vs Govt	9.583	0.021	Yes (p < 0.05)

Note: H-statistic derived from Kruskal-Wallis non-parametric test. Differences in preferences were measured across income and occupation subgroups.

Spearman Correlation Analysis

Spearman's rank correlation results showed that three of the five factors had statistically significant positive correlations with consumer buying behaviour. Location ($\rho = 0.561$, $p < 0.01$) and environment ($\rho = 0.528$, $p < 0.01$) demonstrated strong associations, followed by house features ($\rho = 0.412$, $p < 0.05$). Price ($\rho = 0.176$) and living space ($\rho = 0.231$) were positively correlated, although the associations were weaker and not statistically significant. This implies that while affordability and space are important, buyers in Bintulu prioritise proximity to amenities, neighbourhood quality, and structural characteristics such as design and layout.

Table 4. Spearman Correlation Results

Factor	Correlation Coefficient (ρ)	Significance (p-value)
Price	0.176	> 0.05 (NS)
Location	0.561	< 0.01 (**)
Environment	0.528	< 0.01 (**)
House Features	0.412	< 0.05 (*)
Living Space	0.231	> 0.05 (NS)

Note: NS = Not Significant; * = Significant at 0.05; ** = Significant at 0.01

DISCUSSION

The findings affirm the hypothesis that non-price factors play a pivotal role in shaping consumer housing preferences in Bintulu. Among the five factors evaluated, location and environmental quality emerged as the strongest determinants of purchasing behaviour. These insights are consistent with the broader body of literature which indicates that urban dwellers place a high value on convenience, accessibility to public infrastructure, and neighbourhood livability (Mundher et al., 2023; yap et al., 2021; Ismail et al., 2021). In the context of Bintulu's expanding economy and growing industrial corridor, proximity to workplaces, public services, and transportation nodes becomes a significant draw for potential homeowners.

House features such as layout, design, and modern amenities also ranked highly among decision-making variables. This aligns with current market trends that show increasing preference for functional and aesthetically appealing home designs, particularly among younger (Goessler & Kaluarachchi, 2023). Bintulu's housing market is influenced by its demographic shifts and the rise of dual-income households, where homebuyers prefer properties that support efficient living without compromising style or safety.

Contrary to expectations, price did not exhibit a strong correlation with consumer buying behaviour. This phenomenon may be due to the scarcity of affordable yet strategically located properties within the town. As average house prices in Bintulu for mid-range and corner units exceed RM400,000 to RM800,000, buyers may accept higher price points as a trade-off for favourable location and neighbourhood quality (NAPIC, 2023). Similarly, living space was not a significant predictor in the statistical model. The muted effect could be attributed to the fact that most respondents were younger adults or middle-income earners who prioritised practicality over large dwellings, especially in high-demand urban zones (Kasim & Tey, 2022; Olanrewaju et al., 2024).

The significant differences in preference across income groups reveal that residential decisions are deeply influenced by socio-economic realities. For instance, individuals in higher income brackets tend to favour properties in secure and well-connected areas, whereas lower-income earners may be more constrained in their options. Occupational status also emerged as a relevant factor, with private sector employees and self-employed individuals placing higher emphasis on home location and features. These distinctions may reflect differences in daily commuting patterns, job flexibility, and long-term financial planning.

In practical terms, the study suggests that developers should design housing units that are not only affordable but strategically located and environmentally conducive. Efforts to introduce greenery, enhance security, and improve infrastructure could significantly raise the appeal of residential projects. Local authorities can use these insights to better plan housing schemes that balance market demands with urban sustainability. By understanding the key drivers of consumer behaviour in Bintulu, stakeholders can respond more effectively to the housing needs of an evolving urban population.

CONCLUSION AND POLICY IMPLICATIONS

This study provides meaningful insights into the dynamics of consumer house buying behaviour in Bintulu, a rapidly developing urban area in Sarawak. Through the analysis of key factors such as price, location, environment, house features, and living space, it is evident that location and environmental factors are more influential than price and size. These findings reflect shifting consumer priorities towards convenience, quality of life, and proximity to amenities, driven by urbanisation and lifestyle changes.

The results underscore that respondents with higher income levels and those working in the private sector or self-employed place greater importance on strategic location and living space. This suggests that stable and flexible income sources enhance purchasing power and decision-making freedom. As Bintulu continues its transformation into a more urbanised economy, demand for quality housing that balances affordability and lifestyle preferences is expected to intensify.

Policymakers and urban planners should take note of these evolving preferences. Housing developments must prioritise access to transportation, educational institutions, healthcare, and commercial hubs, while ensuring that green spaces and environmental quality are preserved. Affordable housing schemes should incorporate modern design and strategic placement to attract young professionals and middle-income buyers.

