

STRATEGY FOR INTEGRATING SOCIAL SECURITY PROTECTION INTO SPORTS EVENTS

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Abstract

Background: The participation of informal workers (Bukan Penerima Upah / BPU) in BPJS Ketenagakerjaan remains low despite the rapid growth of sports events in Indonesia. Running events involve various informal actors who face occupational risks, yet most events still rely on liability waivers rather than formal social security protection. Although national regulations mandate protection for sports actors, implementation remains fragmented and non-integrated.

Objective: This study aims to analyze the perceptions and preferences of sports event participants and organizers toward social security protection and formulate an integration strategy to increase informal workers' participation in BPJS Ketenagakerjaan Samarinda.

Method: This study employed a mixed-method approach using Structural Equation Modeling–Partial Least Squares (SEM-PLS) and Soft System Methodology (SSM). SEM-PLS was used to analyze the perceptions and preferences of runners and sports event organizers toward social security protection, while SSM was applied to formulate an integration strategy for BPJS Ketenagakerjaan protection within sports events.

Conclusion: The SEM-PLS results indicate that perceived behavioral control, particularly ease of registration and process simplicity, is the most influential factor affecting runners' intention to participate, while product attributes are the dominant factor for event organizers. The SSM analysis further reveals that successful integration requires regulatory support, digital registration integration, bundled participation mechanisms, cross-sector collaboration, and continuous monitoring. Therefore, a system-based and integrated approach is more effective than conventional voluntary approaches in expanding social security coverage within the sports event ecosystem.

Keywords: BPJS Ketenagakerjaan, Informal Sector (BPU), Social Security, Sport Events, Running

INTRODUCTION

Social security protection is an essential component of sustainable labor welfare and occupational risk management, particularly for informal workers who generally lack access to formal employment protection systems. In Indonesia, BPJS Ketenagakerjaan is mandated to provide employment social security coverage for both formal and informal workers through several protection programs, including work accident insurance and death benefits. However, participation in the informal worker segment (Bukan Penerima Upah/BPU) remains relatively low. In 2024, BPU participation reached only 24.12% of the national target, indicating a substantial gap between policy expectations and actual implementation. One potential sector for expanding social security participation is the sports event ecosystem, particularly running events. Following the COVID-19 pandemic, running activities have grown rapidly in Indonesia due to increasing public awareness of health and fitness. Data from kalenderlari.com indicate that the number of running events in Indonesia increased significantly from 88 events in 2021 to 527 events in 2025. These events involve various informal actors, including runners, race organizers, volunteers, vendors, and community-based workers, all of whom face occupational and physical risks during participation. Despite this rapid growth, social security protection within sports events remains limited. Many organizers still rely on liability waivers that transfer responsibility to participants instead of providing formal protection through BPJS Ketenagakerjaan. Consequently, participants remain vulnerable to injuries, accidents, and fatalities during sporting activities, indicating a substantial protection gap within the sports event ecosystem. From a regulatory perspective, Law No. 11 of 2022

concerning Sports states that sports actors are entitled to social security protection under the national social security system. Similarly, the World Athletics Competition Rules emphasize participant protection, safety assurance, and adequate insurance coverage in sports event management. However, implementation remains fragmented due to weak stakeholder coordination, limited regulatory enforcement, and the lack of integration between event registration systems and social security administration. Previous studies emphasized that sustainable sports event management requires integrated governance, participant protection, stakeholder coordination, and effective safety management systems (Filo et al., 2015; Parent & Smith-Swan, 2013; Sulek, 2023). Recent studies also highlighted that fragmented governance, weak institutional coordination, and limited regulatory integration remain major barriers to implementing effective participant protection systems within sports ecosystems (Lin et al., 2024; Fiege, 2025). These findings indicate that social protection in sports events should be viewed not merely as an administrative requirement, but as an integrated and sustainable governance system.

Previous studies on sports events have mainly focused on economic impacts, tourism development, participant experience, and community engagement, while limited attention has been given to integrating social security protection into sports event ecosystems. Existing studies generally discuss participant safety and governance from operational perspectives, but rarely examine how protection systems can be institutionally embedded into event management processes. Moreover, behavioral intention and governance systems are often analyzed separately, resulting in limited understanding of how participant behavior, organizational decision-making, and institutional governance interact simultaneously in shaping social security participation within sports events. From a behavioral perspective, participation decisions are strongly influenced by perceived benefits, convenience, accessibility, and institutional trust. However, most studies focus primarily on individual acceptance and participation behavior without sufficiently addressing structural and governance barriers that hinder implementation. Conversely, governance studies emphasize institutional coordination and safety regulation but provide limited explanation regarding how protection systems can be operationally integrated into participant registration and event administration processes. As a result, the literature still lacks an integrated framework capable of explaining both behavioral determinants and systemic transformations required to implement social security protection effectively within sports event ecosystems.

