DIJEFA: Dinasti International Journal of Economics, Finance & Accounting
E-ISSN: 2721-303X
P-ISSN: 2721-3021
https://dinastipub.org/DIJEFA dinasti.info@gmail.com +62 811 7404 455

DOI: https://doi.org/10.38035/dijefa.v6i6.5624
https://creativecommons.org/licenses/by/4.0/
Received: 19 September 2025 | **Revised:** 26 November 2025 | **Accepted:** 09 December 2025

Factors Influencing the Participation of Informal Workers in Social Employment Security in Indonesia

Rizky Vitiant Sidharta
Universitas Indonesia, Jakarta, Indonesia, vitiant@gmail.com

Corresponding Author: vitiant@gmail.com

Abstract: This study aims to analyze the factors influencing informal workers' participation in the Employment Social Security program in Indonesia, based on 2022 Susenas data. Participation in employment social security is one effort to improve workers' welfare, but the number of informal workers registered in this program is still relatively low. This study uses a quantitative approach, analyzing data obtained from the Central Statistics Agency (BPS), using the logistic regression method to identify determinants. The results show that demographic factors, employment status, education level, and private insurance participation have a significant influence on informal workers' decisions to participate in the employment social security program. In addition, socioeconomic factors such as type of employment have also been shown to influence participation rates. This study provides recommendations for the government to increase accessibility and awareness of informal workers regarding the importance of employment social security in order to increase social security coverage in Indonesia.

Keywords: Informal workers, employment social security, participation, determinant factors, Indonesia, data analysis.

INTRODUCTION

Poverty is a problem faced by every country, especially developing countries. According to Reitsma and Kleinpenning, poverty is the inability of an individual to meet their basic needs, both material and non-material (Reitsma and Kleinpenning, 1994). Generally, poverty in developing countries is influenced by various interrelated factors, such as economic limitations that remain dependent on the agricultural sector, lack of access to education, unequal social structures, and political conflict within the country itself.

Every country has its own strategy for poverty alleviation. Bangladesh has a program for people starting small businesses, providing microfinance assistance called "Grameen Bank" (Grameen Bank, 2024). In Brazil, poor families receive cash assistance and healthcare for families with school-aged children, a program called "Bolsa Familia." Indonesia itself has specific efforts and strategies for poverty alleviation, one of which is the development of a Social Security System.

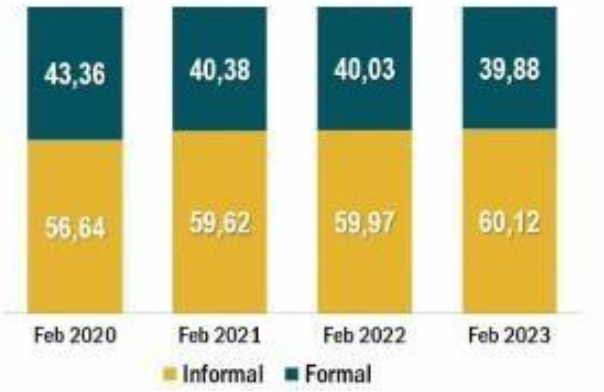
The Social Security System is a strategy used by governments in every country to help alleviate the burdens of life for the poor and vulnerable, including Indonesia. This system aims to provide social protection, guarantee basic needs, and reduce socio-economic inequality. In the context of poverty, social security functions to provide access to basic services such as health care and education, and protection from social risks such as accidents, unemployment, and old age.

There are numerous examples in developing countries that use social security as a primary strategy for poverty alleviation. In India, the "Rashtriya Swasthya Bima Yojana" (Health Insurance for the Poor) program universally links health services to voluntary health insurance that requires only a small contribution. This scheme covers beneficiaries with incomes below the poverty line for costs related to hospitalization. The scheme also improves access to quality health care by allowing beneficiaries to visit government or private health care providers (ADB, 2016). Participation has only reached 40%. In the Philippines, the Informal Sector Workers Insurance (Informal Sector Workers Insurance) is a voluntary scheme, requiring people to register for it on a mandatory basis. Insurance participation in the Philippines has only reached 15%. Similarly, in Thailand, coverage is still at 15%. In Malaysia, through the EPF and SOSCO, coverage has only reached 40% (ADB, 2016).

Indonesia itself has two social security agencies with different functions: the Health Social Security Agency (BPJS Kesehatan) and the Employment Social Security Agency (BPJS Ketenagakerjaan). The difference lies in the programs they implement: BPJS Kesehatan administers the National Health Insurance (JKN), while BPJS Ketenagakerjaan administers specific employment-specific social security programs such as Work Accident Insurance (JKK), Death Insurance (JK), Old Age Security (JHT), Pension Insurance (JP), and Job Loss Insurance (JKP).

