Research Paper

The Analysis of Factors Affecting Social Security of Labour in Indonesia

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ABSTRACT

This research aims to analyze the factors affecting Social Security of labour in Indonesia in the 1991-2022 period reviewed from the variables of total active participants (JPA), Gross Domestiv Product (GDP0, Inflation, Minimum Wage (UM) and Workforce Participation Rate (TPAK). The research employs secondary data, namely annual data obtained from the Central Statistics Agency and BPJS Ketenagakerjaan (Employee Social Security System) report. This research employs regression analysis method of Autoregressive Distributed Lag (ARDL). This research result indicates that in the long term, the variables of GDP, Inflation and Minimum Wage have a positive and significant effect on the JPA, respectively, Meanwhile, TPAK has a negative and insignificant effect on JPA.

Keywords: Total Active Participants, Gross Domestic Product, Inflation, Minimum Wage, Workforce Participation rate, Autoregressive Distributed Lag

INTRODUCTION

National development is a series of efforts carried out continuously in all areas of life of society, nation and state to realize national goals. National development is carried out in order to realize national goals as written in the Preamble to the 1945 Constitution, namely protecting all nations and all Indonesian blood, improving general welfare, educating the nation's life, and participating in implementing world order based on independence, lasting peace, and social justice (Purba et al, 2021).

National Development aims to realize a just and prosperous society, and aims to build a whole Indonesian people. National development can be seen as a process of cultural change and socio-economic interrelated. Therefore, Todaro & Smith (2003) states that the success of a country's economic development is shown by three main values, namely, (1) the development of the ability of society to meet its basic needs (sustenance), (2) increased self-esteem (selfesteem) society as a human being, and (3) increased ability of society to choose (freedom from servitude) which is one of human rights.

The concept of welfare state refers to social policies that include government policies and efforts to improve the well-being of its citizens, mainly through social protection, which includes Social Security, which can be social assistance and social insurance. The National Social Security Program is one of the implementations of realizing the concept of the welfare state through the implementation of Social Security.

In the context of national development, labor protection needs to play an important role because of the interrelation, not only the relationship of labor interests in the work environment but also the relationship with the interests of employers or

companies, government and society. There needs to be an effective effort from agencies and institutions that issue programs to improve human resources, increase productivity, job placement services, and build corporate and industrial relations. Employment Development is held adhering to the principle of integration through functional coordination between the center and regions. The principle of Employment Development is basically in accordance with the principle of National Economic Development. Employment Development has many dimensions and paradigms with many parties, namely the government, companies, workers or laborers and the community. Therefore, employment development is carried out in an integrated manner in the form of mutually supportive cooperation.

Labor Social Security is a form of protection provided to workers and their families against various labor market risks. Social security of Labor is part of the social protection system. In developed countries, Labor Social Security is the most important part of the social protection system because almost all families in society are covered by Labor Social Security. In developing countries, however, social security of Labor covers only a small part of families in society, mainly because a large part of the population works in the informal sector. To date, the government's attention to improving the coverage of community protection through social security continues to be carried out. The National Development Plan states that protection and Social Security is one of the policy steps of the government in an effort to overcome poverty. The absence of social protection is believed to increase the chances of falling into poverty or remaining trapped in the poverty trap. The implementation of social protection programs in principle adheres to the mutual assistance system both horizontally (between generations) which generally occurs outside the state budget mechanism, but the government can establish rules and mutual assistance

systems vertically (between income groups) which are usually implemented through the state budget mechanism, where one group of people is required to pay taxes and the other group becomes the recipient of transfers from the government (Perwira, et al, 2003).

The national development that has taken place to date has expanded employment opportunities and guaranteed the livelihoods of workers and their families. However, the ability to work and income can be reduced or lost due to the various risks that the workforce faces, namely: work accidents, disability, illness, old age and death. Therefore, to overcome these risks. Law No. 3 of 1992 on Labor Social Security regulates the provision of work accident insurance, health maintenance insurance, old-age insurance and death insurance.

Work accident insurance is a guarantee given if the workforce has an accident at work, including interns and students who work in companies that receive wages or not, those who buy jobs unless the buyer is a company, and prisoners who are employed in the company. Work accident insurance includes: (1) transportation costs, (2) examination, treatment, and/or treatment costs, (3) rehabilitation costs and (4) compensation in the form of money including, compensation temporarily unable to work, partial disability compensation for ever, total disability compensation for ever both physical and mental and death compensation.

Death insurance is a guarantee given to the heirs of Labor who died not as a result of an accident at work. Death insurance includes: funeral expenses and monetary compensation. Old-age security is cash that is paid in a lump sum, in part and periodically, to the workforce because it has reached the age of 55 (fifty-five) years and the total disability remains after being established by the doctor. In the event of Labor Death, old-age security is paid to widows or widowers or orphans.

Health maintenance insurance is a health insurance provided to Labor, husband or

wife, and children. Health care coverage includes: (1) first-level outpatient, (2) Advanced outpatient, (3) inpatient, (4) pregnancy screening and childbirth assistance, (5) diagnostic support, (6) special services, and (7) emergency services.

Through Government Regulation No. 36 of 1995, PT Jamsostek was established as the Social Security Agency for Labor. The Labor Social Security Program provides basic protection to meet the minimum needs of workers and their families, by ensuring the continuity of the flow of family income receipts as a partial or complete replacement of income lost as a result of social risks.

With the passing and enactment of Law No. 40 of 2004 on the National Social Security System (SJSN) provides a legal basis for the certainty of protection and social welfare for all Indonesian people, especially in terms of Social Security. Law No. 40 of 2004 on the National Social Security System is one form of social protection to ensure that all people can meet their basic needs properly.

Based on Law No. 40 of 2004 on the National Social Security System in Chapter III of the Social Security Agency Article 5 that since the enactment of this law, the existing Social Security Agency is declared as the Social Security Agency and there are 4 (four) social security agencies, among others, as follows:

Table 1 Governing Bodies Of Social Security

No	Body Name	Programs	Participant Coverage
1.	PT Jamsostek	• Occupational Accident Assurance • Safety Of Death • Old-Day Guarantees • Safety Insurance Healthcare	• Workers who work in companies (SOEs and private) and Informal
2.	PT Askes	• Health Maintenance Guarantee	• Civil Servants • Retirement Recipients • Veterans and pioneers of Independence • Along with his family
3.	PT Taspen	• Pension Funds • Old Age Savings	• Civil Servants
4.	PT Asabri	• Insurance Compensation • Risk Of Death Compensation • Insurance Cash Value Compensation • Funeral Expenses	• TNI, • Police • Ministry of defence civil servants

Source: processed from various related sources

The implementation of the National Social Security system is perfected in Law No. 24 of 2011 concerning the Social Security Administration Agency (BPJS). The law mandates PT. Jamsostek transformed into a public legal entity, so that since January 1, 2014, PT Jamsostek transformed into BPJS Ketenagakerjaan. BPJS Ketenagakerjaan is a public legal entity that is directly responsible to the president and is mandated to organize 5 Social Security programs, namely the work Accident Insurance program (JKK), death insurance (JKM), old age insurance (JHT), and the addition of the Pension Insurance program (JP) starting July 1, 2015 according to Government Regulation Number 45 of 2015 and job loss insurance after the issuance of Government Regulation Number 37 of 2021.

