

## ECONOMIC DETERMINANTS OF URBAN HOUSING AFFORDABILITY: COST-BENEFIT ANALYSIS OF CONSTRUCTION AND FINANCING FACTORS

Rashmi Jaymin-Sanchaniya<sup>1</sup>, Vihanga Akushla De Silva Weligodage<sup>1</sup>,  
Nikunj Niranjambhai Pandya<sup>2</sup>, Antra Kundzina<sup>1</sup>, Janis Vanags<sup>1</sup>

<sup>1</sup>Riga Technical University, Latvia; <sup>2</sup>Maharaja Sayajirao University of Baroda, India  
rashmi.sanchaniya@rtu.lv

**Abstract.** The affordability of housing is a burning socioeconomic issue in urbanising developing economies. It has been exacerbated in Sri Lanka by rapid urbanisation, a serious inflationary crisis (2021-2022), and increasing demand-supply gap, especially in the Western Province. This paper analyses the economic factors of housing affordability by testing four hypotheses including the construction cost, the size of property, the size of household and the income inequality of a region through a structured questionnaire survey ( $r = 61$ ) and multiple regression analysis. The dependent variable was the Housing Affordability Index (HAI). The findings show a rather ambivalent picture: among the four hypothesised relationships, only regional income inequality, proxied with housing loan percentage, was statistically significant ( $r = 0.267$ ;  $r = 0.019$ ). The direct impacts of construction costs (H1), property size (H2), and household size (H3) did not show statistically significant effects of HAI. Further, utility expenses also turned out to be a powerful negative correlate ( $r = -0.221$ ;  $r = 0.044$ ) indicating the importance of the recurrent expenditure on non-mortgage. The results suggest that policy has been over-emphasized on the cost-cutting of construction as the main affordability mechanism, and that income-sensitive financing, utility regulation, and specific credit interventions are more manageable means of attaining better affordability. The implications on housing policy, urban planning, and research in the future are mentioned.

**Keywords:** affordable housing, construction costs, Housing Affordability Index, household income, regional income disparities, Sri Lanka, urban housing market.

### Introduction

The issue of housing affordability, which can be broadly taken to mean the capacity of households to afford decent housing without subjecting themselves to unnecessary financial strains, has emerged as one of the hallmarks of the twenty-first century social challenges [1]. Strategic sustainability has also been identified as a key driver of real estate industry performance, with evidence showing that sustainability-oriented decision-making directly shapes long-term market outcomes [2]. In the majority of countries all over the world, the growth of the prices of houses exceeds the growth of incomes since 2015. In countries like Luxembourg, Portugal, and Canada, the ratio of house prices to income was increased by more than 130 percent (over the 2015 level), more modest but still considerable gains were observed in most observed countries [3]. The residential property centrality to the global economy, estimated to have a value of USD 3.9 trillion in 2023 and expected to reach USD 7.03 trillion by 2034 with an average compound annual growth rate of 5.5%, shows the centrality of residential property to the global economy, as well as the magnitude at which affordability pressures are accruing [4; 5].

In the Asia-Pacific region, which is estimated to have its real estate market almost doubling in USDs, between USD 1.57 trillion and USD 2.92 trillion in 2023-2034, Sri Lanka is a case study to the point [6]. The sustained urbanisation has been seen in the country, and its most rigorous developments were seen in the Western Province and Greater Colombo where economic activities, employment, and infrastructure are agglomerated. As of 2012-2022, the housing demand increased by 218% relative to supply, with demand in Gampaha and Colombo districts (over 600,000 pieces of housing) going up, as supply failed to keep pace [7]. To make matters worse, in January 2020, the rate of inflation in Sri Lanka stood at a steady 5.7%, but by May 2022, it reached a staggering 54.6%, leading to soaring prices of construction materials, such as cement, sand, and reinforcing steel.

