



ASSESSING SOCIAL SECURITY FOR MIGRANT WORKERS' HOUSEHOLDS IN INDUSTRIAL ZONES: EVIDENCE FROM BAC NINH PROVINCE, VIETNAM

Nguyen Thi Huyen Trang

Department of Political Theory, Trade Union University, Ha Noi, Viet Nam

ABSTRACT

While existing literature on labor migration in Vietnam extensively covers individual employment and basic living conditions, there remains a critical research gap concerning social security at the household level – the primary unit where livelihood strategies are formulated and labor is reproduced. Most current policies and studies focus on the individual worker, overlooking the cumulative socio-economic risks that diffuse within the migrant family structure. This study addresses this gap by examining the social security status of migrant workers' households in the industrial zones of Bac Ninh Province. Using a mixed-methods approach, the research integrates survey data from 600 migrant households with 145 in-depth interviews to evaluate five key dimensions: housing, income, healthcare, education, and working conditions. The findings reveal that despite modest improvements in income, migrant households face severe structural constraints. Specifically, 80.1% of households are dependent on substandard private rental housing, which serves as a major barrier to long-term settlement and family reunification. Income remains vulnerable, with 12.5% of total earnings relying on excessive overtime. Furthermore, limited access to formal healthcare is evidenced by a 62% self-medication rate, while only 24.2% of workers can afford to have their children live and study with them at the destination. These results suggest that the current social security system fails to provide a sustainable safety net for the household unit. The study contributes to the sustainable livelihoods framework by highlighting the household as a central intermediary for policy intervention and proposes a shift from individual-centered support to integrated, family-oriented social welfare infrastructure.

KEYWORDS: Social security; Migrant workers; Household-level analysis; Industrial zones; Sustainable livelihoods; Bac Ninh.

1. INTRODUCTION

In recent years, Bac Ninh Province has emerged as one of the most dynamic industrial development hubs in the Northern Key Economic Region of Vietnam. The acceleration of industrialization and modernization, coupled with the expansion of industrial zones (IZs), has attracted a large number of workers from various localities to work and reside in the province. According to the Management Board of Bac Ninh Industrial Zones, by the end of 2025, 20 out of 32 industrial zones were operational, hosting approximately 1,800 projects and employing 568,000 workers (out of a total provincial workforce of 792,600). Of these, migrant workers from other provinces accounted for 64.2% (364,656 individuals), while local workers made up 35.8% (203,344 individuals). Female workers constituted 56.82% (322,737 individuals), and around 24,400 foreign workers were employed in the industrial zones. Migrant workers, predominantly young laborers, have become a vital human resource contributing to local economic growth and labor structure transformation.

However, alongside these positive contributions, the rapid increase in the migrant workforce has posed significant challenges to their living conditions and social security, as well as those of their families. Most migrant workers must adapt to new living and working environments under constrained conditions in terms of housing, income, healthcare services, children's education, and other essential living amenities. These difficulties not only affect the quality of life of workers' households but also influence the stability and sustainability of the labor force within industrial zones. In this context, social security for migrant workers' households has become a critical issue. It is not only associated with the provision of basic needs but also closely linked to livelihood stability, the reproduction of labor, and the long-term attachment of workers to enterprises and localities.

From a research perspective, social security for migrant workers has attracted considerable attention from international organizations and domestic scholars. Studies by the International Labour Organization (ILO, 2016) indicate that migrant workers often face substantial barriers in accessing essential social services such as housing, healthcare, and education. In Vietnam, various studies have similarly highlighted the persistent difficulties faced by workers in industrial zones, particularly in terms of housing and living conditions. In Bac Ninh Province, research by To Thi Hong Nhung et al. (2024) points out that the rapid growth of migrant labor has been accompanied by numerous challenges related to living conditions and social welfare. Nevertheless, existing studies have primarily focused on individual workers or employment conditions, while the dimension of social security at the household level of migrant workers—where living standards and livelihood sustainability are most directly reflected—remains insufficiently explored, especially in the context of industrial



zones in Bac Ninh Province. This constitutes a notable research gap that this article seeks to address. Accordingly, this study aims to analyze the social security conditions of migrant workers' households in industrial zones in Bac Ninh Province across several fundamental domains, identify influencing factors, and propose policy implications to enhance the effectiveness of social security provision for this group in the current context.

