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Does Informal Labor Affect Food Security? Evidence from Indonesia

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Abstract

This study analyzes the impact of informal employment on household food security in Indonesia, focusing on concern about food sufficiency, access to nutritious food, and reduced food intake. Using data from the March 2021 Indonesia National Socioeconomic Survey, binary logistic regression models were applied to a weighted sample of household heads actively employed in formal and informal sectors. The analysis reveals that informal employment significantly undermines food security across all measures, with informally employed households facing higher risks of food shortages, reduced nutritional access, and inadequate intake. Vulnerabilities are more pronounced in rural and non-agricultural households. Protective factors such as education, internet access, and health insurance enhance food security, while larger household sizes and underemployment exacerbate risks. This study emphasizes the urgent need for targeted interventions to safeguard food security for vulnerable populations in Indonesia.

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INTRODUCTION

Food security, defined as the availability of sufficient, safe, and nutritious food to maintain a healthy life, remains a pressing challenge in many developing countries. Despite global efforts, 811 million people faced hunger in 2020, with Asia and Africa disproportionately affected (FAO et al. 2021). A key factor in this crisis is the link between employment and food security, especially where informal employent prevails. The International Labor Organization (ILO) defines informal employment as work lacking legal or social protections, encompassing over 60% of the global workforce and nearly 90% of employment in developing countries (ILO 2018). Informal jobs, typically characterized by low wages, instability, and absence of safety nets, heighten household vulnerabilities, particularly regarding food access. This study explores how informal employment impacts household food security in Indonesia, a country with a substantial informal labor force and a diverse socioeconomic landscape.

Informal employment, although frequently a critical source of income, exposes workers to precarious conditions that undermine their ability to ensure food security. These jobs are frequently unstable, poorly paid, and lack access to social protection, leaving households more susceptible to economic shocks (Albertini, Poirier & Sopraseuth 2020; Fields 2019). Prior research has shown that informal workers are more likely to experience poverty, which compromises their capacity to purchase sufficient and nutritious food. For instance, studies in Vietnam and Sub-Saharan Africa highlight the lower food expenditures and reduced dietary diversity associated with informal employment (Blekking et al. 2020; Vu & Rammohan 2022). Similarly, evidence from other developing countries suggests that while non-farm income improves food security, informal workers often fail to reap these benefits due to irregular incomes and lower earnings (Babatunde & Qaim 2010; Nordman, Rakotomanana & Roubaud 2016; Rahman & Mishra 2020).

The COVID-19 pandemic has further underscored the vulnerabilities of informal workers. With 1.6 billion informal workers globally among the hardest hit, the pandemic exacerbated food insecurity by disrupting incomes and reducing households' ability to purchase food (Kansiime et al. 2021; Narula 2020). Informal workers, reliant on daily earnings, faced severe challenges in maintaining adequate food access during periods of lockdowns and economic slowdown. Previous studies reported significant reductions in dietary diversity and consumption of nutritious food among informal worker households during the pandemic, emphasizing the precarious nature of their food security (Kansiime et al. 2021; Lawson-Lartego & Cohen 2020; Sohel et al. 2022). These dynamics highlight the urgent need for targeted policies to address the food security challenges of informal workers, particularly in countries where informal employment is prevalent.

Despite the growing body of literature on food security, significant gaps remain in understanding the relationship between informal employment and food security. Many studies fail to differentiate between formal and informal employment, instead aggregating them into broader categories, obscuring the specific vulnerabilities faced by informal workers. Existing research also tends to overlook urban challenges, focusing primarily on rural areas. Moreover, much of the literature analyzes food security through limited indicators such as food expenditures or dietary diversity, without considering other critical aspects such as psychological stress about food availability, access to nutritious food, or behavioral changes due to shortages.

This study aims to bridge these gaps by examining the impact of informal employment on household food security in a more comprehensive manner. Indonesia, with its rapid urbanization and large informal labor force, provides an ideal setting to examine these dynamics. Specifically, this study investigates the relationship between informal employment and three key dimensions of food security:

concerns about food sufficiency, consumption of nutritious food, and reductions in food intake due to shortages. The analysis also accounts for key socioeconomic and demographic factors to better understand the mediating factors in this relationship.

