



HOUSEHOLD FINANCIAL RESOURCES, LABOR INFORMALITY AND HOUSING EXPENDITURE PARTICIPATION IN VIETNAM

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ARTICLE INFO	ABSTRACT
DOI: 10.52932/jfmr.v17i1enes.1475 <i>Received:</i> May 26, 2026 <i>Accepted:</i> July 31, 2026 <i>Published:</i> August 08, 2026 Keywords: Household financial resources, Housing access, Housing expenditure participation, Labor informality, Vietnam Article classification: Research paper JEL Classification: R21, D12, J46, C25	Purpose – This study examines housing expenditure participation among Vietnamese households, defined as whether a household reports any positive monetary housing-related expenditure during the survey period. It aims to distinguish housing expenditure participation from housing expenditure intensity, housing affordability burden, and housing quality. Design/methodology/approach – The study uses household-level data from the 2022 Vietnam Household Living Standards Survey with 9,398 observations. A Probit model is estimated, and Average Marginal Effects are reported to interpret the results in probability terms. Findings – The results show that household size is positively and significantly associated with housing expenditure participation. In contrast, total household consumption and urban residence are negatively and significantly associated with the probability of reporting housing-related expenditure. Labor informality has a negative coefficient, but the association is not statistically significant. Practical implications – The findings suggest that housing expenditure participation should not be interpreted as a direct measure of housing welfare or affordability. A zero value may reflect owner-occupied housing, family-supported accommodation, informal arrangements, or other non-cash housing access mechanisms. Housing policy should therefore combine participation-based indicators with broader

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measures of tenure, housing quality, overcrowding, affordability pressure, and household welfare.

Originality/value – The study contributes to the housing literature by treating housing expenditure participation as a distinct survey-based outcome, separate from expenditure intensity and affordability burden.

1. Introduction

Housing is a basic condition for household welfare, economic security and social inclusion. In developing economies, access to housing is shaped not only by income and housing prices, but also by tenure status, family support, employment conditions, informal housing channels and the way household expenditure is recorded. For this reason, housing-related expenditure observed in household survey data should be interpreted with care. A household that reports no monetary housing expenditure may not necessarily face no housing need; it may live in owner-occupied housing, family-provided accommodation or other arrangements that do not involve regular payments. At the same time, a household that reports positive housing expenditure may not necessarily enjoy better housing conditions. It may simply be more exposed to rent, maintenance, repair or other housing-related costs.

Much of the housing literature has focused on affordability, housing cost burden, homeownership, rental pressure and housing quality. These issues remain important, but they do not fully capture the participation dimension of housing expenditure. Housing affordability is often measured through the ratio between housing costs and income, or through residual income after housing costs (Stone, 2006; Brooks, 2023). Other studies have emphasized that affordability should be understood more broadly, including accessibility, amenity and adequacy (Cai & Lu, 2015). Recent research also suggests that housing affordability is

connected to household financial conditions, tenure arrangements, location and broader budget constraints (Kim & Kang, 2024; Tarne & Bezemer, 2025; Zhang et al., 2026). These discussions imply that the simple presence or absence of housing expenditure in survey data should not be treated as a direct measure of housing affordability or housing welfare.

This study focuses on housing expenditure participation among Vietnamese households. Housing expenditure participation is defined as a binary outcome that equals one if a household reports any positive monetary housing-related expenditure during the survey period, and zero otherwise. The study does not examine the amount of housing expenditure. Instead, it asks which household characteristics are associated with the probability of reporting positive housing-related expenditure. This approach is useful because it separates the incidence of housing expenditure from its intensity. Such a distinction is important in Vietnam, where households may access housing through owner-occupied dwellings, inherited housing, family support, informal rentals, self-built housing or other non-cash arrangements.

The objective of the study is to examine whether household financial resources, labor informality, household size and residential location are associated with housing expenditure participation. The analysis uses household-level data from the 2022 Vietnam Household Living Standards Survey. A Probit model is estimated because the dependent variable is binary, and Average Marginal Effects are reported

to interpret the results in probability terms. The study treats the estimated relationships as statistical associations rather than causal effects.

The study is expected to make both theoretical and practical contributions. Theoretically, it contributes to the literature by distinguishing housing expenditure participation from housing expenditure intensity and housing affordability burden. This distinction helps avoid the interpretation that zero reported housing expenditure automatically means the absence of housing need or housing constraint. Practically, the study provides evidence that can help policymakers interpret household survey indicators more carefully. Participation-based measures may be useful, but they should be combined with information on tenure, housing quality, overcrowding, housing security and affordability pressure.