2. RESEARCH METHODOLOGY

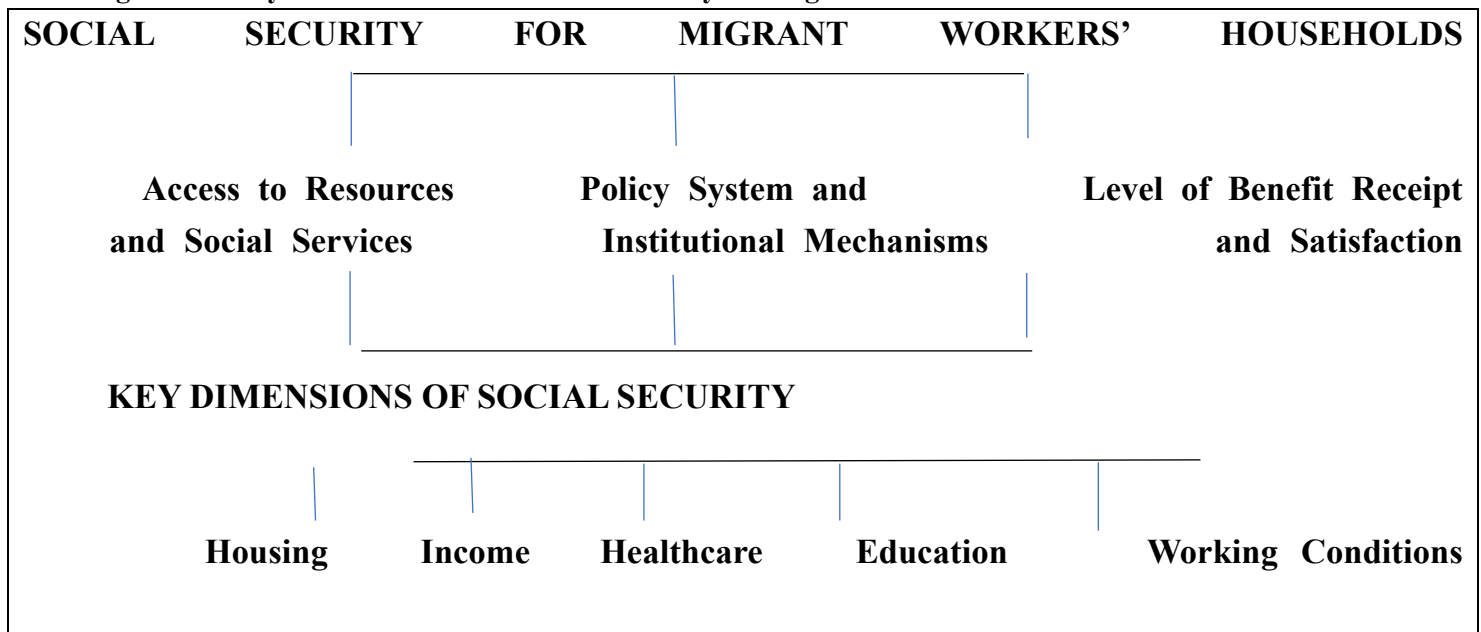
This study is designed to analyze the level of access to, and the capacity to ensure, social security among migrant workers' households in industrial zones in Bac Ninh Province within the context of labor migration and industrialization. Accordingly, social security is conceptualized as a multidimensional construct associated with household livelihoods, rather than being examined through isolated dimensions such as housing, healthcare, or income alone. A mixed-methods approach is employed, in which quantitative data play a central role, complemented by qualitative insights to support the interpretation of findings. The quantitative survey is used to collect indicators related to five key pillars of social security for migrant workers' households: (i) employment and income; (ii) housing; (iii) access to healthcare services; (iv) education and childcare; and (v) the capacity to cope with socio-economic risks. Indicators within each domain are measured using Likert scales and quantitative variables reflecting levels of access, service quality, and the extent to which household needs are met.

