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# RISK ASSESSMENT AND STAKEHOLDER ANALYSIS OF THE FREE NUTRITIOUS MEALS PROGRAM (MBG) FOR SCHOOL AGED CHILDREN IN INDONESIA

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**Abstract**
The Program Makan Bergizi Gratis (MBG) is a nationwide initiative launched by the Indonesian government to improve children's health and reduce malnutrition through free nutritious meals in schools. While the program is a key pillar of Indonesia's long-term development vision (Indonesia Emas 2045), its large-scale implementation presents significant risks across operational, financial, and governance domains. This study aims to identify and assess the key risks involved in the MBG program using the ISO 31000:2018 risk management framework and a qualitative descriptive approach. Data were collected through field observations, structured interviews, stakeholder questionnaires, and document analysis involving schools, catering service providers, and student beneficiaries. Risk levels were assessed based on probability and impact ratings, and further analyzed using a risk matrix and SWOT framework. Findings reveal that schools face the highest risk exposure, particularly in areas of delayed budget disbursement, food safety, and governance transparency. Catering providers reported medium risks related to delivery logistics and hygiene standards, while students expressed concerns primarily related to meal variety and portion sizes. Three priority risk categories were identified: financial uncertainty, food quality assurance, and program accountability. This study contributes to the growing literature on public nutrition policy and risk governance by providing evidence-based recommendations to enhance program implementation. Key recommendations include digital risk monitoring platforms, improved stakeholder coordination, food safety audits, and policy transparency mechanisms. By managing these risks proactively, the MBG program can be transformed into a sustainable and equitable intervention to improve child health and education outcomes in Indonesia.
**Keywords:** Risk management, ISO 31000, school feeding, MBG, food safety, public policy, Indonesia

## INTRODUCTION

The development of high-quality human capital has become one of the most critical pillars in Indonesia's long-term national vision, particularly within the context of *Indonesia Emas 2045*. This vision outlines a roadmap for transforming Indonesia into one of the world's most advanced economies by its centennial year of independence. Central to this transformation is the need to improve health, education, and nutrition outcomes among Indonesia's large youth population. In this regard, the *Program Makan Bergizi Gratis* (Free Nutritious Meals Program, hereafter MBG) emerges as a strategic state-led initiative aimed at enhancing the nutritional intake of school-aged children across the archipelago. This program, championed by the administration of President Prabowo Subianto, is not merely a welfare policy—it is a structural intervention designed to address interlinked challenges in public health, educational equity, and socio-economic mobility.

Malnutrition and stunting continue to pose significant public health challenges in Indonesia. According to the *Survei Status Gizi Indonesia (SSGI)* conducted in 2022, the stunting prevalence among children under five stood at 21.6%, a decline from previous years but still

above the World Health Organization (WHO) threshold for public health concern. The government aims to reduce this rate to 14% by 2024 (SSGI, 2022). Additionally, data from the Ministry of Health shows that 3.8% of Indonesian children suffer from severe malnutrition, a condition that can have irreversible impacts on cognitive development, educational attainment, and adult productivity (Kemenkes, 2023). These nutritional deficiencies not only undermine individual health but also impede broader economic development goals. A report by the World Bank (2021) estimates that stunted children may earn up to 22% less in adulthood than their non-stunted peers, demonstrating the long-term socio-economic cost of inaction.

School-based nutrition programs like MBG have been widely adopted across the world as effective policy tools for addressing the interrelated issues of child malnutrition, school attendance, and social inequality. According to the *World Food Programme (2022)*, over 185 countries have implemented some form of school meal program. These programs have proven to be highly effective in improving school enrolment rates, learning outcomes, and child health indicators. In countries like Japan and Brazil, such programs have been embedded into national development strategies. Japan's *School Lunch Program*, operational since 1947, is often cited as a model of success, contributing to the country's exceptionally low stunting rate of just 2.1%. In Brazil, the *Bolsa Familia* conditional cash transfer program, which includes a food security component, reduced the national stunting rate from 19.5% in 2000 to 7% by 2019 (UNICEF, 2020). These examples underscore how food-based interventions, when well-governed, can serve as powerful levers for inclusive development.