The linkage between building expenses and affordability of housing, which is generally conceded to be negative in the theoretical models, is not as well-defined in the empirical studies in the developing countries setting, and in Sri Lanka, in particular [8]. In the literature, the trends in the construction industry and housing affordability have been analysed as two distinct domains, and studies that examine the affordability indices in Sri Lanka have done so by mostly focusing on the quantile distributions of income rather than cost-side factors [9]. The problem of affordable housing in the developing economies is further complicated by dissolved data, diverse construction quality, and inadequate policy

consistency. This paper fills that gap by testing four hypotheses concerning the economic determinants of housing affordability in urban Sri Lanka, in terms of the outcome measure [10].

The four questions tested are the following: H1 – higher construction cost is strongly reducing housing affordability in urban regions; H2 – property size directly influences housing affordability; H3 – household size directly influences housing affordability; and H4 – regional income difference causes variance in housing affordability across urban districts. The systematic evaluation of the relative explanatory strength of the four hypotheses by conducting a single regression framework will put forward in this study a systematic evaluation of the supply-side and demand-side variables as applied to the issue of housing policy design in Sri Lanka and other developing economies.

The rest of this paper has been structured as follows. Section 2 outlines the methodology of the research. The empirical results are found in section 3. Section 4 presents the findings in reference to the four hypotheses, the basis in which they were theoretically formulated, and their implications on policy. Section 5 concludes.

### Materials and methods

The survey design that was adopted was cross-sectional survey design in order to collect primary data on urban residents in various administrative districts in Sri Lanka in the months of October and November 2025. A self-administered questionnaire was conducted in digital formats and through local community-related organisations to a purposive sample of city stakeholders, such as homeowners, potential buyers, and workers in the construction industry. The purposive sampling technique was used to select the final analytical sample of 61 respondents in 18 districts as a means of capturing variation in the urban housing situation, level of income and geographical location.

The questionnaire consisted of five thematic blocks, (1) demographics and household characteristics; district, household size and gender, (2) income and employment status, (3) housing details, which included property type, size in squares metres and monthly utility bill payments (4), construction and financing parameters, which included estimated construction cost per square foot, housing loan interest rate band, down payment percentage and repayment period, (5) self-rated perception of housing affordability on a five-point ordinal scale ranging between not affordable and very affordable. Quantitative answers of sections 2-4 were to be obtained as inputs to regression model.

The dependent variable was the Housing Affordability Index (HAI). In line with the framework applied to the study on affordability in Sri Lanka and in line with the approach used by the National Association of Realtors, HAI indicates the ratio of median household income to the income necessary to afford a standard mortgage on a median-priced house. HAI of 100 means that a household with median income has just enough income to afford a median-priced home mortgage; a higher value of 100 means surplus of affordability and a lower value of 100 means lack of affordability. The calculation of HAI values was in terms of each respondent based on reported income, property cost, and current loan conditions based on survey responses. Although HAI offers a standardised and commonly used affordability indicator, it can be argued to understate affordability overheads of non-median and non-mortgaged households due to its use of median values and impediment of mortgage-qualified logic.

A bivariate screening step constituted Pearson correlation analysis and then a multiple linear regression technique to determine the simultaneous explanatory value of the five independent variables to HAI. Its regression model was as follows:

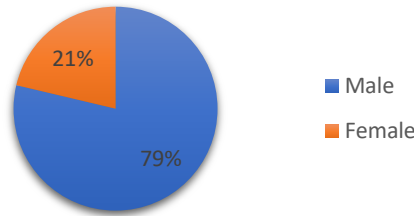
$$HAI = \beta_0 + \beta_1(CC) + \beta_2(HS) + \beta_3(HS) + \beta_4(UC) + \beta_5(HL) + \varepsilon,$$

where  $CC$  – construction cost;  
 $HS$  – household size;  
 $UC$  – utility cost;  
 $HL$  – housing loan, %.

Imputation or removal of missing values was used during the data preparation, Z-scores were used to identify outliers, interquartile range analysis was used to identify outliers, and variable standardisation was done when necessary. SPSS was used to analyse and additional exploratory analysis done in the Orange Data Mining program. To find out the reliability of regression coefficients a condition index and variance inflation factors were evaluated to gauge the level of collinearity.