The findings from this study are expected to contribute to both academic and policy discourse. Academically, the research enhances the understanding of how employment status shapes food security outcomes, addressing a critical gap in the existing literature. On a policy level, they can inform targeted interventions aimed at mitigating food insecurity among informal worker households, such as expanding social protection coverage or providing income stabilization programs. Furthermore, the study's focus on Indonesia, with its diverse socioeconomic contexts and high prevalence of informal employment, offers valuable insights applicable to other developing countries with similar labor market structures.

RESEARCH METHODS

This study investigates the impact of informal employment on food security using the March 2021 Indonesia National Socioeconomic Survey, a cross-sectional and nationally representative survey by Statistics Indonesia (BPS). This survey collects detailed information on various household-level socioeconomic factors, including employment, food security, and demographic characteristics. The focus of this research is on the heads of households, as their employment status directly influences household well-being. To ensure the relevance of the analysis, only households with employed heads were included, excluding observations where the household head was unemployed. The dataset's weighting variable was utilized to adjust for the survey's complex design, ensuring population-representative findings.

The dataset provides a robust basis for analyzing the multidimensional relationship between employment type and food security. The primary dependent variables are three binary indicators of food security. These include whether the household head expressed concern about food sufficiency over the past year (1 = not worried, 0 = worried), whether the household consumed nutritious food (1 = yes, 0 = no), and whether the household had to eat less due to food shortages (1 = did not eat less, 0 = ate less). These variables capture different dimensions of food security, ranging from psychological concerns to actual food consumption behavior, and align with global frameworks such as those of the Food and Agriculture Organization (FAO).

The independent variable of interest in this study is the employment status of the household head, classified as either formal or informal (1 = informal, 0 = formal). This classification aligns with definitions provided by BPS and the framework outlined in the 13th International Conference of Labour Statisticians (ICLS) (BPS 2021). Formal employment is defined as individuals who are either self-employed with permanent staff or employees with formal contracts that provide access to social security and employment benefits. In contrast, informal employment encompasses those without access to such benefits or legal protections. This includes self-employed individuals without permanent staff, casual laborers, and workers in unregulated or non-standard employment arrangements, emphasizing the lack of job security and formal agreements inherent to this sector.

Several control variables are included to account for household characteristics that may influence food security outcomes. These include demographic factors such as area of residence, sex, and household size, as well as socioeconomic variables such as education level, internet access, access to credit, health insurance coverage, employment sector, and underemployment status. These variables are detailed in Table 1 to provide a clear overview of their definitions and measurements.

Table 1. Research Variables

Variable	Definition	Measurement
Insufficiency Concern	Household head's concern about food insufficiency in the past year	1 = Not worried 0 = Worried
Nutritional Adequacy	Household's consumption of healthy and nutritious food in the past year	1 = Consumed 0 = Not consumed
Food Intake Stability	Household's ability to maintain food intake without reduction due to shortages	1 = Did not reduce 0 = Reduced
Employment Status	Employment type of the household head	1 = Informal 0 = Formal
Area	Area residence of the household	1 = Urban 0 = Rural
Sex	Sex of the household head	1 = Male 0 = Female
Education Level	Education attainment of the household head	1 = Middle-high 0 = Low
Household Size	Number of household members	Continuous values
Internet Access	Household access to the internet	1 = Yes 0 = No
Credit Access	Household accessed credit in the past year	1 = Yes 0 = No
Health Insurance	Household has national health insurance coverage	1 = Yes 0 = No
Employment Sector	Employment sector of the household head	1 = Non-agriculture 0 = Agriculture
Underemployment	Household head works less than 35 hours per week	1 = Not underemployed 0 = Underemployed

Source: BPS, 2021

This study employs logistic regression to model the relationship between employment type and food security outcomes. Logistic regression is well-suited for binary dependent variables and estimates the likelihood of achieving specific food security outcomes based on the predictor variables (Bonney 1987; Harrell & Harrell 2015). The model also adjusts for the complex survey design, incorporating the primary sampling unit, stratification variable, and the weighting variable. This adjustment ensures that the analysis accounts for the hierarchical structure of the survey data and provides robust standard errors.

The study's strengths lie in its use of a nationally representative dataset, which allows for generalizable insights into the Indonesian population. The inclusion of multidimensional measures of food security captures a wide range of outcomes, from psychological concerns to behavioral adjustments, providing a comprehensive view of household food security. Furthermore, the use of extensive control variables reduces the risk of omitted variable bias, enhancing the credibility of the findings.