The study sample consists of 600 migrant workers currently employed in industrial zones in Bac Ninh Province, with the unit of analysis being the household rather than the individual worker. The selection of Bac Ninh is justified by its characteristics as a rapidly developing industrial hub that attracts a large number of migrant workers and hosts a high concentration of export-oriented manufacturing enterprises, thereby providing a representative context for examining social security issues affecting workers' households.

A controlled convenience sampling method is adopted, with respondents accessed at both workplaces and residential areas, allowing for the inclusion of diverse groups of workers. In addition to the quantitative survey, the study conducts 145 in-depth interviews with migrant workers to supplement qualitative data, thereby providing deeper insights into household living experiences and livelihood strategies. In terms of data analysis, descriptive statistics are employed to identify trends and disparities in access to social security. The findings are subsequently interpreted through the lens of the sustainable livelihoods framework, clarifying the social mechanisms through which social security resources are transformed into living conditions and livelihood security for migrant workers' households. The study also acknowledges its methodological limitations. The use of cross-sectional data does not allow for the examination of changes over time, while quantitative methods may not fully capture the subjective experiences of households. Nevertheless, within its scope, the adopted approach provides empirically grounded evidence on the social security conditions of migrant workers' households in industrial zones in Bac Ninh Province. Although the research is conducted in Bac Ninh, its findings hold important reference value for other localities in Vietnam with similar industrial zone development models, such as Binh Duong and Dong Nai.

3. THEORETICAL FRAMEWORK

This study approaches the issue of social security for migrant workers' households through an integration of social protection theory and the sustainable livelihood framework. From this perspective, social security extends beyond the provision of policy-based support to encompass access to resources, basic social services, and the overall capacity of households to secure their livelihoods within specific socio-economic contexts (UN-Habitat, 2009; ILO, 2016). In the context of labor migration, migrant workers' households often encounter structural barriers in accessing social services in destination areas due to constraints related to household registration status, income levels, and living conditions. Therefore, social security should be examined not only at the level of individual workers but also at the household level, where resource allocation, adaptation processes, and livelihood maintenance take place. Based on this rationale, the study develops an analytical framework for assessing social security among migrant workers' households in industrial zones, structured around three key dimensions: (i) access to resources and social services; (ii) policy systems and institutional mechanisms of provision; and (iii) the level of benefit receipt and household satisfaction. These dimensions capture the interaction between objective conditions (policies and resources) and outcome indicators (living standards and livelihood security), thereby enabling a comprehensive assessment of social security conditions.

Figure 1. Analytical Framework of Social Security for Migrant Workers' Households in Industrial Zones

