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Determinants of Claim Realization Death Benefit Program: Social Protection Analysis

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Abstract

The Death Benefit Program (JKM) is a key instrument within Indonesia's employment-based social protection system, aimed at safeguarding workers' households from the economic consequences of the death. This study examine to analyze the effects of labor market structure, macroeconomic conditions, human development, as well as program participation and financing on the number of JKM claims in Indonesia. This study employs a quantitative approach using panel data regression across Indonesian provinces (16) for the period 2018–2024. The results show that the proportion of formal workers, economic growth, IPM, and the number of JKM participants significantly affect the realization of JKM claims. In contrast, the total number of employed persons and the proportion of informal workers do not have a significant impact. These findings suggest that JLI claim realization is driven more by the quality of labor market integration into social insurance system and institutional capacity than by the size of the working population. This study contributes by positioning JKM claims as a policy outcome of risk based social protection and underscores the need to shift policy focus toward improving participation quality, promoting labor formalization, and strengthening governance to ensure sustainability and equity.

Keywords: Death Benefit Program (JKM), social insurance claims, risk based social protection, Human Development Index (IPM), panel data.

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1. Introduction

The risk of death is a universal life-cycle risk that has a significant economic impact on workers' households. The loss of a breadwinner not only reduces income but also increases social

vulnerability and the risk of poverty. In this context, the state acts as a risk bearer through an institutionalized social protection system.

In Indonesia, this protection is realized through the National Social Security System managed by BPJS Ketenagakerjaan, one of which is the Death Benefit Program (JKM). This program provides cash benefits to the heirs of participants who die from causes other than work-related accidents. Conceptually, JKM functions as a mechanism for income replacement and risk pooling within the framework of insurance-based social protection. Regulatory-wise, the JKM is governed by various implementing regulations (Government Regulation No. 44/2015 and its amendments), which essentially regulate benefits, contributions, and program governance. However, the program's effectiveness is determined not only by regulations but also by the system's ability to ensure claims are processed accurately, fairly, and sustainably.

Indonesia has a strong commitment to social protection for workers, including Non-Wage Earners (BPU), as part of efforts to improve welfare through the Unitary State of the Republic of Indonesia (Pratiwi, 2024). One of the important instruments in the employment social protection system managed by BPJS Ketenagakerjaan is the Death Benefit Program (JKM). This program is designed as a form of financial protection for the heirs of participants in the event of death that is not caused by a work accident or occupational disease. From a social insurance perspective, JKM functions as an income replacement and social buffering mechanism to prevent a decline in the welfare of workers' households due to the loss of a breadwinner. The existence of JKM is very strategic in the context of Indonesia's heterogeneous employment structure, where formal and informal workers face different levels of vulnerability to social risks. Therefore, the effectiveness of the JKM Program is not only determined by membership coverage, but also by the system's ability to manage claims fairly, accurately, and sustainably as an integral part of risk-based social protection.

Based on data from 2018 to 2024, DKI Jakarta ranks first with an average claim amount of nearly Rp394 billion, followed by West Java at approximately Rp321 billion and East Java at approximately Rp291 billion. Central Java, Banten, and North Sumatra also have relatively high average claim amounts.

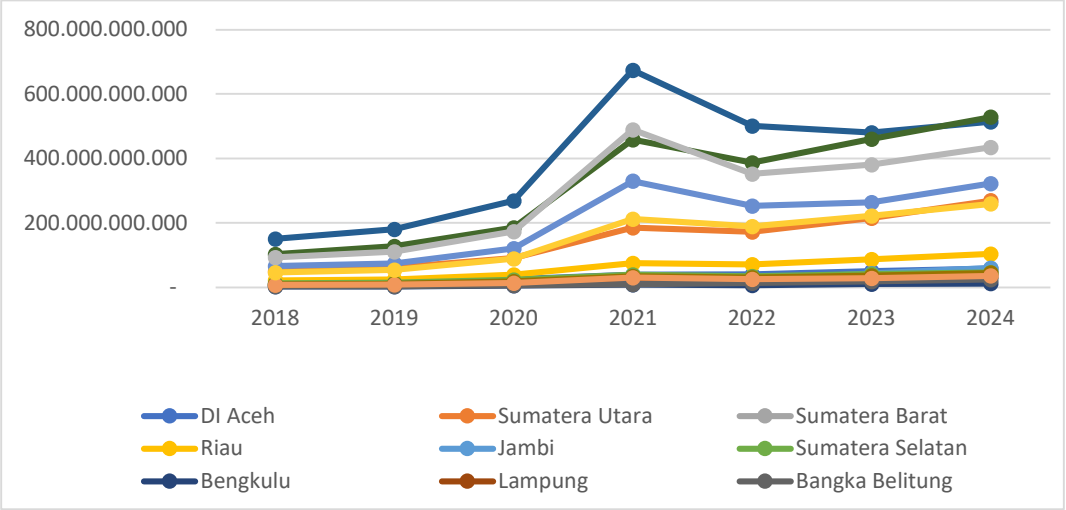

Figure 1. Average number of claims for the 2018-2024 period
Source: BPJS Ketenagakerjaan, processed data, 2025