The general specification of the model is as follows:

$$log\left(\frac{P\,(Y=1)}{1-P\,(Y=1)}\right) = \beta_0 + \beta_1 X_1 + \sum_{i=2}^{k} \beta_i X_i \quad \ldots. (1)$$

In this model, $P\,(Y = 1)$ is the probability of achieving the food security outcome. The variables X_i denote the control variables, β_0 is the intercept, β_1 is the coefficient for employment status, and β_i are the coefficients for control variables. Distinct models are created for each of the three food security outcomes. Coefficients are presented as log-odds, and their significance is assessed at $p < 0.01$, $p < 0.05$, and $p < 0.10$ levels. To explore heterogeneity, the sample is divided into subsamples based on geographic location

(urban vs. rural) and sector of employment (agricultural vs. non-agricultural). This approach also contributes to the robustness of the results.

RESULTS AND DISCUSSION

Table 2 provides a detailed breakdown of the descriptive statistics of the observations based on employment status. Among the sample, 58.23 percent of households were formally employed, while 41.77 percent were engaged in informal employment. The data highlight the disparities across several dimensions, including demographic characteristics, geographical distribution, education, and access to essential resources.

Food security indicators reveal notable differences between the two groups. The mean value for insufficient concern is 0.849 for households with formal employment, compared to 0.786 for informal employment. This suggests that households with informal labor are more likely to worry about food sufficiency. Similarly, nutritional adequacy is significantly higher in formal labor households (0.933) than in informal labor households (0.889), reflecting better access to nutritious food among formally employed individuals. Food intake stability, which measures the ability to maintain a steady food supply without reductions, also favors formal labor households (0.960) over informal labor households (0.943). This implies that informal workers are more prone to reducing their food intake due to shortages.

Demographic characteristics further highlight these disparities. Formal employment households (91.5%) were predominantly male-headed, compared to informal employment households (85.6%). Additionally, the average household size is slightly larger in formal labor households (3.879) compared to informal labor households (3.785). Geographically, formal employment is predominantly urban-based, with 61.3% of formal labor households residing in urban areas, compared to only 38.3% of informal labor households. These geographic patterns suggest the concentration of formal employment opportunities in urban centers and the reliance on informal employment in rural areas.

Formal employment households also suggest considerable advantages in education, technology access, and institutional resources. Education levels varied between the two groups, with 67.1 % of formal employment households achieving higher education, compared to only 50.1 % among informal employment households. Furthermore, access to technology and resources showed notable differences. Among formal employment households, 74.2 % had internet access, compared to just 37.4 % among informal households. Similarly, credit access is more prevalent in formal labor households (26.3%) than in informal labor households (23.1%). Moreover, health insurance coverage is higher among formal labor households (75.5%) than informal labor households (71.0%). These disparities indicate that formal employment provides greater access to institutional resources, potentially buffering households against financial and health shocks.

Sectoral distribution patterns also show marked contrasts. Formal workers were heavily concentrated in non-agricultural sectors (94.0 %), while informal workers were more evenly distributed, with 44.4 % in agriculture and 55.6 % in non-agricultural jobs. Underemployment, defined as working fewer than 35 hours per week, showed an unexpected pattern, with 81.4 % of formal workers classified as underemployed, compared to only 16.9 % among informal workers. This counterintuitive result might reflect the prevalence of part-time formal work arrangements, especially in urban areas, or seasonal employment in formal rural settings.

Table 2. Descriptive Statistics

Variable	Formal Labor			Informal Labor		
	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.
Insufficient Concern	96,740	0.849	0.358	122,117	0.786	0.410
Nutritional Adequacy	96,740	0.933	0.251	122,117	0.889	0.314
Food Intake Stability	96,740	0.960	0.195	122,117	0.943	0.233
Area	96,740	0.613	0.487	122,117	0.383	0.486
Sex	96,740	0.915	0.279	122,117	0.856	0.351
Education Level	96,740	0.671	0.470	122,117	0.501	0.500
Household Size	96,740	3.879	1.559	122,117	3.785	1.688
Internet Access	96,740	0.742	0.438	122,117	0.374	0.484
Credit Access	96,740	0.263	0.441	122,117	0.231	0.422
Health Insurance	96,740	0.755	0.430	122,117	0.710	0.454
Employment Sector	96,740	0.940	0.237	122,117	0.556	0.497
Underemployment	96,740	0.814	0.389	122,117	0.169	0.463

Source: BPS, 2021 (Processed)

The results of the logistic regression analysis confirm that informal employment has a significant negative impact on household food security in Indonesia. Households engaged in informal employment are more likely to experience food insecurity across all measured dimensions, including concerns about food sufficiency, access to nutritious food, and reductions in food intake due to shortages. These findings underscore the economic vulnerabilities associated with informal employment and the pressing need for policy interventions to mitigate these risks.

