Journal of Economics, Finance and Management Studies

ISSN (print): 2644-0490, ISSN (online): 2644-0504

Volume 06 Issue 10 October 2023

Article DOI: 10.47191/jefms/v6-i10-08, Impact Factor: 7.144

Page No: 4742-4749

Informal Employment and Income: A Case Study in Tra Vinh Province

Le Thi Thu Diem

Director of The training centre of Logistics and Ecommerce, Tra Vinh University

ABSTRACT: This paper investigates the impact of the informal economy on the economy, focusing on the relationship between informal employment and the incomes of workers in Tra Vinh province. The empirical modelling employs OLS regression with cross-sectional VHLSS data for the Tra Vinh province covering the period 2004-2018. A labor-based approach of is applied to measure the informality of workers. Accordingly, the workers in the occupational groups who work independently are self-employed, and work for the family business is considered informal employment, while the other group is considered formal employment. The results of the study indicate that the informal employment have the lower incomes in the shor and long term. Beside that, the orther sectors including gender, education, the number of working hours, and skill levels have too a highly significant impact on workers' incomes. All policy implications of the study lead to the goal of improving working conditions for workers in the informal economy. Accordingly, the proposed policies include the synchronization between employment policies and labor supply and demand in the market, which focuses on vocational training for workers, provides solutions to ensure legality for employees and set up a databate on labor supply and demand.

KEYWORD: The informal sector, informal economy, informal employment, income, employment creation, formal employment, Tra Vinh province

JEL code: J01, J21, O17, O15, Z22.

1. INTRODUCTION

The term informal economy term, used in many differing contexts, was first introduced in Hart (1973) article on the traditional economic sector in developing economies. The 'social' perspective associates the informal sector with ethical values such as mutual assistance, or as an incubator for entrepreneurs with little capital but creative and dynamic abilities (Cling et al., 2013). From an economic perspective, the informal economy represents the segmentation of the labor market caused by labor surplus and low labor productivity (Cling et al., 2013). As a result, workers in this market often have low wages, precarious working conditions (Kaliyeva et al., 2018), or high unemployment rates. Recently, a harmonious standpoint between the two perspectives is expressed in two aspects: (i) simple economic activities have low economic efficiency and little opportunity to accumulate; (ii) dynamic entrepreneurs are able to generate substantial profits, choosing this area to operate in order to avoid complicated administrative procedures(Cling et al., 2013). Irrespective of how it is defined, the informal economy plays a role in generating income for the poor, unqualified, or low-skilled workers (Bacchetta et al., 2009; ILO, 2018; Tayyaba et al., 2022; Xu et al., 2022).

Currently, informal employment is the most common form of employment in the labour market in developing countries (Bacchetta et al., 2009). Informal employment is defined as workers who perform jobs that are not protected by labour law, and who do not pay income tax or receive protection from unemployment and related social disadvantage. According to international labor standards, informal employment can be found in both formal sector and informal business establishments and in business activities conducted within the household sector. Informal workers are normally classified as being in vulnerable jobs, as a result of the absence of professional and technical qualifications and lack of recognized skill (ILO, 2018). Consequently, the average monthly salary of informal workers is much lower than that of formal workers (ILO, 2018). The in-depth study by (Cling et al., 2013) indicates that, in the long run, the low level of total income in the informal sector drags down the average income of the whole society. Bhattacharya (2011) and (Cling et al., 2013) showed that there is a positive correlation between informality and poverty. Informal workers have a lower average level of education than formal sector workers with a larger number of young and female workers, as well as mainly working in business and trade sectors, construction and house helping, so the income gap between

formal and informal sector workers is clear (Bacchetta et al., 2009; Cling et al., 2013; Folawewo, 2006; Joo, 2011). Cling et al. (2013) also showed that completing basic education helps to increase income for workers by 20% - 33%.

