

Bpjs Employment in a National Crisis: A Comparative Study of Social Protection for Formal and Informal Workers

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Abstract

This study analyzes the disparities in social protection between formal and informal workers within the BPJS Employment program in Indonesia, particularly in the context of national crises and the labor market transformation towards the gig economy. The main issues examined include inequalities in access, benefit coverage, and policy implementation effectiveness, which tend to favor the formal sector, leaving informal workers facing challenges such as fluctuating income, low social security literacy, and administrative-digital barriers. The research employs a qualitative approach with a comparative study design, reviewing recent literature and policy documents, and applying thematic analysis to explore policy dynamics, participation patterns, and implementation challenges. Preliminary findings indicate that formal workers receive more comprehensive and stable protection through automatic contribution mechanisms managed by employers, while informal workers experience significant gaps due to less adaptive policy designs, self-contribution schemes, and structural barriers. Policy reforms that are more flexible, inclusive, and responsive to the characteristics of informal workers are needed to expand coverage and strengthen the national labor social protection system.

Keywords: BPJS Employment; Social Protection; Informal Workers; Disparity.

1. Introduction

National crises such as the COVID-19 pandemic and large-scale layoffs have exposed structural weaknesses in Indonesia's labor protection system, particularly in the distribution of social security coverage between formal and informal workers. During periods of economic contraction, declining purchasing power, and business restructuring, workers are frequently pushed into precarious employment arrangements, increasing their vulnerability to income shocks and occupational risks (Tumiwa & Sari, 2022; Cahyadi et al., 2021). In this context, BPJS Ketenagakerjaan (BPJS Employment) functions as a central pillar of Indonesia's national social security system, designed to protect workers against work accidents, death, old age risks, and job loss. However, emerging evidence indicates that the protective function of BPJS Employment is distributed unevenly, with formal workers enjoying relatively stable and comprehensive coverage while informal workers remain largely unprotected (Barrientos, 2019; Mulyani & Hartono, 2020). This disparity becomes more visible during national crises, when social protection mechanisms are expected to act as automatic stabilizers but instead reveal systemic gaps in inclusion.



Recent national data demonstrate a stark imbalance in participation between formal and informal workers. While formal sector participation has expanded steadily due to employer-based contribution mechanisms, informal worker enrollment remains disproportionately low. Studies report that only around 7.6% of informal workers are actively covered by BPJS Ketenagakerjaan, with participation concentrated among middle- to upper-income groups (Septiani et al., 2025). Additional national figures show approximately 20.8 million formal participants compared to only 3.5 million informal participants in 2021, with merely 6.35 million Non-Wage Recipients (BPU) registered among the total informal workforce (Rifai et al., 2025; Septiani et al., 2025). This imbalance indicates that the majority of informal workers remain outside the national employment protection framework. In coastal and urban areas such as Medan, many fishermen, daily laborers, and small traders are not registered as participants, thereby facing high risks of poverty in cases of occupational accidents or sudden job loss (Diana & Syarvina, 2022; Fahlovie et al., 2025; Wati et al., 2024). These patterns illustrate a structural segmentation of social protection aligned with employment status.

The rise of the gig economy further complicates this landscape. Digital platform workers including online motorcycle taxi drivers, couriers, and freelancers operate in employment arrangements that blur the boundaries between formal and informal labor. Although their economic contribution is significant, their legal status often places them in a regulatory gray zone, limiting access to employment-based protections (Prabowo & Lestari, 2023; Nugroho & Putri, 2022). While BPJS Ketenagakerjaan formally allows independent enrollment under the BPU scheme, participation depends heavily on individual initiative and contribution compliance, which are constrained by fluctuating incomes and low social security literacy (Wicaksono & Hidayat, 2021; Hartono et al., 2025). Consequently, informal and gig workers experience unstable membership continuity, undermining the protective intent of the program during crisis periods when income security is most needed.