The novelty of the study lies in its focus on housing expenditure participation as a separate empirical outcome. Rather than assuming that higher household resources or urban residence necessarily increase housing expenditure, the study allows these associations to be tested empirically. This is relevant because housing expenditure in household survey data may reflect different housing arrangements, not only household ability to pay. The results show that household size is positively associated with housing expenditure participation, while total household consumption and urban residence are negatively associated with the probability of reporting housing-related expenditure. Labor informality has a negative but statistically insignificant association.

The remainder of the paper is organized as follows. The next section reviews the relevant literature, develops the analytical framework and presents the hypotheses. The third section describes the data, variables and empirical method. The fourth section reports and discusses the empirical results. The final section

presents the conclusions, policy implications, research limitations and directions for future research.

2. Literature review, theoretical framework, and methods

2.1. Literature review

Housing affordability has been widely examined in housing studies, urban economics and social policy. A common approach is to measure affordability through the relationship between housing costs and household income, such as the housing-cost-to-income ratio or the price-to-income ratio. These measures are useful because they are simple and comparable across household groups and locations. However, they do not always reflect how households actually experience housing-related financial pressure. Cai and Lu (2015) argue that housing affordability should be understood beyond income and price terms. They propose a broader view of housing appropriateness, including affordability, accessibility, amenity and adequacy. This view suggests that a household may obtain housing that appears affordable in monetary terms but may still face trade-offs in location, housing quality, access to employment, or basic services.

This broader view is relevant to the present study because the dependent variable is not housing expenditure intensity, housing cost burden, housing quality, or homeownership. The study focuses on housing expenditure participation, defined as whether a household reports any monetary housing-related expenditure during the survey period. This distinction is important. A household with no reported housing expenditure should not be interpreted automatically as having no housing need or no housing constraint. It may own its dwelling, live in family-provided housing, receive employer-related support, or rely on informal and non-cash housing arrangements.

Conversely, a household with reported housing expenditure may not necessarily have better housing conditions. It may simply be more exposed to rent, mortgage payments, repairs, maintenance, or other housing-related costs.

Recent studies also show that affordability may vary depending on the measurement approach. Brooks (2023) compares conventional housing-cost burden measures with residual-income-based measures and shows that affordability outcomes may differ when households' ability to meet other basic needs is considered. The residual income approach is useful because it asks whether households have enough income left after housing costs to cover non-housing necessities. In a similar direction, Zhang et al. (2026), while studying energy poverty, show that ignoring housing costs may understate the true level of household financial strain. Their argument is not about housing expenditure participation directly, but it supports a key point for this study: housing-related expenditure should be read within the broader household budget, not as an isolated payment.

The financial nature of housing affordability is further emphasized by Tarne and Bezemer (2025). They argue that affordability is not only a matter of physical housing supply, but also a monetary and financial issue shaped by income, savings, borrowing capacity, housing prices, rents and credit conditions. This point is relevant for household-level research because participation in housing expenditure may depend not only on current resources, but also on tenure status, accumulated assets, access to credit and exposure to formal housing markets.

Housing affordability also has spatial and temporal dimensions. Kim and Kang (2024) show that housing affordability stress should be viewed as a longitudinal experience rather than a single point-in-time condition. Their

study indicates that income, tenure and location jointly shape the probability of chronic housing affordability stress. This insight is useful because housing expenditure observed in a cross-sectional survey may reflect only one point in a longer housing trajectory. Lin et al. (2026) further show that affordable housing provision should not be evaluated only by price or rent. In their study of Shenzhen, public sector-led affordable housing located in peripheral areas was associated with longer commutes, while some private or informal housing arrangements, such as urban villages, offered lower-cost accommodation closer to employment opportunities. This suggests that residential location may influence housing expenditure participation through rental market exposure, commuting costs, informal housing channels and spatial access to jobs.

In developing economies, household housing behavior may also be shaped by family networks and informal housing channels. Ko et al. (2026), in a cross-national study of housing unaffordability and marriage formation, find that the relationship between housing prices and household formation is weaker in developing economies, partly because family support and informal housing channels may absorb some housing market pressures. Although their outcome differs from this study, the point is useful for interpreting housing expenditure participation in contexts where non-market housing access remains important.