In the implementation of the BPJS Ketenagakerjaan program, problems related to the expansion and increase of participation of both employees and companies become the main foundation of

how the role of BPJS Ketenagakerjaan can run evenly across all levels of the manpower community. Considering that the BPJS Ketenagakerjaan program is a program that prioritizes the welfare of workers and their families, the rights and obligations of workers, both formal and informal, are very important when they are registered as active participants in BPJS Ketenagakerjaan. The need for joint awareness with stakeholders related to how important the protection of Social Security employment. After the official transformation, BPJS Ketenagakerjaan has made various efforts to increase its membership and services, one of which is by coordinating with local governments and massive socialization of the Employment Social Security program to all elements of the working community. In general, the development of BPJS Ketenagakerjaan membership during 2018-2022 is as follows:

Table 2. BPJS Ketenagakerjaan Membership Development

	Year				
	2018	2019	2020	2021	2022
Active Labor Of The Recipient	19.427.150	20.174.472	19.963.696	20.832.255	22.839.463
Wages	2.393.022	2.712.031	2.494.994	3.551.858	6.004.021
Active Labor Is Not A Recipient	8.639.900	11.279.754	7.521.392	6.276.788	7.020.533
Wages	560.730	681.429	638.678	725.829	735.295

Source: BPJS Ketenagakerjaan (2023)

Based on Table 2. above, in general, the number of BPJS Ketenagakerjaan membership from active workers and active employers continued to increase which in 2018 amounted to 30,460,072 workers and 560,730 employers, respectively. For 2022, the active workforce and active employers amounted to 35,864,017 workers and 735,295 employers, while in 2020, the number of active workers and active employers decreased from the previous year, due to the Covid-19 pandemic, causing overall economic activity to be paralyzed due to large - scale social restrictions and many companies closed or stopped operating. According to August 2022 BPS Data, Indonesia's workforce is still dominated by the informal sector. There are 80.24 million people employed in the informal sector. This amount is equivalent to 59.31% of the total working population in the country of 135.3 million people. Meanwhile, the remaining 55.06 million people or 40.69% work in the formal sector. Currently, there is still a very large number of formal and informal workers who have not been covered by the active participation of BPJS Ketenagakerjaan.

The number of BPJS Ketenagakerjaan active participants is strongly influenced by various economic conditions of the country, including Gross Domestic Product and inflation. With the better the economic level of a country, the more jobs available so that it will increase the number of workers from year to year. In accordance with the objectives of economic development, namely increasing employment opportunities and adding jobs, the government and the private sector, namely companies, strive to provide and increase the availability of jobs. However, the company as a provider of jobs is still not able to absorb the maximum workforce, this is due to the increasing number of workers continuously.

One of the important indicators for determining the economic condition in a country in a given period is the Gross Domestic Product (GDP), both on the basis of current prices and on the basis of constant prices. GDP is basically the amount of added value produced by all business units in a given country, or it is the sum of the final value of goods and services produced by all economic units. GDP based on current prices describes the value added of goods and services calculated using prices that are valid in each year, while GDP based on constant prices shows the value added of these goods and services calculated using

prices that are valid in a certain year as a basis (BPS, 2023).

Meanwhile, according to Bank Indonesia, inflation can be interpreted as a general and continuous increase in the price of goods and services within a certain period of time. High and unstable inflation is a reflection of economic instability that results in higher levels of poverty in Indonesia. Inflation is a nightmare in a country's economy. Inflation can cause various problems, such as falling currency values, rising prices for goods and services, rising unemployment, declining public welfare, and loss of investment.

Basically, not all inflation negatively affects the economy. Especially when inflation is mild, IE. inflation is less than ten percent. Mild inflation can actually boost economic growth. Because inflation can encourage entrepreneurs to further increase their production. The entrepreneur seeks to expand his production because the entrepreneur gets more profit with the increase in prices. In addition, increased production has another positive impact, namely the creation of new jobs. Inflation has a negative effect if its value exceeds ten percent (Simanungkalit, 2020). In general, the development of GDP and inflation during 2018-2022 is as follows:

Table 3 GDP Growth and Inflation In Indonesia

			Tahun		
	2018	2019	2020	2021	2022
PDB	10.425.852	10.949.155	10.722.999	11.120.078	11.710.398
Inflation	3,13%	2,72%	1,68%	1,87%	5.51%

Source: Central Bureau Of Statistics (2023)

Based on Table 3. above, Indonesia'S GDP continues to grow and experience an increase until 2022, even amid global economic growth that is in a slowing trend and the Covid-19 pandemic. In 2021, Indonesia'S GDP increased by 11,120,078 billion from the previous year of 10,722,999 billion in 2020. In 2022, Indonesia'S GDP was 11,710,398 billion, growing by 1.05%. This is supported in terms of production, transportation and warehousing business fields experienced the highest growth and in terms of expenditure, the export component of goods and services. The national economy continues to show a positive trend and is recovering faster. Various constructive policies and strategies taken by the government, one of which is through the Covid-19 handling program and the National Economic Recovery, are the key to success in boosting the national economy. Meanwhile, inflation in Indonesia tends to be stable at 1-5%. In 2018, inflation was recorded at 3.13%, this happened due to the increase in prices indicated by the increase in all expenditure group indices, namely the group of ready-made foods, beverages, cigarettes and tobacco. The lowest point of inflation occurred in 2020-2021 which was caused by the Covid-19 pandemic, causing reduced community mobility and the wheels of the economy to move slowly, affecting people's income. In 2022, inflation increased by 5.51% from the previous year which was only 1.87%. This happens because it is caused by the increase in foodstuffs after the increase in fuel prices. In the study Sasongko et al. (2019) and Sari, Nendi Oktaviana (2021) that GDP has a significantly positive influence on BPJS ketenagakerjaan membership. Gultom, Ratih Yasnuarni (2016) said GDP per capita does not significantly affect the growth of BPJS employment participants. Burić, et al. (2017) and Rizqi and Moh. Athoillah (2021) GDP and wages have a significant and positive effect on the demand for life insurance. Rizqi and Moh. Athoillah (2021) also in his research said inflation and financial sector growth had a significant positive effect on the demand for Sharia life insurance in Indonesia, while according to Sasongko et al. (2019) inflation has no

effect on BPJS ketenagakerjaan membership.

The labor aspect cannot be separated from the wages or salaries of workers, based on Law No. 13 of 2003 on Labor, the determination of the minimum wage aims to improve the living standards of workers in accordance with their minimum living needs, therefore the determination of the minimum wage is based on the needs of decent living (KHL). According to Simanjuntak dalam (Sulistiawati, 2012), the minimum wage policy is a wage system that has been implemented in several countries. This policy can be seen from two sides, namely that the minimum wage is a protection tool for workers to maintain the value of wages received does not decrease in meeting the needs of daily life and as a protection tool for companies to maintain productivity. According to Government Regulation No. 78 of 2015 on wages, the minimum wage is the lowest monthly wage consisting of wages without benefits or basic wages including fixed benefits. This government regulation on wages also confirms that the minimum wage only applies to workers or laborers with a working period of less than 1 (one) year at the company concerned. Meanwhile, wages for workers or laborers with a working period of 1 (one) year or more are negotiated bipartite between workers or laborers and employers in the company concerned.

Definition of wages according to Labor Law No. 13 of 2003, wages are the rights of workers or workers received and expressed in the form of money in return from employers to workers or workers who are set and paid according to an employment agreement, agreement, or legislation including benefits for workers or workers and their families for a job and/or services that have been or will be performed.

Viewed from the side of the company, wages are costs that will subsequently be charged to consumers through prices. The provincial minimum wage (UMP) is usually used as a reference to establish the wages of workers in the formal sector, therefore a higher increase in UMP than worker productivity will harm the company because it can increase production costs. High production costs cause the price of output to be uncompetitive, then in turn the company will reduce output. The decrease in output will further reduce the use of Labor production factors, especially low-educated workers (Sulistiawati, 2012). In research Sulistiawati (2012) found that wage increases will potentially reduce the absorption of labor, especially low productivity labor. The determination of the provincial minimum wage in Indonesia is proposed by the Regional Wage Council (DPD) consisting of bureaucrats, academics, workers and entrepreneurs to the governor to be ratified and become a reference.