Scholarly discussions have identified several determinants influencing informal worker participation. Knowledge and literacy regarding social security programs emerge as strong predictors of rational participation decisions, as workers with higher awareness are more likely to perceive the benefits of long-term protection (Hartono et al., 2025; Fahlovie et al., 2025). Socioeconomic characteristics such as age, education level, and income stability also significantly influence enrollment decisions, particularly among fishermen and self-employed groups (Fahlovie et al., 2025; Septiani et al., 2025). Furthermore, community-based associations and intermediary agents, such as Perisai (community-based shield agents), have shown potential in increasing recruitment through collective mobilization strategies, although participation growth remains fluctuating and uneven (Rifai et al., 2025; Torm, 2023). These findings suggest that participation disparities are not solely administrative but also deeply embedded in social and economic structures.

From a policy design perspective, BPJS Ketenagakerjaan programs—including Work Accident Insurance (JKK), Death Insurance (JKM), Old Age Security (JHT), Pension Insurance (JP), and Job Loss Insurance (JKP) are formally available to both formal and informal workers. However, the implementation mechanisms differ substantially. Formal workers benefit from automatic payroll deductions managed by employers, ensuring consistent contribution payments and stable coverage (Jatmiko, 2022; Sari, 2022). In contrast, informal workers must independently register and pay contributions periodically, exposing them to discontinuity when income declines (Wicaksono & Hidayat, 2021; Tambunan et al., 2025). During the pandemic, the introduction of Job Loss Insurance (JKP) aimed to cushion mass

layoffs, yet evaluations indicate that communication strategies and outreach were insufficient, particularly in regions with high informal labor concentrations (Alfiansa et al., 2025; Putri & Gunadi, 2025). Digital innovations such as the JMO application have expanded service access, but digital literacy and technological barriers remain significant obstacles for many informal workers (Rosyada & Yusuf, 2021; Febriyanti et al., 2025).

Legal and normative frameworks formally mandate universal worker registration under BPJS Ketenagakerjaan, including daily workers, contract employees, and migrant workers. Non-compliance by employers may result in administrative, civil, or criminal sanctions (Prajanti et al., 2024; Apriliani & Alfiany, 2025). Nevertheless, enforcement remains uneven, and gig workers or freelancers often fall into ambiguous regulatory categories, leaving them reliant on voluntary BPU schemes rather than employer-based protection (Manihuruk et al., 2025; Harmono et al., 2025). This legal ambiguity contributes to systemic inequity, as the social insurance model remains structurally oriented toward formal employment relationships, while labor market transformations continue to expand non-standard work arrangements.

Although prior research has explored aspects of informal sector vulnerability, gig economy risks, and social protection expansion challenges, several gaps remain. First, much of the existing literature examines participation determinants or program effectiveness separately, without systematically comparing formal and informal worker protection within a unified analytical framework (Mulyani & Hartono, 2020; Wicaksono & Hidayat, 2021). Second, studies often focus on participation rates or administrative barriers but pay limited attention to crisis responsiveness and the comparative adequacy of benefits during national emergencies (Cahyadi et al., 2021; Sari, 2022). Third, there remains insufficient integration between legal analysis, socioeconomic determinants, and policy implementation dynamics in explaining why disparities persist despite universal regulatory mandates. These gaps limit comprehensive understanding of how BPJS Ketenagakerjaan functions as a crisis-responsive social protection instrument across heterogeneous labor categories.

The novelty of this study lies in its comparative and crisis-oriented analytical perspective. Unlike prior research that isolates informal sector barriers or program design challenges, this study integrates policy design, implementation dynamics, socioeconomic determinants, and legal enforcement within a comparative framework that contrasts formal and informal worker experiences. By situating the analysis explicitly within the context of national crises and labor market transformation toward gig-based employment, this research offers a more holistic understanding of structural disparities in employment-based social protection. Furthermore, it contributes to policy discourse by identifying how institutional mechanisms, digitalization strategies, and community-based outreach intersect with structural labor segmentation.

