

Economic Impact Comparison of the MBG Program on Students, Canteens, MSMEs Before–After

Septiana Dwi Nurmala^{1*}, Fridhia Nabilla Zahra², Alia Putri Fadhilah³, Dinda Juliana Putri, Margiyana Retno Wulan⁵, Tiya Marshanda Fahmi⁶

¹⁻⁶ *Economic Development, Faculty of Economic and Business University of Lampung, Bandar Lampung, Lampung, Indonesia*

*Corresponding author's e-mail: septianadwinurmala@gmail.com

ABSTRACT

This study aims to compare the economic impact of the Free Nutritious Meal Program (MBG) on students, school canteens, and nearby MSMEs before and after the program's implementation. The research was conducted at SMA Negeri 5 Bandar Lampung using a mixed-method approach, combining in-depth interviews with questionnaires distributed to students, canteen operators, and surrounding MSME owners. The findings show that the MBG program provides meaningful benefits to students by reducing their daily food expenses and improving access to nutritious meals, consistent with evidence indicating that MBG initiatives enhance students' nutritional adequacy (Merlinda & Yusuf, 2025). However, the program also generates economic pressure on school vendors and local MSMEs, as reflected in studies reporting a decline in canteen income following the introduction of free meal policies (Ariska et al., 2025). This phenomenon aligns with the concept of crowding-out in food assistance interventions, wherein government-provided meals reduce consumer demand for existing food providers (Ruffini et al., 2023). These findings highlight the need for a more inclusive policy design, such as integrating local MSMEs into the MBG supply chain or establishing school–MSME partnerships to support economic sustainability without undermining the program's primary goals.

Keywords: *MBG program, economic impact, students, school canteens, MSMEs.*

Introduction

Improving the quality of human resources is a central objective of national development, and one of its key foundations is the fulfillment of adequate nutrition among school-aged children. Proper nutrition plays a critical role in supporting students' physical health, cognitive development, and learning concentration, which ultimately influences long-term productivity (United Nations Children's Fund, 2019; World Health Organization, 2024). In response to this need, the Indonesian government has introduced the Free Nutritious Meals Program (Makan Bergizi Gratis/MBG) as a public policy intervention in the fields of education and food security to enhance children's nutritional quality and support human capital development (Kemendikdasmen, 2024)

The MBG Program is designed to provide healthy and nutritious meals in accordance with national nutrition standards, with the objective of improving students' learning outcomes. Based on the (Peraturan Presiden Republik Indonesia, 2024)

concerning the National Nutrition Agency, the program targets students at early childhood, primary, and secondary education levels across general, vocational, religious, special, and pesantren education, as well as children under five, pregnant women, and breastfeeding mothers. While the program primarily focuses on nutritional improvement among vulnerable groups, public policy implementation at the local level often generates broader socio-economic effects beyond its main beneficiaries (Dunn, 2017).

Within the school ecosystem, school canteens and surrounding micro, small, and medium enterprises (MSMEs) constitute local economic actors that are directly exposed to the implementation of the MBG Program. On the one hand, school feeding programs have been widely shown to improve students' nutritional status, attendance, and learning concentration (Food and Agriculture Organization of the United Nations, 2019). On the other hand, changes in food provision systems may affect the sustainability of school canteens and nearby MSMEs that depend heavily on students as their primary consumers (International Labour Office, 2015).

Several studies indicate that involving local MSMEs in the program's supply chain can generate positive economic multiplier effects, whereas centralized food provision may reduce income opportunities for small traders around schools (Institute for Development of Economics and Finance, 2024). This highlights the importance of incorporating local economic considerations into the design and evaluation of the MBG policy. However, empirical studies that simultaneously examine the impacts of the MBG Program on students, school canteens, and surrounding MSMEs particularly at the local level remain limited.

Therefore, this study is urgently needed to provide a more comprehensive understanding of the MBG Program's implementation. This research aims to analyze the impact of the Free Nutritious Meals Program on students, school canteens, and MSMEs in the school surrounding environment, focusing on the perceptions, responses, and changes in social and economic conditions experienced by each stakeholder.