While there have been many recent studies of the impact on employment and per capita income in Tra Vinh province, there has not been any research examining the influence of the informal economy on workers' incomes. Therefore, this study focuses on assessing the role and influence of the informal economy on employee income in Tra Vinh province. In this setting, the main objective of this study is to analyze the current situation with respect to impact of the informal economy on the living standards and incomes of workers in Tra Vinh province. Since the Doi Moi policy – the economic reforms in 1986, almost all provinces of the country have achieved significant socio-economic development, including Tra Vinh. The economic development of Tra Vinh province has contributions from both the formal and informal economic sectors. The informal economic sector of Vietnam is dynamic and plays a critical role, creating jobs for nearly 70% of workers in the economy (GSO, 2019; ILO, 2018). But the income of workers in this sector tends to be very low and the working conditions are uncertain. The International Labor Organization has highlighted that Vietnam's informal workers often have low and infrequent income, long working hours, and little opportunities to access career development skills (ILO, 2018). The VHLSS survey of living standards in Tra Vinh province indicated that in 2004, an average worker in the informal sector earned 229.7 thousand VND/month, increasing to 2,351.4 million VND/month by the end of 2006, however this it is much lower than the average monthly income of a worker in the formal sector (2,078.4 million VND/month in 2004 and 15,196.1 million VND in 2016). The participants in the informal sector are largely street vendors, small traders, small neighbourhood retail store owners, tricycles and cyclo drivers, homemakers and homeowners engaging in small and subcontract businesses, small entrepreneurs and self-employed (Yuzon, 2005). Hart (1973) and Hart (2017) indicated that informal workers and their family are disadvantaged because of there not being protected by regulations on labour laws.

The remainder of this paper is organized as follows. The next section briefly describes some of the characteristics of the informal sector in Tra Vinh province, Vietnam. The components of the empirical model used in this study is outlined in Section 3. This section also includes a brief overview of previous studies of the determinants of income in the informal sector. The results from the empirical analysis are listed in Section 4. Some policy recommendations are noted in the concluding section of the paper.

2. RESEARCH METHODS AND DATA

This section outlines the empirical modeling used in this study to assesses the influence of informal employment on the income of workers in Tra Vinh province. The empirical results derived from the modeling is presented in Section 4. The selection of explanatory variables to be used in the estimating equation is discussed, along with a consideration of the definition of the informal sector used in this study.

According to Duval-Hernández (2006), formality needs to be measured according to the legal status of an employment contract. However, this measure omits cases of self-employed workers in cases where self-employed workers do not have access to contracts. Therefore, some measures of informal status concentrate on social security status (Merrick, 1976) with informality associated with the absence of social welfare protection and payment of social security tax (Kaliyeva et al., 2018; Jumambayev, 2016; Maloney, 1999; Marcouiller & Young, 1995; Portes et al., 1986; Saavedra & Chong, 1999). With the data set of Household Living Standards Survey in Vietnam, it is not possible to separate formal and informal employment using these methods; however, it is possible to identify self-employed and salaried workers. Therefore, in this study, a labor-based approach is applied to measure the informality of workers. Workers in the occupational groups who work independently, self-employed and work for the family business are considered informal workers, while the remainder of the remainder group are considered formal workers.

There are several studies on the relationship between informal employment and income (Bacchetta et al., 2009; Bhattacharya, 2011; Cling et al., 2013; Elveren & Ozgur, 2016; Folawewo, 2006; Joo, 2011; Wamuthenya, 2010; Yuzon, 2005). A number of key factors that determine the level of workers' income in the informal sector have been observed in numerous studies (Drews et al., 2015; Zogli et al., 2019). However, the common finding of these studies indicates that age, gender, industry or occupation, education, ethnicity, marital status, age of business or work experience, labor location (urban or rural), labor intensity (hours of working) are key factors effecting informal sector income (Bacchetta et al., 2009; Bhattacharya, 2011; Cling et al., 2013; Folawewo, 2006; Joo, 2011). A notable finding is that those informal female workers earn much less than males (Drews et al., 2015; Folawewo, 2006; ILO, 2018; Wamuthenya, 2010; Yuzon, 2005; Zogli et al., 2019). Meanwhile, Chingono (2016) argued that education is the main factor affecting income in the informal sector. Drews et al. (2015) and Folawewo (2006) also concluded that the rate of return on education is low in the informal sector. On the other hand, Hart (1973), Hemmer & Mannel (1989) and Igudia et al. (2016) highlighted the difference in income of informal workers between rural and urban sectors. In addition, the probabilistic migration model of Harris & Todaro (1970) showed informal employment is often a temporary option for migrant workers while waiting for better paying jobs.