To date, expanding Employment Social Security, particularly for informal workers, remains a major issue. This is due to the low participation rate in Employment Social Security in Indonesia, at only 30% (BPS, 2023). This is despite the fact that informal workers tend to be high in the poor (68.2%), vulnerable (62.5%), and aspiring middle class (54.2%) (LPEM-UI, 2024).

Table 1. Number of Formal and Informal Workers in Indonesia



Source: BPS (processed)

Indonesia's labor force is dominated by informal workers. This significant change occurred after the Covid-19 pandemic in 2020. Economic instability forced companies to lay off workers, forcing many workers to shift to the informal sector. Based on the table above, informal workers in Indonesia continue to increase and exceed formal workers, a form of scarring effect from the Covid-19 pandemic (Dartanto, Susanti, Augustin, & Fitriani, 2023). A

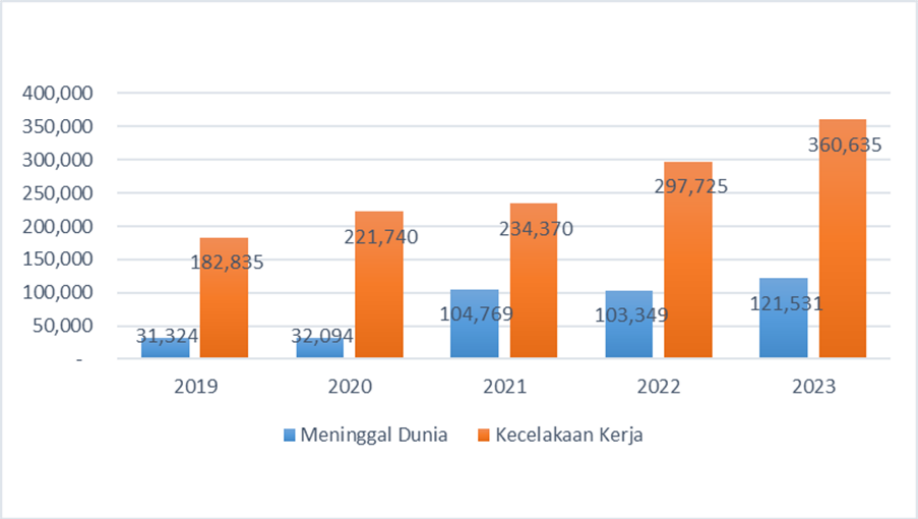
drastic shift occurred in 2021, reaching 3%, and then by 2023, informal workers in Indonesia reached 60.12%.

It's important for informal workers to have social security because they are more vulnerable to various social risks, such as job insecurity, lack of legal protection, and limited access to health services. Some factors that make informal workers more vulnerable include:

1. Unstable Employment Contracts: Many vulnerable workers work on short-term contracts or without contracts, making it difficult for them to access social security.
2. Limited Access to Education: Lack of access to education and skills training prevents them from finding better jobs.
3. Discrimination: Workers from certain groups, such as women, ethnic minorities, or people with disabilities, often experience discrimination in the workplace.
4. Poor Working Conditions: They often work in unsafe conditions, for low wages, and without adequate facilities.
5. Lack of Social Security: Without adequate insurance, vulnerable workers may struggle to access medical care when they fall ill.

Addressing this issue requires collaboration between the government, the private sector, and the community to create a fairer and safer working environment for all workers. If ignored, this issue could lead to unemployment and even new poverty.

Table 2. Occupational Accident and Worker Fatality Rates



Source: BPJS Employment (processed)

Table 2 above shows the rate of workplace accidents and deaths among formal and informal workers, based on BPJS Ketenagakerjaan data. The number of JKK claims in 2019 was recorded at 182,835. Subsequently, the number of JKK claims consistently increased, reaching 221,740 in 2020 and 234,370 in 2021. Then, in 2022, the number rose again to 297,725. The increasing trend also occurred in the number of JKM claims. The number of JKM claims in 2019 reached 31,324 cases. The number of claims further increased to 32,094 in 2020 and 104,769 in 2021. In 2022, 103,349 claims were recorded. From January to November 2023, the number of claims jumped to 121,531 cases.

Therefore, participation in Social Security for informal workers is crucial. High rates of workplace accidents and fatalities can impact the risks faced by informal sector workers, making them more vulnerable to poverty. Social Security's role is to transfer this risk. If workers experience a workplace accident or death, Social Security will replace the costs.

Table 3. Targets, Indicators and Tables of the 2020 to 2024 RPJMN

Indikator	*Baseline* 2019	Target 2024
Persentase penduduk lansia yang tidak mengalami kesulitan melihat, membaca dan mendengar (%)	88,6 (Supas, 2015)	90
Cakupan kepesertaan JKN (%)	84,1 (13 Desember 2019)	98
Cakupan kepesertaan BPJS TK a. Pekerja formal (%) b. Pekerja informal (%)	 40 5	 > 30 > 30
Jumlah cakupan penerima bantuan iuran (PBI) Jaminan Sosial Bidang Ketenagakerjaan (juta pekerja)	-	20

Source: RPJMN 2020 to 2024

The government's efforts to increase Social Security coverage, particularly for informal workers, are already included in the National Medium-Term Development Plan (RPJMN). Based on Table 3 above, BPJS TK coverage is targeted to exceed 30% by 2024, for both formal and informal workers. Furthermore, by 2024, the Employment Social Security program is targeted to have 20 million Contribution Assistance Recipients (PBI). BPJS Employment PBI are groups of workers or members of the public eligible to receive government assistance to pay BPJS Employment contributions.