Accordingly, the objective of this study is to analyze comparatively how BPJS Ketenagakerjaan provides social protection to formal and informal workers during national crises, and to identify structural, socioeconomic, and institutional factors that produce disparities in access and benefit adequacy. By examining these dynamics, this research aims to generate evidence-based recommendations for more inclusive and adaptive social protection reforms capable of addressing Indonesia's evolving labor market structure and strengthening resilience against future national crises.

2. Method, Data, and Analysis

This study employs a qualitative approach with a comparative policy analysis design to examine disparities in social protection between formal and informal workers within the BPJS Ketenagakerjaan system during national crises. The qualitative design was selected because

the research problem is structural and institutional in nature, involving policy design, implementation mechanisms, legal frameworks, and socioeconomic determinants that cannot be adequately captured through quantitative measurement alone. The study relies on secondary data sources, including recent academic publications (2020–2025), national statistics, policy regulations, and institutional reports related to BPJS Ketenagakerjaan participation and crisis response.

Data collection was conducted through systematic literature review and document analysis. Academic sources were selected based on relevance to four analytical dimensions: (1) participation disparity between formal and informal workers, (2) determinants of informal worker enrollment, (3) crisis-response mechanisms such as Job Loss Insurance (JKP), and (4) legal and regulatory enforcement issues. Key national findings indicating that only 7.6% of informal workers are covered by BPJS Ketenagakerjaan, compared to 20.8 million formal participants versus 3.5 million informal participants in 2021, serve as empirical anchors for the analysis (Septiani et al., 2025; Rifai et al., 2025). Additional sectoral studies on fishermen, migrant workers, gig workers, and urban BPU participants were incorporated to contextualize participation patterns (Fahlovie et al., 2025; Wati et al., 2024; Prajanti et al., 2024; Hartono et al., 2025).

The analysis applies thematic analysis techniques, consisting of data coding, categorization, and pattern identification across policy design, participation trends, crisis responsiveness, and legal enforcement. Comparative analysis was conducted by contrasting four core indicators: (1) coverage rates, (2) adequacy and continuity of benefits, (3) administrative and digital accessibility, and (4) structural vulnerability during crises. This framework allows systematic comparison of how BPJS Ketenagakerjaan functions as a crisis-responsive social protection instrument for different labor categories. The results are interpreted within the broader context of Indonesia’s evolving labor market structure and the expansion of informal and gig-based employment.