Meanwhile, based on previous research, it has been consistently confirmed that employment social security is a crucial public policy instrument in mitigating the socioeconomic risks faced by workers, particularly the risks of death, job loss, and income shocks. The International Labor Organization (ILO, 2017) shows that social insurance systems can reduce household vulnerability through income replacement mechanisms and benefits for survivors. However, its effectiveness is highly dependent on coverage, contribution compliance, and institutional capacity. This finding is reinforced by the World Bank (2018), which emphasizes that developing countries with extensive employment-based social protection systems have better social and economic resilience in the face of crises. The structure of the labor market, particularly the dichotomy between the formal and informal sectors, is a key determinant in the utilization of social security. Barr (2012) views death benefits as a fundamental component of the pooling of risk mechanism designed to address the failure of the private insurance market. Comparative studies by the OECD (2019; 2021) show that countries with mature social insurance systems have more stable and predictable claim patterns, supported by a broad participant base and strong institutional governance. Hubungan antara jumlah tenaga kerja dan realisasi klaim jaminan sosial dianalisis lebih lanjut dalam kerangka Risk Based Social Protection. Holzmann and Jørgensen (2001) emphasize that the size of the working population only represents potential risk, while the realization of claims is largely determined by the quality of governance, institutional design, and the level of social literacy. Macroeconomic factors also play an important role in the dynamics of social security. Ebbinghaus (2015) found that periods of stable economic growth tend to increase participation in social security programs as income and job security increase. The dimension of human development is increasingly used in social protection analysis.

The United Nations Development Programme (UNDP, 2022) reports that regions with higher Human Development Index (IPM) scores have better utilization rates for social security

programs. Active participation is the most direct determinant of the number of claims. The ILO (2023) emphasizes that only active participants are entitled to file claims, so expanding participation is a key prerequisite for increasing benefit realization. From a financing perspective, social security actuarial theory emphasizes the importance of balancing contributions and benefits.

The pandemic period (2020–2021) represents a structural shock that simultaneously increased mortality risk while disrupting institutional claim realization mechanisms, indicating that claim outcomes are mediated by administrative and participation continuity factors. Other factors contributing to the increase in claims include uneven economic growth, poverty levels, low education levels, and income instability among informal workers. This imbalance in the economic and employment structure has made social security protection increasingly complex, particularly in the context of maintaining the sustainability of JKM funds. Therefore, this research is important to understand the factors causing the increase in JKM claims and how the government can formulate more equitable and sustainable policies to protect informal workers.

In addition to labor factors, previous studies have also emphasized the importance of macroeconomic conditions and the quality of human development in influencing the utilization of social security benefits. Fiszbein et al. (2014) and Leisering (2019) show that increases in income, education, and institutional capacity contribute to an increase in people's ability to access and exercise their rights to social protection. Other studies have found that regions with higher levels of human development tend to have more effective, transparent, and responsive claims systems, thereby encouraging an increase in the realization of legitimate claims (Dorfman et al., 2015; Alfers et al., 2017). However, empirical studies on death benefits, particularly those that integrate employment, socioeconomic, participation, and financing factors into a single quantitative analytical framework, are still relatively limited.

Given the complexity of these challenges, it is necessary to conduct in-depth research on various factors that influence the increase in JKM claims. Factors such as the working population, the percentage of formal workers, the percentage of informal workers, economic growth, the Human Development Index, the number of JKM program participants, and the amount of JKM program contributions need to be analyzed systematically in order to formulate more appropriate and sustainable policies. Ultimately, this research aims not only to understand the factors that influence the number of death benefit claims, but also to provide data-driven recommendations for improving the system to be more effective and efficient, as well as more capable of reaching and protecting informal workers comprehensively. Thus, the results of this research are expected to form the basis for strategic decision-making by stakeholders in strengthening an inclusive, responsive, and equitable social security system.

Although the literature on social protection and social security for workers has developed significantly, particularly in the context of developing countries, there are still a number of important research gaps that need to be further explored. Most previous studies, such as those conducted by the ILO (2017, 2021, 2022) and the World Bank (2019, 2022), have emphasized the

expansion of coverage and fiscal sustainability of social security programs. However, these studies have generally not specifically analyzed the factors that influence the realization of claims as the main outcome of social protection programs. Previous studies also tend to focus their analysis on the financing and stability of social security funds, particularly in relation to the role of contributions and the number of participants (Barr, 2012; Holzmann et al., 2008; OECD, 2023). The causal relationship between contributions, participation, and claim realization, especially in risk-based insurance programs such as Death Benefit (JKM), is still relatively limited and has produced inconsistent findings.

In addition, studies on labor market segmentation have focused more on its impact on wages, productivity, and job quality (Bosch & Esteban-Pretel, 2020; Bosch et al., 2023). The implications of formal and informal labor structures on social security claims have rarely been studied quantitatively, especially using a panel data approach. The capability and human development approaches developed by Sen (1999) and UNDP (2020, 2022) have also not been widely applied to explain variations in the realization of social security claims. Most studies stop at analyzing access and participation, rather than the actual utilization of benefits. Thus, there is still an empirical gap in integrating macroeconomic factors, labor structure, program participation, and human development quality into a comprehensive analytical framework to explain the dynamics of JKM Program claims.