Overall, the literature suggests that housing expenditure participation should be interpreted carefully. It captures whether a household reports monetary engagement with housing-related costs. It should not be treated as a direct measure of housing affordability, housing welfare, housing quality or housing security. This distinction is the starting point for the analytical framework of this study.

2.2. Theoretical and analytical framework

This study conceptualizes housing expenditure participation as an entry-stage monetary indicator of household engagement with housing-related costs. The dependent variable identifies whether a household reports any positive housing-related expenditure during the survey period. It does not measure how much the household spends, whether the household is cost-burdened, or whether the dwelling is adequate, secure or of good quality. This distinction is important in household survey data, especially in contexts where housing access may occur through both market and non-market mechanisms.

The analytical framework is organized around four channels.

The first channel is household financial resources. Households with greater economic capacity may be better able to rent housing, pay for housing services, maintain dwellings, or enter mortgage-related transactions. However, the relationship may not be strictly positive. A household with higher resources may already live in owner-occupied housing, inherited housing, family-supported housing, or other arrangements that do not generate current monetary housing expenditure. Therefore, financial resources are expected to be associated with housing expenditure participation, but the direction of the association may depend on tenure and payment arrangements.

The second channel is labor informality. Informal employment is often linked to irregular income, limited job protection, weaker access to social insurance and lower eligibility for formal credit. These factors may reduce a household's ability to enter formal housing finance systems, sign formal rental contracts, or maintain regular housing payments. At the same time, households with informal workers may rely on informal rentals, shared accommodation, self-built housing, employer-

related housing, or family support. For this reason, labor informality may reduce reported monetary housing expenditure participation, even though housing needs remain present.

The third channel is household demographic need. Larger households usually require more living space, more utilities, more maintenance and more housing-related services. Even under budget constraints, a larger household may be more likely to report at least some housing-related expenditure. Household size is also relevant from a residual-income perspective, because larger households face greater non-housing needs and may have to balance housing payments against food, education, health care, transport and other basic expenditures.

The fourth channel is residential location. Urban and rural households differ in housing markets, tenure arrangements, infrastructure access, employment location and expenditure reporting. Urban households may face higher housing costs and greater exposure to rental markets. However, they may also have more diverse housing arrangements, including family-based housing, shared accommodation, employer-supported housing and informal rental channels. Thus, urban residence should not be assumed to have a uniformly positive relationship with reported housing expenditure participation. Its effect is treated as an empirical question.

Based on these four channels, the study links the recent housing affordability literature with the empirical model. Housing expenditure participation is specified as a function of household financial resources, labor informality, household size and residential location. The detailed data source, variable construction and estimation procedure are presented in Section 3.

2.3. Hypotheses and method orientation

Based on the literature review and analytical framework, the study develops four hypotheses.

These hypotheses are stated in relation to housing expenditure participation, not housing expenditure intensity or housing affordability burden. The dependent variable captures whether a household reports any positive housing-related expenditure during the survey period.

Hypothesis H1. Household financial resources are significantly associated with housing expenditure participation.

Households with greater financial resources may have more capacity to participate in market-based housing expenditure. However, the expected sign is ambiguous. Higher household resources may also be associated with owner-occupied housing, inherited housing, family-supported accommodation, or other arrangements that do not generate current monetary housing expenditure. Therefore, this hypothesis expects a significant association but does not impose a strictly positive sign.

Hypothesis H2. Households with informal workers are less likely to participate in housing-related expenditure.

Informal employment may limit stable income, access to formal credit and regular housing payment arrangements. Households

with informal workers may also rely more on informal, shared or family-supported housing channels. The expected sign for this variable is negative.

Hypothesis H3. Household size is positively associated with housing expenditure participation.

Larger households tend to have greater housing-related needs, including space, utilities, maintenance and other dwelling-related costs. Household size is therefore expected to increase the probability of reporting positive housing expenditure. The expected sign is positive.

Hypothesis H4. Residential location is significantly associated with housing expenditure participation.

Urban and rural households differ in housing markets, tenure structures, rental exposure, family-based housing arrangements and the way housing expenditure is recorded. Urban residence may increase exposure to market-based housing costs, but it may also reflect more diverse housing arrangements that do not necessarily generate current monetary expenditure. Therefore, the expected sign is ambiguous.