Table 4 Development Of Average Minimum Wage In Indonesia

No.	34 Province	Provincial Minimum wage in Indonesia				
		2018	2019	2020	2021	2022
1	Aceh	2.700.000,00	2.916.810,00	3.165.031,00	3.165.031,00	3.166.460,00
2	Sumatera Utara	2.132.188,68	2.303.403,43	2.499.423,06	2.499.423,06	2.522.609,94
3	Sumatera Barat	2.119.067,00	2.289.220,00	2.484.041,00	2.484.041,00	2.512.539,00
4	Riau	2.464.154,06	2.662.025,63	2.888.584,01	2.888.564,01	2.938.564,01
5	Jambi	2.243.718,56	2.423.889,16	2.630.162,13	2.630.162,13	2.698.940,87
6	Sumatera Selatan	2.595.995,00	2.804.453,00	3.043.111,00	3.144.446,00	3.144.446,00
7	Bengkulu	1.888.741,00	2.040.407,00	2.213.604,00	2.215.000,00	2.238.094,31
8	Lampung	2.074.673,27	2.241.269,53	2.432.001,57	2.432.001,57	2.440.486,18
9	Bangka Belitung	2.755.443,83	2.976.705,97	3.230.023,66	3.230.023,66	3.264.884,00
10	Kepulauan Riau	2.563.875,00	2.769.754,00	3.005.460,00	3.005.460,00	3.050.172,00
11	DKI Jakarta	3.648.035,82	3.940.973,10	4.276.349,91	4.416.186,55	4.641.854,00
12	Jawa Barat	1.544.360,67	1.668.372,83	1.810.351,36	1.810.351,36	1.841.487,31
13	Jawa Tengah	1.486.065,00	1.605.396,02	1.742.015,22	1.798.979,12	1.812.935,43
14	DI. Yogyakarta	1.454.154,15	1.570.922,73	1.704.608,25	1.765.000,00	1.840.915,53

15	Jawa Timur	1.508.894,80	1.630.059,05	1.768.777,08	1.868.777,08	1.891.567,12
16	Banten	2.099.385,00	2.267.990,55	2.460.996,54	2.460.996,54	2.501.203,11
17	Bali	2.127.157,00	2.297.968,70	2.494.000,00	2.494.000,00	2.516.971,00
18	Nusa Tenggara Barat	1.825.000,00	2.012.610,00	2.183.883,00	2.183.883,00	2.207.212,00
19	Nusa Tenggara Timur	1.660.000,00	1.795.000,00	1.950.000,00	1.950.000,00	1.975.000,00

20	Kalimantan Barat	2.046.900,00	2.211.500,00	2.399.698,65	2.399.698,65	2.434.328,19
21	Kalimantan Tengah	2.421.305,00	2.663.435,50	2.903.144,70	2.903.144,70	2.922.516,00
22	Kalimantan Selatan	2.454.671,00	2.651.781,95	2.877.448,59	2.877.448,59	2.906.473,32
23	Kalimantan Timur	2.543.331,72	2.747.561,26	2.981.378,72	2.981.378,72	3.014.497,22
24	Kalimantan Utara	2.559.903,00	2.765.463,00	3.000.804,00	3.000.804,00	3.016.738,00
25	Sulawesi Utara	2.824.286,00	3.051.076,00	3.310.723,00	3.310.723,00	3.310.723,00
26	Sulawesi Tengah	1.965.232,00	2.123.040,00	2.303.711,00	2.303.711,00	2.390.739,00
27	Sulawesi Selatan	2.647.767,00	2.860.382,00	3.103.800,00	3.165.876,00	3.165.876,00
28	Sulawesi Tenggara	2.177.052,00	2.351.870,36	2.552.014,52	2.552.014,52	2.576.016,96
29	Gorontalo	2.206.813,00	2.384.020,00	2.788.826,00	2.788.826,00	2.800.580,00
30	Sulawesi Barat	2.193.530,00	2.381.000,00	2.678.863,10	2.678.863,10	2.678.863,10
31	Maluku	2.222.220,00	2.400.664,00	2.604.961,00	2.604.961,00	2.619.312,83
32	Maluku Utara	2.320.803,00	2.508.091,00	2.721.530,00	2.721.530,00	2.862.231,00
33	Papua Barat	2.667.000,00	2.934.500,00	3.134.600,00	3.134.600,00	3.200.000,00
34	Papua	3.000.000,00	3.240.900,00	3.516.700,00	3.516.700,00	3.561.932,00
	Rata-Rata	2.268.874,19	2.455.662,23	2.672.371,36	2.687.723,69	2.725.504,95

Source: Central Bureau Of Statistics (2023)

Based on Table 4. above, the average wage development in Indonesia shows an increase from year to year, although in 2020 it decreased compared to the previous year, this was due to the Covid-19 pandemic so the government took the policy that for 2021 there was no increase in the minimum wage of the province or regency or city. This is stated in the Circular Letter (SE) of the Minister of manpower of the Republic of Indonesia number 11/HK04/X/2020 concerning the determination of the Minimum wage in 2021 during the Covid-19 pandemic. Of the 34 provinces in the table above, from 2018 to 2022 the province of DKI Jakarta contributed the highest average minimum wage in Indonesia, while the lowest average wage was the province of Yogyakarta. Sasongko et al. (2019) said the Minimum wage has a significant positive effect on BPJS ketenagakerjaan membership. Gultom, Ratih Yasnuarni (2016) in his research the average provincial minimum wage in indonesia has no significant effect on the growth of BPJS ketenagakerjaan participants. Muslim, et al. (2022) states that income has a significant positive effect on BPJS Ketenagakerjaan insurance.

The ILO defines the labor force participation rate as a measurement of the proportion of the labor force population that is active in the labor market either working or looking for work. the labor force participation rate indicates the supply of labor available to engage in the production of goods and services relative to the working-age population. The labor force participation rate itself is an indicator of employment that gives an idea of the economically active population in daily activities referring to a time in the survey period. A high labor force participation rate indicates a higher amount of labor available to produce goods and services, and vice versa.

Table 5. Population Development Aged 15 Years And Over

Types Activities	Tahun				
	2018	2019	2020	2021	2022
Population Aged 15 Years To Top	198.126.553	201.185.014	203.972.460	206.708.299	209.420.383
Armed forces Work	133.355.571	135.859.695	138.221.938	140.152.575	143.722.644
Force Participation Rate Work (%)	67,31	67,53	67,77	67,8	68,63

Source: Central Bureau Of Statistics (2023)

Based on Table 5. the above shows that the labor force participation rate in Indonesia was quite stable in 2018-2021 and increased in 2022 by 68.63% compared to the previous year's 67.8%. This is due to the lack of maximum absorption of the labor force, while in 2022, the economy has begun to grow again after the Covid-19 pandemic and this figure illustrates the provision or supply of large labor for Indonesia. Gultom, Ratih Yasnuarni (2016) in his research that the level of labor participation has a significant effect on the growth of BPJS Ketenagakerjaan membership. Meanwhile, Sari, Nendi Oktaviana (2021) said the number of workers had a significant negative effect on the participation of BPJS ketenagakerjaan wage earners in Indonesia.

LITERATURE REVIEW
Social Security
Social Security is the protection provided by the government to its citizens, and or protection provided by the head of household to his family members for certain risks or events with the aim of providing security, from events that may result in the loss or decline of most income, and to provide medical services and or financial guarantees against the economic consequences of the occurrence of events that are not in want, as well as guarantees for family and child support (Asyhadie, 2007).

Gross Domestic Product
According to the Central Bureau of Statistics, GDP is the amount of added value produced by all business units in a given country, or is the sum of the final value of goods and services produced by all economic units. GDP on the basis of current prices describes the value added of goods and services calculated using the prices in force in each year, while GDP on the basis of nominal shows the value added of goods and services are calculated using the prices in force in a particular year as a basis. According to Mankiw (2009), Gross Domestic Product is often considered the best measure of economic performance. The purpose of GDP is to summarize economic activity in a certain amount of money over a certain period of time. GDP can be seen as the total income from the production of goods equal to the sum of wages and profits of the upper half of the circular flow of money.