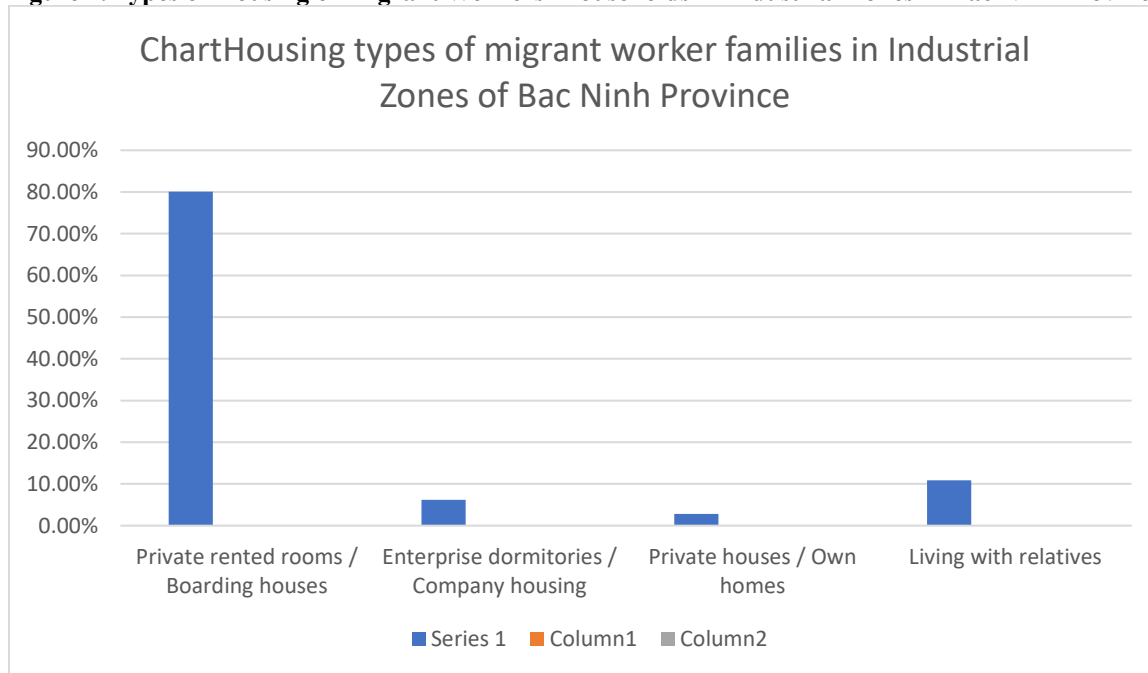
(Source: Author's compilation)

Within this analytical framework, the social security of migrant workers' households is operationalized through five fundamental domains: housing, income, healthcare, education, and working conditions. These factors are directly associated with the reproduction of labor and the overall quality of household living standards. First, housing is considered a critical component of social security, as it not only provides shelter but also reflects living conditions and the degree of household stability. According to UN-Habitat (2009), adequate housing should meet criteria of safety, affordability, and access to essential services. For migrant workers, access to housing largely depends on income levels and the availability of social housing; however, in practice, the majority continue to rely on private rental accommodation. Second, income constitutes a central resource that ensures access to social services and sustains household livelihoods. In the context of industrial labor, workers' income is determined by wages, working hours, and employment benefits, thereby directly influencing living standards and the capacity for household savings. Third, healthcare represents a fundamental factor in maintaining long-term labor capacity and quality of life. Migrant workers' access to healthcare services is influenced by their participation in health insurance schemes, financial conditions, and physical access to medical facilities (ILO, 2016). Fourth, education plays a vital role in securing development opportunities for household members, particularly the children of migrant workers. However, migration-related constraints and limited income may hinder stable access to education. Fifth, working conditions have a direct impact on workers' health, income, and overall quality of life, thereby indirectly affecting household social security. Factors such as working hours, labor environment, and occupational safety are essential components in assessing working conditions.

4. RESEARCH FINDINGS

4.1. Housing Conditions of Migrant Workers' Households in Industrial Zones in Bac Ninh Province

The survey results indicate that housing for migrant workers' households in Bac Ninh Province is currently predominantly dependent on the private rental housing market, while housing models provided by enterprises or the state for workers remain highly limited

Figure 2. Types of Housing of Migrant Workers' Households in Industrial Zones in Bac Ninh Province

(Source: Survey results of the research project, 2025)

The survey results indicate that housing for migrant workers' households in Bac Ninh Province is currently predominantly dependent on the private rental housing market, while housing models provided by enterprises or the state remain highly limited. Specifically, up to 80.1% of workers rent rooms in private boarding houses, whereas only 6.2% reside in dormitories or employer-provided housing, and merely 2.8% own their homes. In addition, 10.9% of workers live with family members or relatives in the locality. This situation clearly reflects the heavy reliance of migrant workers on the informal housing market, particularly in the context of rapidly developing industrial zones such as those in Bac Ninh. Rental housing clusters surrounding industrial zones such as Yen Phong, Que Vo, and VSIP are largely constructed by local households on a small scale, with limited infrastructure and a lack of basic social services.