Furthermore, important theoretical limitations remain within the existing literature. While the Theory of Planned Behavior (TPB) effectively explains behavioral intention through attitude, subjective norms, and perceived behavioral control, the theory provides limited explanation regarding institutional fragmentation and systemic implementation barriers within complex sports event ecosystems. Conversely, governance and sports management studies focus on institutional coordination and stakeholder management but often overlook behavioral factors influencing participation decisions. Consequently, behavioral and governance approaches tend to develop independently, creating a theoretical divide between individual participation behavior and institutional transformation. Furthermore, previous studies rarely combine behavioral analysis with systems-based strategic approaches to address both individual and institutional dimensions simultaneously. This limitation creates an important research gap, particularly in developing countries where informal workers dominate sports event participation and protection systems remain fragmented. In Indonesia, studies specifically examining the integration of BPJS Ketenagakerjaan protection into sports events remain very limited despite the rapid growth of running events and increasing concerns regarding participant safety and social protection.

To address these gaps, this study integrates SEM-PLS and SSM. The approach was designed to examine both behavioral determinants and systemic integration strategies within sports event ecosystems. Unlike previous studies that focus solely on behavioral intention or governance structures independently, this study combines behavioral analysis and systems-based strategic development to explain not only why individuals and event organizers participate in social security protection programs, but also how institutional systems, regulatory mechanisms, and stakeholder collaboration should be redesigned to support sustainable participation. Therefore, this study contributes to the literature by providing an integrated behavioral-systemic framework for social security protection within sports events. Existing studies have primarily examined participant behavior, event governance, and safety management as separate research domains. Consequently, limited understanding exists regarding how behavioral factors and institutional mechanisms interact in shaping social security participation within sports events. To address this gap, this study integrates SEM-PLS and Soft Systems Methodology (SSM) to analyze both participation determinants and systemic implementation challenges. By connecting individual behavioral intentions with institutional transformation processes, this study proposes an integrated framework for embedding BPJS Ketenagakerjaan protection within sports event ecosystems and expanding social security coverage among informal workers. This study contributes both theoretically and practically. Theoretically, it extends the application of the Theory of Planned Behavior within the context of social security participation in sports events by integrating behavioral intention analysis with systems-based strategic development. Practically, it provides strategic recommendations for BPJS Ketenagakerjaan, local

governments, and sports event organizers in developing a more integrated, sustainable, and operational social security protection model for informal workers within sports event ecosystems. Therefore, this study addresses the following research questions: (1) What factors influence runners' and event organizers' intention to participate in BPJS Ketenagakerjaan protection within sports events? (2) How can social security protection be integrated into sports event ecosystems to increase informal workers' participation? and (3) What strategic integration model can be developed to create a more practical, integrated, and sustainable protection system for sports events?

METHOD

This study employed a mixed-method approach combining Structural Equation Modeling–Partial Least Squares (SEM-PLS) and Soft System Methodology (SSM) to analyze behavioral factors and formulate an integration strategy for social security protection in sports events. The study was conducted in Samarinda, East Kalimantan, Indonesia, focusing on the running event ecosystem, including road running and trail running events. The mixed-method approach was selected to capture both the behavioral determinants influencing participation decisions and the systemic integration challenges within sports event ecosystems, thereby providing both empirical and strategic insights for expanding informal workers' participation in BPJS Ketenagakerjaan. The quantitative phase used SEM-PLS to examine the perceptions and preferences of runners and sports event organizers toward BPJS Ketenagakerjaan participation. The study adopted the Theory of Planned Behavior (TPB) framework, which included attitude, subjective norms, and perceived behavioral control, combined with product attributes and marketing attributes to analyze their influence on registration intention and participation decisions. Data were collected using structured questionnaires with a five-point Likert scale. Data collection was conducted between December 2025 and January 2026 during running event activities in Samarinda.

