



Indonesia and Lessons Learned from Implementing the Free Nutritious Meals Program

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ABSTRACT

Free Nutritious Meals (MBG) is a flagship program of the President-elect of the Republic of Indonesia, Prabowo Subianto. This program, which targets school-age children, was initiated to prevent malnutrition, which can lead to reduced height and head circumference and, in turn, affect intelligence. By 2025, the Indonesian government aims to reach 82.9 million beneficiaries, served by 9,406 Nutrition Fulfillment Service Units (SPPG). More than 1.1 billion MBG portions have been distributed as of October 2025. However, as 2025 draws to a close, several problems continue to plague the program. Cases of poisoning related to governance are believed to be one of the leading causes. This study compared programs running in Brazil, China, and Japan. The study's results show that the government must increase public participation in the program's provision, implementation, and evaluation. The goal is to ensure oversight of the process to improve children's nutrition, who are the future of the nation.

1. Introduction

School Lunch Program, or in Indonesia popularly known as Makan Bergizi Gratis (MBG), is a global program that has reached more than 174 countries. Today, at least 466 million preschool, elementary, and middle school children benefit from the program [1]. The estimated global investment for this program has increased from USD 5 billion in 2022 to USD 48 billion in 2024 [1], [2]. The program, which was originally run by a few European charities, has now rapidly developed into a social safeguard that aims to improve the quality of human development. In many developing countries, this program is implemented to combat malnutrition and encourage children to attend school.

Many programs in Europe and America during the 1960s often overlooked children as a vulnerable group for malnutrition. The global food system at that time was primarily aimed at combating food shortages, rather than tackling ongoing malnutrition, particularly in children [3]. Even in nations that proclaimed to be self-sufficient in food production, chronic malnutrition remained a persistent issue [4].

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Looking back at its historical origins, France was the first country to initiate the program in 1840. At the beginning of its implementation, the program targeted children from underprivileged schools, before the government took over in 1849. The French government used excess funds from the National Guard [5]. These funds were then distributed to district-level authorities as school funds called *Caisses des Ecoles*. The scope of these school funds covered clothing, books, medical care, food for poor children, and the provision of school canteens, commonly known as *Cantines Scolaires*. In 1867, the Ministry of Public Education acknowledged canteens as a critical part of *Caisses des Ecoles* and rolled out the program to 464 other locations [6]. In 1882, the Compulsory Education Act mandated that all schools must provide lunch as part of their activities.

The United States was also one of the first countries to establish a school lunch program, known as the National School Lunch Program (NSLP). The origin of this program is a fusion of idealism and frustration, reflecting the gap between social welfare and racial economic inequality. For some observers, this situation reflects domestic political tensions over whether public policy should focus on food policy or on persuading people to eat healthier [7]. Since its inception in 1946 through the School Lunch Act by President Roosevelt, the NSLP has faced criticism from both right-wing and left-wing political groups [8]. The menu, often considered unattractive, tasteless, and sometimes unhealthy, is one of the contributing factors. Additionally, the portions and menu choices often depend more on the surplus of available agricultural commodities than on the nutritional needs of children [7].

However, regardless of existing background, the NSLP can cover 60 percent of schoolchildren nationwide and reduce obesity among children from low-income families [9].

Like France and the United States, China is one of the Asian countries that places great emphasis on children's well-being. The educational gap between urban and rural areas goes beyond infrastructure and teacher resources. The most noticeable difference is in the nutritional support available to students. Urban students generally have better access to a balanced diet, while rural students face more challenging conditions.

Data from the Chinese Center for Disease Control and Prevention [10] reveals an even more alarming picture, with nearly half of primary and secondary school students in rural areas lacking daily food security and a healthy diet. They are also vulnerable to deficiencies in essential nutrients such as eggs, meat, and dairy products. This long-term malnutrition can harm children's physical development, decrease cognitive abilities, and contribute to subpar academic performance, potentially limiting their future potential to achieve higher economic status [11]. This issue is worsened by eating habits in rural areas, which have traditionally prioritized "eating enough" over "eating well."