The expected signs are summarized as follows:

Variable	Hypothesis	Expected sign
ln_total_exp	H1	Ambiguous
informal	H2	-
hhsz	H3	+
urban	H4	Ambiguous

These hypotheses require an empirical model that estimates the probability of participation rather than the level of expenditure. Accordingly, the study uses a binary dependent variable equal to one if the household reports positive housing-related expenditure and zero otherwise. A Probit model is suitable because the outcome is dichotomous and the objective is to

examine factors associated with the probability of housing expenditure participation. Average marginal effects are used to interpret the estimated associations in probability terms. This approach is consistent with the distinction between participation and intensity, and it avoids interpreting zero expenditure as the absence of housing need or housing constraint.

3. Research methods

3.1. Data source and sample

The empirical analysis uses data from the 2022 Vietnam Household Living Standards Survey (VHLSS 2022). The VHLSS is suitable for this study because it provides household-level information on demographic characteristics, employment status, consumption, residential location and living conditions. These variables allow the study to examine whether housing expenditure participation is associated with household financial resources, labor informality, household size and residential location.

The household is the unit of analysis. After data cleaning and the removal of observations with missing information on the variables used in the model, the final analytical sample includes 9,398 households. The sample covers both urban and rural households. This is important because residential location is included as one of the main variables in the empirical model. Survey weights are used where appropriate to preserve the representativeness of the VHLSS data.

3.2. Variable measurement

The dependent variable is housing expenditure participation. It is coded as a binary variable equal to 1 if the household reports any positive monetary housing-related expenditure during the survey reference period, and 0 otherwise. This variable is denoted as *has_housing_exp*.

This measure is different from housing expenditure intensity. It does not measure how much a household spends on housing. Instead, it identifies whether the household reports any housing-related expenditure at all. A value of 0 should therefore not be interpreted as the absence of housing need, housing constraint or housing access. It may reflect owner-occupied housing, family-supported accommodation, employer-related support, informal housing

arrangements, or other non-cash housing access mechanisms. A value of 1 indicates that the household appears in the survey as having incurred some form of monetary housing-related expenditure, such as rent, repair, maintenance, or other dwelling-related payments. For this reason, the dependent variable is interpreted as a participation indicator, not as a direct measure of affordability, housing quality, or housing welfare.

The main explanatory variables follow the analytical framework developed in Section 2.

Household financial resources are measured by the natural logarithm of total household consumption expenditure, denoted as *ln_total_exp*. Total consumption expenditure is used because household survey data often record consumption more reliably than income, especially when income is irregular, seasonal, or incompletely reported. This follows the common practice in household welfare analysis, where consumption is frequently used as a proxy for longer-term living standards (Deaton, 1997; Deaton & Zaidi, 2002). In this study, however, *ln_total_exp* is interpreted as a proxy for overall household economic capacity, not as a direct measure of housing affordability. As discussed in Section 2, households with higher resources may or may not report current housing expenditure, depending on tenure status, ownership, family support and other housing arrangements.

Labor informality is measured by a household-level binary variable, denoted as *informal*. A household is classified as being engaged in informal employment if at least one working household member is identified as participating in informal employment according to the survey's employment information. The variable equals 1 for households with informal employment and 0 otherwise. This variable is included because informal employment

may affect housing expenditure participation through income instability, limited social protection and weaker access to formal finance.

Household size, denoted as *hhsz*, is measured as the total number of household members. It is included to capture demographic pressure and housing-related needs. Larger households may require more space, more utilities, more repairs, or more frequent housing adjustments.

Residential location is measured by an urban dummy variable, denoted as *urban*. It equals 1

for urban households and 0 for rural households, based on the official classification used in the survey. The variable captures spatial differences in housing markets, tenure arrangements, rental exposure, infrastructure access and the way housing expenditure is recorded. In line with the revised analytical framework, the sign of this variable is not imposed in advance.

The dependent variable and the main explanatory variables are summarized in Table 1

Table 1. Variable definitions

Variable	Definition	Measurement
<i>has_housing_exp</i>	Housing expenditure participation	1 if household reports positive housing-related expenditure; 0 otherwise
<i>ln_total_exp</i>	Household financial resources	Natural logarithm of total household consumption expenditure
<i>informal</i>	Labor informality	1 if household has at least one informally employed worker; 0 otherwise
<i>hhsz</i>	Household size	Number of household members
<i>urban</i>	Residential location	1 urban; 0 rural

Note: Variables are constructed from the VHLSS 2022 household-level data. Binary variables are coded as 1 if the stated condition is met and 0 otherwise.