Households headed by informal workers are more likely to express concerns about food sufficiency, as evidenced by the negative coefficient for employment status (-0.182, $p < 0.01$). This finding indicates that financial instability and the absence of social protection contribute to heightened uncertainty about future food availability. The effect is more pronounced in rural areas (-0.193, $p < 0.01$) likely due to the dependence on seasonal agricultural employment, while urban households (-0.138, $p < 0.01$) also face insecurity despite access to more diversified food markets. Additionally, sectoral analysis reveals that the adverse impact is strongest in non-agricultural informal jobs (-0.200, $p < 0.01$), where workers rely entirely on fluctuating wages without the fallback of self-produced food. In contrast, the relationship is insignificant in agricultural sectors, suggesting that access to self-produced food may mitigate worries about food sufficiency.

The regression analysis also demonstrates that informal employment is significantly associated with a reduced likelihood of consuming nutritious food (-0.188, $p < 0.01$). Economic constraints limit access to nutrient-rich foods for both urban (-0.167, $p < 0.01$) and rural informal workers (-0.182, $p < 0.01$). Furthermore, sectoral analysis shows that the association between informal employment and nutritious food is insignificant in agricultural sectors but remains highly significant in non-agricultural sectors (-0.207, $p < 0.01$). Agricultural households' access to diverse crops and livestock likely offsets the adverse effects of informal employment on diet quality.

Households engaged in informal employment are also more likely to reduce their food intake due to financial constraints (-0.123, $p < 0.01$). This effect is particularly pronounced in urban households (-0.108, $p < 0.01$), where reliance on purchased food increases vulnerability to price fluctuations. Rural households (-0.106, $p < 0.01$) experience slightly less reduction in food intake due to subsistence

farming. In the agricultural sector, informal employment unexpectedly shows a positive association with food security (0.204, $p < 0.01$), suggesting self-production mitigates food shortages. However, in non-agricultural sectors, the relationship remains strongly negative (-0.157, $p < 0.01$), emphasizing the heightened vulnerability of these households to food shortages.

Several socioeconomic factors also influence the severity of food insecurity among informal workers. Larger household sizes exacerbate food insecurity due to increased financial pressure and resource constraints. Underemployment further worsens food insecurity, as inconsistent earnings limit households' ability to maintain stable food consumption. In contrast, higher education, internet access, and health insurance significantly enhance food security by improving economic resilience and access to resources.

The findings of this study align with and expand upon existing literature on the interplay between informal employment and food security. The significant negative association between informal employment and all three food security outcomes underscores the vulnerabilities faced by informally employed households. These results corroborate previous studies highlighting the income instability and lack of social protections associated with informal work, restricting households' ability to secure sufficient and nutritious food (Canelas 2019; Vu & Rammohan 2022).

Regional and sectoral differences further enrich the understanding of food security dynamics. The greater vulnerability of urban households aligns with the findings of Ihle et al. (2020) and Toth, Rendall and Reitsma (2016), who emphasize the dependence of urban households on market-based food systems. Similarly, the buffering effect of agricultural self-production in rural areas and agricultural sectors supports studies demonstrating the importance of homegrown food in mitigating food insecurity (Baiphethi & Jacobs 2009; Herrera et al. 2021). However, the pronounced vulnerabilities of non-agricultural informal workers highlight the need for targeted policies addressing income instability and access to affordable food.

The protective effects of education, internet access, and health insurance align with prior research on household resilience. The positive role of education in reducing food insecurity supports findings that education enhances employment opportunities, resource management, and decision-making abilities (Bhorat, Cassim & Tseng 2016; Li, John Morgan & Ding 2008). Health insurance alleviates financial stress during health shocks (Cutler & Zeckhauser 2000; Zhang, Nikoloski & Mossialos 2017), enabling households to allocate more resources to food consumption. Similarly, internet access facilitates economic opportunities or information access (Barrero, Bloom & Davis 2021; Campos, Arrazola & de Hevia 2017), improving household resilience to income variability.