In response to the current situation, the Chinese government launched the Nutrition Improvement Program (NIP) for rural students in 2011 to address nutritional inequality. Through this program, the government supports not only improving education quality but also promoting social equality and justice. At the start of implementation, the government targeted 699 selected districts by providing a daily lunch subsidy of three yuan per student, which increased to five yuan in 2021. As a result, there was a 12.9% increase in the likelihood of entering high school and a 13.3% rise in the chance of continuing to college [12].

Nowadays, besides China, many other countries have also implemented free nutritious meal programs, such as Brazil, Japan, and Indonesia.

In Indonesia, the school lunch program, known as MBG, was not a sudden policy. This program was designed in the 1990s, when the government implemented the School Children's Supplementary Food Program (PMTAS) to address malnutrition in poor areas. The program successfully covered more than eight million students in 53,000 schools. From 2016 to 2019, the Ministry of Education

and Culture, together with the United Nations World Food Programme, ran the School Children's Nutrition Program (PROGAS), in which schools provided meals containing 400-500 kilocalories and 10-12 grams of protein per serving [13]. However, the program was still in its prototype stage.

It was only at the beginning of President Prabowo's administration that the allocation for implementing the MBG program increased sharply. The objective was to reduce three nutritional problems, namely stunting, obesity, and micronutrient deficiencies. However, after one year of administration, various negative cases emerged, one of which was related to poisoning. President Prabowo spoke up. In a speech on September 30, 2025, Prabowo stated that, statistically, compared to the achievements made, unintentional deviations in the MBG program still occurred within a range of 0.00017 percent [53]. BGN data [54] states that from January to September 2025, 4,711 children were poisoned. The Indonesian Education Monitoring Network [55] stated that 8,649 children had been poisoned as of September 27, 2025, and that number had the potential to continue to grow. This condition was also exacerbated by the management of MBG kitchens, which in many cases was handled by a handful of specific parties, thereby potentially failing to benefit the community economically.

This study aims to analyze the implementation of school lunch programs in four countries, namely China, Brazil, Japan, and Indonesia. The basic premise for choosing these four countries is that they have similar social and economic cultures. Specifically, the study was conducted to compare the implementation of school lunch programs, including their impact, especially in China, Brazil, and Japan, so that the Indonesian government can adapt the best practices.

2. Methodology

This research was conducted using a case study approach. The case study approach is a method that focuses on in-depth analysis of specific aspects of a historical event to develop or verify historical explanations of it. Alexander and Bennett [14] define a case as a class of events. The term "class of events" here refers to scientifically interesting phenomena. A case study is a clearly defined aspect of a historical episode selected by the researcher for analysis, not the historical event itself. The Cuban Missile Crisis is a historical example of various classes of events: prevention, coercive diplomacy, crisis management, and so on.

In the context of policy, qualitative researchers can carefully analyze constitutions and laws rather than simply reporting what observers say about them. In addition, they can also provide an in-depth description of complex events, which is not an easy task because many parties' ability to explain is still weak [15]. In case studies, comparative methods can be used to find similarities and differences, as well as to explain the continuity and changes that have occurred. One of the most frequently used processes is "most similar systems design," which involves comparing similar cases [16].

In this study, the process was carried out through a comparative case study involving an in-depth analysis of the implementation of school lunch programs in Brazil, China, Japan, and Indonesia. Through a comparative case study, the researchers attempted to identify similarities and differences with secondary data-based analysis.

Human Capital Theory

One precondition for achieving social welfare is the availability of skilled human resources. However, this skill is not only assessed from a physical perspective, but also from the development of intellectual intelligence and emotional ability in managing thoughts. Specifically, the development

of intellectual intelligence, which is partly determined by the structure and capacity of the brain, occurs from the fetal period through age three.

In the subsequent age up to 15 years, brain dynamics will continue to be influenced, among other factors, by nutrition.