On the basis of evidence emerging from previous studies, the empirical work in this paper focuses attention on the f variables listed in Table 2, as impacting on informal sector workers' incomes.

Table 1. List of variables in the research model

	Variable name	Description	Measure	References
Dependent variable				
1	income	Changes in employee's income	Log of monthly income	(Cling et al., 2013; Rodríguez-Barranco et al., 2017; Zogli et al., 2019)
Independent variables				
2	informal	Informal status of labor	0 = Formal; 1 = Informal	(Cling et al., 2013; Wamuthenya, 2010; Zogli et al., 2019)
3	age	Employee's age	Age	(Cling et al., 2013; Wamuthenya, 2010; Zogli et al., 2019)
4	age2	Average working age	Square of age	(Cling et al., 2013; Joo, 2011)
5	gender	Employee's gender	0 =Female 1 =Male	(Oaxaca, 1973; Rand & Torm, 2012)
6	mar_status	Marital status	0 = Other 1 = Married	(Cling et al., 2013; Dasgupta et al., 2015)
7	ethnicity	Ethnicity of labor	0 = Other 1 = Kinh	(Cling et al., 2013; Folawewo, 2006)
8	urban	Labor's living area	0 = Rural 1 = Urban	(Bromley & Wilson, 2018; Harris & Todaro, 1970; Hart, 1973)
9	education	Level of labor education	Number of years of schooling of labor	(Cling et al., 2013; Igudia et al., 2016; Joo, 2011; Nguyen & Thi Tran, 2016)
10	work_time	Working time in the last 30 days	Number of hours worked in the last 30 days	(Wamuthenya, 2010; Zogli et al., 2019)
11	job	Amount of work in the last 30 days	Number of jobs performed in the last 30 days	(Wamuthenya, 2010; Wulandari & Satria, 2018; Zogli et al., 2019)
12	occupation	Labor's occupation	1 = Group of highly specialized workers 2 = Group of middle-class professional workers 3 = Group of low-level specialized workers 4 = Group of technical and manual workers 5 = Group of unskilled workers	(Hart, 1973; Hemmer & Mannel, 1989; Igudia et al., 2016)

The research data is compiled from the VHHS data set of Tra Vinh province for the period 2004 to 2018 (interval of 2 years). The VHLSS dataset includes detailed household and community information about the living standards of the region and nation. The composition of the data used in this study is summarized in Table 2.

Table 2: Number of observations in the study

	2004	2006	2008	2010	2012	2014	2016	2018
Formal	460	276	356	393	394	396	312	255
	(81.0)	(73.8)	(73.9)	(77.8)	(74.8)	(80.7)	(66.7)	(53.6)
Informal	108	98	126	112	133	95	156	221
	(19.0)	(26.2)	(26.1)	(22.2)	(25.2)	(19.4)	(33.3)	(46.4)
Total	**568**	**374**	**482**	**505**	**527**	**491**	**468**	**476**
	(100)	(100)	(100)	(100)	(100)	(100)	(100)	(100)

Source: *VHLSS Annual Living Standard Survey Dataset 2004, 2006, 2008, 2010, 2012, 2014, 2016 and 2018*

3. EMPIRICAL RESULTS

Based on the selection of independent variables indicated in Section 3, the following regression equation was estimated using OLS.