Table 4. BPJS Employment Social Security Coverage Roadmap (Persons)

TAHUN	SEMESTA	SEMESTA		TARGET			COVERAGE
		FORMAL	INFORMAL	FORMAL	INFORMAL	TOTAL	
2022	96.378.005	51.967.016	44.410.989	31.932.718	6.000.000	37.932.720	36,32%
2023	99.029.946	53.810.840	45.219.106	36.268.506	7.655.595	43.924.101	44,35%
2024	101.810.202	55.748.573	46.061.629	41.571.711	11.948.387	53.520.097	52,57%
2025	104.680.658	57.760.808	46.919.850	44.500.000	16.500.000	61.000.000	58,00%
2026	107.644.546	59.850.485	47.794.061	49.300.000	20.700.000	70.000.000	65,00%

Source: BPJS Employment RJPP 2022-2026

Unlike the National Medium-Term Development Plan (RPJMN), the BPJS Ketenagakerjaan (BPJS Ketenagakerjaan) Long-Term Development Plan (RJPP) for 2022-2026 still focuses primarily on formal sector workers. In 2022, BPJS Ketenagakerjaan targeted total coverage of 37 million participants, with only 6 million (16%) for informal workers. In 2023, out of a target of 53 million participants, informal workers would account for only 11 million (20%) participants. In 2026, out of a target of 70 million, informal workers would account for only 20 million (28%).

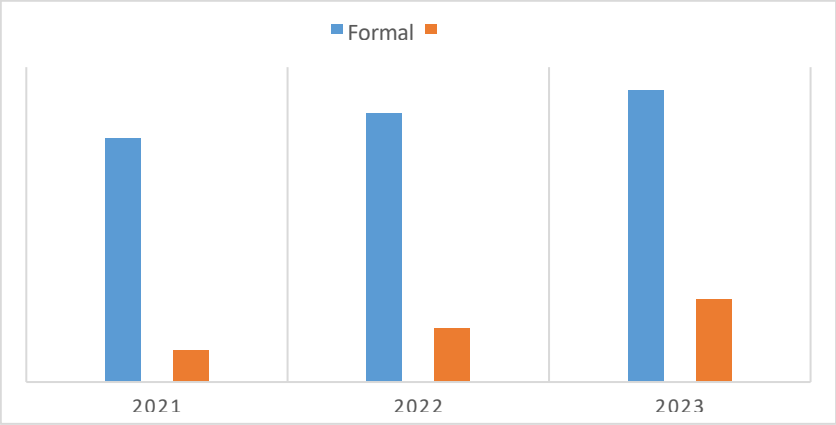
Table 5. BPJS Employment Extension Strategy 2022-2026

Kategori	Inisiatif	2022	2023	2024	2025	2026
Meningkatkan Keagenan	Memperkuat keagenan internal (PERISAI) dan eksternal (Laku Pandai)					
Melakukan *Partnership*	Mengeksplorasi media yang tepat untuk bekerja sama dengan perusahaan SME *Tech*					
	Memperluas kerja sama dengan pelabuhan lokal, pasar, dan *operator mall*					
	Kolaborasi berbagi data dengan perusahaan penyedia kredit/penilai (Pefindo)					
	Kolaborasi dengan IDX *Incubator*					
	Eksplorasi media yang tepat untuk perluasan kerja sama dengan *e-commerce*					
	Program khusus untuk menjangkau pekerja lepas IT (APTIKNAS)					
PBI	Kolaborasi dengan pemerintah dan swasta untuk PBI					

Source: BPJS Employment RJPP 2022-2026

To achieve this target, in table 5, BPJS Ketenagakerjaan created a roadmap in the form of an extensification strategy that will be implemented until 2026 with the following categories: Increasing Agencies, Partnerships, and Contribution Assistance Recipients (PBI). The agency is BPJS Ketenagakerjaan's effort to expand the scope of BPJS Ketenagakerjaan services. The agent currently operating is PERISAI. BPJS Ketenagakerjaan also establishes partnerships with the private sector, public activity venues, and e-commerce. Based on the table, PBI is a strategic plan that must be realized in 2023, where according to the 2020-2024 RPJMN, there are 20 million informal workers categorized as poor and vulnerable who must become participants.