MBG has been recognized as one of the opportunities that opens the door for many children to achieve a better future. However, the financing obstacle remains a challenge for many countries, including Indonesia.

An aging population and slowing economic growth demand a focus on improving the quality of the workforce. Lucas [17] states that education can be a major driver in building a skilled workforce that can increase productivity and welfare. However, fulfilling children's nutritional needs cannot be separated from this. If there is no balance, individual development will not be maximized and the human capital theory introduced by Theodore Schultz in 1961 will not become a reality [18]. Hence, Sustainable Development Goal 2, which emphasizes investment in child nutrition to support long-term food productivity, is key to implementation.

3. Results

Apart from all the conditions that arise, when reviewing the World Food Programme study [1], it can be said that globally, the return on social investment from implementing school lunch programs ranges from USD 3 to USD 9 per dollar invested. Several studies also show that school meals have been proven to improve the quality of education, health and nutrition, strengthen agriculture, and boost economic growth in rural or disadvantaged areas. The conditions in each country that became the focus of the study can be described as follows:

1. Indonesia

A study by the World Food Programme [19] shows that Indonesia is an upper-middle-income country with declining levels of poverty, inequality, and food insecurity. However, only 1% of Indonesians can consume a diet with sufficient calories, and nearly 50% of the population cannot afford food that meets the criteria for a healthy diet [20]. The high rate of childhood obesity in Indonesia cannot be separated from the rapid growth of individually-managed local shops and fast-food outlets, many of which are located near densely populated residential areas, as well as the lack of literacy among parents, teachers, and other parties close to children regarding children's nutritional needs. As a result, children often become the main targets of high-sugar, high-salt, and high-fat foods and beverages. This situation is exacerbated by excise regulations, labeling, and advertising that are unable to curb the urge to consume. Various efforts to protect children have been proposed, but as of 2025, the decision to issue derivative regulations on labeling and sugar taxes has not yet been published. Ultimately, the MBG Program has become one of the government's strategies to address the current situation.

The MBG program in Indonesia was just initiated in 2025. Its core rationale addresses the persistent issues of malnutrition caused by poverty and poor diet, along with stunting. Moreover, MBG aims to develop talented human resources to support Indonesia's 2045 vision and economic growth, as highlighted in the president's speech [21].

"The Free Nutritious Meals Program is strategic because it can empower the economy at the village and provincial levels, as the meal allowance for each child will circulate Rp 8 billion per village per year. We will reverse the money being sucked into the center, into Jakarta, we will now return the

money to the villages, to the regions." (Remarks by President Prabowo Subianto at the 2025 DIPA Handover, December 10, 2024).

The implementation of the MBG commenced with the establishment of the National Nutrition Agency (BGN) on August 15, 2024, pursuant to Presidential Regulation No. 83 of 2024, as a government agency constituted by the President to fulfill responsibilities associated with meeting national nutritional requirements [22]. Subsequently, field operations are overseen by the Nutrition Fulfillment Service Unit (Satuan Pelayanan Pemenuhan Gizi /SPPG), a service entity established by collaborating partners to facilitate the distribution of nutritious food in accordance with BGN standards [23].

According to its website, BGN announced that by 2025, the MBG program would include 5,000 SPPGs, split into two categories: (1) BGN would construct 1,542 units, and (2) BGN would partner with government and third-party organizations to build 3,458 units, aiming to benefit 15 to 16.5 million people [24]. However, by December 2025, BGN Chief Dadan Hindayana reported approximately 30,000 partners, with 16,503 SPPGs already operational across Indonesia and 14,740 still in the planning stage [25]. Regarding partnerships, BGN restricts each foundation to a maximum of 10 SPPGs, except for those linked to institutions. Nonetheless, there are instances where a 20-year-old child of a legislative member owns 41 SPPGs by bypassing ownership restrictions, through the use of different foundations [26].