Inflation
According to Sukirno (2013), inflation can be defined as a process of increasing prices in an economy. Meanwhile, according to Bank Indonesia, inflation is defined as a general and persistent increase in prices. An increase in the price of one or two goods alone cannot be called inflation unless the increase extends (resulting in an increase in prices) to other goods. Reverse

Minimum Wage
The minimum wage refers to the standard of living for workers. Law No. 13 of 2003 on employment stipulates that the minimum wage must be based on KHL standards. Article 1 Paragraph 1 of the regulation of the Minister of Labor No. 1 of 1999, defines the minimum wage as the lowest monthly wage which includes basic salary and fixed benefits. As compensation from employers to workers, wages given in cash must be established on the basis of an agreement or legislation and paid on the basis of an

employment agreement between employers and workers, including benefits, both for the workers themselves and their families.

Labor Force Participation Rate

According to the Central Bureau of Statistics, the labor force participation rate is the population aged 15 years and over. The population that has entered working age consists of the force and not the labor force. The labor force is a population that has entered the working age of 15 years and over who work or have a job but do not work or are unemployed. The labor force is active in economic activities. While not the labor force is a population that is still in school and take care of the household. The involvement of the population in economic activity is measured by the population included in the job market, that is, who is working or who is looking for work
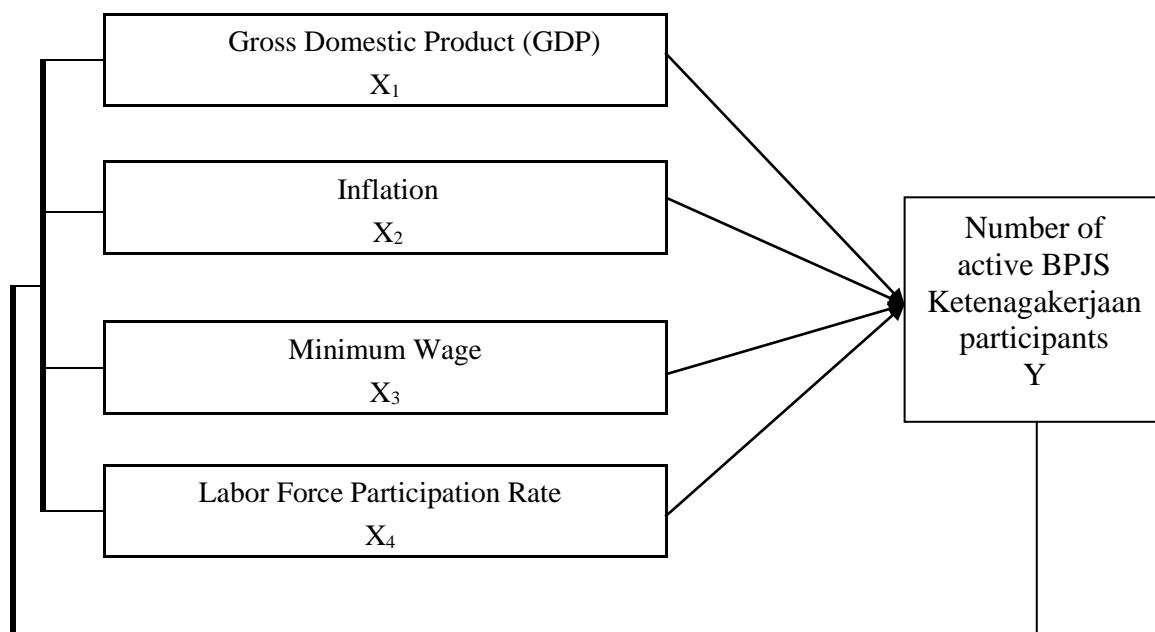

Figure 1. Conceptual Framework

Hypothesis

Based on the background of research and the relationship between variables, the research hypothesis :

1. Gross Domestic Product (X1), a positive effect on the number of active participants BPJS employment.
2. Inflation (X2), a positive effect on the number of active participants BPJS employment.
3. Minimum wage (X3), negatively affect the number of active participants BPJS employment.
4. Labor force participation rate (X4), a positive effect on the number of active participants BPJS employment.
5. Gross domestic product, inflation, Minimum wage and labor force participation rate affect together the number of BPJS Employment active participants.

MATERIAL AND METHODS

This study used samples from BPJS Ketenagakerjaan. The purpose of this study was to analyze the factors affecting the participation of social security workers in Indonesia. This study covers aspects that affect the Social Security participation of labor, among others, gross domestic product, inflation, minimum wage and labor force participation rate. In measuring the participation of Social Security workforce researchers use the indicator of the number of active participants BPJS employment.

The Data used is secondary data sourced from various reports such as from Bank

Indonesia which is accessed through the site www.bi.go.id, Central Bureau of Statistics accessed through the site www.bps.go.id and BPJS employment accessed through the site www.bpjsketenagakerjaan.go.id. in this study the data used is annual data from 1991-2022. The data processing in this study using the application Eviews 12.

RESULTS
Stationary Test
Data stability testing is used to see the presence or absence of unit roots contained in the variables so that the relationship between variables in the equation becomes valid. Unit root testing in this research model is based on Augmented Dickey Fuller (ADF) test at level level.

Table 6. Unit Root Test Results

Variabel	Level	ADF	Description
JPA	0	1.0000	Not Stationary
JPA	1	0.0005	Stationary
PDB	0	1.0000	Not Stationary
PDB	1	0.7768	Not Stationary
LnPDB	0	0.0370	Stationary
LnPDB	1	0.0075	Stationary
INF	0	0.0390	Stationary
INF	1	0.0324	Stationary
UM	0	0.9884	Not Stationary
UM	1	0.1344	Not Stationary
LnUM	0	0.0102	Stationary
LnUM	1	0.0001	Stationary
TPAK	0	0.2580	Not Stationary
TPAK	1	0.0000	Stationary

Source: Estimated Results Of Eviews 12

After testing the unit root test, that JPA and TPAK variables are not stationary at level l (0). Therefore, the first difference is made on both variables and has been stationary at level l (1). Meanwhile, GDP, INF, and UM are stationary at the level of l (0) with a significance level of@ 5%.

Cointegration Test
This integration test is done by Bound test method. Bounds Testing Cointegration cointegration test method is used to determine the existence of cointegration in the model so that long-term relationships between variables in the equation can be known.

Table 7 Results Of F-Bound Integration Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
		Asymptotic: n=1000		
F-statistic	10.30350	10%	2.2	3.09
k	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37
Actual Sample Size	28	Finite Sample: n=35		
		10%	2.46	3.46
		5%	2.947	4.088
		1%	4.093	5.532
		Finite Sample: n=30		
		10%	2.525	3.56
		5%	3.058	4.223
		1%	4.28	5.84

Source: Estimated Results Of Eviews 12

In Table 7 there are results from the ARDL estimation using Long Run Form and Bound Test it can be seen that in the F-Bound Test table there is an F-statistic that has a p-value of 10.30350 where I(0) and I(1) are significant at 5% which has a larger and significant value so that it can be stated that the results of the above data have been cointegrated, meaning there is a long-term relationship between the dependent variable and the independent variable.

Test for Autoregressive Distributed Lag Models (ARDL)
Estimation testing is done to find the most appropriate model to be used in analyzing.

The model in this study is the Autoregressive Distributed Lag Models (ARDL). ARDL Model is a regression method that includes the lag of the dependent and independent variables simultaneously. ARDL Model offers alternative lag, such as AIC (akaike information criterion) and SBC (schwarz bayesian criterion) criteria to choose which model is optimal, in determining the regression equation, each variable will be estimated by entering long-term lag and short-term lag until the best model is found, which is a model with significant variables. To produce this best model, the following results can be obtained:

Table 8 ARDL test results Selected Model: ARDL (1,1,3,4,4).