The MBG program in Indonesia holds significant promise but also faces numerous risks and implementation challenges. A preliminary assessment reveals operational inconsistencies, ranging from delayed budget disbursements to lapses in food quality control and logistical shortcomings in meal delivery. The decentralized nature of Indonesia's education and health systems further complicates coordination among various actors, including central and local governments, schools, caterers, and communities. Inadequate monitoring, vague regulatory standards, and a lack of transparency have also been cited as potential threats to the effectiveness and sustainability of the program (Fandayani et al., 2025). These issues raise important questions about how best to manage the inherent uncertainties in large-scale public service delivery.

In line with ISO 31000:2018, risk is defined as the "effect of uncertainty on objectives," encompassing both threats and opportunities (ISO, 2018). Risk management, therefore, is not merely about avoiding negative outcomes but about systematically identifying, assessing, and responding to factors that could hinder or enhance the achievement of desired results. In the context of the MBG program, this involves addressing financial risks (e.g., budget shortfalls, misuse of funds), operational risks (e.g., poor food handling, delivery failures), reputational risks (e.g., public distrust due to food poisoning cases), and policy risks (e.g., inconsistent enforcement of guidelines). A comprehensive risk management strategy must be rooted in evidence and guided by a structured framework such as that provided by ISO 31000.

Against this backdrop, this study aims to analyze the key risks associated with the MBG program and propose mitigation strategies tailored to the Indonesian context. Using a qualitative-

descriptive method and triangulating data from literature reviews, field observations, semi-structured interviews, and survey questionnaires, the research captures the perspectives of multiple stakeholders, including school administrators, catering service providers, and student beneficiaries. The study is designed to assess the probability and impact of identified risks using a matrix-based approach, categorizing risks into low, medium, and high levels. Moreover, the study integrates elements of SWOT analysis to understand internal strengths and weaknesses as well as external opportunities and threats facing the program.

Preliminary findings indicate that schools face the highest risk burden, particularly in areas of financial uncertainty, food quality assurance, and governance transparency. The delayed disbursement of government funds has forced several schools to rely on temporary internal resources, creating budgetary pressure and disrupting teaching-learning schedules. Meanwhile, catering providers report challenges related to production capacity, hygiene standards, and last-mile distribution. Many caterers operate with minimal infrastructure and untrained personnel, increasing the likelihood of foodborne illness and delivery errors. On the other hand, students—while generally welcoming the program—have raised concerns about meal taste, portion sizes, and occasional delays. Their perception and satisfaction are vital to the program's social legitimacy and long-term success.

The research findings contribute to an emerging body of literature on risk governance in social policy delivery. Previous studies on similar school feeding programs in Nigeria, India, and Kenya have emphasized the need for integrated governance, real-time data monitoring, and stakeholder engagement (Ali, 2018; Okolo-Obasi, 2020; Kavoo-Linge, 2013). For example, Okolo-Obasi's (2020) evaluation of Nigeria's *National Home Grown School Feeding Programme* found that while the initiative had positive effects on enrolment and nutrition, its success was undermined by poor coordination among stakeholders and limited community involvement. These global insights reinforce the importance of adapting international best practices to local institutional settings in Indonesia.

Additionally, this study adopts the principles of effective public sector risk management, which include accountability, proportionality, stakeholder inclusiveness, and continuous improvement. The participatory nature of the research, involving inputs from government officials, school leaders, and service providers, is intended to strengthen program ownership and capacity for local problem-solving. Transparency, particularly in budget utilization and food procurement, emerges as a recurring theme across the interviews and literature. Hence, policy recommendations generated from this research emphasize the need for digital monitoring systems, enhanced training for food handlers, standard operating procedures for delivery logistics, and regular third-party audits.