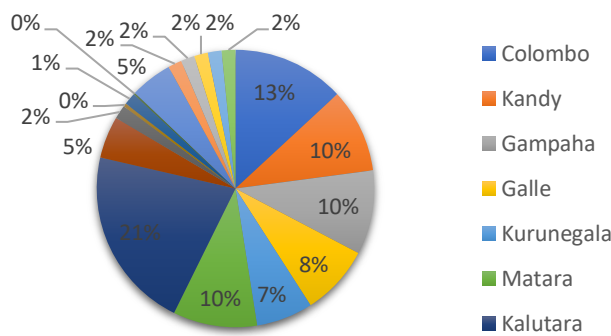
**Results and discussion**

The sample was mainly male (78.7%), salaried (80.3%), and of Bachelor’s degree (70.5%). None of the retired respondents were involved and only a small proportion of the respondents (1.6%) identified as unemployed. Fig. 1 describes gender distribution. Although this demographic portrait is indicative of actual access patterns in the Sri Lankan construction and real estate discourse, it is a weakness as far as generalisability to less wealth, female headed or informally employed households.



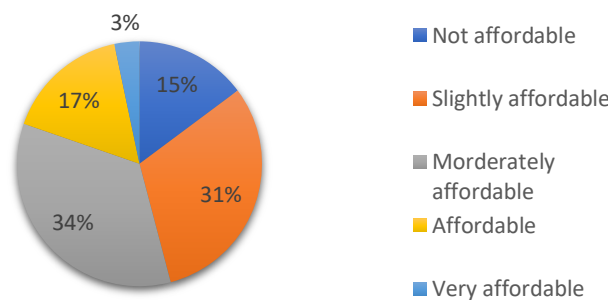
**Fig. 1. Gender distribution of survey respondents**

The population of the sample included 61 respondents in 18 districts. The distribution was geographically located where it had high representation in the south (Kalutara 21.3) and the west (Colombo 13.1) and the high representation in the north (Jaffna 0.2) and east (Trincomalee 0.4). Fig. 2 illustrates the distribution in the region.



**Fig. 2. Regional distribution of survey respondents by district**

The survey respondents indicated that there was a vast array of affordability perceptions. The highest proportion (34.4%) report their area housing to be moderately priced, with 31.1% reporting it to be slightly priced. Only 16.4% found it reasonable to be affordable, 3.3% very affordable, and 14.8% not affordable (see Fig. 3). Combined, almost 50% of the specimen (45.9%) considered the housing slightly or not affordable, which showed that there was a general perceived economic burden in urban Sri Lanka. These views are consistent with the national level data on HAI which indicates that people with lower income levels especially those in the 10% to 40% reported HAI scores that were always lower than the affordability threshold during the period between 2019 and 2021.



**Fig. 3. Respondents’ self-rated perception of housing affordability in urban Sri Lanka**

Table 1 presents the Pearson correlation coefficients between HAI and each of the five independent variables across the 61-observation sample.

Table 1

**Pearson correlation coefficients between HAI and independent variables ( $r = 61$ )**

		HAI	Construct-ion Cost	House-hold Size	House Size	Utility Cost	Housing Loan Percentage
Pearson Correlation	HAI	1.000	0.046	.0205	0.024	-0.221	0.267
	Construction Cost	0.046	1.000	-0.004	0.014	0.065	0.038
	Household Size	0.205	-0.004	1.000	0.124	0.053	-0.105
	House Size	0.024	0.014	0.124	1.000	-0.234	-.0140
	Utility Cost	-0.221	0.065	0.053	-0.234	1.000	-0.099
	Housing Loan	0.267	0.038	-0.105	-0.140	-0.099	1.000
Sig. (1-tailed)	HAI	.	.0363	0.057	0.428	0.044	0.019
	Construction Cost	0.363	.	0.489	0.457	0.310	0.386
	Household Size	0.057	0.489	.	0.171	0.342	0.210
	House Size	0.428	0.457	0.171	.	0.035	0.141
	Utility Cost	0.044	0.310	0.342	0.035	.	0.224
	Housing Loan	0.019	0.386	0.210	0.141	0.224	.
N	HAI	61	61	61	61	61	61
	Construction Cost	61	61	61	61	61	61
	Household Size	61	61	61	61	61	61
	House Size	61	61	61	61	61	61
	Utility Cost	61	61	61	61	61	61
	Housing Loan	61	61	61	61	61	61