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(JPA(-1))	-0.738016	0.223179	-3.306837	0.0079
LOG(PDB)	-1.494245	0.454840	-3.285210	0.0082
LOG(PDB(-1))	1.816568	0.472211	3.846941	0.0032
LOG(UM)	0.144470	0.089484	1.614482	0.1375
LOG(UM(-1))	-0.933268	0.323327	-2.886456	0.0162
LOG(UM(-2))	1.089198	0.486158	2.240423	0.0490
LOG(UM(-3))	0.684560	0.243991	2.805675	0.0186
LOG(TPAK)	5.547920	2.129962	2.604703	0.0263
LOG(TPAK(-1))	-0.738607	2.554681	-0.289119	0.7784
LOG(TPAK(-2))	-2.274692	2.429721	-0.936195	0.3712
LOG(TPAK(-3))	2.542747	2.144523	1.185693	0.2632
LOG(TPAK(-4))	-6.593908	2.863782	-2.302517	0.0441
INF	0.032764	0.006040	5.424015	0.0003
INF(-1)	0.021533	0.004329	4.974296	0.0006
INF(-2)	0.011584	0.002085	5.556869	0.0002
INF(-3)	0.004459	0.001461	3.050878	0.0122
INF(-4)	0.002906	0.001382	2.103034	0.0618
C	16.51609	15.73155	1.049870	0.3185

R-squared	0.998570	Mean dependent var		16.23000
Adjusted R-squared	0.996140	S.D. dependent var		0.885717
S.E. of regression	0.055030	Akaike info criterion		-2.705769
Sum squared resid	0.030283	Schwarz criterion		-1.849352
Log likelihood	55.88076	Hannan-Quinn criter.		-2.443954
F-statistic	410.8459	Durbin-Watson stat		2.379605
Prob(F-statistic)	0.000000			

Source: Estimated Results Of Eviews 12

From Table 8 above, the results of ARDL estimation show that the length of the lags with the Akaike Info Criterion (AIC) method produces the best ARDL model that is (1,1,3,4,4). The figure shows the length of inaction, where:

- In the First Order, The JPA variable at Number 1 indicates the length of the institution which is equal to 1.
- In the second order the GDP variable at Number 1 indicates the length of the institution which is equal to 1.

- In the third order INF variables in Figure 3 indicate the length of the institution is equal to 3.
- In the fourth order the variable UM in Figure 4 shows the length of the institution of 4.

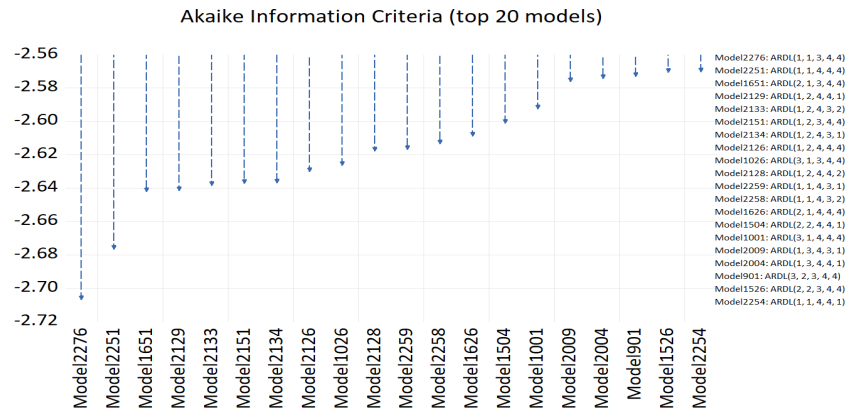- In the fourth variable TPAK in Figure 4 shows the length of the institution of 4.

Figure 2 Lag Optimum

Table 9 Short-Term ARDL Test Results

ECM Regression
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLOG(PDB)	-1.494245	0.241193	-6.195231	0.0001
DLOG(UM)	0.144470	0.052042	2.776016	0.0196
DLOG(UM(-1))	-1.773759	0.242583	-7.311953	0.0000
DLOG(UM(-2))	-0.684560	0.151914	-4.506246	0.0011
DLOG(TPAK)	5.547920	1.171969	4.733845	0.0008
DLOG(TPAK(-1))	6.325854	1.257352	5.031093	0.0005
DLOG(TPAK(-2))	4.051162	1.412664	2.867747	0.0167
DLOG(TPAK(-3))	6.593908	1.408988	4.679889	0.0009
D(INF)	0.032764	0.003238	10.11807	0.0000
D(INF(-1))	-0.018949	0.002777	-6.823474	0.0000
D(INF(-2))	-0.007365	0.001465	-5.028216	0.0005
D(INF(-3))	-0.002906	0.000762	-3.812492	0.0034
CointEq(-1)*	-1.738016	0.180485	-9.629721	0.0000

R-squared	0.972298	Mean dependent var	0.127552
Adjusted R-squared	0.950137	S.D. dependent var	0.201218
S.E. of regression	0.044932	Akaike info criterion	-3.062912
Sum squared resid	0.030283	Schwarz criterion	-2.444388
Log likelihood	55.88076	Hannan-Quinn criter.	-2.873823
Durbin-Watson stat	2.379605		

Source: Estimated Results Of Eviews 12

The short-term ARDL estimation results in Table 9 above, obtained the value of CointEq (-1). The variable is a variable that indicates the error correction of the model used. The value of CointEq(-1) from the result shows negative and significant, where the value of CointEq (-1) which has a probability of 0.0000 and a coefficient of -1.738016 is significant at 5%. That is, the ARDL model is valid. In Table 4.4. the

above can be seen that each of the independent variables (GDP, inflation, Minimum wage and labor force participation rate) at different levels of coefficients and probabilities.

1. GDP variables have a negative and significant effect with a value of 0.0001 > 5%, meaning that every 1% increase in the value of GDP will decrease 1.494245 JPA values.

2. Inflation variables have a negative and significant effect on all lags, namely lag 1, lag 2 and lag 3 with a value of 0.0000 > 5%, meaning that at lag 1 every 1% increase in the value of inflation will decrease 0.018949 JPA value. At lag 2, every 1% increase in inflation will decrease 0.007365 PSD value. While at lag 3, every 1% increase in the value of inflation will reduce the value of PSD 0.002906.

3. The minimum wage variable at lag 1 and lag 2 has a negative and significant effect at the level of 5%. At a lag of 1 per 1% increase in the value of the Minimum wage will decrease 1.773759 PSD value, while at a lag of 2 per 1% increase in the value of the Minimum wage will decrease 0.684560 PSD value.

4. Variable labor force participation rate has a positive and significant effect on all lags, namely lag 1, lag 2 and lag 3 with a value of 0.0000 > 5%, meaning that at lag 1 every 1% increase in the value of the labor force participation rate will increase 6.325854 JPA values. In lag 2, every 1% increase in the value of the labor force participation rate will increase 4.051162 JPA values. Whereas in lag 3, every 1% increase in the value of the labor force participation rate will increase 6.593908 JPA values.

Table 10. Long-Term ARDL Testing Results

Levels Equation Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(PDB)	0.185454	0.056391	3.288731	0.0082
LOG(UM)	0.566715	0.048789	11.61566	0.0000
LOG(TPAK)	-0.872570	2.118873	-0.411808	0.6892
INF	0.042144	0.003987	10.57153	0.0000
C	9.502841	9.005825	1.055188	0.3162

EC = LOG(JPA) - (0.1855*LOG(PDB) + 0.5667*LOG(UM) -0.8726 *LOG(TPAK) + 0.0421*INF + 9.5028)

Source: Estimated Results Of Eviews 12

Based on the results of long-term estimates using the ARDL model in Table 10 above, it can be seen that GDP, UM and inflation variables have a significant positive effect on JPA, while TPAK has a negative and not significant effect at the level of 5%.

1. GDP variables have a positive and significant effect on JPA. This means that in the long run every 1% increase in the value of GDP will increase 0.185454 JPA value.

2. Inflation variables have a positive and significant effect on the JPA. This means that in the long run every 1% increase in inflation will increase 0.042144 JPA value.

3. The minimum wage variable has a positive and significant effect on JPA. This means that in the long run every 1% increase in the Minimum wage will increase 0.566715 JPA value.

4. TpAk variables have a negative and insignificant effect on JPA. This means

that in the long run every 1% increase in TPAK value will decrease 0.872570 JPA value.