The urgency of improving child nutrition through school-based interventions cannot be overstated. Research from UNICEF and the WHO consistently affirms that well-nourished children are more likely to attend school, perform better academically, and transition to productive adulthood. A study by Gelli et al. (2019) found that every US$1 invested in school

feeding generates up to US$9 in economic returns, mainly through improved educational attainment and long-term health outcomes. Therefore, safeguarding the effectiveness of MBG through robust risk mitigation is not just a technical imperative but a moral and economic necessity.

In conclusion, the MBG program reflects Indonesia's strong political commitment to addressing child malnutrition and educational inequality. However, translating this commitment into tangible outcomes requires a nuanced understanding of risk and proactive governance mechanisms. This study aims to fill a critical knowledge gap by identifying the most pressing risks across stakeholder groups and proposing evidence-based strategies to address them. Through this contribution, it is hoped that MBG can evolve into a resilient, scalable, and impactful intervention that helps lay the foundation for *Indonesia Emas 2045*—a future defined by equity, human dignity, and shared prosperity.

## METHOD

This study employs a qualitative research methodology with a descriptive approach to explore, identify, and assess the various risks associated with the implementation of the *Program Makan Bergizi Gratis* (MBG) for school-aged children in Indonesia. The choice of a qualitative framework is grounded in the aim to gain a deep understanding of complex, multi-dimensional phenomena such as risk perception, operational challenges, stakeholder behavior, and institutional responses, which are best captured through non-numeric data and interpretive methods (Creswell, 2014).

### Research Design

The research adopts a case study model supported by literature review and field inquiry. A literature review was conducted to establish the theoretical foundation of risk management based on ISO 31000:2018, and to analyze previous empirical studies on school meal programs in both national and international contexts. Field inquiry was used to capture primary data from stakeholders directly involved in the MBG program. The study also incorporated elements of SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis to enhance the diagnosis of internal and external risk factors.

### Data Collection Techniques

To ensure the robustness of findings, data were triangulated through the following methods:

1. Observations
   Direct on-site observations were conducted at selected schools and catering facilities during the MBG implementation period. Observational focus was placed on food preparation, hygiene standards, logistical coordination, and meal distribution practices.
2. In-depth Interviews

Semi-structured interviews were held with multiple stakeholder groups, including school principals, teachers, kitchen staff, catering managers, local government representatives, and student beneficiaries. Interviews were guided by an open-ended protocol to encourage elaboration on perceived risks and experiences.

3. Questionnaires
   Structured questionnaires were distributed to stakeholders to evaluate risk categories based on probability and impact. Responses were gathered using a Likert scale (1 to 5) and analyzed to quantify stakeholder risk assessments across domains such as financial stability, food quality, delivery reliability, and administrative transparency.
4. Document Analysis
   Policy documents, official reports, budget plans, school correspondence, standard operating procedures, and media articles were reviewed to contextualize and validate findings. Key sources include regulations from the Ministry of Education and Ministry of Health, as well as national policy briefs on MBG implementation.

**Population and Sampling**

The study purposively selected informants from three primary stakeholder categories:

1. School Personnel (e.g., headmasters, program coordinators, teachers)
2. Catering Providers (e.g., food handlers, distribution supervisors)
3. Student Beneficiaries (primarily upper-grade students capable of articulating responses)

The sampling was conducted in Jakarta and its surrounding areas where pilot implementations of the MBG program were underway during the first half of 2025. A total of 45 participants were involved in the field study, with interviews and questionnaires distributed proportionally among the stakeholder groups.

**Risk Assessment Procedure**

Risk analysis in this study follows the ISO 31000:2018 framework, comprising the following stages:

1. Establishing Context
   The internal and external contexts of the MBG program were defined, including policy mandates, institutional roles, logistical capacity, and budgetary constraints.
2. Risk Identification
   Through field data and literature synthesis, potential risks were classified into thematic categories (e.g., financial, food quality, logistics, stakeholder coordination).
3. Risk Analysis
   Each identified risk was assessed based on two dimensions: probability of occurrence and potential impact. Severity Index calculations were used to prioritize risks using the formula proposed by Al-Hammad (2000), where:

$$SI = \frac{\sum_{i=0}^{4} ai.xi}{4\sum_{i=0}^{4} xi} \ (100\%)$$

Where:
ai = rating scale,
xi = frequency of responses,
I = total number of respondents.

