

## IMPACT OF EMPLOYMENT STATUS ON THE INCOME OF WORKERS ACROSS ECONOMIC REGIONS IN VIETNAM

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**Abstract:** The study focuses on assessing the impact of employment status factors on workers' income in Vietnam using the 2022 labor force survey data set (LFS). The authors used the regression model to analyze and evaluate the factors of the work sector, labor contract and type of social insurance as well as to examine their impacts on workers' income in economic regions in 2022. In addition, this research also quantified the impact of demographic factors, length of residence and some factors related to education level on Vietnamese workers' income.

**Keywords:** employment status, income, economic regions, work sector, labor contract, insurance contract.

### 1. Introduction

Labor and employment are among the key areas for a country's economic development. The reason is that labor and employment are closely linked to the development of human resources that support the economic growth of a country. In its leadership perspective, the Communist Party of Vietnam has always affirmed that economic development is driven by the people and for the benefit of the people. Enhancing the role of people in economic development, where people are both the goal and the driving force for the socialist-oriented economic development of Vietnam, is a core and consistent viewpoint in the political leadership of the Communist Party of Vietnam. However, in the current context of this country, the issue of job quality still faces many shortcomings. Specifically, although the labor force participating in the labor market in Vietnam is substantial, some welfare policies and social insurance regulations have not yet kept up with the development of the labor market.

The topic of employment status has attracted the attention of both domestic and foreign researchers for many years. Maloney (2004), Mel et al. (2010) and Rafael et al. (2014) emphasize the classification of individuals into the formal and informal sectors based on education in line with the research results by Robert and Lucas (1978) and Rauch (1991). The results show that the rate of informal labor remains high since most small and informal businesses have little potential to convert to the formal sector. However, individuals working in the informal sector may move to the formal sector when the low-income economy develops (Robert & Lucas, 1978; Gollin, 2008).

In Vietnam, research on employment status is also a topic of interest to many scholars. Take Tai and Vong (2018) as an example. They investigated the status of informal labor in Vietnam in 2016. The results showed that the scale of informal labor was high in both urban and rural, and across most age groups and occupational sectors. Additionally, Hung (2021) on the status and recommendations for the informal economy, Vu and Ho (2022) and Do and Giang (2023) on factors affecting informal labor; and Tuyen and Anh (2021) on the quality of human resources and employment of workers in state-owned enterprises in Vietnam are other studies related to employment status.

Factors affecting workers' income in regions of Vietnam have also been a widely studied issue. Accordingly, Vietnam has achieved many remarkable achievements in the economic field, including positive changes in people's income and living standards. With the breakthrough in economic reform in 1986 and the combination with favorable global trends, the Vietnamese economy has achieved many notable accomplishments. In fact, the economy has grown continuously and stably over the years, bringing Vietnam out of poverty and becoming a

middle-income country in 2010 in just over two decades. Since 2010 until now and even when the Covid-19 pandemic has occurred with many difficulties and challenges, the economy has continued to maintain positive growth and the income has maintained a stable growth rate, contributing to stabilizing the living standards of the people. The average income between regions, areas, provinces, cities and income groups in the country has a significant difference and there is a large gap in average income per capita between these groups. This has created an increasing income gap and increased inequality in workers' income between income groups in society.

Understanding the important role of employment status in the development of the country's human resources and the income of workers, the authors conducted a study based on the 2022 Labor and Employment Survey with the aim of answering the following questions:

- What are the characteristics of workers' income in different economic regions?
- How does employment status affect workers' income?

Employment status can be understood as the current condition or state of an individual concerning employment and their participation in the labor force. Employment status can be reflected through various factors. For example, an individual will be determined whether he or she is employed, unemployed or falls into other categories such as job-seeking or temporarily out of work. Besides, unemployment rate, labor force participation rate, quality of employment and type of work are also important factors reflecting employment status. In this study, the researchers examine employment status based on the sector of employment regarding the public sector, private sector, household and individual sectors and other ones. Additionally, types of employment contract including no contract, less than 1 year, 1 to 3 years, or indefinite and the types of insurance such as mandatory, optional, or no insurance and secondary employment will also be taken into consideration in this study.