$$\text{Ln(income)} = \beta_0 + \beta_1*\text{informal} + \beta_2*\text{age} + \beta_3*\text{age2} + \beta_4*\text{gender} + \beta_5*\text{mar\_status} + \beta_6*\text{ethnicity} + \beta_7*\text{urban} + \beta_8*\text{education} + \beta_9*\text{work\_time} + \beta_{10}*\text{job} + \beta_{11}*\text{occupation} + \varepsilon$$

The study applies OLS regression for the period from 2004 -2018 (2 years interval). To determine the most efficient model, stepwise regression is used in the study. The dependent variable (income) is transformed to so that it can be interpreted as an elasticity (Card, 1999; Rodríguez-Barranco et al., 2017). The results from the regression analysis are shown below in Table 4 and Table 5. Due to the specific nature of the data[1], OLS analysis is performed with cross-sectional data for the period 2004-2018 collected from the VHLSS dataset of the General Statistics Office. The VIF coefficients are all less than 10, so it can be concluded that there is no multicollinearity between the variables (Wooldridge, 2013). The Breusch-Pagan test (Breusch & Pagan, 1979)used to test for heteroskedasticity in the linear regression, with the results indicating the absence of heteroskedasticity in all cases at eh 5% significance level. A review of the R-squared values and the F-test (Godfrey, 1964) shows that the results from the OLS regressions are robust. The R-squared value, reflecting the explanatory power of the independent variables in the model, is mostly greater than 0.5, suggesting that in all years more than 50% of the value of the dependent variable is explained by the independent variables included in the model. The p-value of the F test is used to test the fit of the regression model. The results (table 5) show that all p-values are less than 0.05, indicating that the regression model adequately captures the relationships reflected in the data.

Table 3: Tests of regression model

	(1) 2004	(2) 2006	(3) 2008	(4) 2010	(5) 2012	(6) 2014	(7) 2016	(8) 2018
observation	568	374	482	505	527	491	468	476
R2	0.538	0.963	0.615	0.626	0.563	0.524	0.941	0.587
VIF	5.789	1.824	7.090	4.729	4.695	2.926	2.440	3.487
F-test	58.633	847.635	106.799	113.627	97.661	80.441	470.085	74.166
Prob >F	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Breusch-Pagan/Cook-Weisberg test of variance								
Ho: The variance of error is the same/constant								
Chi2(1)	9.33	3.97	7.79	8.98	2.64	6.48	5.36	3.15
Prob>chi2	0.2101	0.1316	0.1200	0.1104	0.1046	0.0112	0.1130	0.1020

Consideration of the results of the year-to-year and multi-year regression estimates indicates that at the 5% significance level, independent variables such as phichinhthuc, gioitinh, hocvan, sogiolaodong, nghe significantly explained the income of workers in Tra Vinh province both in the short term (reviewed at each year) and long term (considering the entire study period). Thus, the factors of informal status, gender, education level, the number of working hours and occupation level have an important influence on changes in the income of workers. The model also shows that there is no evidence of the impact of age, marriage, urban population, and number of jobs on income in the recent period.

In Tra Vinh province, the proportion of workers in the informal sector remains high, accounting for more than 60% of total employees with low and very low incomes. The regression results show that informal workers have significantly lower income than formal workers at the 5% significance level. Notably, this situation has not only occurred in the short-term, but the entire study timeline also showed similar results. Obviously, over the years, the income situation of informal workers has not been improved. These results reflect the fact that, informal employment often is charactered by precarious employment, with the absence of employment contracts (Wamuthenya, 2010; Wulandari & Satria, 2018; Zogli et al., 2019), with income significantly lower than that of formal sector workers.

Gender factor analysis shows that women have higher income than men in the sample. According to the survey on gender and labor market in Vietnam conducted by the International Labor Organization in 2019, the rate of participation in the informal labor market of Vietnamese women is significantly high in comparison to the total labor force of the economy (accounting for

[1] VHLSS data is collected every 2 years by the General Statistics Office. The chin data is collected from individuals of working age which is different for each year, so it is not possible to form a time series dataset.