3.3. Empirical model

Because the dependent variable is binary, the study estimates a Probit model. The model is used to examine how the selected household characteristics are associated with the probability that a household reports positive housing-related expenditure. The baseline specification is written as:

$$P(H_i = 1|X_i) = \Phi(X_i\beta)$$

where H_i denotes housing expenditure participation for household i , X_i is a vector of explanatory variables, β is the vector of estimated parameters, and $\Phi(\cdot)$ is the cumulative distribution function of the standard normal distribution.

The Probit coefficients indicate the direction and statistical significance of the associations, but they are not directly interpreted as changes in probability. For this reason, the study also reports Average Marginal Effects (AMEs). The AMEs show how the predicted probability of reporting housing expenditure changes with each explanatory variable, holding the other variables in the model constant. This makes the findings easier to discuss in percentage-point terms and more useful for policy interpretation (Wooldridge, 2010).

The estimates are interpreted as associations with the probability of reporting housing expenditure participation, rather than causal effects on housing access, housing quality

or housing welfare. This interpretation is consistent with the cross-sectional nature of the VHLSS data and with the conceptual distinction between participation and expenditure intensity discussed above.

3.4. Statistical inference and diagnostic checks

Robust standard errors are used in the estimation to reduce concerns about heteroskedasticity in the household survey data. Statistical significance is reported at the conventional 1 percent, 5 percent and 10 percent levels.

The overall fit of the model is assessed using the Wald chi-square test, which examines whether the explanatory variables are jointly associated with housing expenditure participation. In addition, the study conducts basic diagnostic checks. Model specification is examined using a linktest. Multicollinearity is assessed using Variance Inflation Factors from an equivalent linear probability specification. These diagnostic checks do not replace substantive interpretation, but they help assess whether the baseline

results are affected by obvious specification or multicollinearity problems.

The empirical strategy is therefore consistent with the conceptual distinction made in Section 2. The model focuses on participation rather than expenditure intensity. It estimates whether selected household characteristics are associated with the probability of reporting housing-related expenditure, while recognizing that zero reported expenditure may reflect different housing situations rather than a simple absence of housing need.

4. Results and discussion

4.1. Baseline probit estimates

Table 2 presents the Probit estimates for housing expenditure participation and the corresponding Average Marginal Effects (AMEs). The dependent variable equals 1 when a household reports any positive housing-related expenditure during the survey period, and 0 otherwise. Robust standard errors are reported.

Table 2. Probit Estimates and Average Marginal Effects for Housing Expenditure Participation

Variable	Probit coefficient	Robust SE	AME	Robust SE
Informal employment	-0.131	0.080	-0.022	0.013
Log of total household consumption	-0.098***	0.031	-0.016***	0.005
Household size	0.105***	0.012	0.017***	0.002
Urban residence	-0.763***	0.051	-0.127***	0.009
Observations	9,398		9,398	
Wald χ^2 (4)	359.50***			
Pseudo R ²	0.065			

Note: Robust standard errors are reported. Average marginal effects are calculated after Probit estimation. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

The model is statistically significant as a whole, as shown by the Wald chi-square statistic. This indicates that the selected household characteristics are jointly associated

with housing expenditure participation. The Pseudo R² is modest, which is common in household-level binary response models. The result suggests that the model is useful

for identifying systematic associations, but housing expenditure participation is still likely to be shaped by other unobserved factors such as tenure status, housing quality, inherited housing, family support and local housing market conditions.

The coefficient on total household consumption is negative and statistically significant. This result supports the hypothesis that household financial resources are significantly associated with housing expenditure participation, although the estimated sign is negative. This should not be interpreted as evidence that households with greater resources have worse housing access. The dependent variable records whether the household reports monetary housing-related expenditure during the survey period. It does not measure housing quality, housing adequacy, homeownership, or affordability burden. A household with higher resources may already live in owner-occupied housing, inherited housing, or family-supported accommodation, and therefore may not report current housing expenditure.

Household size has a positive and statistically significant coefficient. This result is consistent with H3. Larger households are more likely to report housing-related expenditure, which may reflect greater needs for space, utilities, repairs, maintenance, or other dwelling-related costs.

