

Enhancing sustainable social housing development in Vietnam for industrial park workers from the beneficiary perspective

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ABSTRACT

The development of social housing (SH) in Vietnam—particularly for industrial park workers (IPW)—remains largely unsustainable. This study investigates the key factors influencing IPWs' decisions to buy or rent housing, providing a foundation for proposing solutions to promote the sustainable development of SH from the beneficiaries' perspective. Based on survey data from 152 IPWs, the five most influential factors identified are: "Housing Price"; "Financial situation"; "Surrounding environment: Landscape, trees, air quality..."; "Quality of customer care service from the investor: Support before and after purchase/rental" and "Neighbourhood public utilities: schools, hospitals, markets,..." are the five factors that most strongly influence workers' decisions to buy/rent an accommodation. Drawing on these findings, the study proposes five groups of solutions addressing: affordable housing provision, financial accessibility, infrastructure development, legal frameworks, and communication strategies—each aimed at fostering more sustainable SH development for IPWs in the future.

1. Introduction

In recent years, the rapid development of industrial parks (IPs) in Vietnam has significantly contributed to economic growth and the structural transformation of the national economy towards modernisation, while generating employment for millions of workers across various provinces [1]. However, this growth has been accompanied by increasing housing demand among industrial park workers (IPWs), which has placed substantial pressure on local infrastructure systems. According to the Ministry of Labour, Invalids and Social Affairs, as of May 2023, more than 50% of the approximately 7 million IPWs across the country were in need of housing, yet up to 70%—equivalent to around 2.45 million workers—still had unmet housing demands [2].

Housing is universally recognised as a fundamental human need and a critical factor influencing quality of life and labour productivity. For industrial workers—who typically endure high work intensity and long hours—the availability of appropriate housing is particularly vital. Poor living conditions can undermine workers' health and, in turn, affect their job performance. While some industrial parks offer accommodation on or near the premises, the quality and affordability of such housing vary significantly, often failing to meet workers' expectations or needs. Survey data from 2024 revealed that 53.9% of migrant IPWs were living in level 4 rental units, including basic hostels, mixed-use rental housing, and makeshift homes with corrugated iron or fibrocement roofs. Even where sanitation facilities are available, limited space and poor construction standards have negatively impacted residents' wellbeing and productivity [1], [2].

The World Bank has noted that many countries have recognised the urgency of integrating housing solutions into industrial park

planning. However, the effectiveness of implementation varies considerably. In Vietnam, the Government approved a national project in 2023 titled *"Investing in the construction of at least one million social housing units for low-income earners and IPWs in the 2021–2030 period"*, marking a clear commitment towards resolving the housing shortage for IPWs [3]. Addressing this demand is not only a social responsibility for businesses and local authorities but also a crucial component of sustainable development in industrial parks and the broader economy.

Despite this commitment, the development of social housing (SH) for IPWs remains unsustainable. From the perspective of beneficiaries, access to SH is still limited. With average monthly incomes of merely VND 6–7 million, many IPWs are unable to afford home ownership, and even social rental housing remains beyond reach for some [4].

A review of the existing literature reveals that most studies have focused on SH policies or the general housing needs of industrial workers. Few, however, have explored the specific factors that influence IPWs' decisions to buy or rent housing. Thus, there is a pressing need to investigate how various factors—such as pricing, location, public amenities, and housing loan support—affect workers' housing decisions. Gaining a comprehensive understanding of these influences is essential to formulating evidence-based strategies for governments, enterprises, and real estate developers to foster the sustainable development of SH for IPWs, with a strong emphasis on the end-user perspective [5]–[8].

2. Research sequence and methods

To examine the influence of various factors on industrial park workers' (IPWs) decisions to buy or rent housing, this study employs the Relative Importance Index (RII) method. The RII was selected due to its

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effectiveness in quantifying and ranking the relative significance of multiple factors, based on survey responses [9].

Data were collected through a structured questionnaire distributed to IPWs, designed using a five-point Likert scale with the following response options:

- 1 – Absolutely no influence,
- 2 – No influence,
- 3 – Neutral,
- 4 – Influential,
- 5 – Highly influential.