Policy implications are evident from these findings. Short-term measures, such as expanding access to social protection, affordable credit, and internet services, can alleviate immediate vulnerabilities for informally employed households. Long-term structural reforms, such as formalizing labor markets and promoting skill development, ensure economic stability and reduce reliance on precarious informal jobs. Policies enhancing education and vocational training can further empower individuals to transition to more secure employment opportunities. Additionally, targeted interventions in urban and non-agricultural sectors, including subsidized food programs, can mitigate the heightened vulnerabilities of these populations. Ultimately, addressing the structural barriers informal workers face through integrated policy efforts is vital to breaking the cycle of food insecurity, ensuring equitable access to resources, and fostering resilient and inclusive socioeconomic systems.

CONCLUSION

This study provides an in-depth analysis of the relationship between informal employment and household food security in Indonesia,

focusing on three critical dimensions: food sufficiency concerns, nutritious food consumption, and reduced food intake. The results reveal that informal employment is significantly associated with negative outcomes across all dimensions of food security, underscoring the economic instability and lack of social protections inherent in informal work. The findings demonstrate that households headed by informal workers face heightened vulnerabilities, particularly in urban and non-agricultural contexts, where market dependency and income instability exacerbate food insecurity risks.

Protective factors such as education, internet access, and health insurance emerged as key determinants of resilience against food insecurity. Education facilitates better employment opportunities and resource management, while internet access connects households to critical market information and services. Health insurance reduces financial strain during health shocks, allowing households to prioritize food consumption. These factors not only mitigate the adverse effects of informal employment but also highlight actionable pathways for enhancing household resilience. Additionally, rural households and agricultural sector workers demonstrate better outcomes in certain dimensions due to the buffering effects of subsistence farming, a finding that aligns with existing literature emphasizing the role of homegrown food in mitigating food insecurity.

Despite these significant findings, the study is not without limitations. The cross-sectional nature of the dataset limits causal inferences, and future research using longitudinal data would be instrumental in understanding how transitions between employment types influence food security over time. Additionally, the focus on household heads may overlook the contributions of other household members, such as spouses or adult children, to the household's overall employment and food security dynamics. Future studies could expand the scope to include the role of intra-household employment and gendered labor patterns in influencing food security outcomes.

The results call for evidence-based policies to support informal workers and ensure their access to sufficient and nutritious food. Policy implications include short-term measures like improving access to social protection for informal workers, alongside long-term reforms for labor market formalization, skill development, and education access. Targeted actions in urban and non-agricultural sectors are also essential. By addressing these systemic issues, policymakers can contribute to building more resilient and inclusive food systems, advancing both food security and socioeconomic development goals.

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APPENDIX

Appendix 1. Logistic Regression Results: Insufficient Concern

Variable	All Sample	Rural	Urban	Agricultural	Non-agricultural
Employment Status	-0.182***	-0.193***	-0.138***	0.055	-0.200***
	(0.023)	(0.032)	(0.031)	(0.066)	(0.024)
Area	-0.064**			0.031	-0.116***
	(0.030)			(0.055)	(0.032)
Sex	0.242***	0.185***	0.300***	0.328***	0.188***
	(0.027)	(0.040)	(0.033)	(0.043)	(0.033)
Education Level	0.177***	0.310***	-0.019	-0.104***	0.269***
	(0.019)	(0.028)	(0.024)	(0.033)	(0.023)
Household Size	-0.065***	-0.063***	-0.066***	-0.058***	-0.068***
	(0.006)	(0.008)	(0.007)	(0.009)	(0.007)
Internet Access	0.500***	0.540***	0.403***	0.226***	0.539***
	(0.022)	(0.032)	(0.027)	(0.042)	(0.025)
Credit Access	-0.124***	-0.149***	-0.079***	-0.082**	-0.132***
	(0.022)	(0.032)	(0.029)	(0.041)	(0.026)
Health Insurance	0.073***	0.136***	-0.021	-0.039	0.104***
	(0.022)	(0.032)	(0.028)	(0.039)	(0.025)
Employment Sector	-0.127***	-0.231***	-0.048		
	(0.028)	(0.056)	(0.031)		
Underemployment	0.207***	0.184***	0.225***	0.137***	0.241***
	(0.024)	(0.036)	(0.030)	(0.038)	(0.029)
Constant	1.298***	1.260***	1.340***	1.252***	1.158***
	(0.050)	(0.085)	(0.060)	(0.088)	(0.052)
N	218,857	106,050	112,807	59,953	158,904