70.9%), and this is also one of the highest rates in Southeast Asia (Oaxaca, 1973; Rand & Torm, 2012). This also coincides with the fact that women do not have the same opportunity as men when entering the labor market.

Table 4: Results of regression model

	(1) 2004	(2) 2006	(3) 2008	(4) 2010	(5) 2012	(6) 2014	(7) 2016	(8) 2018
informal	-0.4273***	-0.1206***	-0.3165***	-0.3776	-0.4982***	-0.6260***	-0.0949***	-0.5615***
	(0.095)	(0.038)	(0.083)	(0.231)	(0.118)	(0.113)	(0.031)	(0.106)
age	0.0331***	-0.0069**	0.0195***	0.0862***	0.0725***	0.0383***	0.0010	0.0052
	(0.009)	(0.003)	(0.007)	(0.011)	(0.013)	(0.010)	(0.002)	(0.008)
age2	-0.0004***	0.0001**	-0.0002***	-0.0010***	-0.0009***	-0.0005***	-0.0000	-0.0001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
gender	-0.9864***	-0.0330	-0.4588***	-0.8709***	-1.1107***	-1.2599***	-0.1658**	-0.1358*
	(0.132)	(0.060)	(0.118)	(0.225)	(0.179)	(0.216)	(0.072)	(0.073)
Mar-status	-0.1773	0.0685*	-0.1415	-0.3731***	-0.2744*	0.2936	0.0367	0.2105*
	(0.110)	(0.037)	(0.095)	(0.141)	(0.146)	(0.182)	(0.038)	(0.108)
ethnicity	0.0031	-0.0291	-0.0114	-0.1252	-0.1013	-0.2391*	0.0797***	-0.0281
	(0.073)	(0.034)	(0.074)	(0.104)	(0.102)	(0.126)	(0.028)	(0.081)
urban	0.1579*	0.0230	0.3468***	0.2797**	0.4349***	0.5140***	0.0418	0.1980*
	(0.093)	(0.043)	(0.093)	(0.141)	(0.132)	(0.157)	(0.036)	(0.103)
education	0.0292**	0.0210***	0.0193**	0.0297*	0.0249	0.0287	0.0095**	0.1402***
	(0.012)	(0.006)	(0.010)	(0.016)	(0.016)	(0.022)	(0.005)	(0.013)
work_time	0.0019***	0.0004*	0.0038***	0.0082***	0.0036***	0.0048***	-0.0005*	0.0030***
	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)
job	-0.1878***	-0.0522*	-0.0997**	-0.7345***	0.0504	0.0741	-0.0869**	0.0009
	(0.051)	(0.027)	(0.044)	(0.112)	(0.063)	(0.088)	(0.037)	(0.034)
_occupation_2	0.0246	-1.1440***	-0.7037	-0.1353	0.4010	-3.0971***	-1.9093***	-0.9685***
	(0.525)	(0.061)	(0.491)	(0.471)	(0.498)	(0.445)	(0.082)	(0.279)
_ occupation _3	-1.2644***	-2.1821***	-1.7450***	-1.8203***	-1.7694***	-2.5708***	-1.5502***	-1.4442***
	(0.247)	(0.070)	(0.189)	(0.278)	(0.489)	(0.252)	(0.094)	(0.308)
_ occupation _4	-2.6648***	-2.4986***	-2.4213***	-2.9347***	-2.4436***	-2.6149***	-2.7287***	-0.5948*
	(0.235)	(0.148)	(0.152)	(0.306)	(0.486)	(0.300)	(0.074)	(0.337)
_ occupation _5	-1.8956***	-3.1094***	-2.7726***	-3.0658***	-2.5908***	-2.7171***	-3.2262***	-0.6490**
	(0.241)	(0.067)	(0.170)	(0.259)	(0.491)	(0.254)	(0.099)	(0.280)
Cont	1.2691***	6.4154***	6.9142***	6.0719***	6.3441***	6.9349***	8.2918***	1.3392***
	(0.270)	(0.072)	(0.177)	(0.338)	(0.520)	(0.373)	(0.069)	(0.357)