The sampling technique used was purposive sampling. Respondents consisted of two groups: runners and sports event organizers. Organizer respondents were selected from four major running communities in Samarinda, resulting in 40 organizer respondents. The runner respondents consisted of 150 participants involved in running events in Samarinda. The sample size met the minimum requirement for SEM-PLS analysis based on the sample adequacy criteria recommended by Cohen (1992) for structural equation modeling. The SEM-PLS analysis included measurement and structural model evaluations. Measurement model testing assessed validity and reliability using loading factors, Average Variance Extracted (AVE), cross-loading, Cronbach's alpha, and composite reliability. The structural model was evaluated using R-square and path coefficient analysis to examine the relationships among variables and determine the strength of the proposed model. SEM-PLS analysis was conducted using SmartPLS 4.

The qualitative phase employed Soft System Methodology (SSM) to formulate an operational integration strategy for BPJS Ketenagakerjaan protection within sports events. SSM was applied through the standard seven-stage process, including problem situation analysis, rich picture development, root definition formulation, CATWOE analysis, conceptual model development, comparison between conceptual models and real-world conditions, and the identification of feasible and desirable changes. Qualitative data were collected through interviews, observations, and stakeholder discussions involving BPJS Ketenagakerjaan, event organizers, local government agencies, sports organizations, and related institutions. The integration of SEM-PLS and SSM enabled this study to not only identify the behavioral determinants influencing participation decisions but also develop a practical and system-based strategy for integrating social security protection into sports event management. This combined approach provided both empirical and strategic insights for expanding informal worker participation in BPJS Ketenagakerjaan through sports events.

RESULT AND DISCUSSION

Respondent Characteristics

This study involved two groups of respondents: runners and sports event organizers in Samarinda. The organizer respondents consisted of committee members from four major running communities and event organizers, namely SMDRun, Bots Runner Indonesia, Samarinda Hash House Harriers (SH3), and Teman Lari Soremu. The runner respondents represented participants involved in various running events in Samarinda, including road running and trail running events. The respondent profile reflects the dominance of productive-age and community-based participation within Samarinda's sports event ecosystem, indicating the strong role of informal and volunteer-driven actors. The respondent characteristics indicate that the sports event ecosystem in Samarinda is primarily composed of productive-age individuals who actively participate in community-based sporting activities. The predominance of private-sector employees among runners suggests that participants generally possess independent decision-making authority and may prioritize practical considerations when evaluating social security participation. Meanwhile, the substantial involvement of volunteers within event organizing committees reflects the community-driven nature of

sports event management, where operational activities rely heavily on informal human resources. These characteristics provide important context for understanding the behavioral patterns identified in the SEM-PLS analysis, particularly the strong emphasis on convenience among runners and the value-oriented decision-making observed among event organizers.

Runner SEM-PLS Model

The R-square value of 0.608 indicates that the model explains a substantial proportion of the variation in runners’ participation intentions. Likewise, the R-square value of 0.703 demonstrates strong explanatory power in predicting participation decisions. These results suggest that the combination of TPB variables, product attributes, and marketing attributes provides a robust framework for explaining BPJS Ketenagakerjaan participation behavior within the context of sports events. Consequently, the model can be considered adequate for examining the factors that influence both intention formation and participation decisions among runners.