Table 6. Number of Formal and Informal Jamsostek Participants



Source: BPJS Employment and Ministry of Manpower (processed)

However, as of 2023, according to data from the Ministry of Manpower and the BPJS Ketenagakerjaan (Employment Social Security Agency), the realization of employment social security coverage remains very minimal. Table 6 above shows the realization of membership over the past three years. In 2023, active BPJS Ketenagakerjaan membership reached 41 million, but within that coverage, only 9 million informal participants were registered, or just 21% of active participants. According to BPS data, in 2023, the number of informal workers in Indonesia reached 82.6 million. Compared to informal participants, only 9% were registered for Employment Social Security.

Based on this, an analysis is needed to determine the factors that may be related to participation in informal sector employment social security. BPJS Ketenagakerjaan's efforts to expand membership are still ineffective and inefficient. The analysis in this study draws on 2022 Susenas data using logistic regression methods to examine several variables, including

demographics, business sectors, and participation in the National Health Insurance (JKN) and private insurance. These results can then be developed by relevant parties as strategic steps in expanding social security for workers.

METHODS

The research method used Susenas (National Socioeconomic Survey) data, because the data collected is numerical and can be analyzed statistically. Susenas is a survey conducted by the Indonesian Central Statistics Agency (BPS), which aims to provide data on the social, economic, and welfare conditions of households in Indonesia.

This study uses a quantitative approach with logistic regression analysis to analyze the relationship between independent and dependent variables. Agresti (2018) explains that logistic regression is a model used to analyze the relationship between a binary dependent variable and one or more independent variables by modeling the log-odds of the probability of an event. This approach was chosen in this study to test hypotheses through numerical data and to explain the phenomena that occur based on that data.

To create the overall variables, the authors first categorized the employment statuses to be used. The employment status used in this study focuses on informal workers. The definition of informal workers contained in the Susenas data is processed in "Block VII. Savings Ownership and Employment," specifically in the "Position in Main Occupation" column, which consists of the following codes: 1. Self-Employed; 2. Business with the assistance of casual workers/unpaid workers; 3. Business with the assistance of permanent workers/paid workers; 4. Laborer/Employee/Staff; 5. Freelance Worker; and 6. Family Worker. In this categorization, variables using codes 1, 2, 5, and 6 are classified as informal workers, and those using codes 3 and 4 are classified as formal workers.

Table 7. Operational Definitions

Variable Name		Description
JKN-PBI	JKN PBI Participants	(1 = JKN PBI Participant; 0 = Other)
JKN-Non-PBI	JKN Non-PBI Participants	(1 = JKN PBI Participant; 0 = Other)
Private Insurance	Insurance Participants	(1 = Insurance; 0 = Other)
Agriculture	Agricultural Sector	(1 = Agriculture Sector; 0 = Not in Agriculture Sector)
Mining	Mining Sector	(1 = Mining Sector; 0 = Not in Mining Sector)
Industry	Industrial Sector	(1 = Industry Sector; 0 = Not in Industry Sector)
Trade	Trade & Services Sector	(1 = Trade & Services Sector; 0 = Not in Trade & Services Sector)
Services	Financial Sector	(1 = Finance Sector; 0 = Not in Finance Sector)
Financial	Gender	(1 = Male; 0 = Female)
JK	Education Level	(1 = 9 years of education; 0 = otherwise)
Education	Number of Household Members	(1 = More than 3 household members; 0 = otherwise)
Number of Members	Internet Users	(1 = User; 0 = Not User)

Internet	Business	(1 = Business; 0 = Employed)

Source: Processed data

Research Hypothesis

JKN PBI Participants

H0: JKN PBI Participant Factors have no significant relationship with Employment Social Security participation.

H1: JKN PBI Participant Factors have a significant relationship with Employment Social Security participation.

JKN Non-PBI Participants

H0: JKN Non-PBI Participant Factors have no significant relationship with Employment Social Security participation.

H1: JKN Non-PBI Participant Factors have a significant relationship with Employment Social Security participation.

Insurance Participation

H0: Insurance Participation Factors have no significant relationship with Employment Social Security participation.

H1: Insurance Participation Factors have a significant relationship with Employment Social Security participation.

Agricultural Sector

H0: Agricultural Sector Factors have no significant relationship with Employment Social Security participation.

H1: Agricultural Sector Factors have a significant relationship with Employment Social Security participation.

Mining Sector

H0: Mining Sector factors have no significant relationship with Employment Social Security participation.

H1: Mining Sector factors have a significant relationship with Employment Social Security participation.

Industrial Sector

H0: Industrial Sector factors have no significant relationship with Employment Social Security participation.

H1: Industrial Sector factors have a significant relationship with Employment Social Security participation.

Trade & Services Sector

H0: Trade & Services Sector factors have no significant relationship with Employment Social Security participation.

H1: Trade & Services Sector factors have a significant relationship with Employment Social Security participation.

Financial Sector

H0: Financial Sector factors have no significant relationship with Employment Social Security participation.