The highest positive correlation was found between the housing loan percentage and HAI ( $r = 0.267$ ;  $r = 0.019$ ), meaning that those respondents in a district, where the housing loan utilisation rates were higher, were more likely to have higher values of affordability index. The utility cost showed statistically significant negative correlation ( $r = -0.221$ ;  $r = 0.044$ ), which proves that increased recurrent spending on energy and water decreases effective housing affordability. There was a near positive correlation in the household size ( $r = 0.205$ ;  $r = 0.057$ ). The construction cost ( $r = 0.046$ ;  $r = 0.363$ ), and property size ( $r = 0.024$ ;  $r = 0.428$ ) had insignificant, non-significant relationships with HAI.

Table 2 presents the multiple regression model summary, and Table 3 presents the findings of ANOVA. The combined five predictors accounted 17.1% of the variance of HAI ( $R^2 = 0.171$ ; adjusted  $R^2 = 0.096$ ). The total model was not conventional but close to it ( $F(5, 55) = 2.273$ ;  $r = 0.060$ ). The value of 1.441 in Durbin-Watson meant that there was no significant autocorrelation of the residuals. The diagnostics of collinearity (Table 4) indicated the condition indices vary between 1.000 and 22.868, and this is less than the threshold of 30, indicating that there were no cases of multicollinearity that skewed the regression estimates. Fig. 4 was a normal distribution (mean 0; SD 0.957) that was approximated by the standardised residual histogram, which met the normality assumption of regression.

Table 2

**Multiple regression model summary ( $R$ ,  $R^2$ , adjusted  $R^2$ , F-statistic, Durbin-Watson)**

Model Summary										
Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R <sup>2</sup> Change	F Change	df1	df2	Sig. F Change	
1	0.414	0.171	0.096	37.45858	0.171	2.273	5	55	0.060	1.441
a. Predictors: (Constant), Housing Loan Percentage, Construction Cost, Household Size, Utility Cost, House Size										
b. Dependent Variable: HAI										

Table 3

ANOVA table for the regression model

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15943.316	5	3188.663	2.273	0.000
	Residual	77172.996	55	1403.145		
	Total	93116.311	60			
a. Dependent Variable: HAI						
b. Predictors: (Constant), Housing Loand Percentage, Construction Cost, Household Size, Utility Cost, House Size						

Table 4

Collinearity diagnostics (eigenvalues, condition indices, variance proportions)

Collinearity Diagnostics									
Model	Dim-ension	Eigen-value	Condition Index	Variance Proportions					
				Constant	Construction Cost	House-hold Size	House Size	Utility Cost	Housing Loand Percentage
1	1	5.676	1.000	0.00	0.00	0.00	0.00	0.00	0.00
	2	0.113	7.084	0.00	0.00	0.01	0.28	0.01	0.50
	3	0.103	7.435	0.00	0.00	0.00	0.17	0.42	0.20
	4	0.053	10.334	0.00	0.82	0.05	0.05	0.11	0.06
	5	0.045	11.263	0.00	0.00	0.67	0.30	0.25	0.02
	6	0.011	22.868	1.00	0.17	0.26	0.20	0.21	0.22
a. Dependent Variable: HAI									