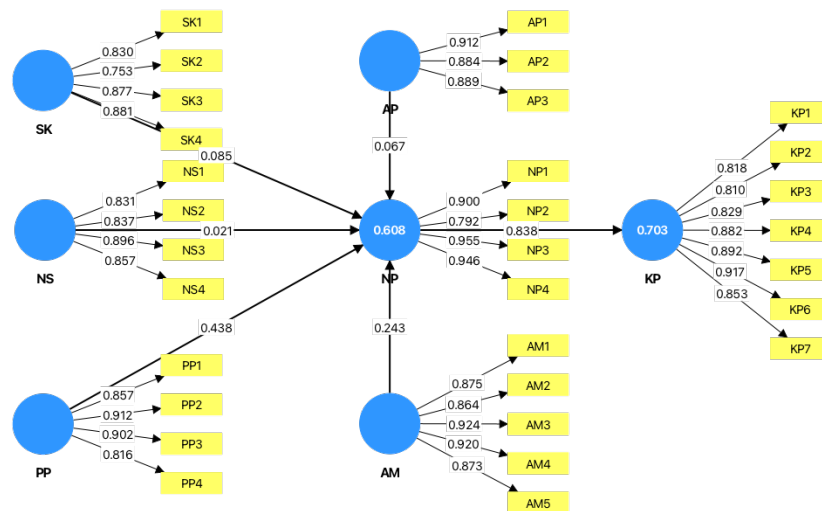


Figure 1. Runner SEM-PLS Structural Model

The path coefficient analysis revealed that perceived behavioral control was the strongest determinant of runners’ intention to participate in BPJS Ketenagakerjaan protection during sports events ($\beta = 0.438$), followed by marketing attributes ($\beta = 0.243$), attitude ($\beta = 0.085$), product attributes ($\beta = 0.067$), and subjective norms ($\beta = 0.021$). These findings indicate that participation intentions are influenced primarily by practical and operational considerations rather than by social influence or normative expectations. The results indicate that perceived behavioral control was the most influential determinant of runners’ intention to participate in BPJS Ketenagakerjaan protection during sports events. This finding suggests that participation decisions are driven primarily by practical considerations related to ease of access, affordability, and administrative simplicity. A streamlined registration process and user-friendly enrollment mechanism appear to reduce perceived barriers and encourage participation. Consistent with the Theory of Planned Behavior, individuals are more likely to engage in a behavior when they perceive sufficient control over its implementation (Ajzen, 2015).

Similarly, the Technology Acceptance Model emphasizes that perceived ease of use plays a critical role in shaping behavioral adoption (Davis, 1989). More importantly, the substantially stronger influence of perceived behavioral control compared with attitude suggests that practical accessibility may be more important than favorable perceptions when participation is voluntary and requires active enrollment. This finding extends the application of TPB within sports-event-based social protection programs by highlighting the dominant role of implementation convenience in shaping participation intentions. Marketing attributes emerged as the second strongest predictor of participation intention, indicating that communication effectiveness and information accessibility remain important factors in encouraging enrollment. Participants appear to respond more strongly to the way information is communicated than to the intrinsic characteristics of the protection program itself. Effective promotional activities, digital communication channels, and awareness campaigns may therefore enhance participation by improving understanding of program benefits and enrollment procedures. This finding is consistent with sport management literature emphasizing the importance of communication quality and information accessibility in influencing participant engagement and behavioral intentions (Shonk & Chelladurai, 2008). The result further suggests that increasing participation requires not only a valuable protection program but also effective communication strategies

capable of translating program value into participant awareness and action. Although attitude demonstrated a positive relationship with participation intention, its contribution was considerably weaker than that of perceived behavioral control and marketing attributes. This suggests that favorable perceptions toward social security protection do not necessarily translate into enrollment decisions. While runners generally acknowledge the importance of accident and injury protection, positive evaluations alone appear insufficient to motivate participation unless accompanied by convenient and accessible implementation mechanisms. The finding indicates that awareness-building efforts should be complemented by practical interventions that reduce procedural complexity and facilitate participation.

A similar pattern is reflected in the relatively limited influence of product attributes. Although participants recognize the value of the protection benefits provided by BPJS Ketenagakerjaan, these benefits do not appear to be the primary consideration driving participation decisions. Instead, runners place greater emphasis on convenience, accessibility, and administrative simplicity. This finding suggests that participation decisions are shaped less by evaluations of program features and more by the ease with which those benefits can be obtained. Consequently, efforts to increase participation should focus not only on communicating the advantages of the program but also on simplifying the enrollment experience.

In contrast to the expectations of the Theory of Planned Behavior, subjective norms demonstrated only a marginal influence on participation intention. While TPB assumes that perceived social pressure contributes to behavioral intentions, the present findings indicate that participation decisions are largely based on individual evaluations rather than collective expectations. This result may reflect the characteristics of recreational runners, whose decisions tend to be self-directed and influenced by personal preferences rather than peer approval. The finding therefore challenges the relative importance of normative influence within voluntary sports-event contexts and suggests that social pressure becomes less relevant when participation decisions are highly individualized. Similar observations have been reported in studies of recreational sport participation, where behavioral choices are frequently driven by perceived utility and personal value rather than external expectations (Maditinos et al., 2021).

Overall, the findings demonstrate that participation decisions among runners are shaped primarily by convenience, accessibility, and effective communication rather than by social influence. The dominance of perceived behavioral control over attitude and subjective norms suggests that the successful integration of social protection programs within sports events depends more on reducing implementation barriers than on strengthening normative appeals. From a managerial perspective, these results indicate that participation can be increased most effectively through seamless digital registration systems, simplified administrative procedures, and targeted communication initiatives that improve accessibility and participant understanding. Such approaches are likely to generate greater behavioral impact than strategies that rely predominantly on awareness campaigns or social persuasion.