This study offers several novelties that distinguish it from previous studies. First, this study positions Death Benefit Program (JKM) claims as the main dependent variable, so that claims are understood as a functional indicator of the effectiveness of social protection, not merely as a financial consequence of the program. Second, this study integrates risk-based social protection theory with social insurance theory, labor market segmentation, the capability approach, and institutional governance theory into a single empirical framework. This cross-theoretical integration is rarely found in previous studies, which tend to be partial in nature. Second, this study includes macroeconomic indicators such as economic growth and the Development Index, which are expected to contribute conceptually and empirically to the development of social protection policies in Indonesia.

Given this background, the objective of this study is to analyze the impact of labor market structure, macroeconomic conditions, human development quality, as well as program participation and funding on the realization of Death Benefit Program (JKM) claims in Indonesia.

2. Research Method

This study employs a quantitative approach using panel data regression across 16 provinces in Indonesia during the 2018–2024 period. The selection of these 16 provinces is based on their representation of more than 60% of the total number of participants, premiums, and JKM claims nationwide, and is therefore considered to reflect the system's key dynamics. The conceptual framework of this study is as follows:

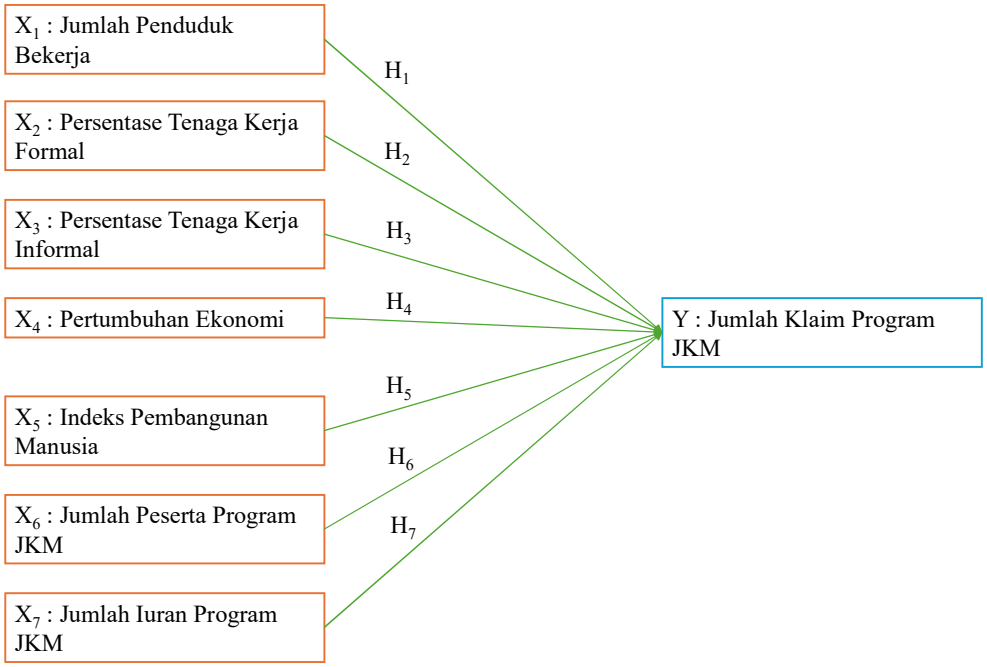

Figure 2. Conceptual Framework
Source: BPJS Ketenagakerjaan, processed data (2025)

The increase in the working population expands the base of social security program participants. The more active workers there are, the greater the probability of claims due to the risk of death being spread across a larger population. In addition to being supported by classical literature and international institutions, this hypothesis is also reinforced by recent research. Behrendt and Nguyen (2022) show that an increase in the number of workers does not always increase social security claims without accompanying expansion of active coverage. Research by Cepeda et al. (2023) in developing countries also found that the structure of the workforce is more decisive in determining the utilization of claims than the number of workers alone.

H_1 : The number of employed people (JPB) has a significant effect on the number of JKM program claims (JK JKM).

Formal workers who are regulated by labor laws and have employment contracts must register and pay social security contributions. The number of formal workers directly increases the number of people enrolled in the JKM program. lower social security contributions due to better job protection and risk management systems. A study by Bosch, Melguizo, and Pages (2023) also found that increased labor formalization reduces the risk of death and work accident claims. Based on the above research results, the following hypothesis can be formulated:

H_2 : The percentage of formal workers (PPF) has a significant effect on the number of JKM program claims (JK JKM).

The high percentage of informal workers can reduce the number of JKM program participants, thereby reducing the number of claims. The ILO (2022) found that informal workers still face significant barriers in realizing social security claims despite being at high risk. Sen's (2000) research shows that institutional exclusion limits the access of informal groups to public services. Studies by Suryahadi et al. (2020) and ILO (2021) also found that despite the high occupational risks faced by informal workers, the low Recent research by Alfers et al. (2023) shows that limited institutional access is a major factor in the low number of claims by informal workers. Based on the above research results, the following hypothesis can be formulated:

H_3 : The percentage of informal workers (PPI) has a significant effect on the number of JKM Program claims (JK JKM).