Referring to Rutledge [27], policies always embed moral and cultural judgments that impact not only the intended beneficiaries but also those outside the targeted group. Instead of fostering economic empowerment from village to provincial levels, as the president's speech suggests, the MBG has become a platform primarily serving specific groups. Notably, in 2025, the MBG funding is projected to total IDR 99 trillion, with approximately 41.65 million individuals benefiting as of November [28].

2. China

China has been implementing the school feeding program since November 2011 under the name Nutrition Improvement Program for Rural Compulsory Education Students (NIPRCES), or some literature, often referred to as the Nutrition Improvement Program (NIP). This program was launched by the government to improve the nutritional status of children, especially those in rural areas. Malnutrition, overweight, and obesity in children are among the issues affecting society in China. These problems are thought to stem from economic disparities that impact the well-being of people in both urban and rural areas.

The NIP targets elementary school students aged 6–15 years. In 2021, the government allocated a budget of 196.74 billion yuan [29]. A decade after the program's start, 37 million students in 120,000 schools across 28 provinces have benefited from it. To ensure proper food distribution, the government issued regulations called the Provisions for Administration of School Food Safety and Nutrition Health, which oversee school food safety and nutrition. Additionally, there is the Food Safety Law, the national legal foundation for food safety.

The mechanism works by provides subsidies to students in grades one through nine. Each student receives an annual subsidy of three yuan per day for 200 school days, funded by the central or local finance department in 2011, which increased to five yuan in 2021 [30], [31]. After more than two decades of implementation, the Chinese Center for Disease Control and Prevention estimated that, on average, boys and girls in areas with the program experienced height increases of 4.2 cm and 4.1 cm, respectively, along with weight gains of 3.5 and 3.3 kilograms [32].

3. Japan

In 1889, the school lunch program was first introduced in Tsuruoka, Yamagata Prefecture, Japan [33]. This program was initially started by a Buddhist monk who saw many underprivileged children who could not bring lunch from home. Moved by this, he took the initiative to create a lunch program. The menu was simple, consisting of rice balls, grilled fish, and a pickled vegetable called tsukemono [34]. The program, which was believed to bring many benefits, then spread and was widely adopted across the country. The menu offered a variety of dishes, including rice mixed with meat, vegetables, fish, and various types of miso soup.

The program was temporarily suspended during World War II, and only resumed in 1947. That year, three million children began receiving lunch programs with a variety of menus, including fat-free milk powder donated by the United States government and UNICEF [35]. Then, in 1950, elementary school children in eight major cities received food packages that included bread made from American wheat flour. During this period, the staple menu often consisted of bread rolls, potato soup, croquettes, sliced cabbage, and milk. At this time, lunch was often prepared in school kitchens or lunch centers before being delivered to schools [36].

After more than 50 years of implementation, the food transformations in the lunch menu have seen significant changes. Initially, powdered milk was part of the program, but in 1958, the Ministry of Education, Culture, Sports, Science, and Technology started replacing it with fresh cow's milk, which was later replaced with carton-packaged milk in 1976.

In food procurement, schools serve as providers of school lunches based on input from nutrition teachers, parent representatives, and other relevant parties. Procurement priorities are also set by considering the availability of local commodities. The aim is for children to understand and become familiar with the types of local food available in their environment.

In the School Lunch Program Law, the Japanese government requires all public elementary and junior high schools to provide safe and nutritious school lunches. In Japan, food and nutrition education is called Shokuiku. To promote this, in June 2005, Japan enacted the Shokuiku Basic Act, which emphasizes the importance of shokuiku for children, particularly by assigning nutrition-competent teachers to develop lunch menus. The goal is for school meals to serve as a “living textbook” that helps children learn about local food culture, eating etiquette, and gratitude, including appreciation for those who have prepared, produced, and distributed the food. Through ongoing programs, children also learn to serve food, both in the classroom and in the school cafeteria, and to clean up after meals [37].

The program's implementation had some flaws. In 1996, in Okayama Prefecture, a food mishandling incident led to the deaths of two children and affected 468 others with poisoning symptoms. An investigation confirmed *E. coli* bacteria as the source.