Classical Assumption Test And Statistical Test

Classical assumption test needs to be done so that the estimation results are good and meet the criteria of BLUE (Best Linear Unbiased Estimator). Regression models that meet the criteria can be used as a reliable and reliable estimator where the estimator is stated to be unbiased, consistent, normally distributed and also efficient. To determine whether the regression model to be used has met the criteria of BLUE (Best Linear unbiased Estimator), it is necessary to perform a series of tests, namely normality Test, heteroscedasticity Test, and autocorrelation Test as follows:

Normality Test

Normality test is a test carried out with the aim to assess the distribution of data on a group of data or variables, whether the distribution of data has been distributed normally or not. Normality testing is done with Jarque Bera Test. From the results of these calculations Jarque-Bera probability value of 0.506921 with the level of significance (③=5%) then the value of the probability of Jarque-Bera greater than 0.05 means that the data has been distributed normally and has met the assumption of normality.
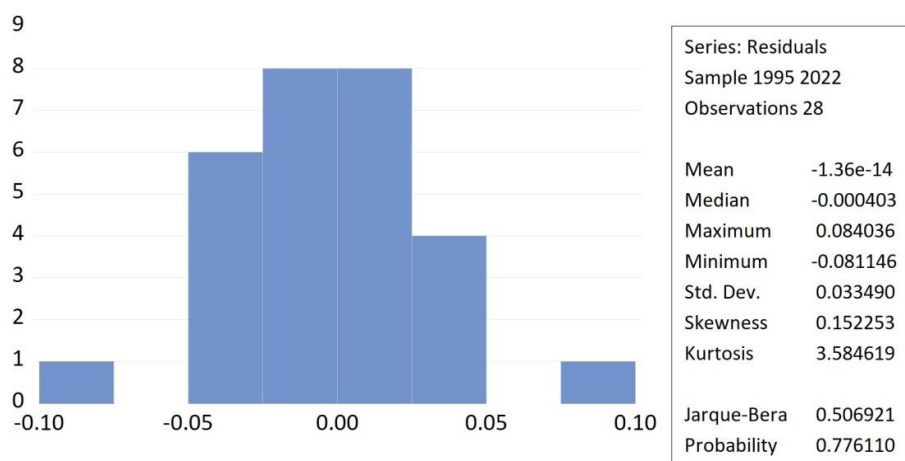
Source: Estimated Results Of Eviews 12
Figure 3 Results Of The Normality Test

Heteroscedasticity Test

Heteroscedasticity test aims to test whether the regression model occurs variance inequality from residual one observation to another. If the variance of the residuals of one observation to another is fixed, it is called homoscedasticity, and if it is different it is called heteroscedasticity.

Table 11 Heteroscedasticity Test Results

Heteroskedasticity Test: Breusch-Pagan-Godfrey
Null hypothesis: Homoskedasticity

F-statistic	0.980832	Prob. F(17,10)	0.5330
Obs*R-squared	17.50294	Prob. Chi-Square(17)	0.4208
Scaled explained SS	2.885105	Prob. Chi-Square(17)	0.9999

Source: Estimated Results Of Eviews 12

To detect the presence or absence of heteroscedasticity by looking at the probability of Obs*R-squared, because the probability is 0.4208 > 0.05, we can conclude that the regression model does not occur heteroscedasticity.

Autocorrelation Test

Autocorrelation test in this study aims to see whether in this study there is a deviation of the classical assumption of autocorrelation or not, in this study requires the absence of symptoms of autocorrelation. The test results can be seen in Table 2.

Table 12 Autocorrelation Test Results

Breusch-Godfrey Serial Correlation LM Test:
Null hypothesis: No serial correlation at up to 1 lag

F-statistic	0.991006	Prob. F(1,9)	0.3455
Obs*R-squared	2.777314	Prob. Chi-Square(1)	0.0956

Source: Estimated Results Of Eviews 12

Autocorrelation test results showed the value of Chi Square Probe (1) which is the P-value of Breusch Godfrey Serial Correlation test LM $0.0956 > 0.05$ so that autocorrelation does not occur.

Model Stability Test

In ARDL Model, CUSUM Test and CUSUMQ Test are used to see if the estimation of ARDL model is stable. A measure of the stable state when the CUSUM Test and CUSUMQ Test lines are at the 5% significant line.
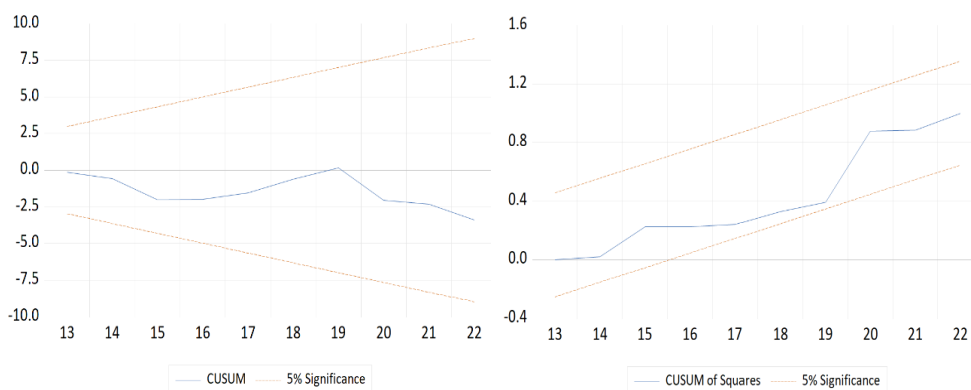

Figure 4 Model Stability Test Results

In Figure 4 above, the results of the model stability test are shown by the CUSUM line (Blue) which is still between the 5% significance line (red). The CUSUMQ line also shows the same result. It can be concluded that the ARDL model is in a stable state.

Statistical Test F

F test is intended to see whether or not the influence of independent variables together against the dependent variable. In Table 4.3. Calculated F value of the regression model is equal to 410.8459 with a probability value of 0.0000 with a significance level of 95% (③=5%), the probability value is smaller than ③. That is, the variables GDP (Gross Domestic Product), INF (inflation), UM (Minimum wage) and TPAK (Labor Force Participation Rate) together affect the number of active participants BPJS employment.

Coefficient Of Determination Test

Coefficient of determination test results contained in table 4.3. that the obtained value of R2 or (r square) is equal to 0.998570 means that the variation in the variable GDP (Gross Domestic Product), INF (inflation), UM (Minimum wage) and TPAK (labor force participation rate can be explained by 99.85% of the variable JPA

(number of active participants), while the rest is explained by other variables outside the model.

DISCUSSION

Effect Of Gross Domestic Product On The Number Of Active Participants BPJS Employment

The results of this study in the short-term show that the variable GDP negative and significant effect with a value of $0.0001 < 0.05$. This is because, the concentration of superior sectors in the industrial sector, because it uses more technology such as machines for production and is not able to absorb more labor. According to BPS data for 2022, the largest contributing sectors are the processing industry and large and Retail Trade (car and motorcycle repair). The decline in employment is also caused by the transfer of industry more oriented to capital-intensive, where production activities to spur output and generate increased income are prioritized over labor-intensive oriented economic growth, resulting in lack of employment so that the impact of declining JPA. While in the long term the GDP variable has a significant positive effect on JPA. According to Robert Solow's economic growth theory, economic growth depends on the factors of production (population, labor, capital accumulation, and the rate of technological progress). According to Solow, to produce a certain amount of ouput can use labor. The impact will create job opportunities that will certainly encourage the improvement of JPA.