Research by Ebbinghaus (2015) and the World Bank (2019) also shows that periods of economic growth tend to be followed by an increase in social security claims. The World Bank (2022) shows that the post-pandemic economic recovery phase is followed by an increase in social security claims. A study by Kim and Madestam (2023) also found that economic expansion increases the utilization of social protection programs through increased labor participation. Based on the results of the above studies, the following hypothesis can be formulated:

H_4 : Economic growth (PE) has a significant effect on the number of JKM program claims (JK_JKM).

An increase in the Human Development Index (IPM) indicates a better quality of life, and people with a higher IPM tend to be more proactive in registering for and using the benefits of social security programs, which in turn results in more claims. UNDP (2022) shows that an increase in the IPM is closely related to an increase in the utilization of social protection programs.

H_5 : The Human Development Index (IPM) has a significant effect on the number of JKM Program claims (JK JKM).

Social security is viewed as a risk pooling mechanism, whereby participants collectively bear the risk in order to create more equitable protection (Barr, 2001). Only active participants are eligible to file JKM claims, so this is the variable that most directly affects the number of claims. The more participants there are, the greater the likelihood of deaths in the population that will result in claims.

H_6 : The number of participants in the JKM program (PJKM) has a significant effect on the number of claims in the JKM program (JK JKM).

Social Security Actuarial Theory (Barr, 2001) states that the sustainability of social security programs depends on the financial balance between contributions (premiums) received from participants and claim payments (benefits) to beneficiaries, which are analyzed using actuarial principles. This balance is very important to ensure that the program can fulfill its obligations in

the long term and avoid bankruptcy. Participant contributions are the main source of JKM funding.

H_7 : The amount of JKM Program Contributions (IurJKM) has a significant effect on the amount of JKM Program Claims (JK JKM).

To answer the above questions, the analysis technique used is panel data regression, supported by existing quantitative data. The data was processed using Microsoft Office Excel and Eviews 9 statistical software. The model used in this study is as follows: Panel data (pooled data), also known as longitudinal data, is a combination of cross-sectional data and time series data. Panel data has complexity regarding the behavior in the model, and panel data is relatively more robust against several violations of classical assumption tests (Gujarati, 2012).

The model used in this study:

$$JK\_JKMit = \alpha + \beta_1(JPBit) + \beta_2(PPFit) + \beta_3(PPIit) + \beta_4(PEit) + \beta_5\ (IPMit) + \beta_6\ (PJKMit) + \beta_7\ (IurJKMit) + \varepsilon it$$

Where:

JK_JKM it	: Total Death Benefit Claims
α	: Constant
β1 β2 β3 β4 β5 β6 β7	: Regression Coefficients
JPBit	: Total Working Population i in year t
PPFit	: Percentage of Formal Workers i in year t
PPIit	: Percentage of Formal Workers i in year t
PEit	: Economic Growth i in year t
IPMit	: Human Development Index i in year t
PJKMit	: Number of JKM Program Participants i in year t
IurJKMit	: Number of JKM Program Contributions i in year t
εit	: Error term

Selection of Panel Data Estimation Models

Panel data analysis techniques in this study can be performed using the common effect, fixed effect, and random effect methods. To determine which method is more suitable for this study, the Chow test and Hausman test are used (Khamayanti, 2016).

3. Analysis of Results and Discussion

Death Benefits (JKM) is a benefit program provided by BPJS Ketenagakerjaan in the form of cash payments to beneficiaries when a participant dies due to causes other than a work-related accident. According to Government Regulation No. 44 of 2015 (PP No.44/2015), the implementation of JKM aims to provide compensation to heirs so that they can meet their basic needs after the participant's death. Furthermore, Figure 3 below shows the average number of working people during 2018-2024 for each province, thereby clarifying the comparison between regions.

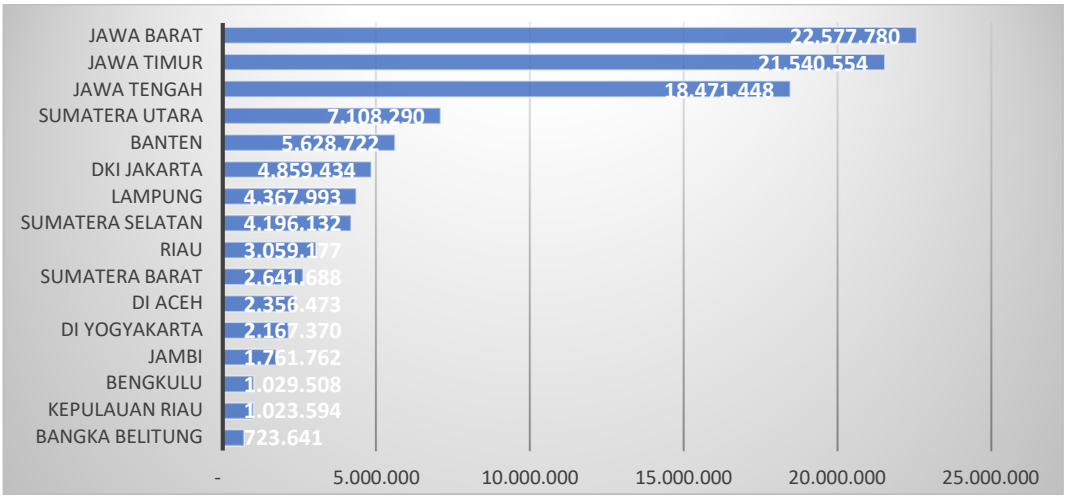

Figure 3. Average Number of Working Population during 2018-2024
Source: BPJS Ketenagakerjaan, processed data (2025)