Event Organizer SEM-PLS Model

For event organizers, the structural model also showed strong predictive capability. The R-square value for registration intention reached 0.869, while the participation decision variable reached 0.907.

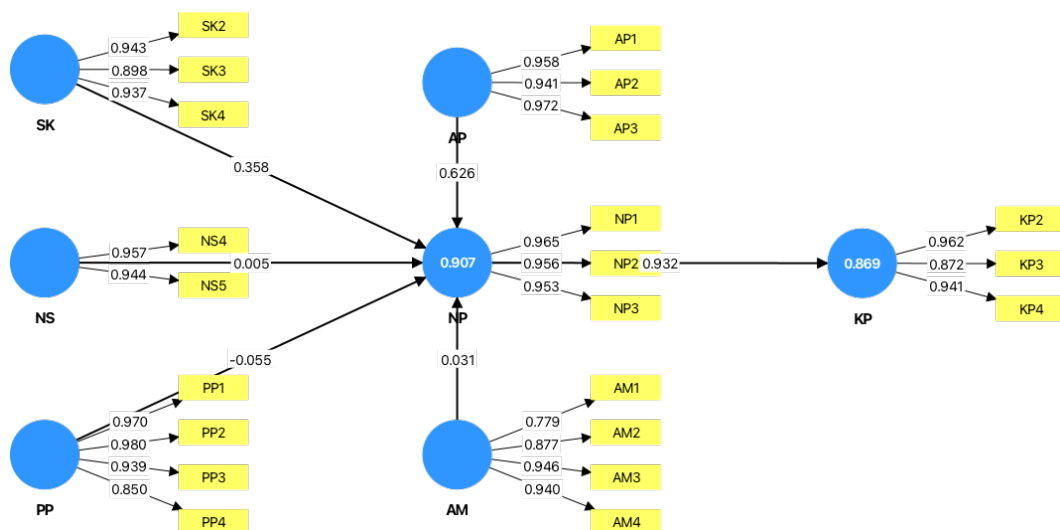


Figure 2. Event Organizer SEM-PLS Structural Model

The results indicate that product attributes were the most influential factor affecting organizers' intention to integrate BPJS Ketenagakerjaan protection into sports events ($\beta = 0.626$), followed by attitude ($\beta = 0.358$), marketing attributes ($\beta = 0.031$), subjective norms ($\beta = 0.005$), and perceived behavioral control ($\beta = -0.055$). These findings suggest that organizers evaluate BPJS Ketenagakerjaan primarily from an operational and value-oriented perspective, with implementation decisions being driven more strongly by perceived benefits than by social influence or promotional exposure. The findings indicate that product attributes were the most influential factor affecting organizers' intention to integrate BPJS Ketenagakerjaan protection into sports events. This result suggests that implementation decisions are driven primarily by assessments of tangible organizational value rather than by external influence or promotional exposure. Event organizers appear to evaluate BPJS Ketenagakerjaan based on its contribution to participant protection, risk mitigation, regulatory compliance, and event credibility. The dominance of product attributes further indicates that organizers adopt a rational and outcome-oriented decision-making approach, focusing on whether the protection program can generate measurable benefits for event operations and long-term sustainability. Compared with individual participants, organizers face greater accountability for participant safety and event performance, making practical value considerations more important than personal perceptions alone.

Although attitude also demonstrated a positive influence on implementation intention, its contribution was substantially lower than that of product attributes. This finding suggests that favorable perceptions toward social security protection are necessary but not sufficient to encourage implementation. Organizers may acknowledge the importance of participant welfare, accident prevention, and responsible event management; however, positive beliefs are unlikely to translate into action unless accompanied by clear operational advantages. The result therefore highlights an important distinction between attitudinal support and implementation commitment, indicating that organizational decisions are shaped not only by beliefs but also by evaluations of feasibility, effectiveness, and expected outcomes. Marketing attributes, in contrast, exhibited only a limited influence on implementation intention. Unlike participants, who may be influenced by communication quality and information accessibility, organizers appear to place less emphasis on promotional activities when evaluating BPJS integration. This finding suggests that communication efforts targeting event organizers should focus less on awareness creation and more on demonstrating practical benefits, operational efficiency, and risk-management value. The result also illustrates a fundamental difference between consumer-oriented decision-making and organizational decision-making within sports-event ecosystems, where implementation considerations often outweigh promotional influences.