Note: *** p<0.01, ** p<0.05, * p<0.10

The results of the study on the factor of educational level shows that the more educated an employee, as measured by the number of years of schooling, the higher is their income. This result is consistent with studies by a number of previous studies (Cling et al., 2013; Igudia et al., 2016; Joo, 2011; Nguyen & Thi Tran, 2016). The results reported in Table 5 also suggest that the number of

working hours has a positive and significant effect on the employee's income. This finding is consistent with the studies of Wamuthenya (2010), Wulandari & Satria (2018) and (Zogli et al., 2019). The survey results also show that the average number of working hours over a typical 30 days period does not change much, ranging from 185 hours to 192 hours, and that the distribution of working hours is fairly constant over the years in the sample.

Regarding the occupation factor, the study includes 4 variables to assess the differences in the level of occupation ranges from high to low. Research results show that skill level is statistically significant at 1% and has a negative correlation with income. This means that the lower skill level workers have, the lower the income they receive, as indicated by the regression coefficient of occupation 4 being larger than occupation 3, and occupation 3 is likewise larger than occupation 2, with a negative correlation. The occupation factor analysis shows that the proportion of low-skilled workers accounts for a large proportion of the total labor of the economy (nearly 56%), while the proportion of workers with medium and high technical expertise accounts for a very small percentage, less than 10%, the proportion of skilled craftsmen accounts for only about 15% of the total labor. These results are consistent with the studies of Cling et al. (2013) and Thi et al. (2010) indicating a significant negative relationship between low-skilled workers and income levels.

4. Concluding Comments

The study was conducted to assess the influence of informal employment on employee income in Tra Vinh province during the period 2004-2018. Regression analysis results show that for the informal factor, gender, education, number of working hours, and skill levels have a significant impact on workers' income in the short and long term. There are a number of policy recommendations arising for these results which have the potential to improve the working conditions for workers in the informal sectors in Tra Vinh province.

There is the need for job creation polices synchronized with other local socio-economic development programs with the objective of increasing income-generating employment for disadvantages groups of workers located in the informal sector. It is also important that more centralized and assessable data on labor demand and supply conditions is available for all regions, and for all labor market participants. Lack of information is a major deterrent to achieving improvements in labor market efficiency. Vocational training for workers is of critical importance, and an evaluation and expansion of the National Target Program Employment - Vocational Training scheme would represent a useful starting point. In addition, it is necessary to propagate and disseminate information about the legal aspects of labor relations and responsibilities. All of these policy recommendations have as the objective the creation of conditions favorable for the formalization of employment.

REFERENCES

1) Bacchetta, Marc., Ernst, E., Bustamante, J. P., Bureau international du travail., Organisation internationale du travail., & Organisation mondiale du commerce. Secrétariat. (2009). *Globalization and informal jobs in developing countries* (1st ed.). International Labour Organization and World Trade Organization. https://www.wto.org/english/res_e/booksp_e/jobs_devel_countries_e.pdf
2) Bhattacharya, P. C. (2011). Informal sector, income inequality and economic development. *Economic Modelling*, *28*(3), 820–830. https://doi.org/https://doi.org/10.1016/j.econmod.2010.10.007
3) Breusch, T. S., & Pagan, A. R. (1979). A Simple Test for Heteroscedasticity and Random Coefficient Variation. *Econometrica*, *47*(5), 1287–1294. https://doi.org/10.2307/1911963
4) Bromley, R., & Wilson, T. D. (2018). The Urban Informal Economy Revisited. *Latin American Perspectives*, *45*(1), 4–23. https://www.jstor.org/stable/48595194
5) Card, D. (1999). Chapter 30 - The Causal Effect of Education on Earnings. In O. C. Ashenfelter & D. Card (Eds.), *Handbook of Labor Economics* (Vol. 3, pp. 1801–1863). Elsevier. https://doi.org/https://doi.org/10.1016/S1573-4463(99)03011-4
6) Chingono, M. (2016). Women, the Informal Economy and the State in Lesotho. *World Journal of Social Science Research*, *3*, 629. https://doi.org/10.22158/wjssr.v3n4p629
7) Cling, J.-P., Nam, Đ. H., Lagrée, S., Razafindrakoto, M., & Roubaud, F. (2013). *Kinh tế phi chính thức tại các nước đang phát triển* (1st ed.). Nhà xuất bản Tri thức.
8) Dasgupta, S., Bhula-Or, R., & Fakthong, T. (2015). Earnings differentials between formal and informal employment in Thailand. *ILO Working Papers 994896403402676, International Labour Organization.* . www.ilo.org/publns
9) Drews, C.-C., Stephan, U., Hart, M., & Mickiewic, T. (2015). *Understanding Motivations for Entrepreneurship: A Review of Recent Research Evidence*. https://doi.org/10.13140/RG.2.1.3343.2165
10) Duval-Hernández, R. (2006). Informality, segmentation and earnings in urban Mexico. *Unpubished Paper, Center for US-Mexican Studies, University of California, Sandiegio*.