## 2. Methodology

### 2.1. Research Data

The study utilizes the 2022 Labor and Employment Survey according to the General Statistics Office (2021). This is a significant survey within the national indicators system, aimed at collecting information on the labor market participation of individuals aged 15 and older currently residing in Vietnam. The results of the survey serve as the basis for national statistical indicators on labor, employment, unemployment, and workers' income. After data cleaning, the dataset includes 199,085 workers across 6 economic regions. The observed variables in the study are derived from previous research (Doan et al., 2018; Tuyen & Do, 2021). Detailed information on the observed variables is provided in Table 1.

### 2.2. Research Methods

The model assessing the impact of employment status on income is conducted using a multiple regression model:

$$\log(\text{Income}_i) = \beta_0 + \beta_1 \text{employment}_i + \sum_{j>1} \beta_j X_{ji} + \epsilon_i \quad (1)$$

where  $i$  represents the observation index; Income is the monthly income of the worker; It is a quantitative variable. Variable related to employment status is included in the model through  $\text{employment}_i$ . Additionally, demographic variables are also incorporated into the model through  $X_j$ . The selection of variables for inclusion in the model is performed using stepwise regression and tests for model adequacy (such as multicollinearity tests and tests for heteroscedasticity). Calculations are carried out using the open-source software R, version 4.3.2, with supporting packages tidyverse, gt summary, AER, and lmtest.

## 3. Results

### 3.1. Characteristics of research objects

Table 1: The Descriptive Statistics of Variables

Characteristic	Central Highlands, N = 11,467	Mekong River Delta, N = 32,575	North Central area and Central Coastal Area, N = 42,778	Northern Midlands and Mountain Areas, N = 33,699	Red River Delta, N = 44,859	Southeast, N = 33,707
<b>Income</b>	6,768 (2,568)	6,577 (2,229)	6,770 (2,319)	7,096 (2,424)	8,016 (2,512)	8,223 (2,500)
<b>Gender</b>						
Female	43.15%	38.49%	40.58%	44.16%	47.83%	45.18%
Male	56.85%	61.51%	59.42%	55.84%	52.17%	54.82%
<b>Age group</b>						
Age 15-24	12.93%	12.85%	10.41%	8.57%	9.61%	12.81%
Age 15-44	32.42%	32.38%	30.35%	37.27%	33.42%	31.12%
Age 25-34	32.46%	28.75%	31.54%	31.65%	32.03%	34.28%
Age 45+	22.19%	26.02%	27.71%	22.51%	24.94%	21.79%
<b>Marital Status</b>						
Other	5.66%	6.36%	4.84%	5.29%	4.22%	5.40%
Married	73.30%	67.62%	73.98%	81.68%	78.90%	65.26%
Single	21.04%	26.02%	21.19%	13.02%	16.88%	29.34%
<b>Living area</b>						
Urban	59.23%	43.47%	48.61%	48.08%	45.42%	60.66%
Rural	40.77%	56.53%	51.39%	51.92%	54.58%	39.34%
<b>Work Sector</b>						
Private Sector	22.23%	35.95%	35.30%	32.89%	57.75%	63.58%
Household/Individual	50.86%	48.92%	47.34%	34.51%	27.20%	28.21%
Other	0.94%	0.64%	0.81%	0.75%	0.84%	0.76%
Public Sector	25.97%	14.49%	16.55%	31.85%	14.20%	7.45%
<b>Contract Type</b>						
No Contract	53.79%	55.85%	51.27%	38.11%	28.58%	31.82%
Less than 1 year	1.60%	4.22%	3.51%	3.79%	5.42%	4.22%
From 1 to 3 years	8.42%	16.43%	19.26%	16.83%	34.23%	33.33%
Permanent Contract	36.20%	23.50%	25.96%	41.27%	31.77%	30.63%
<b>Insurance Type</b>						
Mandatory	45.08%	42.54%	45.72%	59.52%	67.66%	66.65%
Optional/No Insurance	54.92%	57.46%	54.28%	40.48%	32.34%	33.35%
<b>Educational Level</b>						
Undergraduate	31.79%	18.30%	26.42%	35.42%	30.70%	21.02%
No Education	54.06%	72.24%	59.12%	46.43%	51.05%	68.27%
Intermediate Education	12.83%	8.51%	13.04%	16.02%	15.57%	10.03%
Postgraduate	1.33%	0.95%	1.42%	2.12%	2.68%	0.68%

<b>Second Job</b>						
No	10.67%	5.81%	6.13%	4.27%	2.37%	1.17%
Yes	89.33%	94.19%	93.87%	95.73%	97.63%	98.83%
<b>Parents of Young Children</b>						
Other	24.76%	27.58%	25.92%	19.08%	22.58%	24.21%
Yes	9.40%	5.39%	9.13%	9.77%	9.81%	5.67%
No	65.84%	67.03%	64.95%	71.15%	67.61%	70.12%
<b>Duration of Residency</b>						
Less than 1 year	0.63%	1.04%	0.94%	0.64%	1.53%	3.12%
From 1 to 5 years	2.90%	4.37%	3.79%	3.00%	5.99%	9.83%
More than 5 years	96.47%	94.60%	95.28%	96.36%	92.49%	87.06%

Source: The authors' calculation from the LFS 2022.