Subsequently, to guarantee the continuity of the program, politicians and pertinent stakeholders in Japan enacted several regulations. The timeline for the promulgation of these regulations is as follows:

- 1954 : The School Lunch Program Act was enacted.
- 1968 – 1969 : The National Curriculum Standards for elementary and junior high schools were revised, and the school lunch program and guidelines were designated as one of the special activities.
- 2004 : The School Lunch Program Act has been revised.
- 2005 : The “nutrition and nutrition teacher” system has been initiated. Additionally, this year marked the enactment of the Basic Act on Shokuiku, which defines the fundamental principles and guidance for

- 2008 food and nutrition education.
: The School Lunch Program Act has been revised once more, including a focus on promoting food and nutrition education in schools.

During program implementation, expenses are shared among stakeholders. School administrators pay for facilities and labor to serve lunch, while parents cover the food costs. For children facing financial difficulties, the government offers aid via education allowances and school subsidies through social welfare programs. This system operates with parental contributions, subsidized by the local government, amounting to 4,343 yen for elementary students and 4,941 yen for junior high students.

Research conducted by Miyawaki, Lee and Kobayashi [38] states that the program has significantly reduced the percentage of overweight and obese boys, although it has not had a significant impact on girls. There has been no significant change in body weight and height percentages. More than 10 million people have benefited from the program [39].

4. Brazil

The Programa Nacional de Alimentação Escolar (PNAE) was launched by President Vargas in 1955 [40]. The program started as a school lunch campaign. At first, it was all about eliminating malnutrition, but it later evolved into a policy to tackle obesity and overweight issues by promoting healthy, nutritious foods. The program aims to help students develop healthy eating habits, especially in low-income areas.

In 2003, this lunch program became part of the National Zero Hunger Program, which aims to reduce starvation and ensure food security. During that period, approximately 44 million people, or 28 percent of Brazil's total population, were estimated to be earning less than USD 1 per day [41]. The specific regulations governing this lunch program were enacted recently in 2009 through Law No. 11,947 concerning the National School Meals Program (Programa Nacional de Alimentação Escolar, PNAE). Through the implementation of this program, the government endeavors to ensure that all students enrolled in public schools—from preschool through secondary levels—as well as those enrolled in technical and vocational educational institutions, receive daily meals that fulfill at least 15 percent of their nutritional requirements [42,43].

The goal is to enhance nutrition and food security for public school students while supporting local agricultural production. The law requires that at least 30 percent of central government funds transferred to the regions for PNAE be used to buy local agricultural products [44], [45]. Through the implementation of the program, the government is not only distributing calories but also supporting the local economy, especially women, farmers, and community workers at the grassroots level.

Women have begun growing vegetables and raising livestock in their yards to supply raw materials to PNAE kitchens [46]. Studies show that 90 percent of the income women receive can be used to meet their daily needs, ensuring the economic cycle delivers maximum benefits. To ensure effective supervision of program implementation, city governments are also mandated to form a School Feeding Council [Conselho de Alimentação Escolar – CAE]. The aim is to ensure transparency in community involvement [47]. In 2024, the program's implementation budget will reach R\$5.5 billion [48]. The table below shows the implementation process and subsidy mechanisms for the 4 countries studied.

Table 1
Implementation process and subsidy mechanisms for the 4 countries studied

Aspect	Indonesia (MBG)	China (NIPRCES)	Japan (Kyushoku)	Brazil (PNAE)
Beneficiaries	41,65 million students, pregnant women, and nursing mothers	37 million rural students aged 6 – 15 years	more than 10 million students	40 million students across all levels of education
Budget	2025 – Rp 99 trillion	2021 – 196,7 billion yuan	2025 - ¥510 million	2024 - R\$5,5 billion
Subsidy Mechanism	Direct subsidies from the central government and transfers to the regions.	Direct subsidies are provided by the central government; monitoring mechanisms are implemented digitally, and sanctions are enforced for violations.	Government and parental subsidies are implemented, with parents being asked to contribute one-third; specifically, students identified as unable to pay will be provided with free of charge services.	Transfer from the central government to the federal government and subsequently to the regional authorities; there exists a mandate for allocating 30% of food purchases to local farmers.
Health impact	This program possesses the potential to reduce stunting rates and enhance nutritional outcomes. At present, it is not possible to assess its impact, as the program is slated for implementation in 2025.	Increasing height and reducing malnutrition among beneficiaries.	Providing education about healthy eating habits to school children and reducing the risk of obesity.	Reducing the potential for obesity.