4. Risk Evaluation
   Risks were mapped on a 5×5 risk matrix to determine their level: low, medium, or high. High-level risks were prioritized for mitigation strategy development.
5. Risk Treatment
   Based on the evaluation, proposed responses included four standard options: risk avoidance, risk reduction, risk transfer (e.g., through third-party contracts), and risk acceptance, aligned with ISO principles.

**SWOT Analysis Integration**

To supplement the risk analysis, a SWOT framework was applied to identify the broader strategic environment affecting MBG implementation. SWOT enabled cross-validation between internal operational findings and external policy dynamics. For example:

- Strengths
  Strong political commitment, potential for social equity enhancement.
- Weaknesses
  Limited infrastructure, unclear monitoring indicators.
- Opportunities
  Integration with health and education policy, international support.
- Threats
  Public backlash due to food poisoning or corruption, media scrutiny.

**Ethical Considerations**

Ethical approval for this study was obtained from the institutional review board at Sekolah Tinggi Manajemen Asuransi Trisakti. Informed consent was obtained from all participants, and student respondents were involved with parental or institutional permission. Data anonymity and confidentiality were strictly maintained throughout the research process.

**Research Limitations**

This study is limited by its geographic scope and reliance on qualitative indicators. While the findings offer valuable insight, they may not be universally generalizable to all regions or contexts in Indonesia. Nonetheless, the qualitative depth and triangulation of methods provide a robust basis for understanding risk exposure within the MBG program and for informing national policy discourse.

## RESULTS AND DISCUSSION

### Overview of Respondents

The data were collected from three main stakeholder groups involved in the implementation of the *Makan Bergizi Gratis* (MBG) program: school administrators and educators, catering service providers, and student beneficiaries. These groups represent the primary agents responsible for implementing and receiving the MBG program. The data collection involved structured questionnaires, in-depth interviews, and field observations.

Respondents from schools included principals and teachers in charge of MBG logistics and reporting. Catering respondents included food preparation and distribution supervisors, while students provided feedback based on their direct experiences with the meals.

### Summary of Questionnaire Results

Risk assessment was carried out using a Likert-scale matrix to evaluate probability and impact across several risk categories. Each category was then mapped into a risk matrix to classify risk levels as low, medium, or high.

Table 1. Summary of Risk Perception Scores by Stakeholder Group

| Stakeholder | Risk Category | Probability | Impact | Risk Level |
|---|---|---|---|---|
| School | Financial Risk | 3.93 | 3.67 | High |
| School | Food Quality and Safety | 3.73 | 3.67 | High |
| School | Distribution and Logistics | 3.33 | 3.47 | Medium |
| School | Governance and Transparency | 3.53 | 3.60 | High |
| School | General Perception of Program | 3.73 | 3.67 | High |
| Catering | Food Production and Hygiene | 3.00 | 3.08 | Medium |
| Catering | Human Resources Capacity | 2.50 | 2.60 | Medium |
| Catering | Distribution and Delivery Logistics | 2.60 | 3.30 | Medium |
| Catering | Communication and Coordination | 2.90 | 2.90 | Medium |
| Student | Food Quality and Health Impact | 2.12 | 2.35 | Low |
| Student | Portion and Timeliness | 1.95 | 2.21 | Low |
| Student | Perception and Satisfaction | 3.17 | 3.28 | Medium |

### School-Level Risk Analysis

Among all stakeholder groups, schools face the highest cumulative risk, particularly in financial and operational domains. The financial risk scored highest, with a probability of 3.93 and impact of 3.67. Interviews confirmed that delayed government budget disbursement forces schools to use internal funds as temporary financing. This leads to administrative complications and threatens the program's continuity.