Effect Of Inflation On The Number Of Active Participants BPJS Employment

Inflation variables have a negative and significant effect in the short term on all lags, namely lag 1, lag 2 and lag 3 with a value of $0.0000 < 0.05$. According to Keynes's view, most businesses are not able to increase their output capacity in a relatively short time and rising production costs can increase the selling price of products. This can occur due to the continuous increase in the average general price caused by a boost in costs and a decrease in the level of production. According to Mankiw (2007), shocks to aggregate supply can cause economic fluctuations. Supply shocks are shocks to the economy that can change the cost of producing goods and services and, as a result, affect the prices that companies charge consumers. The company will make operational cost efficiency one of them by reducing the number of employees. This will lower the JPA. While in the long term inflation variables have a significant positive effect on JPA. This is in accordance with Keynes ' theory, that an increase in aggregate demand may be due to an increase in employment, as firms need to hire more people to increase their output. The company's desire to increase output is of course also accompanied by the addition of production factors such as Labor. with that condition, the demand for Labor will increase which further increases the absorption of existing labor and will encourage the growth rate of JPA.

Effect Of Minimum Wage On The Number Of Active BPJS Ketenagakerjaan Participants

Variable Minimum wage in the short term at lag 1 and lag 2 negative and significant effect. For employers or companies, wages include production costs so that employers will minimize these production costs to achieve optimal profits. According to the classical wage theory developed by Adam Smith, David Ricardo and John Stuart Mill that low wage levels can encourage increased demand for Labor. On the other hand, a high level of wages can reduce labor demand, which will lead to a decrease in JPA. Meanwhile, in the long term, the minimum wage variable has a positive and significant effect on JPA. The results of this study are supported by the theory of wage efficiency of Alfred Marshall. The efficiency-wage theory explains that increasing wages will increase worker productivity. The effect of wages on worker efficiency may explain why companies find

it difficult to cut wages despite an oversupply of Labor. When companies make wage reductions to make production cost efficiency, it will drive down worker productivity and company profits. The high productivity of employees in producing output can reduce production costs incurred by the company so that there is no reduction in labor and will have an impact on increasing JPA.

Effect Of Labor Force Participation Rate On The Number Of Active Participants BPJS Employment

Variable labor force participation rate in the short term on all lags, namely lag 1, lag 2 and lag 3 positive and significant effect on the level of 5%. According to Lewis's theory, the existence of an oversupply of workers does not give problems to economic development. On the contrary, the excess of workers is precisely the capital to accumulate income, assuming that the transfer of workers from the subsistence sector to the modern capitalist sector is in full swing and that the transfer will never become too much. A lot of labor force will drive the level of productivity even more and can be enjoyed by many people. The amount of tpAk percentage will affect the growth of BPJS Ketenagakerjaan membership, because the amount of TPAK is calculated based on formal and informal sector workers so that the greater the change in TPAK, the higher the growth of JPA. While in the long run the effect is negative and insignificant. According to Malthusian theory, population growth is the result of the development process. But population growth cannot occur without a comparable increase in well-being. If the rate of capital accumulation increases, the demand for Labor also increases and will promote population growth. That is, population growth will increase well-being if it increases effectively, since the number of inhabitants will always tend to exceed the growth of production. This indicates that the increasing population does not always lead to positive things, where more and more

people will result in fewer jobs and cause fierce competition for job opportunities. An increase in the level of labor force participation that is not balanced with employment will have an impact on the decline in JPA.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Based on the results of the study, it can be concluded as follows:

1. In the short term, the GDP variable has a negative and significant effect with a value of 0.0001 > 5%, meaning that every 1% increase in the value of GDP will decrease 1.494245 JPA values. While in the long term, GDP variables have a positive and significant effect on JPA. This means that in the long run every 1% increase in the value of GDP will increase 0.185454 JPA value.

2. In the short term, inflation variables have a negative and significant effect on all lags, namely lag 1, lag 2 and lag 3 with a value of 0.0000 > 5%, meaning that at lag 1 every 1% increase in the value of inflation will decrease 0.018949 JPA value. At lag 2, every 1% increase in inflation value will decrease 0.007365 PSD value. While at lag 3, every 1% increase in the value of inflation will reduce the value of PSD 0.002906. While in the long term, inflation variables have a positive and significant effect on the JPA. This means that in the long run every 1% increase in inflation will increase 0.042144 JPA value.

3. Variable Minimum wage in the short term at lag 1 and lag 2 negative and significant effect at the level of 5%. At a lag of 1 per 1% increase in the value of the Minimum wage will decrease 1.773759 PSD value, while at a lag of 2 per 1% increase in the value of the Minimum wage will decrease 0.684560 PSD value. Meanwhile, in the long term, the minimum wage variable has a positive and significant effect on JPA.

This means that in the long run every 1% increase in the Minimum wage will increase 0.566715 JPA value.

4. Results in the short-term variable labor force participation rate has a positive and significant effect on all lag, namely lag 1, lag 2 and lag 3 with a value of 0.0000 > 5%, meaning that at lag 1 every 1% increase in the value of labor force participation rate will increase 6.325854 JPA value. In lag 2, every 1% increase in the value of the labor force participation rate will increase 4.051162 JPA values. Whereas in lag 3, every 1% increase in the value of the labor force participation rate will increase 6.593908 JPA values. While in the long term, tpAk variables have a negative and insignificant effect on JPA. This means that in the long run every 1% increase in TPAK value will decrease 0.872570 JPA value.

5. Calculated F value of the regression model is equal to 410.8459 with a probability value of 0.0000 with a significance level of 95% (③=5%), the probability value is smaller than ③. That is, the variables GDP (Gross Domestic Product), INF (inflation), UM (Minimum wage) and TPAK (Labor Force Participation Rate) together affect the number of active participants BPJS employment.\

6. The value of R2 or (r squared) is equal to 0.998570 which means that the variation in the variables GDP (Gross Domestic Product), INF (inflation), UM (Minimum wage) and TPAK (labor force participation rate can be explained by 99.85% of the variable JPA (number of active participants), while the rest is explained by other variables outside the model.

RECOMMENDATIONS

Suggestions researchers from research that has been done are as follows:

1. GDP has a positive and significant effect. BPJS Employment membership is strongly influenced by the economic condition of the country. The creation of this new industrial sector increased the factors of production that led to an increase in the number of workers. There needs to be a strong commitment and support from the central and local governments in supporting the implementation of the Employment Social Security program, the government through the Ministry of manpower and Public Administration must be firm in sanctioning any employer or company that does not register its workers in BPJS employment. As for the informal sector, the scope of BPJS Employment membership is still very low so that regulations or special binding contribution schemes are needed, such as protection for vulnerable workers in each district and city with contribution schemes paid through the APBD and APBN so that all informal workers can be protected by the Employment Social Security program for the creation of universal labor coverage.

2. Inflation is positive and significant. This means that stable and controlled inflation will encourage employers or companies to increase their production which will have an impact on the higher supply of available labor and will increase the number of BPJS Employment participants because BPJS Employment participants are formal and informal sector workers. In an effort to keep inflation under control and stable, there is a need for a joint commitment between the central inflation control team (TPIP) and the regional inflation control team (TPID) so that policies made in handling inflation can run optimally.

3. The minimum wage has a positive and significant effect. This shows that the increase in the minimum wage does not reduce the number of young workers or youth workers, and vice versa. The minimum wage can support the company in the absorption of Labor. It is necessary to maintain good relations between workers, employers and Central and local

governments in order to realize an equal and balanced collective agreement so as to create a conducive business climate.

4. In this study, researchers used 4 independent variables, it is advisable to add other variables that are strongly suspected to have a significant effect on JPA and can also add a comparison of the implementation of Social Security labor in developed and developing countries.