A notable characteristic is that many migrant workers' families do not co-reside at the place of employment. Due to cramped housing conditions and high living costs, workers often adopt a spatially separated livelihood strategy, whereby one household member works in the industrial zone and remits income to support the family in their place of origin. This indicates that the social security of migrant workers' households is not solely determined by conditions at the destination but is also closely linked to support networks in their home communities. In terms of living space, 42% of workers have less than 10 m² per person, including 13.7% with less than 5 m² per person, reflecting the prevalence of overcrowded housing conditions. At the same time, more than 80% of workers spend between 10% and under 30% of their income on housing, placing considerable pressure on household budgets. As one male worker described his current housing situation, "My wife, our young child, and I rent a room of less than 10 square meters. In the summer, it becomes unbearably hot, and the landlord charges electricity and water rates that are double the standard price. After a whole month of saving, we can only set aside a few million VND. Although we would like to move to a larger place so our child has space to play, we cannot afford it, as rent already takes up nearly one-third of our income" (Male worker, Que Vo Industrial Zone).

From the perspective of the theoretical framework, it can be observed that migrant workers face significant constraints in accessing housing resources, resulting in low levels of benefit and directly affecting their quality of life. This highlights a gap between workers' actual needs and the capacity of the housing policy system, thereby underscoring the need for more appropriate housing solutions tailored to the specific conditions of migrant workers' households.

4.2. Income Conditions of Migrant Workers' Households in Industrial Zones in Bac Ninh Province

Income is a key determinant of the capacity to ensure the livelihoods of migrant workers' households. However, the survey findings reveal that workers' income levels remain relatively modest and lack stability. Data on average monthly income (including base salary, allowances, and bonuses) indicate that 63.3% of surveyed workers report earning between 8 and 12 million VND per month, primarily derived from fixed wages or salaries from their main employment. The survey results regarding the total monthly income of migrant workers' households are as follows:

Table 1. Average Monthly Income and Main Sources of Income of Migrant Workers

Category	Content	Percentage (%)
Total monthly income	From 5 to under 8 million VND	14.5
	From 8 to under 12 million VND	63.3
	From 12 million VND and above	21.3
Main source of income	Fixed wages/salaries from primary employment	72.2
	Overtime/additional work income	12.5
	Secondary jobs/family support	15.4

(Source: Survey results of the research project, 2025)

A notable finding is that, although fixed wages constitute the primary source of income (72.2%), as much as 12.5% of workers' income depends directly on overtime, and 15.4% relies on external support or secondary jobs. This reflects the reality that base wages have not yet become a sufficiently strong and reliable foundation enabling migrant workers to sustain their livelihoods without additional support or the need for extended working hours that may exhaust their labor capacity. Overall, the income structure indicates that while most migrant workers' households have relatively stable earnings from employment in industrial zones, income levels remain moderate and are not commensurate with the cost of living in rapidly industrializing areas such as Bac Ninh. For many households, income must cover not only living expenses at the destination but also remittances to support family members in their place of origin, including childcare and elderly care. Consequently, the capacity for savings and improvements in living conditions remains limited.

One clear manifestation of this situation is workers' concern about their ability to provide for their families and children. Survey results show that 57% of workers report that low or unstable income discourages them from bringing their children to live with them or prevents them from ensuring adequate educational conditions. In addition, income that is not commensurate with labor effort negatively affects work motivation. Specifically, 34.2% of workers report dissatisfaction or a lack of motivation due to wages not matching their time and effort. These findings suggest that income not only directly influences material living standards but also affects psychological well-being, work motivation, and household-related decisions.