A similarly weak effect was observed for subjective norms. Contrary to the assumption that stakeholder expectations and institutional encouragement can motivate organizational behavior, the findings indicate that external pressure currently plays only a minor role in shaping organizers' intentions. This may reflect the absence of mandatory protection requirements within sports-event governance as well as limited regulatory enforcement regarding participant safety. As a result, voluntary encouragement from stakeholders appears insufficient to drive widespread adoption. The finding therefore suggests that stronger institutional arrangements, formal policy instruments, and regulatory support may be necessary to transform participant protection from a voluntary initiative into a standard component of event management practice.

One of the most notable findings is the negative relationship between perceived behavioral control and implementation intention. This result contrasts with the conventional expectation of the Theory of Planned Behavior, which generally predicts that greater perceived control will strengthen behavioral intention (Ajzen, 2015). In the present context, however, perceived behavioral control appears to represent awareness of additional administrative procedures, documentation requirements, and coordination efforts associated with BPJS integration. Rather than facilitating implementation, these perceived obligations may increase concerns regarding operational complexity and resource demands. This finding suggests that the influence of perceived behavioral control is highly context dependent and may operate differently in organizational settings than in individual behavioral contexts. Consequently, the result extends the application of TPB by demonstrating that perceived control can function as a barrier rather than an enabler when implementation is associated with additional administrative responsibilities.

Taken together, the findings reveal that implementation decisions among event organizers are shaped predominantly by practical value considerations, organizational feasibility, and operational consequences rather than by social influence or promotional exposure. While positive attitudes toward participant protection remain important, widespread adoption of BPJS Ketenagakerjaan is unlikely to occur without mechanisms that clearly demonstrate organizational benefits and reduce implementation complexity. These findings further suggest that successful integration requires a combination of value-based incentives, administrative simplification, and institutional support. From a managerial perspective, digital integration, automated enrollment systems, bundled protection mechanisms, and stronger regulatory frameworks emerge as critical instruments for increasing adoption among event organizers and strengthening the institutionalization of social security protection within sports-event ecosystems.

SSM-Based Integration Strategy

The SSM analysis identified several critical issues within the sports event ecosystem related to social security protection. The rich picture analysis revealed fragmented coordination among stakeholders, including BPJS Ketenagakerjaan, local government agencies, police authorities, sports organizations, and event organizers. Most sports events still relied on liability waivers instead of formal protection systems, while regulatory enforcement remained weak and inconsistent. The CATWOE analysis further highlighted that runners and event organizers were the primary beneficiaries of the proposed integration system, while BPJS Ketenagakerjaan, local government agencies, and event organizers acted as key actors responsible for implementation. The study also identified several environmental constraints, including sectoral ego, fragmented governance, technological limitations, and cost resistance from organizers and participants.