Additionally, the private sector should collaborate with local authorities to promote sustainable housing solutions that align with buyer expectations. Financial institutions may also consider more tailored loan products to accommodate different occupational segments. By addressing these insights through targeted housing policies, Bintulu can foster a more inclusive and responsive housing market that reflects its residents' needs and aspirations.

Limitations and Future Research

Although the study offers robust findings, it is not without limitations. First, the study is geographically confined to Bintulu, which may limit the applicability of results to other urban centres in Malaysia. Regional differences in infrastructure, economic development, and demographic composition may yield different housing preference patterns. Second, the cross-sectional design captures consumer preferences at a single point in time, making it difficult to account for evolving attitudes influenced by market trends, inflation, or policy changes.

Future research should consider expanding the geographic scope to include comparisons across other towns and cities in Sarawak or Peninsular Malaysia. Employing a longitudinal approach could also provide deeper insights into how consumer housing preferences evolve over time. Furthermore, incorporating qualitative methods such as interviews or focus groups may uncover nuanced factors like cultural influences, safety concerns, and lifestyle aspirations that are not easily captured through quantitative surveys. Finally, future studies might explore the impact of digital marketing and online property platforms on consumer decision-making, especially among younger homebuyers.

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REFERENCES

1. Aini, M. A., Adediran, A. O., & Seng, Y. R. (2025). The influence of buyers' aesthetic preferences for building facade colours on the pricing of high-rise residential properties: A hedonic pricing model analysis. International Journal of Housing Markets and Analysis.
2. Almusaed, A., Yitmen, I., & Almssad, A. (2023). Enhancing smart home design with AI models: A case study of living spaces implementation review. Energies, 16(6), 2636.
3. Bank Negara Malaysia. (2021). Financial stability review second half 2021. https://www.bnm.gov.my
4. Biswas, S., & Mukerji, A. (2025). Identifying factors contributing to homebuyers' satisfaction in an affordable housing market using CFA and SEM: A study in Kolkata, India. International Journal of Housing Markets and Analysis.
5. Chan, I. Y., & Liu, A. M. (2018). Effects of neighbourhood building density, height, greenspace, and cleanliness on indoor environment and health of building occupants. Building and Environment, 145, 213–222.
6. Chia, J., Harun, A., Kassim, A. W. M., Martin, D., & Kepal, N. (2016). Understanding factors that influence house purchase intention among consumers in Kota Kinabalu: An application of buyer behaviour model theory. Journal of Technology Management and Business, 3(2), 94–110. https://penerbit.uthm.edu.my/ojs/index.php/jtmb/article/view/1466
7. Chuan, C. L. (2006). Sample size estimation using Krejcie and Morgan and Cohen statistical power analysis: A comparison. Journal Penyelidikan IPBL, 7(1), 78–86.
8. Daly, J., Gronow, S., Jenkins, D., & Plimmer, F. (2003). Consumer behaviour in the valuation of residential property: A comparative study in the UK, Ireland and Australia. Property Management, 21(5), 295–314. https://doi.org/10.1108/02637470310508653
9. EdgeProp. (2023). Bintulu property market snapshot. https://www.edgeprop.my
10. Galster, G., & Lee, K. O. (2021). Housing affordability: A framing, synthesis of research and policy, and future directions. International Journal of Urban Sciences, 25(sup1), 7–58.
11. Goessler, T., & Kaluarachchi, Y. (2023). Smart adaptive homes and their potential to improve space efficiency and personalisation. Buildings, 13(5), 1132.
12. Green, R. K., & Malpezzi, S. (2003). A primer on U.S. housing markets and housing policy. Urban Institute Press.
13. Hashim, Z. A. (2010). House price and affordability in housing in Malaysia. Akademika, 78(1), 37–46.
14. Ismail, S. (2019). Rethinking housing: Between state, market and society. Khazanah Research Institute.
15. Ismail, S., Manaf, A. A., Hussain, M. Y., Basrah, N., & Azian, F. U. M. (2021). Housing preferences: An analysis of Malaysian youths. Planning Malaysia, 19(17).
16. Jones, L., Barnett, A., & Vagenas, D. (2025). Common misconceptions held by health researchers when interpreting linear regression assumptions: A cross-sectional study. PLOS ONE, 20(6), e0299617.
17. Kasim, R., & Tey, C. S. (2022). The factors for residential properties overhang in Johor. Research in Management of Technology and Business, 3(1), 809–824.
18. Koller, M., Floh, A., & Zauner, A. (2011). Further insights into perceived value and consumer loyalty: A "green" perspective. Psychology & Marketing, 28(12), 1154–1176.
19. Lee, C. L., & Reed, R. G. (2014). The relationship between housing market intervention for first-time buyers and house price volatility. Housing Studies, 29(8), 1073–1095.
20. Marcus, C. C., & Sarkissian, W. (2023). Housing as if people mattered: Site design guidelines for the planning of medium-density family housing (Vol. 4). University of California Press.
21. Mathur, N. (2024). Rationality, consumerism and lifestyle choices: Narratives of urban youth. In Sociology of Rationality (pp. 145–157). Routledge India.
22. Meyrick, K., & Newman, P. (2023). Exploring the potential connection between place capital and health capital in the post COVID-19 city. npj Urban Sustainability, 3(1), 44.
23. Mohamad, A. H. H., Ab-Rahim, R., Kushairi, A. R. E., & Esa, M. S. M. (2024a). Housing market: A bibliometric analysis from 2020 to 2024. International Journal of Academic Research in Business and Social Sciences, 14(8), 274–295.
24. Mohamad, A. H. H., Ab-Rahim, R., Zainuddin, M. R. K. V., & Kushairi, A. R. E. (2024b). Spending behaviour toward the financial aid during COVID-19 in Sarawak. International Journal of Academic Research in Accounting, Finance and Management Sciences, 14(1), 154–172.