H1: Financial Sector factors have a significant relationship with Employment Social Security participation.

Gender

H0: Male gender has no significant relationship with Employment Social Security participation.

H1: Male gender has a significant relationship with Employment Social Security participation.

Education Level

H0: 9 years of education has no significant relationship with Employment Social Security participation.
H1: 9 years of education has a significant relationship with Employment Social Security participation.

Number of Household Members

H0: 3 or more household members has no significant relationship with Employment Social Security participation.
H1: 3 or more household members has a significant relationship with Employment Social Security participation.

Internet Users

H0: 9 years of education has no significant relationship with Employment Social Security participation.
H1: 9 years of education has a significant relationship with Employment Social Security participation.

Business

H0: Business factors have no significant relationship with Employment Social Security participation.
H1: Business factors have a significant relationship with Employment Social Security participation.

RESULTS AND DISCUSSION

Descriptive Analysis

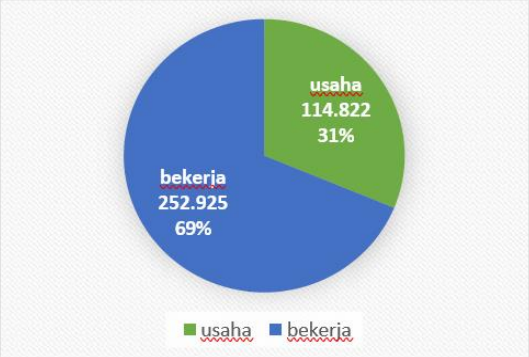


Figure 1. Types of Informal Workers
Source: Processed Data

Based on data processing, there were 367,747 informal workers recorded in the 2022 Susenas data. Of this data, working constituted the highest percentage, at 69%. The remaining percentage was 31% for informal workers who were self-employed. In this case, informal workers with an employment status still dominate.

In the previous descriptive results, employment social security participation was related to the informal sector. Those employed as casual laborers or laborers predominated, but the lack of legal ties and clear rights resulted in minimal social security participation for these informal workers.



Figure 2. Number of Informal Workers and Jamsostek Participation
Source: Processed Data

Based on processed data for informal workers who are already participating, out of 367,747 informal workers, participation in the Employment Social Security program is still very low, at only 10,101 (3%), and 357,646 (97%) are not yet participating. The majority of informal workers in Indonesia are from various economic sectors who generally lack permanent employment contracts, formal worker rights, or social security. Informal workers often work in more flexible sectors and are not formally organized.

The next descriptive analysis reveals the relationship between informal workers' JKN membership and Jamsostek participation. This analysis demonstrates that JKN membership can be a determining factor in their participation in the employment social security program. It's important to note that employment social security and health insurance participation are distinct, but informal workers should have the same rights, namely employment social security coverage.

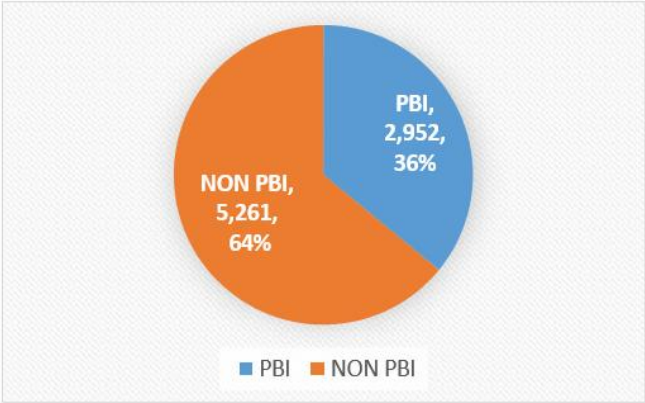


Figure 3. Relationship between JKN Participants and Informal Jamsostek Participation
Source: Processed data

In the table above, looking at JKN participation, JKN Non-PBI (Non-Premium Assistance Recipient) participants have a higher participation rate in Employment Social Security, at 5,261 (64%). For JKN PBI (Premium Assistance Recipient) participants, the number is much lower, at 2,952 (36%). This indicates that informal workers who are considered vulnerable (registered as PBI) still do not have the opportunity to participate in Employment Social Security.

The next descriptive analysis reveals the relationship between informal workers who are already private insurance participants and their participation in Jamsostek. This analysis provides an indication that informal workers who are already private insurance participants can be a determining factor in their ability to participate in the employment social security program.



Figure 4. Relationship between Private Insurance Participants and Jamsostek Participation
Source: Processed Data

Figure 4 above, based on private insurance participation data, shows that informal workers with private insurance are more aware of Employment Social Security. A total of 8,253 (88%) of those with private insurance are registered as Employment Social Security participants. Conversely, only 1,102 (12%) are not yet enrolled in Employment Social Security.