Figure 4 below shows the average percentage of formal workers during 2018–2024 by province. This figure clearly shows that Riau Islands and DKI Jakarta occupy the top two positions with an average percentage of formal workers of around 66.64 percent and 64.66 percent, respectively.

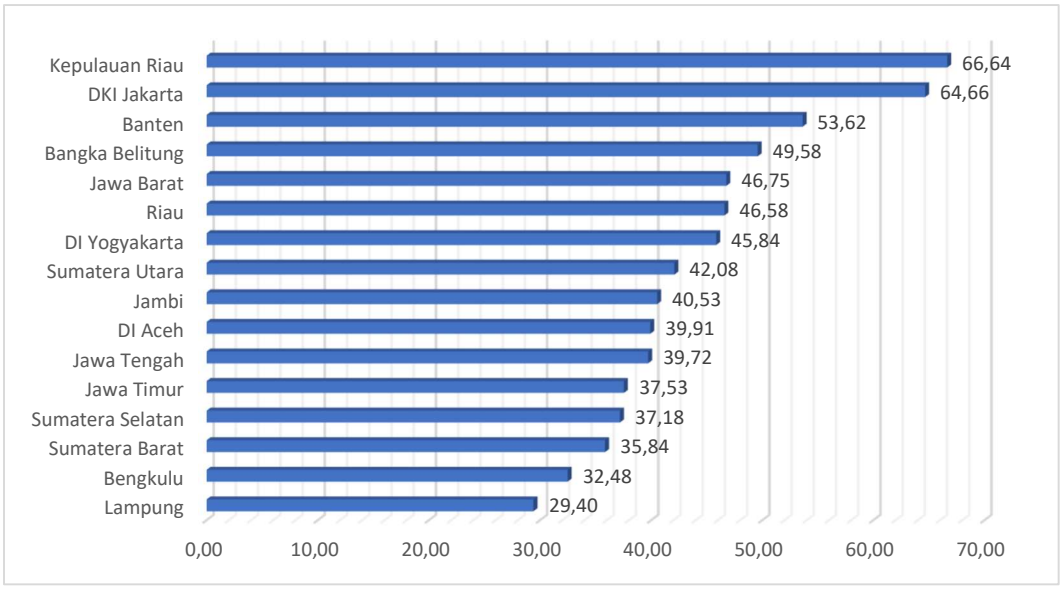

Figure 4. Average Formal Workforce by Province
Source: BPJS Ketenagakerjaan, processed data (2025)

After observing the pattern in formal employment, the opposite condition can be seen in Figure 4, which shows the percentage of informal employment in 16 provinces from 2018 to 2024.

Furthermore, Figure 5 presents the average percentage of informal employment by province from 2018 to 2024.

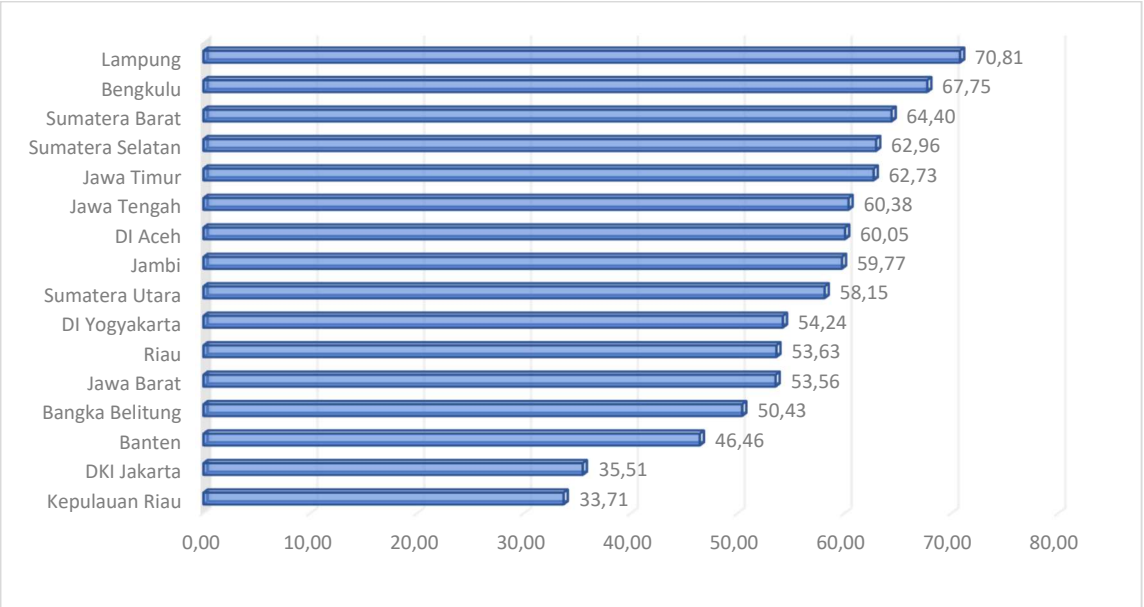

Figure 5. Average Informal Workforce by Province during 2018-2024
Source: BPJS Ketenagakerjaan, processed data (2025)