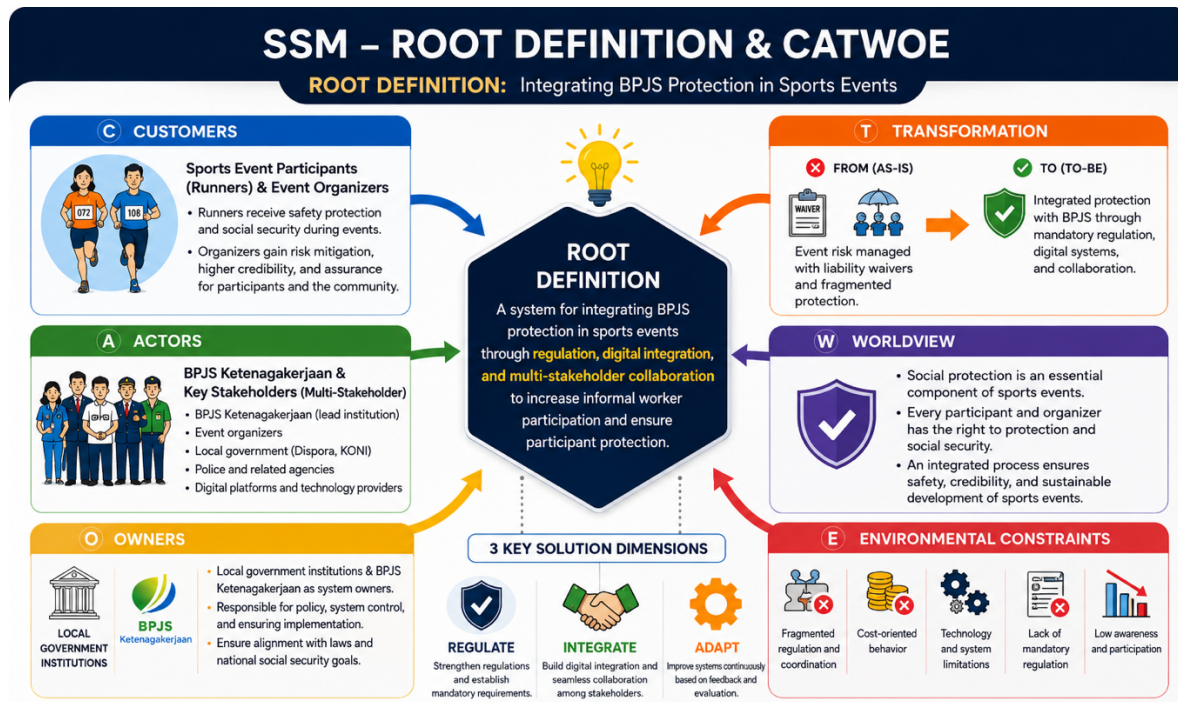


Figure 3. Root Definition & CATWOE Analysis

The CATWOE and Root Definition analyses highlighted the importance of regulatory support, digital integration, and multi-stakeholder collaboration in strengthening social security protection within sports events. The SSM analysis resulted in the formulation of six interconnected strategic actions aimed at strengthening the integration of BPJS Ketenagakerjaan within sports event ecosystems. These strategies include risk assessment, regulatory strengthening, digital registration integration, bundled participation mechanisms, monitoring and evaluation systems, and continuous feedback processes. Rather than functioning as independent initiatives, the strategies form an integrated framework designed to address both the behavioral barriers identified through SEM-PLS and the institutional challenges revealed through the SSM analysis.

The findings suggest that effective integration should begin with a structured risk assessment process. Sports events vary considerably in terms of participant volume, route characteristics, weather exposure, demographic composition, and emergency response requirements. Consequently, a standardized risk identification mechanism is necessary to determine the appropriate level of protection required for different event categories. By linking social security coverage to event-specific risk profiles, organizers can strengthen participant safety while simultaneously improving accountability and risk management practices.

Beyond operational considerations, the analysis highlights the importance of institutional coordination and regulatory support. The SSM findings revealed that fragmented governance structures and the absence of clear protection requirements remain significant barriers to implementation. Addressing these issues requires stronger collaboration among BPJS Ketenagakerjaan, local governments, sports governing bodies, and law enforcement agencies. The establishment of standardized policies and formal inter-institutional arrangements would not only improve implementation consistency but also help reposition participant protection as a fundamental component of sports event governance rather than a voluntary add-on.

Digital integration emerged as another critical element of the proposed framework. Embedding BPJS Ketenagakerjaan enrollment within existing event registration systems would allow participants to complete registration and protection enrollment through a single process. This strategy directly addresses the behavioral findings of the SEM-PLS analysis, which identified perceived behavioral control as the strongest determinant of participation intention among runners. By reducing procedural complexity and improving accessibility, digital integration can remove practical barriers that discourage participation. Similarly, the incorporation of BPJS contributions into event registration packages provides a mechanism for increasing protection coverage while simplifying enrollment procedures. Bundling protection costs within registration fees reduces the need for separate administrative processes and enhances the perceived value of participation. This strategy is particularly relevant in light of the event organizer findings, where product attributes emerged as the most influential determinant of implementation intention. The result suggests that organizers are more likely to support integration when protection programs generate clear operational and organizational benefits.

To ensure long-term effectiveness, the framework also incorporates monitoring, evaluation, and feedback mechanisms. Continuous oversight is necessary to assess compliance, evaluate implementation outcomes, and identify operational challenges that emerge during event execution. At the same time, systematic feedback from participants, organizers, regulators, and BPJS Ketenagakerjaan can facilitate adaptive learning and continuous improvement. Such mechanisms are essential for ensuring that the integration model remains responsive to evolving stakeholder needs, technological developments, and policy requirements. Collectively, these strategies demonstrate how behavioral and institutional barriers can be addressed simultaneously. Digital registration systems and bundled participation mechanisms respond directly to participants' preference for convenience and accessibility, whereas regulatory strengthening, stakeholder coordination, monitoring systems, and adaptive feedback processes address the governance fragmentation identified through the SSM analysis. This finding illustrates that improving social security participation within sports events requires more than behavioral interventions alone; it also demands institutional transformation capable of supporting sustainable implementation.