Research Framework for Comparative Analysis of BPJS Employment

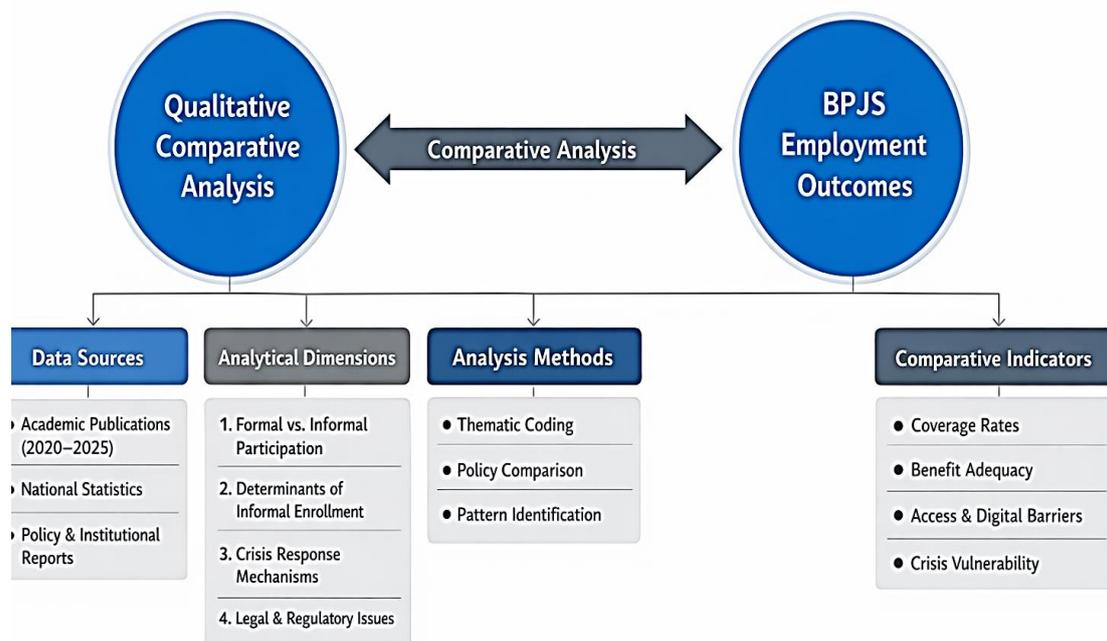


Figure 1. Diagram Conceptual Research

3. Results

Article 1 paragraph 3 of Law No. 4/2004 explains that social security is protection against socioeconomic risks experienced by participants or their families, the funds for which are collected on a mandatory basis and are called social insurance. These funds are managed for program development and for the maximum benefit of participants. This principle is in accordance with the concept of national social security for employment. BPJS Employment can also be utilized by informal sector workers who are not wage earners as a form of protection from the government to maintain their livelihoods when facing the risk of work accidents or disability.

Risks are always present in work activities, making social security essential. JKK benefits include compensation for heirs in the event of death, as well as educational scholarships for children, limited to a maximum of two children. Unlike JKK and JKM, JHT is a voluntary employment insurance program for workers, where benefits depend on the total contributions paid. The amount of JHT contributions for non-wage earners is also regulated by the government.

Informal workers are categorized as non-wage participants because they earn their own income and are not formally connected to another party in an employment relationship. BPJS Employment registration for informal workers requires several requirements, such as having an ID card, being under 65 years of age, and having a job. Once registered, participants are required to pay regular contributions (monthly, or every 2, 3, or 6 months). A participant number will be issued no later than one year after registration and contribution payment.

In addition to these requirements, if registration is made through a specific group or organization, a power of attorney representing the rights and obligations agreement is required. Contribution payments must be made on time, typically by the 15th of each month, to maintain insurance benefits. Compensation can only be disbursed after outstanding contributions are paid in full, as stipulated in Article 92 of Ministerial Regulation No. 5/2021.

BPJS Employment registration for informal workers can be done online through the BPJS website with the following steps: registration, selecting the BPU (non-wage recipient) category, entering an email address, activation, filling in personal details, making a payment, and receiving the participant card within seven days of payment. Manual registration through a BPJS branch office involves filling out a form, obtaining a queue number, being verified by an officer, receiving contribution information, making a payment, and receiving the participant card within seven days of payment.

Legally, BPJS Ketenagakerjaan for formal workers is regulated by Law No. 24/2011 and Law No. 13/2003, as well as Government Regulation No. 84/2014, which stipulates the obligation for employers to register in stages. In 2025, Minister of Manpower Regulation No. 1/2025 revised the previous regulation by requiring non-ASN employees to register for JKK and JKM, simplifying work accident reporting, and expanding JKM benefits for

workers with multiple jobs. The national target by 2025 is to achieve 50% coverage of registered formal and informal workers, up from the current 34%, through education and strict supervision. In practice, employers register workers online and pay collective monthly contributions. Typically, JKK and JKM contributions are covered by the company, while JHT and JP are shared between workers and employers. Local governments act as regulators, BPJS (Social Security Agency) implements the program, and unions provide input, while the Ministry of Manpower oversees compliance.

The main challenges are a lack of company compliance and low literacy rates, which have led to suboptimal worker participation, particularly in certain regions. Improvement strategies include providing tax incentives, developing a digital claims application, cross-agency collaboration, and a data-driven, participatory approach to broaden inclusion. Evaluations indicate that the program's effectiveness is moderate, with a score of 2.8 out of 5 for access and benefits.