4.3. Healthcare Conditions

Healthcare is a critical component of the social security system, particularly for migrant workers who often operate under high-intensity working conditions. Survey results indicate that access to healthcare services among migrant workers remains constrained, as illustrated below:

Table 2. Responses of Migrant Workers When Experiencing Illness

Response to illness	Frequency (persons)	Percentage (%)
Self-medication (purchasing drugs at pharmacies)	371	62.0
Self-treatment at home (traditional remedies/rest)	49	8.2
Visiting primary healthcare facilities (commune/ward health stations, private clinics)	140	23.4
Directly visiting district/provincial hospitals	38	6.4
Total	600	100.0

(Source: Survey results of the research project, 2025)

The findings show that when facing health problems, the majority of migrant workers tend to rely on self-treatment rather than seeking formal healthcare services. Specifically, 62.0% of workers choose to purchase medication from pharmacies, while 8.2% rely on home remedies or rest. This indicates that self-treatment remains a common practice among workers, partly reflecting constraints related to working time, healthcare costs, and the desire to address health issues quickly without disrupting work. As one respondent noted: *"I work from early morning until late evening. If I go to the hospital, I have to take a day off and lose my wages, so I just go to the pharmacy at the end of the alley for a quick solution"* (female worker, industrial zone). Meanwhile, the proportion of workers seeking formal healthcare services remains relatively low. Only 23.4% visit primary healthcare facilities such as commune health stations or private clinics, and just 6.4% go directly to district- or provincial-level hospitals when ill. This situation suggests that access to healthcare services for migrant workers is still constrained by barriers related to time, cost, and service accessibility. In general, healthcare-seeking behavior among migrant workers is still largely characterized by self-treatment and temporary solutions, while the utilization of formal healthcare services remains limited. This underscores the need to strengthen healthcare policies and services tailored to migrant workers' households in industrial zones in order to better ensure their right to healthcare.

4.4. Educational Conditions for Children of Migrant Workers in Industrial Zones in Bac Ninh Province

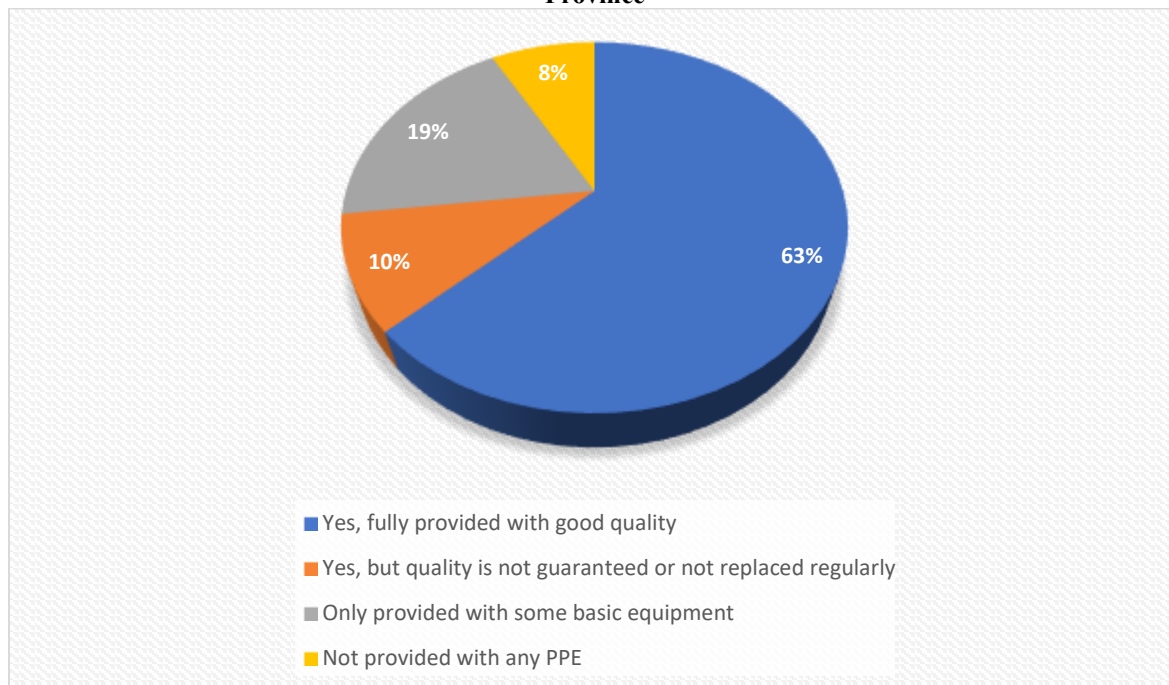
Education is a key factor shaping the development opportunities of migrant workers' children. However, survey findings indicate that ensuring adequate educational conditions remains a challenge for many households. Only approximately 24.2% of workers report that their children are currently living and studying at their place of employment, while 31.5% indicate that their children remain in their