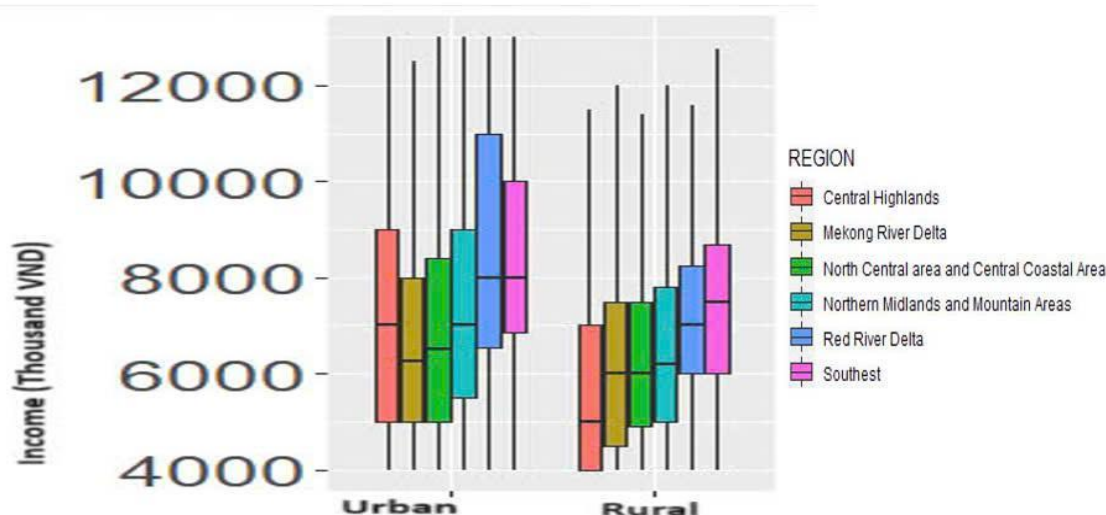
Table 1 provides general information about the research subjects. The research subjects are workers in Vietnam. In terms of gender, the data show a fairly even ratio of male and female workers. In terms of age structure, except for the group from 15 to 24 years old, which accounts for a small proportion, because at this age there are many people still studying in the education system, the remaining three age groups have a fairly even distribution of proportions. Most of the workers in the survey are married (more than 65%). In all regions, the proportion of workers living in rural areas is higher than that of workers living in urban areas, except for the Central Highlands and the Southeast region.

In areas with rapidly developing economies such as the Red River Delta and the Southeast, the proportion of workers working in the private sector is clearly dominant. Whereas in the remaining areas, workers are mainly households operating in the fields of agriculture, forestry, fishery or individual production and business establishments.

The majority of workers in this survey data set are uneducated workers. The highest proportion of these workers is in the Mekong Delta region with 72.24% and the lowest in the Northern Midlands and Mountain Areas with 46.43%. Only a small number of workers with post-graduate degrees were surveyed in this data set, mostly less than 2%, and the highest was 2.68% in the Red River Delta.

The issue of Contract Type, Insurance Type, and whether or not there was a second job, or whether the worker lived with a child under three years old was also mentioned; however, the majority of the answers were no in all six economic regions.

Figure 1: Workers' Income by Economic Region



Workers' income in different economic regions is visually represented in Figure 1. Each region is divided into two areas: urban and rural. Figure 1 shows that workers' income in urban areas is higher than that in rural areas across all economic regions, with the Red River Delta and the Southeast having the highest income on average. The urban area in the Red River Delta is also the region that has the strongest dispersion among the income of workers from nearly 7 million VND to 11 million VND. The income of workers is lowest in the Central Highlands, where the 25<sup>th</sup> quantile is only 4 million VND and the maximum income is recorded as nearly 12 million VND per month. In the remaining areas, the income gap between urban and rural areas is quite similar, the workers who work in urban areas have a little higher income than the one in rural areas.