25. Mohamad, A. H. H., & Wahid, H. (2017). Persepsi masyarakat Islam terhadap agihan zakat oleh Tabung Baitulmal Sarawak (TBS) dan peranan medium promosi: Kajian di Bintulu, Sarawak. Prosiding PERKEM.

26. Mundher, R., Abu Bakar, S., Maulan, S., Gao, H., Mohd Yusof, M. J., Aziz, A., & Al-Sharaa, A. (2023). Identifying suitable variables for visual aesthetic quality assessment of permanent forest reserves in the Klang Valley urban area, Malaysia. Urban Science, 7(3), 92.

27. NAPIC. (2023). Property market report 2023. National Property Information Centre. https://napic.jpph.gov.my

28. Naeem, N., & Rana, I. A. (2025). Influence of locational and marketing factors on home-buyer behaviour in the housing sector of Islamabad, Pakistan. Journal of Real Estate Portfolio Management, 1–26.

29. Nikezić, A., Ristić Trajković, J., & Milovanović, A. (2021). Future housing identities: Designing in line with the contemporary sustainable urban lifestyle. Buildings, 11(1), 18.

30. Okoye, K., & Hosseini, S. (2024). Mann–Whitney U test and Kruskal–Wallis H test statistics in R. In R programming: Statistical data analysis in research (pp. 225–246). Springer Nature Singapore.

31. Olanrewaju, A., Chai, K. S., Sanmargaraja, S., Nizamani, Z., & Khor, S. C. (2024). Examining surplus and shortage in occupied housing preference in Malaysia. International Journal of Housing Markets and Analysis.

32. Peng, Y., Peng, Z., Feng, T., Zhong, C., & Wang, W. (2021). Assessing comfort in urban public spaces: A structural equation model involving environmental attitude and perception. International Journal of Environmental Research and Public Health, 18(3), 1287.

33. Rameshkkumar, S. R., Gope, P., Santhosh, R., Gawande, N. M., Vishnu, M. M., & Umamaheswari, S. (2024). Exploring the severity of factors influencing lifestyle on housing preference of young adults: A thematic analysis. Migration Letters, 21(S1), 1013–1023.

34. RECODA. (2020). Sarawak Corridor of Renewable Energy (SCORE). https://recoda.gov.my

35. Sani, A., Mohammed, M. I., & Usman, H. (2023). Locational, neighbourhood and physical characteristics of residential rental properties: A review. Journal of Commerce, Management, and Tourism Studies, 2(3), 143–154.

36. Styhre, A. (2022). The economics of affordable housing. Routledge.

37. Tan, W. L., & Goh, Y. N. (2018). The role of psychological factors in influencing consumer purchase intention towards green residential building. International Journal of Housing Markets and Analysis, 11(5), 788–807.

38. UN-Habitat. (2020). The state of world cities 2020/2021. https://unhabitat.org

39. Vincent Jaiwant, S. (2023). Changing structure of consumer buying behaviour and expectation in the digital era. In Industry 4.0 and the Digital Transformation of International Business (pp. 207–215). Springer Nature Singapore.

40. Yap, J. B. H., Chua, C. Y., & Skitmore, M. (2021). Towards sustainable mobility with transit-oriented development (TOD): Understanding Greater Kuala Lumpur. Planning Practice & Research, 36(3), 314–336.