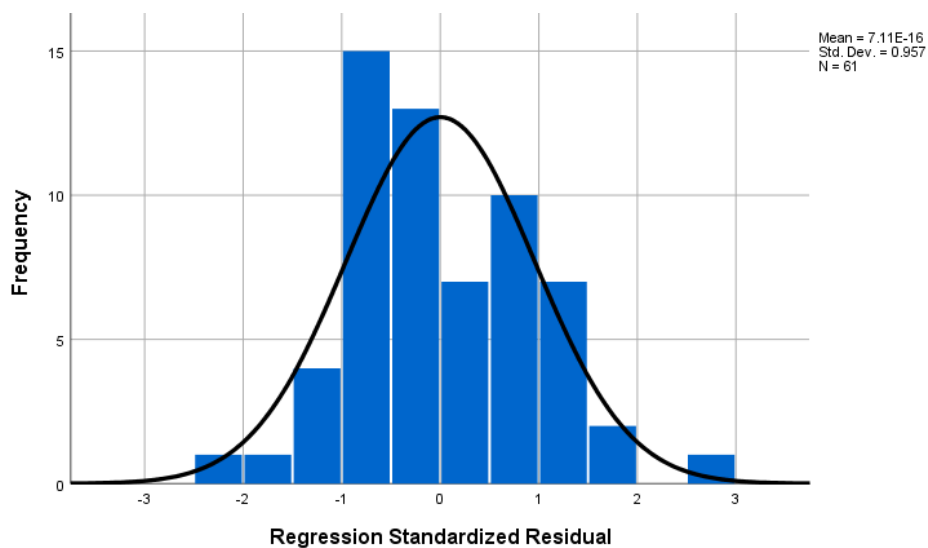


Fig. 4. Histogram of regression standardised residuals (dependent variable: HAI)

H1 – Construction costs and affordability: The coefficient for construction cost was not statistically significant ( $r = 0.363$ ). The scatter plot of HAI versus construction cost confirmed a very weak positive association ( $r = 0.046$ ). H1 was not supported by the data.

H2 – Property size and affordability: Property size demonstrated a near-zero correlation with HAI ( $r = 0.024$ ;  $r = 0.428$ ). H2 was not supported.

H3 – Household size and affordability: Household size showed a borderline but non-significant positive association with HAI ( $r = 0.205$ ;  $r = 0.057$ ). H3 was not firmly supported at the conventional  $p < 0.05$  threshold, though the direction of the relationship warrants further investigation.

H4 – Regional income disparities and affordability: Housing loan percentage, as a proxy for regional income and credit access differentials, demonstrated the strongest and only statistically significant association with HAI ( $r = 0.267$ ;  $r = 0.019$ ). Median household income also showed a moderate positive correlation with HAI ( $r = 0.27$ ). H4 was supported.

One of the most practical findings of the study is the negligible direct correlation between construction costs and HAI ( $r = 0.363$ ). This structural rigidity in construction costs is also documented in comparable South Asian emerging markets, where real estate management firms' operational and sustainability decisions have been shown to exert greater influence on housing market outcomes than raw material cost fluctuations alone [11]. On the macro level, the cost of construction in Sri Lanka in the period of 2000-2021 was increased dramatically, as the costs of sand and especially the extraction thereof became the most rapidly growing, whereas the cost of cement, bricks, and labour in the country also grew steadily. The 2021-2022 economic crisis that pushed the inflation to 54.6% also destabilized the process of acquiring materials and making projects viable. These tendencies are also documented and of substance [12].

However, in the current sample, this difference in construction costs did not show in quantifiable differences in HAI. This might be explained by a number of mechanisms. First, the variability in type of construction, material, and place of location among all the respondents may dampen a monotonic relationship between cost and affordability. Second, it is probable that the burden of construction expenses flows upstream to developers and is converted into aggregate property prices, the effect of which is mediated by income levels and financing conditions instead of the direct effect of the cost of building on affordability. It is in line with the theory of Life Cycle Cost (LCC), which presupposes that upfront capital investment is just a part of the entire ownership charge. Third, the disunity in the developer environment in Greater Colombo, namely, the relatively small-scale operators will possibly not allow achieving the economies of scale, which, in principle, can help lower the unit construction costs. In the absence of such efficiencies, construction costs act as a structural floor which has no significant changes along the affordability spectrum.

Combined, these dynamics indicate that the strategies of subsidizing construction costs or controlling the prices of materials, although it might be helpful in terms of the developer viability, might not bring the immediate affordability improvements that policymakers tend to anticipate. The correlation between low cost of construction and low price of the home and high HAI is not linear and certain. Effective project management practices – including procurement efficiency, cost scheduling, and contractor coordination – have been empirically shown to influence construction outcomes more substantially than material cost subsidies alone, reinforcing the need for process-level interventions in the construction sector [13].