The Semarang case shows implementation is more prevalent in the formal sector with a strong bureaucracy, while in Sidoarjo, despite good program communication, the company's role remains minimal. Studies from the DJSN (2022) and the 2025 research emphasize the need to strengthen the National Social Security System (SJSN) through Contribution Assistance Recipients (PBI) to achieve universal coverage, with BPJS providing clearer financial protection for participants.

How BPJS Ketenagakerjaan provides social protection to formal and informal workers, emphasizing the dynamics of policy design, implementation on the ground, and structural barriers that lead to unequal protection between the two groups. Using a comparative approach, this analysis demonstrates that differences in protection stem not only from administrative mechanisms but also from social, economic, and institutional factors deeply rooted in Indonesia's labor structure.

1. BPJS Employment Policy Design for Formal and Informal Workers

The BPJS Ketenagakerjaan program was initially designed based on the formal employment model. In this model, industrial relations are clear, wages are more stable, and employers are responsible for deducting and depositing contributions. This design benefits formal workers because the entire administrative process, from registration to payment of contributions, is managed by the company. As a result, formal workers have easier and more consistent access to BPJS Ketenagakerjaan programs, such as Work Accident Insurance (JKK), Death Insurance (JKM), Old Age Security (JHT), and Pension Insurance (JP). This stability of participation is closely related to income security and an organized work structure. Academic literature confirms that formal workers are relatively better protected because the BPJS Ketenagakerjaan design was born from the employer-oriented, employment-based social security paradigm (Jatmiko, 2022).

In contrast, informal workers don't have an employer responsible for their membership administration. They must register independently and pay contributions based on their fluctuating income. Income instability is a major factor in the low sustainability of informal workers' membership. They generally only participate in basic programs, especially JKK and JKM, due to financial limitations and low social security literacy (Wicaksono & Hidayat, 2021).

2. Comparison of Social Protection Implementation

In addition to differing policy designs, the implementation of social protection also reveals stark disparities between formal and informal workers. The following table presents a comparison of implementation based on participation, benefit coverage, occupational risks, and access to information.

Table 1. Comparison of the Implementation of Social Protection for Formal and Informal Workers

Aspect	Formal Workers	Worker Informal / Gig Economy
Contribution mechanism	Deposited automatic by the company	Paid independent: prone to stop
Program coverage	Complete (JKK, JKM, JHT, JP)	Limited (generally only JKK & JKM)
Participation stability	Tall	Low: inconsistent
Income stability	Relatively stable	Fluctuating: depending on request



Risk of work accidents	Lower: there is a company SOP	More supervision	tall: minimum
Access to information	Supported HR and management	Depends on individual literacy	
Work relationship	Clear (formal)	No clear/not permanent (gig/informal)	

Studies by Prabowo & Lestari (2023) and Nugroho & Putri (2022) emphasize that digital platform workers are in a “grey area” of employment law, thus not receiving equal protection to formal workers even though their workload and risks are often higher.

3. Implementation Barriers in the Field

In its implementation, social protection for informal workers faces various obstacles, including technical, structural, and cultural ones. Independent registration and contribution payment mechanisms are often not consistently met by informal workers, particularly during periods of low income.

Low social security literacy results in most informal workers not understanding the benefits they receive or distrusting the claims process.

Furthermore, administrative barriers, such as the need for proof of employment documents, pose a significant obstacle. Informal workers lack employment certificates, contracts, or other supporting documents required for claims procedures. Furthermore, digital access through applications like JMO is also not fully accessible to informal workers who face limitations in device, network, or technological knowledge. Ultimately, these barriers demonstrate that the BPJS Ketenagakerjaan implementation approach is still not fully responsive to the characteristics of the informal sector.

These differences in implementation are not only caused by technical aspects, but also by structural and social factors. Informal workers, for example, are highly vulnerable to termination of membership due to unstable income, making them less likely to receive benefits when needed. Formal workers, on the other hand, receive more consistent benefits because their contributions are paid regularly by their employers. Furthermore, the national crisis exacerbated this gap. Formal workers were relatively able to maintain access to BPJS Ketenagakerjaan services, while informal workers experienced increasing difficulties accessing benefits due to digital limitations, a lack of institutional support, and bureaucratic processes that still relied on proof of employment. Thus, the implementation comparison confirms that the systemic vulnerability of informal workers arises not only from economic instability but also from the design of social security policies that were initially unprepared for the highly heterogeneous informal sector. This analysis forms the basis for policy recommendations aimed at structural reforms to make BPJS Ketenagakerjaan more relevant to the changing modern labor market.