Figure 6 below shows the average economic growth and average Human Development Index (IPM) in 16 provinces during the 2018–2024 period.

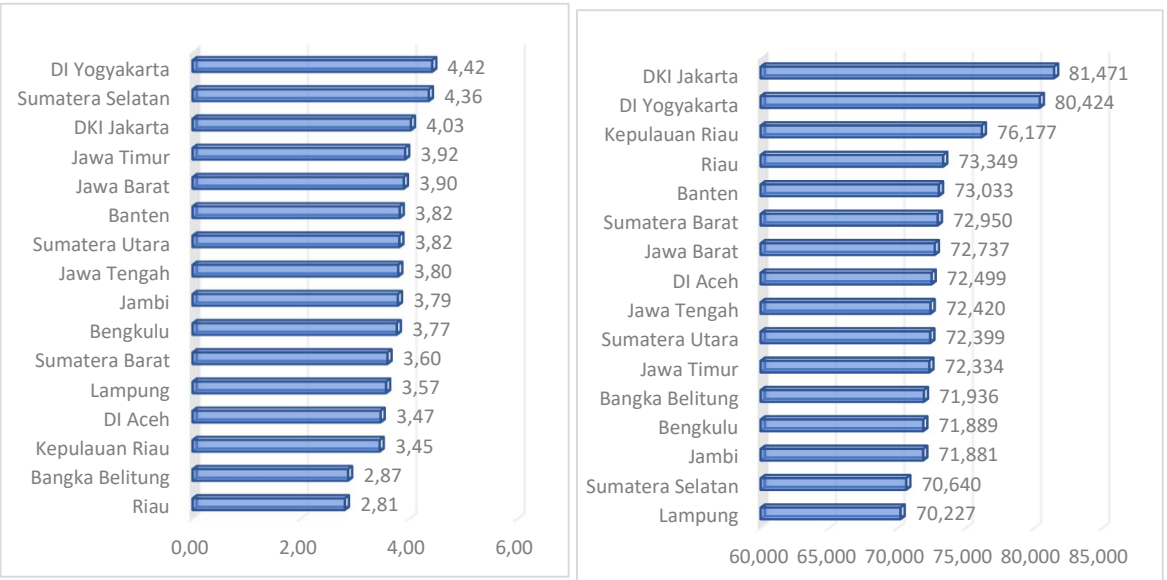

Figure 6. Average Economic Growth and IPM during 2018-2024
Source: BPJS Ketenagakerjaan, processed data (2025)

Meanwhile, the image below shows the average contribution amount in 16 provinces during the 2018–2024 period.

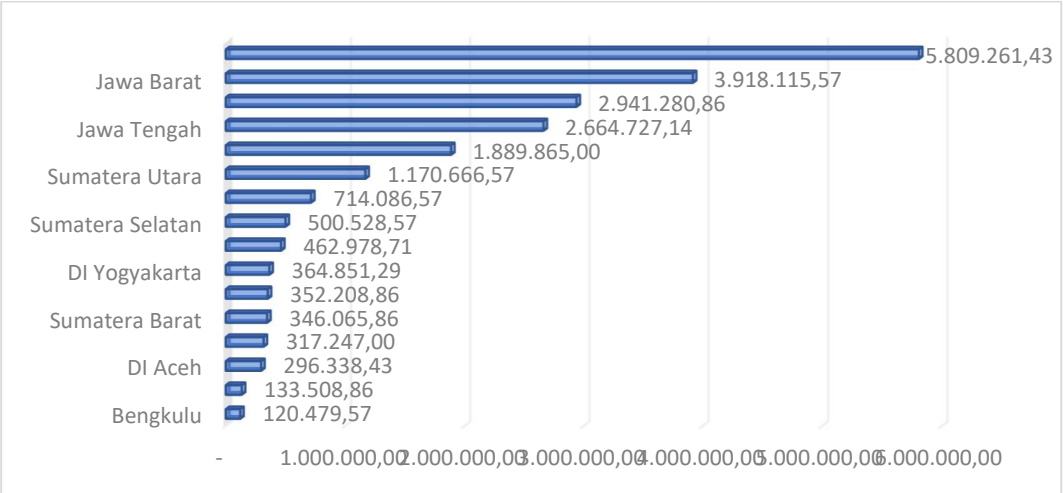

Figure 7. Development of JKM Program contributions (in rupiah) in 16 provinces 2018–2024
Source: BPJS Ketenagakerjaan, processed data (2025)

Based on the test results, it is known that the Chow Test produces a probability value from Cross-section Chi Square smaller than 0.05 (alpha 5%), so it is decided to use Fixed Effect. Next, conduct a Hausman test (Fixed effect vs Random effect) to determine which is best for estimating the model. The Hausman Test results show a value smaller than 0.05 (alpha 5%), so it is concluded that the model uses the Fixed Effect Model estimation results.