Urban residence has a negative and statistically significant coefficient. This result supports the hypothesis that residential location is significantly associated with housing expenditure participation, although the estimated association is negative. The result suggests that, after household resources, labor informality and household size are taken into account, urban households are less likely than rural households to report positive housing-related expenditure. This finding needs to be interpreted with caution because urban residence may capture diverse housing arrangements, including owner-occupied

housing, family-based accommodation, shared housing, employer-supported housing, or informal rental channels.

Labor informality has a negative coefficient, which is consistent with the expected direction in H2. However, the coefficient is not statistically significant. The baseline model therefore does not provide strong evidence that household labor informality, by itself, is associated with a lower probability of housing expenditure participation.

4.2. Average marginal effects

The AME estimates provide a more direct interpretation of the results in probability terms. For total household consumption, the AME is -0.016. This means that a one-unit increase in the log of total household consumption is associated with a 1.6 percentage-point decrease in the probability of reporting positive housing-related expenditure, holding other variables constant. The size of this effect is relatively small, but the negative sign is important because it confirms that financial resources do not have a simple positive relationship with the reporting of housing expenditure.

For household size, the AME is 0.017. Each additional household member is associated with a 1.7 percentage-point increase in the probability of housing expenditure participation. This result is consistent with the expectation that larger households face greater housing-related needs.

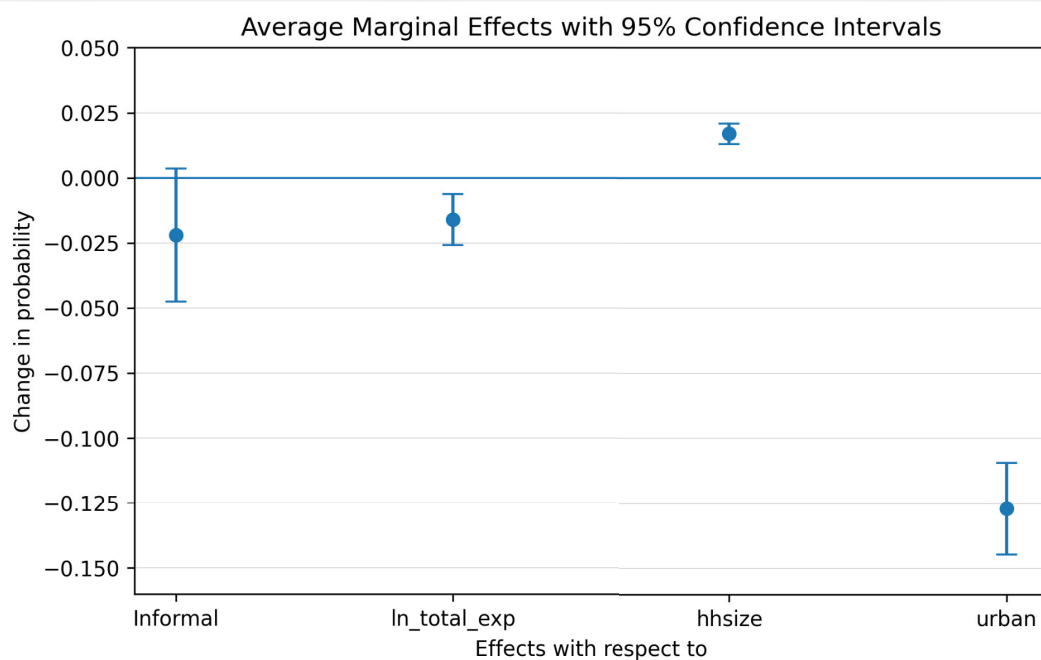
The largest marginal effect is observed for urban residence. The AME is -0.127, indicating that urban households are about 12.7 percentage points less likely than rural households to report positive housing-related expenditure, holding other variables constant. This is the strongest association in the model. It suggests that the urban-rural difference in housing expenditure participation is substantial and should be examined in relation to tenure, family-based

housing arrangements and how housing costs are recorded in household survey data.

For labor informality, the AME is -0.022, but it is not statistically significant. Although the sign is negative, the result does not provide enough statistical evidence to conclude that households with informal workers have a lower probability of reporting housing-related expenditure. This finding suggests that labor informality may not operate as a direct predictor of housing expenditure participation in the baseline model. Its role may be mediated by other household and housing characteristics not fully observed in the model.

4.3. Visualization of marginal effects

Figure 1 presents the average marginal effects and their 95% confidence intervals. The figure confirms the main patterns reported in Table 2. Urban residence has the largest marginal effect in absolute value and remains clearly below zero. Household size has a smaller but positive marginal effect. Total household consumption also has a negative marginal effect, although the magnitude is modest. The confidence interval for labor informality crosses zero, which is consistent with the insignificant estimate in the Probit model.