hometowns under the care of relatives. This reflects the reality that many migrant workers are unable to bring their children to live and study at the destination, primarily due to constraints related to housing, income, and local support services. Regarding satisfaction with educational quality at the destination, 23.5% of workers report being satisfied or fairly satisfied, while 66.7% rate it as average. These results suggest that although the education system in industrial zones in Bac Ninh has improved to some extent, access to suitable educational services for migrant workers' children remains limited.

4.5. Working Conditions of Migrant Workers in Industrial Zones in Bac Ninh Province

Working conditions directly affect the health, income, and overall quality of life of migrant workers' households. While working conditions in industrial zones in Bac Ninh have shown certain improvements, high labor intensity and long working hours remain key concerns in ensuring social security. Survey results indicate that most workers have relatively long working hours. Specifically, 44.3% work more than 48 hours per week, including 13.7% who work over 60 hours per week. This suggests that overtime work remains prevalent in enterprises within industrial zones. Regarding the working environment, 55.9% of workers rate conditions such as hygiene, lighting, and temperature as good or fairly good, while 34.5% consider them average and report occasional issues such as heat, noise, or discomfort. A survey on the provision of occupational safety equipment by enterprises indicates

Figure 3. Provision of Essential Personal Protective Equipment for Migrant Workers in Industrial Zones in Bac Ninh Province



(Source: Survey results of the research project, 2025)

The survey results on the provision of occupational safety equipment for migrant workers in industrial zones in Bac Ninh Province indicate that the majority of workers have received a certain level of protective equipment from their employers. Specifically, 63% of workers report that enterprises provide adequate and good-quality personal protective equipment (PPE). This reflects improvements in the implementation of occupational safety and hygiene regulations across many enterprises in industrial zones. However, the findings also reveal that a proportion of workers are not fully provided with adequate protective equipment. Approximately 10% report that PPE is provided but of insufficient quality or not regularly replaced, while 19% indicate that they are only equipped with basic protective items. Notably, 8% of workers state that they are not provided with any PPE at all. These figures suggest disparities in the enforcement of occupational safety regulations across enterprises. Overall, although the majority of workers are equipped with PPE, a considerable proportion still lack adequate safety conditions in the workplace. This not only directly affects workers' health and safety but may also have broader implications for the well-being of migrant workers' households, particularly in cases of occupational accidents or work-related risks. Therefore, strengthening monitoring mechanisms and enhancing employers' accountability in the provision and management of PPE are essential to better safeguard workers' rights and safety.



5. DISCUSSION

5.1. Comparison with Previous Studies

The findings of this study are consistent with international literature in affirming that migrant workers constitute a vulnerable group in accessing basic social security services, particularly housing and healthcare (ILO, 2016; UN-Habitat, 2009). Previous studies have identified institutional barriers, low income, and unstable employment conditions as key factors limiting migrant workers' access to social welfare. The empirical evidence from this study further reinforces these conclusions in the Vietnamese context. For instance, 80.1% of workers rely on private rental housing, and the rate of self-treatment when ill reaches 62.0%. These figures highlight a significant gap between nominal access and actual utilization of social security services. Importantly, this study goes beyond confirming individual-level challenges by extending the analysis to the household level. Limitations in housing, healthcare, and income not only affect workers themselves but also generate spillover effects on other family members, particularly children, in terms of educational access and living conditions. Thus, compared to previous studies that primarily adopt an individual-level perspective, this research highlights the diffusion of social security risks within households in the context of labor migration, offering a more comprehensive understanding of the issue.