Theoretical Framework and Hypothesis

The implementation of free meal programs in schools has been widely analyzed in prior studies, particularly concerning their effects on student welfare and learning outcomes. Research consistently shows that subsidized food interventions can reduce students' daily consumption expenses and improve access to nutritious meals, which in turn enhance concentration and learning performance (Merlinda & Yusuf, 2025). These findings provide a foundation for understanding the positive student-level outcomes observed in this study and highlight the relevance of nutritional support programs within the education sector.

From an economic perspective, the concept of the crowding-out effect explains how government-provided goods may reduce consumer demand for similar products offered by private or local vendors. When free meals are supplied directly by the state,

students' purchasing behavior shifts away from school canteens and nearby MSMEs, leading to decreased revenue for these businesses (Ruffini et al., 2023). This theoretical framework aligns with the declining sales patterns identified among canteen operators and micro-enterprises in the surrounding school environment.

Previous research on local economic ecosystems also emphasizes that policy interventions can generate unintended distributional effects. Studies examining food assistance programs show that while targeted beneficiaries receive direct welfare gains, small enterprises dependent on the same consumer base may face reduced demand and heightened competition (Hermawati et al., 2025). Such patterns suggest that school-level nutrition programs require complementary measures to minimize income displacement for local food vendors.

In the context of public policy analysis, Dunn's evaluation framework argues that policy effectiveness must be assessed not only through immediate outcomes but also through broader social and economic implications for all stakeholders involved (Dunn, 2015). Applying this perspective to the MBG program underscores the need to interpret student benefits alongside the pressures experienced by school canteens and nearby MSMEs. This theoretical lens reinforces the importance of designing inclusive implementation strategies that balance nutritional objectives with local economic sustainability.

Hypothesis 1: The Free Nutritious Meals (FFM) Program significantly reduces students' daily food expenses and improves their financial efficiency compared to the period before the program implementation.

Hypothesis 2: The MBG program has a significant positive impact on students' nutritional access, which is associated with increased learning readiness and concentration compared to pre-program conditions.

Hypothesis 3: The implementation of the MBG program significantly reduces daily income and the volume of buyers in school canteens and MSMEs due to reduced student purchasing activity.

Hypothesis 4: With the MBG program, business competition between MSMEs around schools has increased compared to conditions before the program.

Research Methods

Samples and sampling techniques

This study uses a mixed methods approach with a concurrent triangulation design, where qualitative and quantitative data are collected simultaneously to obtain a comprehensive picture of the impact of the Free Nutritional Meal Program (MBG) on students, school canteens, and MSMEs around the school. The choice of this approach is based on the need to combine objective findings based on quantitative measurements with in-depth understanding from stakeholders' perspectives through qualitative data. The study was conducted at SMAN 5 Bandar Lampung in the period month November 2025, which was chosen because it is a school that has implemented the MBG Program since

January 2025, has an actively operating canteen, and is located in an environment with MSMEs within a 500-meter radius, allowing direct observation of the economic impact.

The study population comprised three main groups: students receiving the MBG program, school canteen managers, and MSMEs operating in the school's vicinity. Qualitative data collection used purposive sampling to ensure that interview respondents were directly relevant to MBG implementation. Quantitative data were collected through stratified random sampling to ensure equitable representation across all respondent groups. A total of 44 respondents participated, comprising 32 students, 6 canteen managers, and 6 MSMEs.

Data were collected through in-depth interviews and questionnaires. Semi-structured interviews were conducted with canteen managers, MSMEs, and several students to explore perceptions, experiences, and changes in conditions after the MBG implementation, including the phenomenon of crowding-out in the canteen, pressures or opportunities for MSMEs, and student perceptions regarding nutrition and learning concentration. Interviews were recorded with the respondents' consent and transcribed verbatim for further analysis. The questionnaire was prepared in a before-after format to measure changes in conditions before and after the program, including aspects of student satisfaction with nutrition and learning concentration, changes in turnover and the number of canteen and MSME transactions, and adjustments to business strategies. The questionnaire instrument was prepared using a Likert scale of 1–5 and has undergone validity testing using Pearson correlation and reliability testing using Cronbach's Alpha with coefficient results above 0.70, thus being declared valid and reliable.