Logistic Regression Analysis

To estimate the influence of various factors on informal workers' Social Security Employment Membership of JKN and Insurance Participation, the researchers conducted logistic regression and segmented by various variables: JKN and Insurance Participation, Business Sector, and Demographics and Socioeconomic Economics.

Table 8. Results of Logistic Regression Processing (Marginal Effect)

VARIABLES	(1) Jamsostek_Informal_mfx	(2) Jamsostek_Informal_mfx	(3) Jamsostek_Informal_mfx
Merupakan Peserta JKN			
Peserta JKN PBI (1 = Peserta JKN PBI ; 0 = Bukan Peserta JKN PBI)	-0.0327***	-0.0254***	-0.0242***
	(0.00302)	(0.00290)	(0.00289)
Peserta JKN Non PBI (1 = Peserta JKN PBI ; 0 = Bukan Peserta JKN Non PBI	0.00600**	0.00733**	0.00778***
	(0.00301)	(0.00288)	(0.00287)
Asuransi Swasta (1= Mengikuti Asuransi ; 0 = Lainnya)	0.0395***	0.0325***	0.0313***
	(0.00304)	(0.00292)	(0.00291)
Sektor Usaha			
Sektor Pertanian (1 = Sektor Pertanian ; 0 = Bukan Sektor Pertanian)			-0.00417***
			(0.000932)
Sektor Pertambangan (1 = Sektor Pertambangan ; 0 = Bukan Sektor Pertambangan)			-0.00971***
			(0.00240)
Sektor Industri (1 = Sektor Industri ; 0 = Bukan Sektor Industri)			-0.000317
			(0.00114)
Sektor Perdagangan & Jasa (1 = Sektor Perdagangan & Jasa ; 0 = Bukan Sektor Perdagangan Jasa)			-0.000317
			(0.000929)
Sektor Keuangan (1 = Sektor Keuangan ; 0 = Bukan Sektor Keuangan)			0.00162
			(0.00414)
Demografi dan Sosial Ekonomi			
Jenis Kelamin (1 = pria; 0 = wanita)		-0.000824***	-0.000583***
		(0.000214)	(0.000208)
Pendidikan (1 = Pendidikan 9 tahun ; 0 = sebaliknya)		0.00868***	0.00817***
		(0.000459)	(0.000460)
Jumlah ART (1= lebih dari 3 ART ; 0 = sebaliknya)		0.0106***	0.0105***
		(0.000611)	(0.000608)
Pengguna Internet (1 = Pengguna ; 0 = sebaliknya)		-0.00126***	-0.00102***
		(0.000114)	(0.000116)
Berusaha (1 = Memiliki Usaha ; 0 = Bekerja)		0.00625***	0.00573***
		(0.000472)	(0.000481)
Observations	316,474	316,474	316,474
Standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

Source: Processed Data

Based on the data processing results, various factors influence the participation of informal workers in the Employment Social Security (Jamsostek) program. Becoming a JKN

PBI (Contribution Assistance Recipient) participant actually reduces the probability of becoming part of the informal Jamsostek program by 2.42% to 3.27% with a high level of significance. This is because informal workers in this category are classified as poor or very poor, so they are unable to contribute independently and generally still receive social assistance such as PKH or BPNT. Conversely, becoming a JKN Non-PBI participant increases the probability of becoming part of the informal Jamsostek program by 0.6% to 0.77% with a moderate level of significance. JKN Non-PBI participants generally have the financial ability to contribute themselves or receive financing from their workplace. Meanwhile, private insurance participants have a much higher probability of being involved in informal Jamsostek, namely 3.13% to 3.95% with a high level of significance. They usually come from the upper middle class and have better financial literacy.

In terms of employment sectors, working in the agricultural sector reduces the probability of being part of the informal Jamsostek program by 0.4%, while working in the mining sector reduces it by 0.1%. This is due to low income and literacy, as well as precarious work status. Demographically, men have a lower probability of being involved in the informal Jamsostek program than women, because women are considered more careful in planning their financial future and more concerned about social protection. A minimum of 9 years of education increases the probability of being part of the informal Jamsostek program by 0.81% to 0.86% with a high level of significance, indicating the importance of education in increasing awareness of social protection. The number of household members also has an influence, where workers with more than three household members have a higher probability of participating in the informal Jamsostek program by 1.05% to 1.06% due to greater economic responsibilities.

Conversely, internet users reduce the probability of being part of the informal Jamsostek program by 0.10% to 0.12% with a high level of significance, likely due to working in the more flexible online sector and being less tied to formal institutions. Finally, informal workers who are self-employed increase the probability of being part of the informal Jamsostek program by 0.57% to 0.62% with a high level of significance, as they are more aware of the importance of protection against work risks and have flexibility in choosing social protection programs. These findings demonstrate the importance of policies tailored to the characteristics of informal workers to increase participation in the Jamsostek program.