5.2. Interpretation of Findings

The study's findings can be explained by structural characteristics of the labor market and the social security system in industrial zones in Vietnam. First, the heavy reliance on private rental housing reflects a shortage of social housing supply for workers. While the private sector plays a dominant role in housing provision, market-based mechanisms result in uneven quality and living conditions, leading to overcrowded and unstable housing arrangements. Second, migrant workers' household income—primarily concentrated within the range of 10–20 million VND per month—indicates limited economic resources relative to the cost of living in industrial zones. This constrains households' ability to accumulate savings and access higher-cost social services, particularly healthcare and education. Third, the lack of synchronization between rapid industrial development and the expansion of social welfare institutions represents a structural issue. While industrial zones have expanded rapidly and attracted large numbers of migrant workers, public services such as social housing, schools, and healthcare facilities have not developed at a commensurate pace. As a result, the burden of social security provision is shifted toward households' self-adaptation strategies. From the perspective of the sustainable livelihood framework, the available social security resources of migrant workers (income, housing, and social services) remain insufficient to be effectively transformed into stable living conditions, thereby increasing household vulnerability to socio-economic risks.

5.3. Academic Contributions

This study makes several important academic contributions. It provides additional empirical evidence supporting a household-level approach to social security in the context of labor migration. The findings demonstrate that focusing solely on individual workers is insufficient to capture the full nature of the issue, as social security impacts tend to diffuse within households. The study clarifies the interaction between economic, institutional, and social factors in shaping access to and utilization of social security. In doing so, it reinforces the value of an interdisciplinary approach to social security research in developing economies. The study proposes an analytical perspective that emphasizes the role of the household as an intermediary unit in absorbing, allocating, and adapting social security resources. This opens new avenues for evaluating the effectiveness of social security policies not only at the individual level but also at the household level. Overall, the study not only provides empirical evidence but also contributes to expanding theoretical approaches to social security in the context of labor migration, particularly in developing countries such as Vietnam.

6. CONCLUSION

This study provides a multidimensional overview of the social security conditions of migrant workers' households in Bac Ninh Province, a representative locality of rapid industrialization in Vietnam. The findings confirm that, despite improvements in income and the availability of basic services, the current social security system has not yet established a truly sustainable safety net at the household level. The separation between workplaces and living spaces, combined with constraints in social infrastructure, has resulted in a prolonged state of "temporary settlement," where access to housing, healthcare, and education remains inadequate relative to workers' economic contributions. A key theoretical contribution of this study lies in shifting the analytical focus from the individual worker to the household unit. This perspective enables a deeper understanding of cumulative risks: when working conditions are harsh or income is unstable, the impacts extend beyond individuals to disrupt household livelihood strategies and future prospects. The study underscores that social security should not be viewed as fragmented support measures but rather as an integrated system in which the household serves as the central unit of policy intervention. From a practical standpoint, the evidence from Bac Ninh provides a valuable basis for policymakers to recognize the urgency of aligning economic development with social welfare infrastructure. The effective implementation of strategies related to social housing, digital healthcare, and equitable education is not only a matter of social justice but also a prerequisite for stabilizing the labor force and achieving sustainable economic development. Although the study is limited by its reliance on cross-sectional data and does not fully capture long-term dynamics, it provides a foundation for future research. Further studies should focus on analyzing the adaptive livelihood strategies of migrant workers' households in response to economic fluctuations, thereby



contributing to the development of a more inclusive, responsive, and context-sensitive social security policy framework in the evolving development context.

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