The integration of SEM-PLS and Soft Systems Methodology represents a key contribution of this study. While the Theory of Planned Behavior provides a useful framework for explaining the behavioral determinants of participation intentions, it offers limited insight into the governance and implementation challenges associated with large-scale institutional change. Conversely, SSM provides a structured approach for understanding complex problem situations and designing feasible system-level interventions but does not explicitly explain individual behavioral decisions. By combining these complementary approaches, the study bridges the gap between behavioral intention and institutional transformation. The resulting framework demonstrates that effective social protection integration requires simultaneous attention to individual participation behavior, organizational decision-making, and broader governance arrangements. This integrated perspective contributes to the growing literature on sports event governance by offering a practical and theoretically grounded model for embedding social security protection within sports event management.

MANAGERIAL IMPLICATION

The findings suggest that expanding BPJS Ketenagakerjaan participation within sports events requires coordinated efforts among multiple stakeholders. From the perspective of BPJS Ketenagakerjaan, the integration of protection services into event registration platforms through application programming interfaces (APIs) and automated enrollment mechanisms could simplify administrative procedures and improve participant accessibility. In addition, incorporating BPJS contributions into event registration fees may encourage participation by reducing the need for separate registration processes. At the policy level, local governments can strengthen the implementation of social security protection by incorporating BPJS participation requirements into event licensing procedures. Such measures would help establish participant protection as a standard component of sports event governance rather than an optional initiative. Similarly, authorities responsible for issuing event permits may support compliance by including BPJS participation verification within permit evaluation and approval processes, thereby reinforcing accountability and participant safety standards. From an operational perspective, event organizers are encouraged to embed BPJS enrollment directly into existing registration systems. A seamless registration process can reduce administrative burdens for participants while improving coverage rates and enhancing the credibility of sports events through stronger risk management practices. Furthermore, sports associations and governing bodies can facilitate broader implementation by developing standardized protection guidelines that provide clear operational direction for organizers and promote consistency across events.

Overall, the study indicates that increasing social security participation within sports events cannot rely solely on voluntary enrollment mechanisms. A combination of regulatory support, digital integration, institutional collaboration, and standardized operational procedures is required to create a sustainable and scalable protection system for informal workers participating in sports events.

CONCLUSION

This study demonstrates that both behavioral and systemic factors influence the integration of BPJS Ketenagakerjaan protection within sports events. Among runners, perceived behavioral control emerged as the strongest determinant of participation intention, indicating that convenience, ease of registration, and accessibility play a critical role in encouraging enrollment. In contrast, event organizers were primarily influenced by product attributes, suggesting that implementation decisions are driven by perceived benefits related to participant safety, risk management, and event credibility. These findings indicate that participation decisions are shaped not only by individual perceptions but also by the practical value offered by social security protection programs. The SSM analysis revealed that the limited integration of BPJS Ketenagakerjaan within sports events is associated with fragmented governance structures, weak institutional coordination, and the continued reliance on liability waivers as a substitute for formal protection mechanisms. To address these challenges, six strategic actions were identified, including risk assessment, regulatory strengthening, digital registration integration, bundled participation mechanisms, monitoring and evaluation systems, and continuous feedback processes. These strategies provide an operational pathway for embedding social security protection within sports event management. By integrating SEM-PLS and Soft Systems Methodology, this study demonstrates that increasing social security participation requires both behavioral interventions and institutional transformation. The findings confirm that a system-based integration approach, supported by digital innovation, regulatory alignment, and stakeholder collaboration, offers a more sustainable solution than conventional voluntary participation models for expanding social security coverage among informal workers.

Recommendations

Based on the findings, BPJS Ketenagakerjaan should strengthen collaboration with local governments, sports associations, and event organizers to establish a more integrated protection system within sports events. Priority should be given to the development of digital registration integration, bundled participation mechanisms, and standardized protection requirements within event licensing procedures. Local governments and regulatory authorities are encouraged to incorporate social security protection into event governance frameworks to improve compliance and participant safety. At the operational level, event organizers should adopt seamless enrollment mechanisms that reduce administrative burdens and improve accessibility for participants. Collectively, these measures can support the development of a sustainable and scalable social security protection system capable of expanding BPJS Ketenagakerjaan participation among informal workers within sports event ecosystems.

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