The collected data were then analysed using the RII approach to determine the weight and ranking of each factor influencing housing decisions. This method provides a clear prioritisation of the factors that most significantly affect whether workers choose to buy or rent housing in or near industrial parks:

$$RII = \frac{\sum_{i=1}^5 W_i \times X_i}{A \times N}$$

In which:

- RII – Relative Importance Index used for ranking
- W_i – Influence on a scale of 1 to 5
- X_i – Number of respondents who chose the scale i
- i – Likert scale from 1 to 5
- A is the highest Likert scale (of 5 in this study)
- N is the total number of survey participants

The threshold value to benchmark is as follows:

- RII from 0.00 to 0.20: Absolutely no influence
- RII from 0.21 to 0.40: No influence
- RII from 0.41 to 0.60: Normal
- RII from 0.61 to 0.80: Influence
- RII from 0.81 to 1.00: High influence

To identify the factors influencing industrial workers' decisions to buy or rent housing, a comprehensive literature review was conducted to compile a list of potential influencing variables. This preliminary list was then reviewed by five experts with over ten years of experience in social housing research. All experts reached consensus on the proposed list, resulting in the retention of 20 influencing factors, categorised into seven thematic groups as summarised in Table 1.

To ensure the reliability of the survey results, the study adopted the sampling guideline proposed by Hair et al. [10], which recommends a minimum observation-to-variable ratio of 5:1 for statistical validity at a 95% confidence level. Accordingly, with 20 influencing variables, the minimum required sample size was calculated as:

$$\text{Sample size} = 5 \times 20 = 100 \text{ respondents.}$$

This benchmark was used to guide data collection efforts and ensure methodological robustness in the subsequent analysis.

3. Survey Results

3.1. Survey participants

The survey was administered via an online questionnaire between October 2024 and December 2024. A total of 152 valid

responses were collected from industrial park workers in Bac Ninh and Ha Nam provinces. All responses met the inclusion criteria and were deemed suitable for analysis. The demographic and occupational characteristics of the participants are presented as follows:

Table 1: Factors affecting the decision to rent/buy a house by industrial workers.

Group	Factors	References
1. Economic and Financial Situation	F1. Housing Price	[11] [12] [13]
	F2. Financial situation	[12]
	F3. Housing O&M costs: Monthly fees such as electricity, water, etc, maintenance costs.	[14]
	F4. Loan support policies	[14]
	F5. Stability of rent/purchase prices in the future	[13]
2. Characteristics and Design of the House	F6. Real estate characteristics (scale, design, quality of works...)	[15] [11]
	F7. Ability to renovate housing in the future	[12]
3. Location and Surrounding Utilities	F8. Geographical location of the property	[12], [14]
	F9. Neighbourhood public utilities: schools, hospitals, markets,...	[16]
	F10. Distance from residence to workplace	[11]
4. Security and Habitat	F11. Security status	[12]
	F12. Surrounding environment: Landscape, trees, air quality...	[16]
5. Society and Culture	F13. Influence from relatives: Opinions and encouragement from family and friends.	[12]
	F14. Housing perspectives: Beliefs related to the direction of the house and location.	[11]
	F15. The area has a large working community: Engage with the surrounding community.	[12]
6. Legal Procedures and Contract Terms	F16. Legal process: Clear, secure legal ownership or lease	[14], [11]
	F17. Ability to lease or transfer	[14]
	F18. Flexibility in Rent/Purchase Agreements: Terms Regarding Deadlines or Payments	[14]
7. Brand, Reputation and Support of the Investor	F19. Reputation and brand of the investor	[12], [13]
	F20. Quality of customer care service from the investor: Support before and after purchase/rental	[13]