Figure 5. BPJS Ketenagakerjaan's Main Strategy for 2023
Source: BPJS Ketenagakerjaan Annual Report 2023

To enhance the program's success, BPJS Ketenagakerjaan has established three main focuses: increasing participant penetration (coverage), improving service quality (trust), and optimizing investment returns (yield). To increase participant penetration, the strategies adopted include optimizing the existing employer ecosystem, simplifying the registration process for prospective participants, and developing partnerships and collaborations with

strategic partners. These steps aim to expand participant coverage and simplify the registration process. To improve service quality (trust), the primary focus is on simplifying and standardizing the claims and service processes, increasing participant engagement and retention, and integrating data and systems to maximize the user experience. These steps are expected to significantly increase participant trust and satisfaction.

Segmen Peserta	2023			2022	2021
	Target	Realisasi	% Pencapaian	Realisasi	Realisasi
Penerima Upah	45.428.404	43.541.810	95,85	41.582.178	40.453.500
Bukan Penerima Upah	45.219.106	10.172.341	22,50	6.777.009	4.189.212
Jasa Konstruksi	8.382.436	7.363.800	87,85	7.020.533	6.276.788
Jumlah Peserta	**99.029.946**	**61.077.951**	**61,68**	**55.379.720**	**50.919.500**

Figure 6. BPJS Employment Participant Targets and Actual Numbers
Source: BPJS Employment Annual Report 2023

According to the 2023 BPJS Employment Annual Report, the participation rate of informal workers is still far from the established target. Actual BPU participation in 2023 was only 10 million out of a potential 45 million, or only 22.5%. Judging from the annual increase in BPU participants, only 2 to 3 million participants are added per year. To increase this number of participants, an analysis is needed to determine the factors that may be related to the increase in social security participation for informal workers.

The results of the descriptive and regression analyses indicate that social security participation is influenced by various factors. Based on Figure 3 in the descriptive analysis, the occupational type of informal workers in Indonesia is predominantly employed, accounting for 69%. The regression results in Table 12 indicate that employed informal workers have a lower probability of participation than those who are unemployed. The presence of employed informal workers can be a primary focus for BPJS Ketenagakerjaan (Employment Social Security Agency) because the majority of them are casual/contract laborers who do not receive protection from their employers.

Informal workers also dominate the agricultural and mining sectors. According to data from the Central Statistics Agency (BPS) as of February 2023, the agricultural sector in Indonesia employed approximately 38.14 million people, representing 27.52% of the total national workforce of 138.63 million. Meanwhile, the mining and quarrying sector absorbed approximately 1.2% of the total national workforce, equivalent to 1.7 million people (BPS, 2023). Based on the regression results in Table 12, the agricultural and mining sectors are indeed associated with a decline in employment social security participation. To increase the number of participants in these sectors, the Employment Social Security Agency (BPJS Ketenagakerjaan) can provide education to employers to register agricultural and mining workers for employment social security programs. This strategy can complement the point "optimizing the existing ecosystem of employers" in Figure 7 of BPJS Ketenagakerjaan's Main Strategy.

Based on Figure 5 in the descriptive analysis, the level of employment social security participation from JKN PBI participants is only 36%. This low participation rate is due to the fact that informal workers in this category are poor and underprivileged. The JKN PBI regression results also associate a decreased probability of employment social security participation. Expansion of this segmentation can be improved by providing contribution assistance to informal workers in this segment. To expand participation, BPJS Ketenagakerjaan can collect data on JKN PBI participants who are classified as informal workers so that they can be immediately registered through the contribution assistance program, considering that workers in this segment do not have the capacity to contribute. JKN PBI factors can support

the main strategy under the development point "Partnership and collaboration with strategic partners" with BPJS Kesehatan regarding data collection on informal workers eligible for employment social security contribution assistance.

Informal workers with low levels of education can be educated about the program and BPJS Ketenagakerjaan registration. A low level of education does not necessarily mean that informal workers are unable to contribute. The "Simplify the Registration Process" strategy in BPJS Ketenagakerjaan's main strategy can be directly applied to informal workers with minimal literacy. Informal workers in Indonesia are dominated by low levels of education. Most workers in this sector have low educational backgrounds, namely elementary school, junior high school, or even no formal education (BPS, 2023). Informal workers who strive for greater economic independence, based on regression results, have a higher probability of participating in employment social security. This could be a factor in increasing participation if they receive more intensive education from BPJS Ketenagakerjaan. MSMEs, entrepreneurs, or traders who are considered capable can be a key strategy for expansion.