Tabel 1. Chow Test Results

Test	Stat Value	Prob	Decision
Chow Test	122.5863	0.0000	Fixed Effect
Hausman Test	77.050687	0.0000	Fixed Effect

Source: Processed data (2025)

Model Test Results and Discussion

Table 2. Estimation Table

Variable	Dependent Variable: CLAIM				Decision
	Beta	Std Error	T_{stat}	P_{value}	
Constant	-15.98333	2.595775	-6.157439	0.0000	
PDDK	-0.007492	0.071598	-0.104646	0.9169	H_1 rejected
FORMAL	-0.173897	0.048684	-3.571973	0.0006	H_2 accepted
INFORMAL	-0.048225	0.067908	-0.710159	0.4795	H_3 rejected

Variable	Dependent Variable: CLAIM				Decision
	Beta	Std Error	T_{stat}	P_{value}	
EGROWTH	0.048029	0.022268	2.156838	0.0337	H_4 accepted
IPM	0.699235	0.053152	13.15531	0.0000	H_5 accepted
PARTICIPANT	-0.000349	0.000191	-1.827890	0.0709	H_6 accepted
FEE	-0.000889	0.000869	-1.022778	0.3092	H_7 rejected
R-squared	0.977710				
Adj R-squared	0.972200				
F-statistic	177.4460				
Prob(F-statistic)	0.000000				

H1: There is an effect of the Working Population on the Number of JKM Program Claims

The test results show a P_{value} of 0.9169 > 0.10 (alpha 10%), so H1 is rejected. It is statistically concluded that there is no effect of the Working Population on the Number of JKM Program Claims. This finding can be explained through the risk-based social protection theory, which asserts that social insurance claims are more influenced by the probability of risk events and the effectiveness of the membership system than by the size of the working population (Holzmann & Jørgensen, 2001; Barr, 2012).

H2: There is an effect of the percentage of formal workers on the number of JKM program claims

The test results show a P_{value} of 0.0006 < 0.01 (alpha 1%), so H2 is accepted. It is statistically concluded at a 99% confidence level that there is a negative effect of the percentage of formal workers on the number of JKM program claims. The negative and significant effect of the percentage of formal workers on the number of JKM claims is consistent with the dual labor market theory, which distinguishes the risk characteristics between the formal and informal sectors (Doeringer & Piore, 1971).

H3: There is an effect of the percentage of informal workers on the number of JKM program claims

The test results show a P_{value} of 0.4795 > 0.10 (alpha 10%), so H3 is rejected. It is statistically concluded that there is no effect of informal labor on the number of JKM program claims. The insignificant effect of informal labor on JKM claims can be explained through social exclusion theory and institutional access theory. Informal workers often face administrative barriers, low social security literacy, and income instability that hinder active participation (Sen, 2000).

H4: There is an effect of Economic Growth on the Number of JKM Program Claims

The test results show a P_{value} of 0.0337 < 0.05 (alpha 5%), so it is decided that H4 is accepted. It is statistically concluded at a 95% confidence level that there is a positive effect of economic

growth on the number of JKM program claims. The positive effect of economic growth on the number of JKM claims is in line with the theory of insurance demand in the economic expansion phase (Arrow, 1971), which states that increased economic activity increases risk exposure and work interactions.

H5: There is an effect of the Human Development Index on the Number of JKM Program Claims

The test results show a P-value of 0.0000 < 0.01 (alpha 1%), so it is decided that H5 is accepted. It is statistically concluded at a 99% confidence level that there is a positive effect of the Human Development Index on the number of JKM program claims. The positive effect of the IPM on the number of JKM claims is consistent with the capability approach (Sen, 1999), which emphasizes that improvements in the quality of education, health, and income increase individuals' ability to access public services.

H6: There is an effect of the number of JKM program participants on the number of JKM program claims

The test results show a P-value of 0.0709 < 0.10 (alpha 10%), so H6 is accepted. It is statistically concluded at a 90% confidence level that there is a negative effect of the number of JKM program participants on the number of JKM program claims. The negative effect of the number of participants on JKM claims can be explained by the law of large numbers in insurance theory, where an increase in the number of participants expands the risk base and reduces the average claim (Rejda & McNamara, 2017).

H7: There is an effect of the number of JKM Program contributions on the number of JKM Program claims

The test results show a P-value of 0.3092 > 0.10 (alpha 10%), so H7 is rejected. It is statistically concluded that there is no effect of the JKM Program Contribution Amount on the Number of JKM Program Claims. Contributions serve to maintain fiscal sustainability and fund balance, not as a direct determinant of claims (Barr, 2012).