The insignificant connection between property size and HAI ( $r = 0.024$ ;  $r = 0.428$ ) disproves a common belief that smaller houses are necessarily cheaper. This can be explained by a number of structural characteristics of the Sri Lankan housing market. The location factor in property prices, especially the excessive price charged by land in Colombo and the Western Province compared to the peripheral districts, would probably trump the size-based price adjustment. An apartment in Colombo can be much cheaper than a bigger house in Sabaragamuwa although its area is smaller. Also, the urban market is bifurcated, with luxury and low-end segments lacked price continuity, which implies that property size cannot be a useful proxy variable of price tier. This observation adds weight to the argument that affordability indices based on price-per-unit measures have to be carefully geographically contextualised.

The fact that the relationship between household size and HAI is borderline but not significant ( $r = 0.205$ ;  $r = 0.057$ ) deserves closer attention. On the one hand, there was marginal empirical support to the hypothesised positive direction that larger household had superior effective affordability due to income pooling. It has a theoretical basis with the Permanent Income Hypothesis suggesting that as households have a more stable aggregate income, which can be supplemented by compositions of multi-earners, they can plan their housing expenditure more confidently against anticipated lifetime income. Conversely, bigger families are typically going to need bigger and hence costly properties which offsets the benefit of income pooling. Researchers have observed that bigger households in Sri Lanka experience compounded financial stresses such as the cost of energy that increases with the size of the household. The null value, at traditional levels of significance, is most likely to indicate the

counteracting nature of these two opposite forces. Further studies must directly separate the household income composition of the household size and thus isolate the pooling effect [14].

The most policy-relevant result of the study, which is the most consistent with the existing literature on housing affordability, is the confirmation of H4 that regional income inequality is the important source of variation in HAI ( $r = 0.019$ ). It is a structural reality in Sri Lanka: the prices of houses differ widely across provinces, but the differences in household incomes are even more dire. The Western Province is where property prices are highest and incomes are highest in the country, and Sabaragamuwa is where they are lowest, but the proportion of cost of housing in the lower-income households is even harsher in the less developed regions [15]. The access to the credit market is a proxy of which housing loan percentage reflects this regional income gradient: the more affluent the area, the more formal mortgage financing is accessible, which the data relates to greater affordability as measured.

Internationally, income insufficiency rather than price levels similarly constrains affordability in Malaysia, where urban households spend 30-40% of income on housing [18] – higher than in Sri Lanka 27.5%. In India, construction cost volatility equally fails to directly affect household affordability, with financing access as the mediating variable [11]. European markets differ structurally, with affordability driven by price-to-income ratios exceeding 130% [3] rather than credit exclusion. In Sri Lanka, as elsewhere in South Asia, the primary barrier remains mortgage market eligibility, consistent with housing loan percentage being the sole significant predictor here [16; 17].

The policy implication is straightforward: expanding access to credit by lower- and middle-income households, e.g. through lower down payment requirements, interest rate subsidies, or state mortgage guarantee programs, will result in more definitive affordability gains than construction cost regulation. The state of the mortgage market in Sri Lanka where commercial banks are charging around 12-15.5% is a considerable obstacle that would proportionately lock out lower-income urban households. The National Housing Policy also considered the necessity of affordable credit processes, but the implementation gaps still exist, which explains the necessity of specific financing reforms [19].

In addition to the four hypotheses, it is worth single-handedly classifying significant negative correlation that exists between utility costs and HAI ( $r = -0.221$ ;  $r = 0.044$ ). The standard structures of affordability such as the HAI involve the cost of mortgages in relation to income and does not take into account recurrent non-mortgage expense.