11) Elveren, A., & Ozgur, G. (2016). The Effect of Informal Economy on Income Inequality: Evidence from Turkey. *Panoeconomicus*, *63*, 293–312. https://doi.org/10.2298/PAN1603293E
12) Folawewo, A. (2006). Determinants of Informal Sector Labour Demand: An Application of Alternative Methodological Approaches to South Western States of Nigeria. *Applied Econometrics and International Development*, *6*.
13) Godfrey, M. (1964). Econometric theory, by Arthur S. Goldberger, John Wiley and Sons, New York, 1964, xi + 399 pp. *Naval Research Logistics Quarterly*, *11*, 230–231. https://doi.org/10.1002/nav.3800110213
14) GSO. (2019). *Statistical Yearbook of Viet Nam 2018* (1st ed.). Statistical publishing house.
15) Harris, J. R., & Todaro, M. P. (1970). Migration, Unemployment and Development: A Two-Sector Analysis. *The American Economic Review*, *60*(1), 126–142. www.jstor.org/stable/1807860
16) Hart, K. (1973). Informal Income Opportunities and Urban Employment in Ghana. *The Journal of Modern African Studies*, *11*(1), 61–89. www.jstor.org/stable/159873
17) Hart, K. (2017). Informal Economy. In *The New Palgrave Dictionary of Economics* (pp. 1–4). Palgrave Macmillan UK. https://doi.org/10.1057/978-1-349-95121-5_804-2
18) Hemmer, H.-R., & Mannel, C. (1989). On the economic analysis of the urban informal sector. *World Development*, *17*(10), 1543–1552. https://doi.org/https://doi.org/10.1016/0305-750X(89)90026-0
19) Igudia, E., Ackrill, R., Coleman, S., & Dobson, C. (2016). Determinants of the informal economy of an emerging economy: A multiple indicator, multiple causes approach. *International Journal of Entrepreneurship and Small Business*, *28*, 154. https://doi.org/10.1504/IJESB.2016.076643
20) ILO. (2018). *Third edition Women and men in the informal economy: a statistical picture* (3rd ed.). International Labour Office. www.ilo.org/publns
21) Joo, D. (2011). Determinants of the Informal Sector and their Effects on the Economy: The Case of Korea. *Global Economic Review*, *40*(1), 21–43. https://doi.org/10.1080/1226508X.2011.559326
22) Jumambayev, S. (2016). The Precarization of Employment A Case of Kazakhstan. *Journal of Asian Finance, Economics and Business*, *3*(2), 59–66. https://doi.org/10.22158/wjssr.v3n4p629
23) Kaliyeva, S. A., Alzhanova, F. G., Meldakhanova, M. K., Sadykov, I. M., & Adilkhanov, M. A. (2018). The Precariousness employment in the Eurasian Economic Space: Measurement problems, factors and main forms of development. *Journal of Asian Finance, Economics and Business*, *5*(3), 157–167. https://doi.org/10.13106/jafeb.2018.vol5.no3.157
24) Maloney, W. F. (1999). Does Informality Imply Segmentation in Urban Labor Markets? Evidence from Sectoral Transitions in Mexico. *The World Bank Economic Review*, *13*(2), 275–302. http://www.jstor.org/stable/3990099