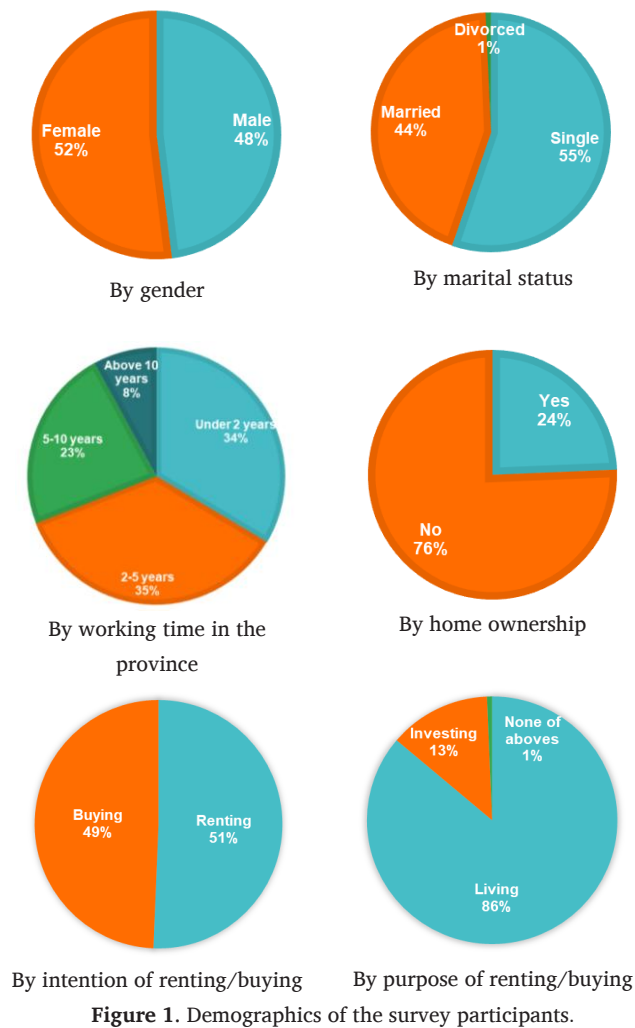


Figure 1. Demographics of the survey participants.

3.2. Ranking result of factors affecting the decision to rent/buy a house by industrial workers

From the results of the Relative Importance Index (RII) calculation presented in Table 2, it is evident that all 20 identified factors influence the decision of industrial park workers to rent or purchase housing. Among them, “F1. Housing Price” and “F2. Financial Situation” were rated as having a high level of influence. Conversely, factors such as “F14. Housing Perspectives: Beliefs related to the direction of the house and location”, “F15. The Area Has a Large Working Community: Engage with the Surrounding Community”, and “F18. Flexibility in Rent/Purchase Agreements: Terms Regarding Deadlines or Payments” were perceived as having only a moderate influence on the workers’ decisions.

The ranking results in Table 2 show that the ten most influential factors affecting the housing decisions of industrial workers, in descending order, are as follows: (1) “F1. Housing Price”; (2) “F2. Financial Situation”; (3) “F12. Surrounding Environment: Landscape, Trees, Air Quality...”; (4) “F20. Quality of Customer Care Service from the Investor: Support Before and After Purchase/Rental”; (5) “F9. Neighbourhood Public Utilities: Schools, Hospitals, Markets,...”; (6) “F8. Geographical Location of the Property”; (7) “F3. Housing O&M Costs: Monthly Fees Such as Electricity, Water, Maintenance Costs”; (8) “F10. Distance from Residence to Workplace”; (9) “F5. Stability of Rent/Purchase Prices in the Future”; and (10) “F4. Loan Support from Financial Institutions or Developers”.

These results demonstrate that economic-related and environmental factors are the most important determinants influencing housing decisions among workers in industrial zones, while social and cultural elements appear to play a less decisive role.

Table 2. Ranking of factors affecting the decision to rent/buy a house of industrial workers.

Group	Factors	RII	Influence	Group Ranking	Overall Ranking
1. Economic and Financial Situation	F1. Housing Price	0.888	Very influence	1	1
	F2. Financial situation	0.842	Very influence	2	2
	F3. Housing O&M costs: Monthly fees such as electricity, water, etc, maintenance costs.	0.716	Influence	3	7
	F4. Loan support policies	0.672	Influence	5	13
	F5. Stability of rent/purchase prices in the future	0.708	Influence	4	9
2. Characteristics and Design of the House	F6. Real estate characteristics (scale, design, quality of works...)	0.679	Influence	2	12
	F7. Ability to renovate housing in the future	0.708	Influence	1	10
3. Location and Surrounding Utilities	F8. Geographical location of the property	0.725	Influence	2	6
	F9. Neighbourhood public utilities: schools, hospitals, markets,...	0.736	Influence	1	5
	F10. Distance from residence to workplace	0.712	Influence	3	8
4. Security and Habitat	F11. Security status	0.608	Normal	2	17
	F12. Surrounding environment: Landscape, trees, air quality...	0.770	Influence	1	3