REFERENCE

1. Ajija, Shochrul R, dkk, 2011. Cara Cerdas Menguasai Eviews. Jakarta: Salemba Empat.
2. Arsyad, Lincolin. 1999. Pengantar Perencanaan dan Pembangunan Ekonomi Daerah. BPFE. Yogyakarta.
3. Asyhadie, Zaeni. 2007. Hukum Kerja: Hukum Ketenagakerjaan Bidang Hubungan Kerja. Jakarta: PT. Raja Grafindo Persada.
4. Badan Pusat Statistik. http://www.bps.go.id. Diakses Tanggal 14 Februari 2023
5. Basuki, Prihantoro Imam dan Kasir Iskandar. 2013. "Analisis Faktor-Faktor Makro Ekonomi dan Demografi Terhadap Fungsi Permintaan Asuransi Jiwa di Indonesia". Jurnal Asuransi dan Manajemn Risiko Vol. 1 No. 1.
6. Boubaker, Heni dan Nadia Sghaier. 2012. "How Do The Interest Rate And The Inflation Rate Affect The Non-Life Insurance Premiums?". Bulletin Français D'actuariat Vol. 12 No. 24.
7. Burić, et al. 2017. "Impact of Economic Factors on Life Insurance Development in Western Balkan Countries". Zb. rad. Ekon. fak. Rij. Vol. 35 No. 2.
8. BPJS Ketenagakerjaan. http://www.bpjsketenagakerjaan.go.id. Diakses Tanggal 14 Februari 2023.
9. Cristea, Loredana Andreea dan Cătălin Zeti. 2019. "Study On The Incidence Of Social Security Contributions On Employment And Unemployment, In The European Context". Revista Economică 71:2.
10. Dinar, Muhammad dan Muhammad Hasan. 2018. Pengantar Ekonomi: Teori dan Aplikasi. Makasar: Pustaka Taman.
11. Fadhilah, N dan Sukmana, R. 2017. Pengaruh Sertifikat Bank Indonesia Syariah (SBIS) Jakarta Islamic Index (JII), Tingkat Inflasi, dan Index Harga Saham Gabungan (IHSG) Terhadap Nilai Tukar: Pendekatan Autoregressive Distributed Lag (ARDL). Jurnal Ekonomi Syariah Teori dan Terapan Vol. 4 No. 1.
12. Gujarati, D. N. dan Porter, D. C. 2009. Dasar-Dasar Ekonometrika. Jakarta: Salemba Empat.
13. Gujarati, D.N. dan D.C. Porter. 2013. Dasar-Dasar Ekonometrika. Buku 1. Edisi 5. Jakarta: Salemba Empat.
14. Gultom, Ratih Yasnuarni. 2016. "Pengaruh Perkembangan Makro Ekonomi Indonesia Terhadap Pertumbuhan Kepesertaan BPJS Ketenagakerjaan". Jurnal Institut BPJS Ketenagakerjaan Tahun 2016 Vol. 1.
15. Izzati dan Sari. 2013. Kebijakan Penetapan Upah Minimum di Indonesia. Jurnal Ekonomi & Kebijakan Publik Vol. 4 No. 2.
16. Kertonegoro, Sentanoe. 1982. "Jaminan Sosial Prinsip dan Pelaksanaannya di Indonesia". Jakarta: Mutiara.
17. Kertonegoro, Sentanoe. 1997. "Reformasi Jaminan Sosial Studi Perbandingan di Berbagai Negara". Jakarta : Yayasan Tenaga Kerja Indonesia.
18. Mandigma, Ma. Belinda S. 2016. "Determinants of Social Insurance Coverage in the Philippines". International Journal of Social Science and Humanity, Vol. 6 No. 9.
19. Mankiw N, Gregory. 2009. Macroeconomics, 7th Edition. NewYork: Worth Publishers.
20. Muslim, et al. 2022. "Analisis Faktor-Faktor Yang Mempengaruhi Permintaan Asuransi BPJS Ketenagakerjaan Pada Pekerja Sektor Formal Kota Probolinggo". Jurnal Ilmu Ekonomi (JIE) Vol. 6 No. 2.
21. Nopirin. 1994. Pengantar Ilmu Ekonomi Makro & Mikro. Yogyakarta: BPFE Yogyakarta.
22. Peraturan Pemerintah Nomor 36 Tahun 1995 tentang Penetapan Badan Penyelenggara Program Jaminan Sosial Tenaga Kerja.
23. Peraturan Menteri Tenaga Kerja Nomor 1 Tahun 1999 Tentang Upah Minimum.

24. Peraturan Pemerintah Nomor 45 Tahun 2015 Tentang Penyelenggaran Program Jaminan Pensiun.
25. Peraturan Pemerintah Nomor 37 Tahun 2021 Tentang Penyelenggaraan Program Jaminan Kehilangan Pekerjaan.
26. Perwira, et al. 2003. Perlindungan Tenaga Kerja Melalui Sistem Jaminan Sosial: Pengalaman Indonesia. Jakarta: SMERU.
27. Purba et al, 2021. Ekonomi Pembangunan. Medan: Yayasan Kita Menulis.
28. Rizqi, Asmi Aftah dan Moh. Athoillah. 2021. "Analisis Pengaruh Faktor-Faktor Makroekonomi dan Demografi terhadap Permintaan Asuransi Jiwa Syariah di Indonesia". Jurnal Ilmiah Mahasiswa FEB Vol. 9 No. 2.
29. Sari, Nendi Oktaviana. 2021. "Determinan yang Berpengaruh Terhadap Kepesertaan BPJS Ketenagakerjaan Penerima Upah di Indonesia Tahun 2001-2017". Jurnal Paradigma Multidisipliner (JPM) Vol. 2 No. 3.
30. Sasongko, et al. 2019. "Pengaruh Upah Minimum, Produk Domestik Bruto Sektor Industri dan Inflasi Terhadap Kepesertaan BPJS Ketenagakerjaan". International Journal of Social Science and Business Vol. 3 No. 3.
31. Simanungkalit, Erika Feronika Br. 2020. "Pengaruh Inflasi Terhadap Pertumbuhan Ekonomi Di Indonesia". Journal of management (sme's) Vol. 13 No. 3.
32. Sukirno, Sadono. 2006. Pengantar Teori Makro Ekonomi. Jakarta: Raja Grafindo Persada.
33. Sukirno, Sadono, 2005. Mikroekonomi Teori Pengantar. Jakarta: PT. Raja Grafindo Persada.
34. Sukirno, Sadono. 2013. Makroekonomi : Teori Pengantar. Jakarta: PT. Raja Grafindo Persada.
35. Sulistiawati, Rini. 2012. "Pengaruh Upah Minimum Terhadap Penyerapan Tenaga Kerja dan Kesejahteraan Masyarakat di Indonesia". Jurnal Eksos, Vol 8. No. 3, Oktober 2012.
36. Sumarsono, Sonny. 2009. Ekonomi Sumber Daya Manusia Teori dan Kebijakan Publik. Yogyakarta: Graha Ilmu.
37. Sumarto, Mulyadi. 2018. Perlindungan Sosial dan Klientelisme: Makna Politik Bantuan Tunai dalam Pemilu. Yogyakarta: Gadjah Mada University Press.
38. Surat Edaran (SE) Menteri Ketenagakerjaan Republik Indonesia Nomor 11/HK04/X/2020 tentang Penetapan Upah Minimum tahun 2021 pada Masa Pandemi Covid-19.
39. Todaro, M.P. dan Smith Stephen. C. 2003. Pembangunan Ekonomi di Dunia Ketiga. Edisi kedelapan. Jilid 2. Jakarta: Erlangga.
40. Todaro, Michael P. dan Smith, Stephen C. 2009. Pembangunan Ekonomi. Jilid 1. Jakarta: Erlangga.
41. Undang-Undang Nomor 3 Tahun 1992 tentang Jaminan Sosial Tenaga Kerja.
42. Undang-Undang Nomor 13 Tahun 2003 tentang Ketenagakerjaan.
43. Undang-Undang Nomor 40 Tahun 2004 tentang Sistem Jaminan Sosial Nasional (SJSN).
44. Undang-Undang Nomor 24 Tahun 2011 tentang Badan Penyelenggara Jaminan Sosial (BPJS).
45. Widarjono, Agus. 2013. Ekonometrika Pengantar dan Aplikasinya. Edisi Keempat. Yogyakarta: UPP STIM YKPN.
46. Winarno, Wing Wahyu. 2007. Analisis Ekonometrika dan Statistika Dengan EViews. Cetakan Pertama, YKPN: Yogyakarta.

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