25) Marcouiller, D., & Young, L. (1995). The Black Hole of Graft: The Predatory State and the Informal Economy. *The American Economic Review*, *85*(3), 630–646. http://www.jstor.org/stable/2118193
26) Merrick, T. W. (1976). Employment and Earnings in the Informal Sector in Brazil: The Case of Belo Horizonte. *The Journal of Developing Areas*, *10*(3), 337–354. http://www.jstor.org/stable/4190380
27) Nguyen, L. D., & Thi Tran, H. (2016). Determinants to Female Labor Income in the Vietnam's Informal Sector. *Mediterranean Journal of Social Sciences*, *7*(3). https://doi.org/10.5901/mjss.2016.v7n3s1p169
28) Oaxaca, R. (1973). Male-Female Wage Differentials in Urban Labor Markets. *International Economic Review*, *14*(3), 693–709. https://doi.org/10.2307/2525981
29) Portes, A., Blitzer, S., & Curtis, J. (1986). The urban informal sector in Uruguay: Its internal structure, characteristics, and effects. *World Development*, *14*(6), 727–741. https://doi.org/https://doi.org/10.1016/0305-750X(86)90015-X
30) Rand, J., & Torm, N. (2012). The informal sector wage gap among Vietnamese micro-firms. *Journal of the Asia Pacific Economy*, *17*(4), 560–577. https://doi.org/10.1080/13547860.2012.724544
31) Rodríguez-Barranco, M., Tobías, A., Redondo, D., Molina-Portillo, E., & Sánchez, M. J. (2017). Standardizing effect size from linear regression models with log-transformed variables for meta-analysis. *BMC Medical Research Methodology*, *17*(1). https://doi.org/10.1186/s12874-017-0322-8
32) Saavedra, J., & Chong, A. (1999). Structural reform, institutions and earnings: Evidence from the formal and informal sectors in urban Peru. *The Journal of Development Studies*, *35*(4), 95–116. https://doi.org/10.1080/00220389908422582
33) Tayyaba, R., Abdul, W., & Shahzad, A. (2022). Mobilizing Informal Economic Sector to Uphold Urban Institutional Resilience: A Case Study of Rawalpindi, Pakistan. *Journal of Asian Finance*, *9*(5), 397–0407. https://doi.org/10.13106/jafeb.2022.vol9.no5.0397
34) Thi, N., Chí, N., Thị, P., Cling, J.-P., Razafindrakoto, M., & Roubaud, F. (2010). *The Informal Sector in Vietnam A focus on Hanoi and Ho Chi Minh City* (Thế Giới). Thế Giới.

35) Wamuthenya, W. (2010). *Determinants of Employment in the Formal and Informal Sectors of the Urban Areas of Kenya* (1st ed.). The African Economic Research Consortium.
36) Wooldridge, J. M. (2013). *Introductory econometrics* (6th ed.). www.cengage.com/highered
37) Wulandari, R., & Satria, D. (2018). *Income Inequality between Formal-Informal Employees Based on Education Group*. 25–42. https://doi.org/10.7454/efi.v64i1.583
38) Yuzon, I. F. (2005). The Informal Labor Sector Amidst Globalization. *Humanomics*, *21*(1/2), 21–29. https://doi.org/10.1108/eb018898
39) Zogli, L.-K. J., Lawa, E., & Dlamini, B. (2019). Determinants of Income in the Informal Sector: A Case of Selected Slums in Ghana. *International Journal of Entrepreneurship*, *23*.