Group	Factors	RII	Influence	Group Ranking	Overall Ranking
5. Society and Culture	F13. Influence from relatives: Opinions and encouragement from family and friends.	0.700	Influence	1	11
	F14. Housing perspectives: Beliefs related to the direction of the house and location.	0.600	Normal	2	18
	F15. The area has a large working community: Engage with the surrounding community.	0.575	Normal	3	20
6. Legal Procedures and Contract Terms	F16. Legal process: Clear, secure legal ownership or lease	0.612	Influence	2	16
	F17. Ability to lease or transfer	0.651	Influence	1	15
	F18. Flexibility in Rent/Purchase Agreements: Terms Regarding Deadlines or Payments	0.595	Normal	3	19
7. Brand, Reputation and Support of the Investor	F19. Reputation and brand of the investor	0.654	Influence	2	14
	F20. Quality of customer care service from the investor: Support before and after purchase/rental	0.751	Influence	1	4

3.2.1. Economic and Financial Situation

Of the 10 most important factors mentioned above, four belong to the "Economic and Financial Situation" group of industrial park workers (IPW). "F1. Housing Price" (RII = 0.888) plays the most significant role, not only directly affecting access to housing but also determining the willingness to invest and long-term attachment to it, while "F2. Financial situation" (RII = 0.842) is the second most influential factor affecting workers' decision to rent/buy a house. This result is entirely predictable and easy to explain. Indeed, the average salary according to Article 3 of Decree 74/2024/ND-CP for workers in Vietnam is based on a basic salary of 3,450,000 VND per month and varies depending on region, job position, experience, and workplace, averaging about 6–9 million VND/person/month [17]. Meanwhile, the average house price in Vietnam is currently 23.7 times higher than the average annual household income, a slight increase compared to 23.5 times in 2023. This reveals that, with current income levels, workers need to save for many years before they can afford to purchase a home. Not to mention the costs of living and other necessities, workers often seek housing products that are suitable for their financial capacity, balancing income, living expenses, and savings. At the same time, they must carefully consider current costs and long-term benefits [18].

"F3. Housing O&M costs" (RII = 0.716) is considered the third most important factor within the "Economic and Financial Situation" group when IPW decide to buy/rent housing. It is clear that monthly expenses such as electricity, water, and maintenance directly impact workers' ability to sustain their livelihoods. For the middle-income class, ensuring reasonable housing operating costs is a top priority to reduce financial pressure. However, this factor only ranks seventh overall, indicating that IPW do not face significant difficulty in managing monthly housing expenses; their disposable income normally allows for affordability.

Another factor in the same group, also important to IPW, is "F5.

Stability of rent/purchase prices in the future" (RII = 0.708), ranking as the ninth most important factor. It reflects workers' concerns about fluctuations in real estate prices in the short term. The stability of rent and home prices provides workers with peace of mind when making long-term decisions, especially in the context of rising living costs.

The factor "F4. Loan support policy" (RII = 0.672) ranks last in the group and 13th out of 20 overall, indicating that IPW do not heavily rely on governmental support. It is evident that policies to support reasonable pricing or flexible financial packages are necessary to reduce post-purchase financial burdens, thereby enhancing access to housing for workers. However, current financial policies for both investors and beneficiaries of SH for IPW have not provided strong support, and the eligibility criteria for such support remain stringent.

3.2.2. Characteristics and Design of the House

"F7. Ability to renovate housing in the future" (RII = 0.708) is rated as more important than "F6. Real estate characteristics (scale, design, quality of works...)" (RII = 0.679). F7 is the last factor within the top 10 most influential ones. This result suggests that IPW may choose affordable properties that meet current needs, but later, when they marry or have children, they will require renovations to expand or improve the living space. Real estate characteristics, including scale, design, and quality, were also a significant concern among workers and ranked 12th out of 20 factors. Workers may accept poorer quality housing to save costs; however, they also prioritise properties that are comfortably designed, affordable, and well-built to minimise future repair costs.