Based on the table above, in the Indonesian context, the program has reached a large number of beneficiaries in a relatively short period. To reach more than 30 million participants, Brazil and China took over 10 years. Indonesia is also quite bold with its subsidy mechanism, with the entire process managed by the government. As a result, the fiscal psychology for program funding has become unstable. Funding remains a challenge for implementing the MBG program. A study by the Task Force on Fiscal Policy for Health [49] states that if developing countries expand their tax base for alcohol, tobacco, and high-sugar beverages, the revenue of low- and middle-income countries can increase by 0.6-0.7 percent of GDP [50]. However, the Indonesian government has not made this move. Moreover, the process of utilizing local food, which is not mandatory for MBG implementation, has hindered economic benefits from reaching grassroots levels. The MBG is also suspected of causing price increases in traditional markets due to supply disruptions in certain chains to meet school lunch requirements [51]. This situation is worsened by the management of MBG kitchens, which is controlled by several parties with political influence.

The MBG intervention in Indonesia is seen as a promising way to help increase height. In Japan, after they started providing school lunches, there was a noticeable upward trend in height. Between 1945 and 1980, 17-year-olds grew taller, with men's average height rising from 165 cm to 170.7 cm, and women's from 153.7 cm to 157.9 cm. In Indonesia, the average height for males was only 161.6 cm in 1985, which increased to 166.3 cm by 2019. Similarly, women's heights grew from 150.1 cm to 154.4 cm during the same period [52]. With continued efforts through the MBG program, there is

hope that the rate of height increase can match what was seen in China, where heights grew by 4.2 cm and 4.1 cm over 15 years. This progress not only impacts physical growth but could also positively influence intelligence, given its connection to height and brain development.

4. Conclusions

In essence, school lunch programs began as charitable initiatives by individuals and religious or philanthropic organizations, before being adopted by governments. Throughout history, these programs have undergone three phases: (1) 1930-1940: launched in response to agricultural surpluses in several South American and European countries, as well as the United States; (2) 1960-1970 was marked by the establishment of the school lunches program as one of the basic policies of the U.N.'s World Food Program (WFP), which was disseminated throughout the world; (3) The 1990s was a period of shifting motivations, from market-based solutions (agricultural surplus) to child hunger solutions [27].

However, regardless of the circumstances, it is recognized that this program has changed the lives of many children and expanded their opportunities to access good nutrition. The implementation of the program can provide benefits that transcend traditional policy boundaries that often separate issues of food security, education, health, social protection, and access to social justice as mandated in the fifth principle of Pancasila when the program's products are applied in the Indonesian context. On the other hand, the program also has the potential to increase school participation rates and provide a social safety net for children who have tended to be secondary beneficiaries. Through the program's implementation, children become direct beneficiaries. However, it is acknowledged that the program's implementation may reduce other government spending allocations due to the relatively large amount of funds required. To that end, higher taxes on goods harmful to society, such as tobacco, alcohol, high-sugar, and ultra-processed foods, could be an alternative source of revenue.

Apart from fiscal improvements, the implementation of this program in the Indonesian context also requires improvements in terms of governance. The implementation of the MBG kitchens, which in some areas are still controlled mainly by certain "political elites," needs to be improved to ensure that economic benefits are distributed evenly and reach the grassroots. This includes assisting and monitoring the kitchens, as well as encouraging the presence of nutritionists in schools to help children's eating habits change through greater individual awareness.

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