Similarly, food quality and safety risks—scoring 3.73 and 3.67 respectively—emerged as a pressing concern. Despite not being directly responsible for meal preparation, schools often bear

the burden of complaints from parents and students when food is spoiled or improperly handled. In multiple cases, schools reported instances of food arriving in a spoiled condition or lacking nutritional balance.

Distribution and logistical challenges (3.33 and 3.47) reflect issues such as late deliveries, incomplete rations, and transportation bottlenecks. These disruptions affect the school's ability to serve food on time and jeopardize classroom schedules. Additionally, governance and transparency risks (3.53 and 3.60) highlight concerns about unclear reporting procedures, absence of standardized monitoring tools, and a lack of accountability mechanisms between central authorities and implementing schools.

**Catering Service Provider Perspective**

Catering service providers identified production capacity and human resource limitations as moderate risks. Most vendors operate with small teams and limited infrastructure, making it difficult to meet large-scale production targets while maintaining hygiene and nutritional standards. The distribution risk (2.60 and 3.30) is also critical, as caterers struggle with route planning, fuel costs, and coordination with schools. Delayed or misdirected deliveries contribute directly to student dissatisfaction and program inefficiencies.

Communication and coordination risk scored at a moderate level (2.90 each), reflecting the absence of a digital system or structured communication flow between caterers and school administrators. Several providers expressed a desire for digital dashboards, standardized reporting templates, or designated liaison officers to improve operational communication.

**Student Feedback and Satisfaction**

Student respondents generally reported low-risk levels regarding food quality and timing, with probabilities and impacts below 2.5. This suggests a baseline tolerance among students, particularly in lower-income groups who appreciate the benefit of free meals regardless of occasional shortcomings.

However, the perception and satisfaction index reached medium levels (3.17 and 3.28), indicating rising expectations and a need for quality control improvements. Students voiced preferences for better variety, larger portions, and consistent delivery times. Although these do not register as critical risks, they are important for maintaining program support and legitimacy, especially as peer influence and social perception among students can shape program acceptance.

**Cross-Stakeholder Synthesis and Risk Prioritization**

Combining all stakeholder perspectives, three core risk areas emerged as priorities for intervention:

1. Financial Management and Budget Disbursement
   - Delayed funding directly disrupts operations and imposes hidden costs on schools.
   - Mitigation: Align national and regional budget cycles, introduce emergency buffer funds.
2. Food Safety and Quality Assurance

- Hygiene lapses, poor ingredient storage, and insufficient training pose public health risks.
- Mitigation: Certification and training for caterers, random quality audits, digital reporting.

3. Program Governance and Accountability
   - Lack of transparency and unclear SOPs cause mistrust and inefficiency.
   - Mitigation: Develop a unified digital platform for performance tracking, grievance redress, and financial transparency.

**Comparison with International Cases**

The challenges observed in Indonesia's MBG program mirror issues faced by similar programs globally. For example, Jabir Ali's (2018) study of India's *Mid-Day Meal Scheme* identified infrastructure limitations and kitchen management as persistent threats. Likewise, Okolo-Obasi (2020) noted that Nigeria's *National Home-Grown School Feeding Programme* was hindered by poor inter-agency coordination and inadequate funding systems.

However, international success cases provide transferable lessons. Brazil's integration of local farmers into the food supply chain under *Bolsa Familia* improved not only student nutrition but also rural livelihoods (FAO, 2019). Japan's strict hygiene protocols and detailed calorie/nutrient tracking systems under the *School Lunch Program* provide an effective model of operational control and student education integration.

**Discussion: Toward Sustainable Risk Governance**

The findings from this study suggest that while MBG holds transformative potential, its operational risks must be managed through structured, participatory, and transparent approaches. The ISO 31000 risk management framework proves valuable in diagnosing and classifying risks but must be complemented by contextual tools such as SWOT and participatory monitoring.