Note: The figure displays average marginal effects with 95% confidence intervals based on Probit estimates.

Figure 1. Average marginal effects of key determinants of housing expenditure participation

The figure is useful because it shows not only the direction of the associations but also the relative size and statistical uncertainty of each marginal effect. In particular, the visual gap between the urban coefficient and the other variables highlights the importance of spatial differences in reported housing expenditure participation.

4.4. Discussion of key findings

The results should be interpreted in light of how the dependent variable is constructed. Housing expenditure participation is not the same as housing affordability, housing quality, or housing welfare. It only captures whether a household reports positive monetary housing-

related expenditure during the survey period. This distinction helps explain why some results do not follow a simple affordability interpretation.

The negative association between total household consumption and housing expenditure participation suggests that better-off households are not necessarily more likely to report current housing expenditure. This finding is consistent with the study's conceptual distinction between participation and intensity. Higher economic capacity may allow some households to own housing, live in inherited dwellings, or receive support from family networks. These arrangements may reduce or remove the need for regular out-of-pocket housing payments during the survey period. In this sense, the result does not imply lower housing access among better-off households. It suggests that recorded housing expenditure is shaped by the form of housing access, not only by household resources.

This interpretation is in line with the literature that cautions against reading housing affordability through a single expenditure indicator. Cai and Lu (2015) argue that affordability should be understood together with accessibility, amenity and adequacy, while Brooks (2023) and Zhang et al. (2026) show that affordability assessment depends on how household budgets and residual income are considered. The finding on total household consumption therefore supports the need to distinguish between whether a household reports housing expenditure and whether the household faces housing affordability stress.

The positive association between household size and housing expenditure participation is more straightforward. Larger households have greater housing-related needs, including space, repairs, utilities and maintenance. They may also face more frequent housing adjustments as family needs change. This result is consistent with

the view that household demographic pressure affects housing-related expenditure decisions.

The negative association between urban residence and housing expenditure participation is also important. At first glance, one might expect urban households to report more housing expenditure because urban housing markets are more developed and housing costs are often higher. However, the result shows the opposite. This may reflect the diversity of urban housing arrangements. Some urban households may live in owner-occupied or family-owned dwellings. Others may share accommodation, receive employer-related support, or rely on informal rental arrangements that are not fully captured as regular monetary expenditure. Lin et al. (2026) show that affordable housing cannot be assessed only through price or rent, because location, commuting burden and informal housing channels also matter. Ko et al. (2026) similarly suggest that in developing economies, family networks and informal housing channels may absorb part of the pressure from formal housing markets. These arguments help explain why urban residence may not necessarily increase reported housing expenditure participation.

The insignificant result for labor informality also requires careful interpretation. The negative sign is consistent with the expectation that informal employment may be linked to unstable income and weaker access to formal finance. However, the lack of statistical significance means that the baseline model does not support a strong direct relationship between informality and housing expenditure participation. One possible explanation is that informal workers may access housing through many different channels, including informal rentals, shared housing, self-built housing and family support. These channels may weaken the observed relationship between labor informality and reported monetary housing expenditure.

Overall, the findings support the main argument of the study. Housing expenditure participation should be treated as a specific survey-based outcome. It provides useful information about whether households enter recorded monetary housing expenditure, but it should not be interpreted as a complete measure of housing welfare. The results suggest that household size and residential location are particularly important, while household financial resources and labor informality need to be read through the lens of tenure, family support and informal housing arrangements. These findings also indicate that participation-based evidence can complement, rather than replace, conventional affordability indicators.

5. Conclusions and policy implications

5.1. Conclusions

This study examines housing expenditure participation among Vietnamese households using data from the 2022 Vietnam Household Living Standards Survey. The study focuses on whether a household reports any positive housing-related expenditure, rather than the amount of housing expenditure. This distinction is important because housing expenditure participation should not be interpreted as a direct measure of housing affordability, housing quality, or housing welfare.

The empirical results show that household size is positively associated with housing expenditure participation. Larger households are more likely to report housing-related expenditure, which is consistent with the expectation that housing needs increase with household size. Total household consumption is negatively and significantly associated with housing expenditure participation. This result suggests that households with greater economic capacity are not necessarily more likely to report current monetary housing expenditure. This may reflect owner-occupied housing, inherited housing,

family-supported accommodation, or other arrangements that reduce the need for regular housing payments during the survey period.