4. Discussion

Analysis Framework and Key Indicators

The analytical framework in this study was designed to assess the differences in the effectiveness of BPJS Ketenagakerjaan implementation between the formal and informal sectors based on indicators reflecting access, service quality, membership stability, and

workers' experiences during the crisis. These indicators were developed with reference to research by Prabowo & Lestari (2023), Nugroho & Putri (2022), and international literature on informal sector social protection, allowing for a comprehensive analysis that takes into account the Indonesian employment context.

1. Coverage

This indicator measures the percentage of workers registered as BPJS Ketenagakerjaan participants. Formal workers tend to have high participation rates because registration is handled by their employers, while informal workers show low participation rates due to the self-registration mechanism, which requires personal initiative and financial capacity.

2. Adequacy and Relevance of Benefits

The analysis considers the suitability of the JKK, JKM, JHT, and JP social security programs to workers' needs during the crisis. Formal workers typically receive full benefits, while informal workers often only participate in basic programs due to income limitations.

3. Speed and Ease of Claim Process

Claims resolution time and the number of administrative requirements are important indicators for assessing service quality. Formal workers often experience faster processing due to more complete employment documentation, while informal workers often face verification challenges due to a lack of proof of employment.

4. Access to Services and Digitalization

This aspect assesses the extent to which workers can access services such as the JMO app, face-to-face support channels, and help centers. Formal workers typically have better support from HR and access to technology, while informal workers face digital literacy barriers and limited devices.

5. Barriers to Registration and Contribution Compliance

This indicator assesses factors that hinder informal workers from registering and maintaining membership, including contribution costs, time constraints, service location, and income uncertainty. Using these indicators, a comprehensive implementation comparison can be conducted to demonstrate the pattern of social protection gaps between the formal and informal sectors. This analytical framework also facilitates the formulation of more targeted policy recommendations to strengthen the BPJS Ketenagakerjaan system to make it more adaptive to national crises and changes in the labor market structure.

The findings confirm that BPJS Ketenagakerjaan plays a critical role as a national social protection anchor during crises; however, its protective capacity is distributed unevenly between formal and informal workers. National participation data clearly illustrate structural disparity: while formal sector enrollment reaches tens of millions, informal worker coverage remains below 10%, with only approximately 7.6% actively registered and participation concentrated among middle- to upper-income groups (Septiani et al., 2025; Rifai et al., 2025). This indicates that social insurance mechanisms function more effectively in stable employment structures where employer-based contributions are institutionalized.

The comparative analysis reveals that the participation gap is not merely administrative but deeply structural. In coastal and urban informal economies, including fishermen, daily laborers, and small traders, participation remains low despite high occupational risks (Diana & Syarvina, 2022; Fahlovie et al., 2025; Wati et al., 2024). These groups face income volatility and irregular contribution capacity, which directly affects membership continuity. Research on fisheries communities demonstrates that age, education level, and income stability significantly influence enrollment decisions, confirming that socioeconomic determinants shape access to

social protection (Fahlovie et al., 2025). Thus, informal workers' vulnerability during crises is compounded by both economic instability and systemic enrollment barriers.

Knowledge and social security literacy emerge as key explanatory variables. Empirical evidence shows that awareness of BPJS programs strongly predicts rational participation among Non-Wage Recipients (BPU), and positive attitudes toward social insurance increase enrollment likelihood (Hartono et al., 2025; Fahlovie et al., 2025). However, literacy levels remain uneven, particularly in regions with high informal labor concentration. This suggests that disparities are partly informational and cultural, not solely financial.