3.2.3. Location and Surrounding Utilities

All three factors in the "Location and Surrounding Utilities" group are in the top 10 most influential ones affecting the decision to rent/buy housing by IPW. "F9. Neighbourhood public utilities: schools,

hospitals, markets,...” has an RII of 0.736, ranking 5th out of 20, showing that IPW highly value these surrounding facilities. As noted in the demographic information of respondents, almost all IPW want accommodation suitable for living rather than temporary lodging. Therefore, proximity to markets and hospitals is a key consideration for their daily convenience. Additionally, although many respondents are single, in Eastern culture, many people already consider future schooling needs for their children when selecting housing.

"F8. Geographical location of real estate" (RII = 0.725) is the factor workers are most interested in after housing characteristics. This is understandable as location significantly impacts property price fluctuations [2]. Likewise, "F10. Distance from residence to workplace" (RII = 0.712) ranks 8th, indicating a strong correlation between IPW's decisions and commuting costs, time, and daily convenience—particularly important for workers on three-shift schedules. However, because the survey sample is from provinces with relatively low traffic density, the "Distance" factor is not rated more important than F8 and F9.

3.2.4. Security and Habitat

The factor "F12. Surrounding environment: Landscape, trees, air quality..." has an RII of 0.770, ranking third in importance after "F1. Housing Price" and "F2. Financial situation". This is a notable finding, showing that IPW highly value the living environment of their home. Younger and older generations increasingly participate in outdoor activities like jogging, camping, and walking, making properties with scenic landscapes more attractive and expensive. People also increasingly invest in air purifiers and acknowledge the negative health impacts of poor air quality. They are progressively adopting greener lifestyles, valuing greenery and natural surroundings.

In the same group, however, "F11. Security status" (RII = 0.608) ranks 17th out of 20 factors, indicating that IPW are less concerned about security. This is understandable, as most residential planning zones have good security conditions. Furthermore, a large proportion of IPW are from low to middle-income groups and do not possess significant assets to protect.

3.2.5. Society and Culture

The RII values of the three factors under the "Society and Culture" group—"F13. Influence from relatives: Opinions and encouragement from family and friends" (RII = 0.700), "F14. Housing perspectives: Beliefs related to the direction of the house and location" (RII = 0.600), and "F15. The area has a large working community: Engage with the surrounding community" (RII = 0.575)—indicate that none of them are within the top 10 most influential factors. This demonstrates that IPW are becoming more independent in their decision-making. They also have little belief in spiritual or cultural aspects such as luck from housing direction or feng shui. Moreover, they tend to live more privately and have limited interactions with neighbours.

3.2.6. Legal Procedures and Contract Terms

All factors under "Legal Procedures and Contract Terms" fall outside the top 10. "F16. Legal process: Clear, secure legal ownership or lease" (RII = 0.612), "F17. Ability to lease or transfer" (RII = 0.651), and "F18. Flexibility in Rent/Purchase Agreements: Terms Regarding Deadlines or Payments" (RII = 0.595) collectively indicate that IPW do not pay much attention to legal procedures when buying/renting housing. When legal disputes arise, they often suffer the consequences. This highlights the need to raise legal awareness among IPW in real estate matters. Moreover, stronger enforcement mechanisms are required to address violations and better protect the rights of housing beneficiaries.

3.2.7. Brand, Reputation and Support of the Investor

"F19. Reputation and brand of the investor" (RII = 0.654) ranks 14th out of 20, reflecting the limited concern among IPW for the reputation of real estate developers. However, "F20. Quality of customer care service from the investor: Support before and after purchase/rental" (RII = 0.751) ranks 4th overall, indicating that workers do value investor support, especially after completing the transaction, to mitigate potential risks. Still, the reputation and branding of an investor often serve as a proxy for their long-term commitment to customers, something IPW may overlook in favour of more immediate concerns.

4. Orientation of solutions to promote sustainable social housing development for industrial park workers from the perspective of beneficiaries

Research on the factors influencing industrial park workers' (IPW) decisions to buy or rent housing has emphasised that price and financial affordability remain the most decisive factors, while policy support plays a crucial role in improving housing accessibility. The Housing Law 2023, which takes effect from January 1, 2025, introduces a supportive framework for worker accommodation in industrial parks. However, to maximise its effectiveness, more concrete and actionable implementation measures are needed.