Urban residence is also negatively and significantly associated with housing expenditure participation. This finding does not mean that urban households face fewer housing problems. Rather, it suggests that reported monetary housing expenditure may differ across residential locations because of tenure arrangements, family-based housing, shared accommodation, informal rental channels, or how housing costs are recorded in the survey. Labor informality has a negative coefficient, but the result is not statistically significant. The model therefore does not provide strong evidence that household labor informality directly reduces housing expenditure participation.

Overall, the findings support the main argument of the study: housing expenditure participation is a specific indicator of recorded monetary engagement with housing-related costs. It is useful for identifying whether households enter observable housing expenditure, but it should be interpreted together with other housing indicators, such as tenure, housing quality, affordability burden, overcrowding and housing security.

5.2. Policy implications

The findings have several policy implications. *First*, housing policy should not rely only on whether households report housing expenditure. A household with no reported housing expenditure may not be free from housing constraints. It may live in inherited housing, crowded family housing, informal accommodation, or housing arrangements that do not involve regular payments. Therefore, participation-based indicators should be combined with other measures of housing access and welfare.

Second, the positive association between household size and housing expenditure participation suggests that larger households may need closer policy attention. Housing support programs should consider household size when assessing housing needs, especially for households with children, multi-generation families, or households facing crowding pressure. A uniform support rule may overlook the different housing needs of households with different demographic structures.

Third, the negative association between urban residence and housing expenditure participation suggests that urban housing issues should not be assessed only through recorded housing payments. In urban areas, households may use different strategies to reduce housing costs, including living with relatives, sharing housing, relying on informal rentals, or accepting lower-quality housing in better locations. Policy design should therefore pay attention to the interaction between housing cost, location, commuting burden and housing quality.

Fourth, although labor informality is not statistically significant in the baseline model, it should not be excluded from policy concern. Informal workers often face unstable income and weaker access to formal credit. Their housing difficulties may not be fully captured by a binary expenditure indicator. Housing finance and housing support policies should consider flexible mechanisms for households with irregular income, especially when formal income documentation is required for access to credit or subsidized housing programs.

Finally, housing support should be evaluated not only by direct housing consumption but also by broader household welfare. Early and Olsen (2026) show that low-income housing programs may affect both housing services and non-housing consumption. This point is relevant for policy because reducing housing cost pressure may free household resources for food, health

care, education, transport and other basic needs. In this sense, housing policy should be linked with household welfare policy, not treated only as a construction or real estate issue.

5.3. Limitations and future research

This study has several limitations. *First*, the analysis uses cross-sectional data from VHLSS 2022. The results show statistical associations, not causal effects. Future research could use panel data or quasi-experimental designs to examine how changes in income, employment or housing policy affect housing expenditure participation over time.

Second, the dependent variable captures only whether households report positive housing-related expenditure. It does not measure the level of expenditure, affordability burden, housing quality, overcrowding, tenure security or housing satisfaction. Future studies could combine participation indicators with expenditure intensity, housing cost burden, residual income measures and housing quality indicators.

Third, the model includes a limited set of explanatory variables. Important housing-related factors such as tenure status, dwelling ownership, housing quality, land-use arrangements, mortgage status, rental contract type, or access to housing support are not fully examined in the baseline specification. Future research should incorporate these variables if the data allow.

Fourth, labor informality is measured at the household level. This approach captures whether the household is exposed to informal employment, but it does not distinguish between different degrees of informality, income instability, type of occupation or social insurance coverage. Future research could develop more detailed measures of labor informality and examine how they relate to housing access and housing finance.

Finally, the study focuses on housing expenditure participation at the national household level. Future research could examine differences across regions, income groups, household types, and urban areas with different housing market conditions. Such analysis would help identify whether the determinants of housing expenditure participation differ between large cities, smaller urban areas and rural locations.

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Data Availability

The data used in this study are derived from the Vietnam Household Living Standards Survey 2022 (VHLSS 2022), which is available from the General Statistics Office of Vietnam subject to its data access regulations.

AI Usage Statement

During manuscript preparation, the authors used ChatGPT for language editing and structure support only. The authors reviewed all AI-assisted outputs, made the final academic decisions, and take full responsibility for the final content of the manuscript.

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