There are a number of limitations which limit the generalisability of such findings. The design is cross-sectional, which makes it impossible to infer causality. Self-reported variables- especially income and cost of construction- have a recall and social desirability bias. The 17.1% explained variance of the model supports the fact that significant factors that determine HAI such as land prices, zoning regulations, macroeconomic policy, and developer behaviour were not covered in the current specification. Future studies ought to attain stratified and larger sample; include administrative information on mortgage approvals and material price indexes; and use longitudinal designs which have impact on affordability outcomes over time as stated in [20].

## Conclusions

1. The hypothesis that the variations in the affordability are due to the regional income inequality (H4) was supported only statistically ( $r = 0.267$ ;  $r = 0.019$ ). Cost of construction (H1) ( $r = 0.046$ ;  $r = 0.363$ ), and property size (H2) ( $r = 0.024$ ;  $r = 0.428$ ) did not reveal major direct impacts on HAI in the sampled group and household size (H3) had a borderline non-significant relationship ( $r = 0.205$ ;  $r = 0.057$ ).
2. All these findings are a challenge to the prevailing policy discourse that sees the reduction in construction costs as the inquisitee point that would improve housing affordability in Sri Lanka. Although the inflation of construction costs is a factual and structurally important issue, aggravated by the economic crisis of 2021-2022 and historical market fragmentation, it does not seem that its impact on the affordability of individuals is a causal factor, but rather moderated by the income and financing factors ( $R^2 = 0.171$ ; adjusted  $R^2 = 0.096$ ). The more manageable policy goals are regional income inequality, availability of credit, and utility prices ( $r = -0.221$ ;  $r = 0.044$ ).
3. To policy makers, the immediate task at hand must be to increase accessibility of cheap mortgages to low and middle-income households (current commercial bank rates: 12-15.5%), to regulate utility

rates of urban residential homes and to control the regional income gradients that dictate the eligibility to engage in the formal housing market.

### Author contributions

Conceptualization, R.J.S., V.A.W.; methodology, V.A.W., N.N.P. and R.J.S.; validation, R.J.S. N.N.P. and V.A.W.; formal analysis, V.A.W. and R.J.S.; investigation, V.A.W., N.N.P. and R.J.S.; data curation, R.J.S. and V.A.W.; writing – original draft preparation, R.J.S. and N.N.P.; writing – review and editing, R.J.S. N.N.P. and A.K.; visualization, R.J.S. and A.K. project administration, J.V.; funding acquisition, R.J.S., A.K., N.N.P. and J.V. All authors have read and agreed to the published version of the manuscript.