4.1. Developing a system of low-cost accommodation

It is essential to accelerate the development of affordable housing projects within industrial parks that align with the financial capacity of IPW. Such accommodations should meet basic standards of safety, offer a comfortable living environment, and ensure access to essential utilities such as water supply and drainage, electricity, and waste management. Furthermore, a transparent and equitable housing allocation mechanism should be established, prioritising low-income workers, long-term employees, and those residing with their families. The government should also encourage, and assign responsibility to,

enterprises to participate in the construction and management of these housing areas, thereby expanding the supply of high-quality accommodation for workers.

4.2. *Increase financial support for workers*

In parallel with housing development, financial support schemes should be introduced to provide workers with a wider range of options tailored to their economic conditions. Priority should be given to subsidised loan packages offering low interest rates, long-term instalment periods (10–20 years), and eligibility criteria aligned with workers' income levels. These financial instruments not only meet workers' immediate housing needs but also facilitate their long-term homeownership aspirations. Additionally, monthly rental subsidies should be provided to those not eligible for public accommodation, thereby alleviating financial pressures—especially among newly employed or younger workers.

4.3. *Development of infrastructure and public utilities*

Worker housing must go beyond basic shelter to comprehensively meet residents' daily living needs. Accordingly, investments in public infrastructure—including schools, healthcare facilities, markets, and recreational spaces—should be prioritised in proximity to worker accommodation. Such amenities directly enhance the quality of life for workers and their families. Equally important is the improvement of transport systems connecting residential areas and industrial parks, ensuring convenience, minimising commuting time, and reducing travel-related expenses.

4.4. *Improving legal procedures*

Streamlining and increasing the transparency of legal procedures is vital to facilitating easier access to housing for workers. The government should establish clear, user-friendly processes and reduce the time and cost associated with formalities for purchasing or renting accommodation. At the same time, independent monitoring units should be set up to inspect and evaluate the progress and quality of housing projects, ensuring that implementation aligns with the proposed plans and meets the actual needs of workers.

4.5. *Strengthening communication and dialogue*

For housing support policies to be truly effective, proactive communication strategies must be implemented via official channels such as government websites, trade union networks, and on-site seminars at industrial parks. Clear and accessible information regarding eligibility, financial support schemes, and housing project details should be widely disseminated so that workers can make informed decisions. Moreover, regular forums and dialogues involving workers, developers,

and regulatory bodies are essential to gathering timely feedback, addressing concerns, and adapting policies throughout the implementation process.

The accommodation support policy outlined in the Housing Law 2023 represents a significant step toward addressing the housing challenges faced by industrial park workers. However, to ensure its success, coordinated action is required among government agencies, businesses, and civil society organisations. A comprehensive approach that integrates financial assistance, infrastructure development, legal simplification, and stakeholder engagement will greatly enhance access to suitable housing solutions, thereby improving the well-being of workers and fostering the sustainable development of industrial parks.

5. **Conclusion**

The development of social housing in Vietnam, particularly for industrial park workers (IPW), continues to face numerous challenges and remains far from achieving true sustainability. Through a comprehensive review of relevant literature and an empirical investigation, this study has identified and quantitatively analysed key factors influencing the housing decisions of industrial workers. The findings, based on survey responses from 152 industrial parks, reveal that the five most influential factors are: *F1. Housing Price*, *F2. Financial Situation*, *F12. Surrounding Environment (landscape, greenery, air quality)*, *F20. Quality of Customer Care Services from Investors (support before and after purchase/rental)*, and *F9. Neighbourhood Public Utilities (schools, hospitals, markets, etc.)*.

These results highlight the need for a beneficiary-oriented approach to social housing policy and development. In response, the study proposes five strategic solution groups aimed at promoting the sustainable development of social housing for industrial workers: (1) accelerating the provision of affordable housing; (2) enhancing financial support mechanisms; (3) investing in infrastructure and public amenities; (4) simplifying legal procedures; and (5) strengthening communication and stakeholder engagement. These interconnected measures are essential to improve housing access, raise the quality of life for IPW, and support the long-term sustainability of industrial zones in Vietnam.

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