Source: BPS, 2021 (Processed)

Note: ***statistical significance at 1%, **statistical significance at 5%, *statistical significance at 10%

Appendix 2. Logistic Regression Results: Nutritional Adequacy

Variable	All Sample	Rural	Urban	Agricultural	Non-agricultural
Employment Status	-0.188*** (0.033)	-0.182*** (0.047)	-0.167*** (0.040)	0.045 (0.081)	-0.207*** (0.035)
Area	-0.049 (0.037)			0.093 (0.072)	-0.132*** (0.039)
Sex	0.258*** (0.035)	0.196*** (0.053)	0.320*** (0.042)	0.423*** (0.053)	0.155*** (0.044)
Education Level	0.115*** (0.027)	0.259*** (0.04)	-0.079** (0.031)	-0.160*** (0.042)	0.224*** (0.033)
Household Size	-0.057*** (0.008)	-0.043*** (0.012)	-0.074*** (0.009)	-0.064*** (0.013)	-0.054*** (0.010)
Internet Access	0.708*** (0.032)	0.747*** (0.045)	0.612*** (0.038)	0.416*** (0.057)	0.748*** (0.035)
Credit Access	-0.032 (0.031)	-0.053 (0.045)	-0.000 (0.038)	0.027 (0.051)	-0.048 (0.036)
Health Insurance	0.092*** (0.029)	0.169*** (0.042)	-0.008 (0.035)	-0.074 (0.050)	0.155*** (0.034)
Employment Sector	-0.081** (0.036)	-0.241*** (0.074)	0.034 (0.038)		
Underemployment	0.309*** (0.032)	0.364*** (0.051)	0.242*** (0.036)	0.144*** (0.047)	0.403*** (0.040)
Constant	1.960*** (0.065)	1.862*** (0.113)	2.117*** (0.076)	1.967*** (0.109)	1.840*** (0.068)
N	218,857	106,050	112,807	59,953	158,904

Source: BPS, 2021 (Processed)

Note: ***statistical significance at 1%, **statistical significance at 5%, *statistical significance at 10%

Appendix 3. Logistic Regression Results: Food Intake Stability

Variable	All Sample	Rural	Urban	Agricultural	Non-agricultural
Employment Status	-0.123*** (0.042)	-0.106** (0.054)	-0.108* (0.057)	0.204** (0.098)	-0.157*** (0.044)
Area	-0.408*** (0.044)			-0.106 (0.089)	-0.552*** (0.047)
Sex	0.212*** (0.046)	0.119* (0.066)	0.348*** (0.059)	0.466*** (0.079)	0.087 (0.055)
Education Level	0.099*** (0.035)	0.270*** (0.048)	-0.219*** (0.043)	-0.244*** (0.060)	0.216*** (0.042)
Household Size	-0.039*** (0.011)	-0.019 (0.015)	-0.076*** (0.013)	-0.056*** (0.018)	-0.034*** (0.013)
Internet Access	0.716*** (0.041)	0.743*** (0.054)	0.610*** (0.051)	0.566*** (0.080)	0.717*** (0.045)
Credit Access	-0.085** (0.039)	-0.119** (0.052)	-0.019 (0.052)	-0.072 (0.072)	-0.088** (0.045)
Health Insurance	0.124*** (0.038)	0.232*** (0.051)	-0.079* (0.047)	-0.02 (0.068)	0.167*** (0.044)
Employment Sector	-0.231*** (0.044)	-0.509*** (0.086)	0.006 (0.052)		
Underemployment	0.367*** (0.042)	0.466*** (0.060)	0.202*** (0.049)	0.077 (0.063)	0.495*** (0.050)
Constant	2.795*** (0.081)	2.386*** (0.134)	3.092*** (0.105)	2.707*** (0.138)	2.596*** (0.084)
N	218,857	106,050	112,807	59,953	158,904

Source: BPS, 2021 (Processed)

Note: ***statistical significance at 1%, **statistical significance at 5%, *statistical significance at 10%