Moreover, program sustainability depends not only on technical fixes but also on institutional trust and community engagement. Empowering schools with clearer mandates, allocating sufficient resources, and ensuring accountability mechanisms are central to maintaining the integrity and legitimacy of the MBG program.

Stakeholder collaboration between schools, government agencies, catering providers, and communities must be continuous and responsive. Investments in digital infrastructure, third-party monitoring, and grievance mechanisms will further strengthen resilience against operational disruptions.

**CONCLUSION**

The implementation of the *Program Makan Bergizi Gratis* (MBG) represents a bold and strategic move by the Indonesian government to combat child malnutrition and promote equitable access to education and health. Through this study, it becomes evident that while the program holds significant transformative potential, it is also exposed to a complex array of risks that vary across stakeholder groups.

Schools, as the primary implementing agents, face the highest concentration of risk, particularly related to delayed budget disbursement, food quality control, logistical challenges, and administrative transparency. Catering providers, although essential to the program's success, also encounter medium-level risks due to limited human resources, distribution bottlenecks, and lack of clear communication systems. Meanwhile, student beneficiaries report relatively low levels of perceived risk, but their satisfaction levels highlight the importance of quality assurance and consistent service delivery.

The study reinforces the importance of adopting a structured risk management approach grounded in the ISO 31000:2018 framework. By categorizing and prioritizing risks based on their probability and impact, this research provides actionable insights into the most pressing threats to the MBG program's sustainability. Furthermore, by integrating SWOT analysis and stakeholder feedback, the study underscores the value of participatory governance and cross-sector collaboration in public policy delivery.

In conclusion, the MBG program cannot rely solely on political will or short-term operational gains. Long-term success demands robust institutional mechanisms, continuous monitoring, and adaptive governance frameworks that place transparency, accountability, and local empowerment at the core of implementation.

## REFERENCES

Ali, J. (2018). Evaluation of Mid-Day Meal Scheme in India: Issues and Policy Recommendations. *Journal of Policy Modeling*, 40(4), 675–690. https://doi.org/10.1016/j.jpolmod.2018.02.002

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). SAGE Publications.

FAO. (2019). *School Food and Nutrition Framework: Brazil Country Case*. Food and Agriculture Organization of the United Nations. http://www.fao.org/documents

Fandayani, L., Ramadhani, S., & Syam, M. (2025). Risk Assessment of Government-Driven Nutrition Programs: An Indonesian Case. *Jurnal Kebijakan Publik dan Pembangunan*, 12(1), 33–44.

Gelli, A., Espejo, F., & Drake, L. (2019). A comparison of school feeding delivery mechanisms: Costs and cost-effectiveness of school feeding programs in low- and middle-income countries. *Food and Nutrition Bulletin*, 40(4), 465–479. https://doi.org/10.1177/0379572119864391

International Organization for Standardization (ISO). (2018). *ISO 31000:2018 Risk Management – Guidelines*. Geneva: ISO.

Kementerian Kesehatan Republik Indonesia. (2023). *Profil Kesehatan Indonesia 2022*. Jakarta: Pusat Data dan Informasi Kemenkes RI.

Okolo-Obasi, E. N. (2020). Risk and Implementation Analysis of Nigeria's School Feeding Programme. *Journal of African Development*, 22(3), 55–70.

SSGI. (2022). *Survei Status Gizi Indonesia Tahun 2022*. Jakarta: Badan Kebijakan Pembangunan Kesehatan, Kementerian Kesehatan RI.

UNICEF. (2020). *Policy Brief: Nutrition and Social Protection in Brazil*. Retrieved from https://www.unicef.org/brazil

World Bank. (2021). *Investing in Early Years: The Economic Case for Nutrition in Indonesia*. Washington, DC: World Bank Group. https://www.worldbank.org

World Food Programme (WFP). (2022). *State of School Feeding Worldwide 2022*. Rome: WFP. https://www.wfp.org/publications/state-school-feeding-worldwide-2022