### References

- [1] OECD Designing Policies for Efficient, Inclusive and Sustainable Housing, in OECD eBooks, Organization for Economic Cooperation and Development, 2021. DOI: 10.1787/8ec0f507-en
- [2] Sanchaniya R. J., Geipele I. Impact of Strategical Sustainability on Real Estate Industry'S Sustainability Performance, *Found. Manag.*, vol. 16, no. 1, 2024, pp. 59-66, DOI: 10.2478/fman-2024-0004
- [3] Kelly J., Blanc J. Le, Lydon R. Pockets of Risk in European Housing Markets: Then and Now, *SSRN Electron. J.*, 2019, DOI: 10.2139/ssrn.3723443
- [4] Lewandowska G., Taracha M., Maciuk K. Socio-economic factors associated with house prices. Evidence based on key macroeconomic aggregates globally, *Bud. i Arch.*, vol. 22, no. 3, 2023, pp. 45-58, DOI: 10.35784/bud-arch.3635
- [5] Samad D., Zainon N., Rahim F. A. M., Lou E. Malaysian Affordability Housing Policies Revisited, *Open House Int.*, vol. 42, no. 1, 2017, pp. 44-51, DOI: 10.1108/ohi-01-2017-b0007
- [6] T.S H., W.H.T G. ADOPTION OF SUSTAINABLE REAL ESTATE DEVELOPMENT IN SRI LANKA: A GAP ANALYSIS, *Proc. Int. Conf. Real Estate Manag. Valuat.*, vol. 5, 2022, DOI: 10.31357/icremv.v5.5645
- [7] Alikhan M. M. Dynamics of Low-Income Settlements in Colombo, Sri Lanka, in *Routledge eBooks, Informa*, 2024, pp. 396-406. DOI: 10.4324/9781003300991-39
- [8] Denagama T. D., Jayasooriya J. M. S. N. Comparative Analysis of Precast Construction and Conventional Construction of Small-scale Concrete Building in Terms of Cost, *Int. J. Res. Appl. Sci. Eng. Technol.*, vol. 11, no. 2, 2023, pp. 573-578, DOI: 10.22214/ijraset.2023.49049
- [9] Hettiarachchi T., Dhanji M. The Challenges of Sustainable Affordable Housing Construction During the Sri Lankan Economic Crisis, *Int. J. Res. Innov. Soc. Sci.*, 2024, pp. 1868-1875, DOI: 10.47772/ijriss.2024.802131
- [10] Balachandran C., Thennakoon T. M. S. P. K. Housing Deprivations in the Underserved Settlements of Jaffna Municipality and Its Urban Fringe Using Slum Severity Index, *Vidyodaya J. Humanit. Soc. Sci.*, vol. 8, no. 1, 2023, pp. 201-227, DOI: 10.31357/fhss/vjhss.v08i01.12
- [11] Sanchaniya R. J., Asif S. A. S., Geipele I. Role of Real Estate Management Firms Toward Sustainability in India, *Civ. Environ. Eng.*, vol. 19, no. 2, 2023, pp. 511-519, DOI: 10.2478/cee-2023-0046
- [12] Langappuli B. L., Ilangakoon I. W. M. A. D., Disaratna P. A. P. V. D. S., Perera B. A. K. S. Framework to Manage the Impacts on the Contractor's Budget for Construction Projects Due to the Economic Crisis in Sri Lanka, *J. Des. Built Environ.*, vol. 23, no. 3, 2023, pp. 98-117, DOI: 10.22452/jdbe.vol23no3.6
- [13] Rashmi Jaymin-Sanchaniya, Dany Thomson, Antra Kundzina I. G. Effective Project Management Practices in Data Center Construction, *Conf. Eng. Rural Dev.*, 2024, DOI: 10.22616/ERDev.2024.23.TF017
- [14] Li W., Dorfman J. H. Intrahousehold Economies of Scale with Application to Food Assistance and Work Incentive Programs, *Am. J. Agric. Econ.*, vol. 103, no. 4, 2021, pp. 1251-1267, DOI: 10.1111/ajae.12187
- [15] Jayathilaka R., Palihawadana T., Amalka I., Jayasinghe S., Jayarathne P. Influence of Socio-economic and Demographics factors on Households' Savings in Sri Lanka, *Vidyodaya J. Manag.*, vol. 8, 2022, DOI: 10.31357/vjm.v8ii.5604

- 
- [16] Goodman L., Li W., Zhu J. Housing Affordability: Local and National Perspectives, *Int. J. Popul. Data Sci.*, vol. 3, no. 5, 2018, DOI: 10.23889/ijpds.v3i5.1059
- [17] Head A., Lloyd-Ellis H., Stacey D. HETEROGENEITY, FRICTIONAL ASSIGNMENT, AND HOME-OWNERSHIP, *Int. Econ. Rev. (Philadelphia)*, vol. 64, no. 3, 2023, pp. 1265-1308, DOI: 10.1111/iere.12624
- [18] Leng K. S., Malek N. M., Yasin S. M. Housing Affordability Woes and The State Of Developed Underdevelopment In Penang Island, *Malaysian Manag. J.*, vol. 21, 2020, DOI: 10.32890/mmj.21.2017.9046
- [19] Nakiwala M., Mukiibi S., Kigundu A. T. Mortgage Financing: Access, Knowledge, Attitudes and Challenges Experienced by Urban Housing developers, *Int. J. Financ. Account.*, vol. 1, no. 1, 2023, pp. 47-56, DOI: 10.37284/ijfa.1.1.1030
- [20] Sanchaniya R. J. et al. Determinants of Property Reuse for Age-Friendly Social Housing Development in Shrinking and Ageing Cities : Evidence from Latvia, 2025, pp. 1-25.