The results of this study reinforce the risk-based social protection theory framework, which views social security claims not merely as a financial consequence, but as a functional indicator of the effectiveness of risk-based social protection. From this perspective, the realization of Death Benefit (JKM) claims reflects the system's ability to respond to identified social risks, particularly the risk of death of breadwinners. The finding that structural and institutional variables are more dominant than purely demographic factors shows that the success of social protection is largely determined by the system's capacity to manage risk, not just by the size of the working population exposed to that risk.

The insignificant effect of the working population on the realization of JKM claims has important theoretical implications for social insurance theory. These results confirm that expanding the labor force does not automatically increase the utilization of social security

benefits if it is not accompanied by active participation and compliance with contributions. Within the framework of social insurance theory, claims can only occur in populations that are integrated into risk pooling mechanisms. Thus, these findings reinforce the argument that the size of the working population is a necessary condition, but not a sufficient condition, for the effectiveness of death benefit programs. This confirms that claims are made only by individuals who are enrolled in the social security system.

The significant influence of formal workers on the number of JKM claims supports the theory of labor market segmentation, particularly the distinction between the primary (formal) and secondary (informal) sectors. Formal workers who are under contractual and labor regulation regimes have higher active participation rates and better administrative access to the social security system. Therefore, the increase in claims in the formal sector cannot be interpreted as an increase in mortality risk, but rather as an increase in the system's ability to effectively reach and serve participants.

Conversely, the insignificant influence of informal workers on JKM claims reinforces the perspective of institutional exclusion in the social protection literature. Although informal workers face higher levels of vulnerability, limited access to formal systems, low contribution continuity, and administrative barriers prevent these risks from being fully converted into claims. In this context, the low number of claims from the informal sector reflects a systemic failure to bridge vulnerable groups with formal social protection instruments. Thus, the low number of claims in the informal sector reflects undercoverage rather than a low risk.

The finding that economic growth has a positive effect on the realization of JKM claims makes an important contribution to the theory of economic growth and the welfare state. Economic growth increases the fiscal capacity of the state, the stability of household income, and compliance with social security contributions. The increase in claims in this context should be understood as a reflection of the community's increasing ability to exercise its social rights, not merely as a fiscal burden.

The positive influence of the Human Development Index (IPM) on JKM claims reinforces the capability approach developed by Amartya Sen. A higher IPM reflects improvements in literacy, health, and administrative capacity of the community, which ultimately increases the probability of claims realization. This finding confirms that social security claims can be understood as an outcome of improved human capabilities and institutional quality. This is consistent with the capabilities approach, under which individuals with greater capacity tend to be able to access their social rights.

From an institutional governance perspective, the significant influence of the number of participants on JKM claims confirms the importance of institutional design in social insurance systems. Active participation is the main link connecting individual risk with collective protection mechanisms. These results support a paradigm shift in policy from a quantitative approach based on membership expansion to a qualitative approach that emphasizes continuity of contributions,

compliance, and ease of access to claims. This can be explained by the principle of risk diversification in insurance, whereby an increase in the participant base can lower the relative claims ratio.

Regression results indicate that provinces with high levels of formalization and IPM tend to have more active and well-managed claims systems, even if they do not always have the highest claim values. Overall, these findings expand the literature by demonstrating that claim realization is a key indicator of the effectiveness of social protection, which is determined not only by coverage but also by the quality of system integration.

4. Conclusions and Recommendations

Based on the results of statistical tests and empirical analysis, this study concludes that the realization of JKM claims is more influenced by the quality of the labor market structure, economic conditions, and human capacity than by the size of the working population. The variables of economic growth and the Human Development Index (HDI) were found to increase claim realization by improving access and enhancing community capabilities. Meanwhile, the variables of the percentage of formal workers and the number of participants show a negative relationship, reflecting risk management dynamics as well as the level of integration within the social security system. These findings confirm that claim realization cannot be understood solely as a financial consequence, but rather as an indicator of the performance and effectiveness of a risk-based social protection system.

This study is limited to provincial aggregate data and does not directly include institutional variables, such as service quality or governance. Based on the findings and conclusions of this study, several policy recommendations can be formulated as follows.

1. Strengthening policies on labor formalization should be prioritized as a key instrument in mitigating social risks. The government needs to make labor formalization an integral part of social protection strategies by simplifying regulations, providing incentives to businesses, and integrating labor policies with social security and occupational safety programs.
2. Improving the quality of social security coverage and literacy, particularly for informal workers, is of utmost importance. This can be achieved through enhanced social security education, improvements to registration mechanisms, and the development of more adaptive and flexible enrollment schemes to better accommodate the characteristics of informal workers.
3. the expansion of JKM coverage should be directed as a risk stabilization strategy within the social protection system. This requires support through institutional capacity building at BPJS Ketenagakerjaan, as well as the alignment of contribution policies within a framework of long-term fiscal sustainability.

For future research, it is recommended to use microdata to analyze claims behavior in greater depth, as well as to incorporate institutional and governance variables. Additionally, comparative studies across programs and countries are needed to enrich the perspective and validate the findings.

Overall, this study makes an important contribution to expanding the understanding of the effectiveness of social protection in Indonesia by positioning claim realization as a key indicator in the evaluation of labor and social security policies.

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