Socialization and education regarding the employment social security program can be optimized directly. Based on regression analysis results, internet users have a lower probability of participating in employment social security. A direct approach to participants, especially informal workers, is more targeted, given their low educational levels and low literacy regarding employment social security. This socialization can change the perspective of

Social security as a necessary social protection need. Another strategy, namely expansion through internet media, must be appropriate for the informal worker segment. According to data from the Reuters Institute, the percentage of social media users with higher education varies across platforms. Twitter (X) has the highest proportion, with 49% of its users having a higher education. Instagram is next at 40%, followed by YouTube at 39%. Meanwhile, Facebook and TikTok have similar percentages, at 37% (Goodstats, 2023). Conversely, for users with lower educational levels, Facebook and TikTok have the highest proportions, at 17% each. Instagram and YouTube each account for 15%, while Twitter has the lowest proportion, at 11% (Databooks, 2024). This data suggests that platforms like Twitter and Instagram tend to be more widely used by individuals with higher education, while Facebook and TikTok are more popular among users with lower education.

CONCLUSION

To examine the factors influencing informal workers' social security participation, this study employed descriptive analysis and a logistic regression model on variables derived from the 2022 Susenas data. The analysis revealed that informal workers have varying levels of awareness. Those with businesses tend to be more aware of social security, but these businesses are fewer in number than employed informal workers. From the business sector, informal workers in agriculture and mining are the ones requiring social security contribution subsidies.

Another factor is that informal workers with more than nine years of education participate in social security, as well as workers with more than three family members, are more aware of social security. An interesting factor is that those who already have private insurance or participate in the independent National Health Insurance (JKN) program are more likely to participate in social security. Internet information media must be optimized and targeted to the informal worker segment.

This study aims to examine the factors influencing participation in Social Security for informal workers in Indonesia. The significance of these factors is used to analyze potential areas for improvement in Social Security coverage for informal workers. Significant findings that contribute to increased or decreased coverage can be processed into more effective policies. Private insurance users have a greater opportunity for informal workers to participate

in Social Security. Their financial capabilities and literacy should be more likely to encourage participation.

REFERENCES

Adisty, Munandar, Sumerta. (2023). Factors Influencing Informal Workers Registration For SOC Security: A Comparative Analysis Between Indonesia And Taiwan. Journal IPB.

Badan Pusat Statisktik. (2022). Survei Sosial Ekonomi Nasional 2022 Maret (Modul Konsumsi dan Pengeluaran)

Badan Pusat Statistik. (2021). Jumlah Pekerja Informal tahun 2021. https://www.bps.go.id/subject/6/tenaga-kerja.html

International Labour Organization. (2015). *Employment in the informal economy: Implications of the COVID-19 pandemic*. https://www.emerald.com/insight/0144-333X.htm

International Labour Organization. (2019). *Extension of social security to workers in informal employment*. https://www.ilo.org/media/457996/download

Jannah, Aisyah. (2021). Dampak Covid 19 Terhadap Pendapatan di Daerah Sektor Dominan Tersier. (Tesis Magister, Universitas Indonesia).

Kementerian PPN/Bappenas. (2022). *Bonus demografi 2030–2040: Strategi Indonesia terkait ketenagakerjaan dan pendidikan*. https://www.bappenas.go.id/index.php/berita/bonus-demografi-2030-2040-strategi-indonesia-terkait-ketenagakerjaan-dan-pendidikan-nnQGn

Kurniawati, Ardhian. (2018). Dampak upah minimum terhadap employment: pendekatan difference in spatial difference. (Tesis Magister, Universitas Indonesia)

Muchlisa, Aynun. (2023).Faktor Risiko Kelelahan Kerja Pada Pekerja Sektor Informal di Kabupaten Soppeng. Jurnal Dinamika Kesehatan Masyarakat. Vol.1 No.1.

Nachrowi, N.D & Usman. (2006). Pendekatan Populer Dan Praktis Ekonometrika Untuk Analisis Ekonomi dan Keuangan. Jakarta: Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia.

Nazara, S. (2010). Ekonomi Informal di Indonesia: Ukuran, Komposisi dan Evolusi. Jakarta: Organisasi Perburuhan Internasional.

Novendra, K.J Wiryadi. (2022). Jaminan Kehilangan Pekerjaan Dampak Pandemi Covid-19: Pengaturan, Manfaat, dan Perbandingannya dengan Negara Lain. Jurnal DPR. Vol.12 No.1.

Rahmaini, Indah (2023). Social Security Obstacles for Workers in Indonesia: Indonesian Family Life Survey 2014 Study. Talenta Publisher

Siti Ummu Adillah,Sri Anik. (2015). Kebijakan Jaminan Sosial Tenaga Kerja Sektor Informal Berbasis Keadilan Sosial Untuk Meningkatkan Kesejahteraan. Yus Isia. Vol.4 No. 3.

UNDP. Developing Social Insurance Schemes for the Informal Sector in South Africa. Issue No: 3/2022.

Wooldridge,J. (2013). Introductory Econometric: A Modern Approach, Fifth Edition. South Western: Cengage Learning.

Yanti Astrelina, Aini, Asiati & Ngadi. (2020). Kesenjangan Kepesertaan Jaminan Sosial Tenaga Kerja Di Indonesia: Analisis Data Sakernas 2018. J-Naker. Vol 15 No. 2