Community-based recruitment mechanisms, such as Perisai (shield agents) and informal worker associations, have demonstrated potential in improving participation rates (Rifai et al., 2025; Torm, 2023). Nevertheless, growth remains fluctuating and regionally uneven, indicating that institutional outreach strategies are not yet systematically integrated into crisis-response frameworks. Without stable intermediary networks, informal workers remain disconnected from formal social security structures.

From a crisis-response perspective, programs such as JKK, JKM, JHT, JP, and particularly Job Loss Insurance (JKP) were designed to cushion employment shocks (Tambunan et al., 2025; Putri & Gunadi, 2025). However, evaluations during pandemic-related mass layoffs reveal that communication strategies and outreach efforts were insufficient, particularly in areas with high informal labor composition (Alfiansa et al., 2025). Formal workers benefited from employer-facilitated claims and institutional HR support, while informal workers faced administrative complexity and limited access to information.

Digitalization initiatives, including the JMO application, represent important institutional innovation. However, digital access barriers—such as device limitations, unstable internet connectivity, and low digital literacy remain significant obstacles for informal workers (Febriyanti et al., 2025; Wati et al., 2024). Thus, while digital transformation enhances efficiency, it may inadvertently reproduce exclusion if not accompanied by inclusive access strategies.

Legal enforcement further explains structural inequality. Although regulations mandate universal registration, including migrant workers and contract labor, compliance remains uneven (Prajanti et al., 2024; Apriliani & Alfiany, 2025). Gig workers and freelancers continue to occupy regulatory gray areas, often shifted into voluntary BPU schemes without employer responsibility (Manihuruk et al., 2025; Harmono et al., 2025; Indayatun, 2025). This reflects a mismatch between traditional employment-based insurance models and evolving labor market realities.

Overall, the discussion demonstrates that disparities in BPJS Ketenagakerjaan protection stem from three interconnected dimensions: (1) institutional design favoring employer-based contributions, (2) socioeconomic instability among informal workers, and (3) regulatory ambiguity in non-standard employment relationships. National crises amplify these structural weaknesses, as protection mechanisms function optimally for formal workers but remain fragile for informal and gig workers. Therefore, strengthening crisis resilience requires adaptive reforms, including flexible contribution schemes, literacy enhancement programs, community-based recruitment expansion, and clearer legal recognition of gig employment categories.

5. Conclusion, Limitations, and Suggestions

Conclusion

This study concludes that there is a significant disparity in social protection between formal and informal workers under the BPJS Ketenagakerjaan program. This disparity arises from differences in contribution mechanisms, income stability, access to information, and institutional design, which is more oriented toward formal employment. Informal workers face challenges such as fluctuating incomes, low social security literacy, and administrative and digital barriers that limit their access to social security. To address changes in the labor market structure and the rise of the gig economy, BPJS Ketenagakerjaan (the Employment Social Security Agency) needs to adopt more adaptive and inclusive policy reforms. These reforms include contribution flexibility, simplified administrative procedures, increased inclusive digital access, and stronger collaboration with informal communities to expand coverage and strengthen social protection for workers in Indonesia.

Limitation and suggestions

This study has several limitations that should be acknowledged. First, the research relies primarily on secondary data and literature-based comparative analysis, which limits the ability to capture real-time empirical experiences of formal and informal workers across different regions in Indonesia. Second, the qualitative design does not provide statistical generalization regarding the magnitude of disparities, particularly in measuring benefit adequacy and crisis responsiveness quantitatively. Third, the dynamic regulatory changes and digital transformation processes within BPJS Ketenagakerjaan may evolve rapidly, potentially affecting the relevance of some findings over time. Future research is therefore recommended to employ mixed-method or quantitative approaches, including large-scale surveys or panel data analysis, to measure participation behavior, benefit adequacy, and crisis impact more precisely. Additionally, region-specific case studies and policy experiments such as flexible contribution schemes, literacy interventions, and community-based recruitment models should be explored to generate more evidence-based and context-sensitive policy recommendations for strengthening inclusive social protection in Indonesia.

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