### 3.2. Regression Result

Table 2. Regression Result

	Estimate	Std. Error	t value	Pr(>  t )
Intercept	8.892	0.009	999.316	0.000 (***)
Gender (Default: Male)	0.158	0.001	121.036	0.000 (***)
Age_group (Age 15-44)	0.066	0.004	18.372	0.000 (***)
Age_group (Age 25-34)	0.014	0.003	4.021	0.000 (***)
Age_group (Age 45+)	0.087	0.003	29.024	0.000 (***)
Marital (Married)	0.016	0.003	5.805	0.000 (***)
Marital (Single)	-0.028	0.003	-8.644	0.000 (***)
Living area (Default: Urban)	-0.030	0.001	-23.101	0.000 (***)
Work sector (Household/ individual)	-0.024	0.003	-8.909	0.000 (***)
Work sector (Other sector)	-0.123	0.007	-17.578	0.000 (***)
Work sector (Public sector)	-0.140	0.002	-62.821	0.000 (***)
Contract type (Less than 1 year)	-0.028	0.005	-6.296	0.000 (***)
Contract type (From 1 to 3 years)	0.027	0.005	5.815	0.000 (***)
Contract type (Permanent contract)	0.083	0.005	17.520	0.000 (***)
Insurance type (Default: Optional/No insurance)	-0.107	0.004	-25.099	0.000 (***)
Education level (No education)	-0.229	0.002	-117.036	0.000 (***)
Education level (Intermediate education)	-0.119	0.002	-53.277	0.000 (***)

Educational level (Postgraduate)	0.173	0.005	34.749	0.000	(***)
Second job (Yes)	-0.042	0.003	-13.636	0.000	(***)
Region (Mekong River Delta)	0.017	0.003	5.619	0.000	(***)
Region (North Central Area and Central Coastal Area)	0.014	0.003	4.869	0.000	(***)
Region (Northern Midlands and Mountain Areas)	0.026	0.003	8.815	0.000	(***)
Region (Red River Delta)	0.143	0.003	48.905	0.000	(***)
Region (Southeast)	0.198	0.003	65.517	0.000	(***)
Parents of young children (Yes)	0.012	0.003	3.415	0.001	(***)
Parents of young children (No)	0.035	0.002	14.126	0.000	(***)
Duration of residency (From 1 to 5 years)	0.010	0.006	1.763	0.078	(.)
Duration of residency (More than 5 years)	-0.011	0.005	-2.039	0.041	(*)

Note: \*, \*\* and \*\*\* represent significance levels at 10%, 5% and 1%, respectively.

Source: The authors' calculation from the LFS 2022.

Based on the table above, we can see that most of the regression coefficients are statistically significant at  $p < 0.01$ . Accordingly, most of the factors selected for inclusion in the model have an impact on the income of workers. Focusing on the employment status factors, the work sector, the contract type, and the insurance type are the main factors that affect the income of workers. People who work in the private sector tend to have higher income on average than those in other sectors. Compared to the default employment contract type of no contract, people who have a permanent contract and those with contracts of 1 to 3 years have higher incomes. Surprisingly, workers with employment contracts of less than 1 year have lower incomes than those without a contract. This may be because short-term labor contracts for less than 1 year are usually a probationary contract or seasonal work. The variable of the social insurance contract is also an important variable that is often mentioned when considering workers' income. For this model, workers with mandatory social insurance contracts have higher income than the group of optional insurance and no social insurance.

In addition, the model also shows a number of other factors that also affect the income of labor such as marital status, regional factors, parents of young children, duration of residency. The impact of these factors is suitable for several studies on the data of previous years.

#### 4. Conclusion

The research results provide several specific insights to aid in the implementation of measures aimed at increasing workers' income, thereby supporting the country's economic development goals. To achieve this, a thorough understanding of labor characteristics, employment status factors, and the strengths and weaknesses of the workforce is required. This understanding will enable the proposal of reasonable policies and solutions to effectively enhance human resources. The goal is to ensure that Vietnamese human resources are utilized appropriately for socio-economic development and meet the demands of international economic integration.

The research has shown factors affecting the income of workers, especially the factors of employment using the updated data from the Labour Force Survey data set of 2022. The factors affecting income are statistically significant including work sectors, employment contract, social insurance contract, gender, education level, age group, living area and region. In addition, the study also refers to factors such as duration of residence time, second job or parents of young children under three years old which play an important role in affecting the income of workers.

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