Qualitative data were analyzed using theory-based thematic analysis, starting from the transcription process, coding, grouping codes into themes, and interpreting findings based on the theoretical framework used in the study, namely Dunn's public policy analysis, Weber's conflict theory, Durkheim's educational functionalism perspective, and Teun A. van Dijk's critical discourse analysis. This thematic analysis was then triangulated with quantitative results to increase the accuracy and credibility of the findings. Quantitative data were analyzed using descriptive statistics in the form of frequency, percentage, mean, and standard deviation, as well as inferential tests in the form of paired sample t-tests for normally distributed data and Wilcoxon signed-rank tests for non-normally distributed data. This test was conducted to assess changes in the conditions of students, canteens, and MSMEs before and after the program implementation according to the research hypothesis.

Data validity was maintained through source triangulation, method triangulation, member checking with several key respondents, and consultation and discussion with supervisors and fellow researchers to reduce interpretive bias. This study also adhered to ethical research principles by obtaining informed consent from all respondents, ensuring data anonymity and confidentiality, and allowing respondents the freedom to withdraw at any time without consequence.

Result and Discussion

Student Demographic Characteristics

Before analyzing the impact of the Free Nutritious Meal Program (MBG), it is important to describe the demographic characteristics of student respondents at SMAN 5 Bandar Lampung. These characteristics provide initial context regarding students' economic capacity and program coverage.

Table 1. Demographic Characteristics of Students (n = 32)

Variable	Category	Frequency	Percent (%)
Gender	Male	10	31.3
	Female	22	68.8
Average Daily Pocket Money (IDR)	< 10,000	6	18.8
	10,000 – 30,000	19	59.4
	30,000 – 50,000	4	12.5
	> 50,000	3	9.4
MBG Recipient Status	Yes	32	100

The data show that female students dominated the sample, accounting for 68.8% of respondents. Most students (59.4%) received daily pocket money between IDR 10,000–30,000, indicating a moderate level of daily consumption capacity. Importantly, all respondents confirmed receiving MBG, indicating full program coverage and equitable implementation. This aligns with (Kemendikdasmen, 2025) which emphasizes equal access to nutritional interventions for all students.

Economic Impact of MBG on Students

To improve clarity, students' perceptions of MBG's economic benefits are presented in a single table summarizing three key indicators: reduction in food expenditure, savings behavior, and allocation for priority needs.

Table 2. Students' Perceptions of the Economic Impact of MBG

Statement	Agree (%)	Strongly Agree (%)	Neutral (%)
MBG reduces daily food costs	25	56.3	18.8
MBG helps students save pocket money	34.4	56.3	9.4
MBG helps allocate funds for priority needs	15.6	21.9	62.5

The results indicate that MBG has a significant positive economic impact on students. More than 80% of respondents agreed or strongly agreed that MBG reduced daily food expenditure, while over 90% stated that the program helped them manage pocket money more efficiently and save. Although perceptions regarding allocation for

priority needs were mostly neutral, no respondents expressed disagreement, suggesting that MBG indirectly eases household financial pressure.

These findings confirm that MBG functions not only as a nutritional intervention but also as a consumption-smoothing mechanism for students and their families. This supports (Basit & Ramadani, 2025), who argue that free meal programs reduce daily consumption burdens and allow households to reallocate resources toward education, savings, or other essential needs.

MSMEs Characteristic

Understanding MSME characteristics is essential because their dependence on student consumers determines their vulnerability to MBG implementation.

Table 3. Characteristics of MSMEs Respondents (n = 6)

Variable	Category	Frequency
Owner Gender	Male	4
	Female	2
Type of Business	Food	4
	Drink	2
Main Buyer	Students	6
Sales Condition After MBG	Stable	2
	Decline	4
Daily Profit (IDR)	100,000 – 300,000	3
	400,000 – 600,000	2
	700,000 – 1,000,000	1
Labor Force	1 worker	6

The MSMEs are small-scale, labor-intensive businesses that rely entirely on students as their main consumers. Most respondents reported declining sales after MBG implementation, indicating high exposure to changes in student consumption patterns. This finding is consistent with (Hermawati et al., 2025; Widyasari et al., 2025), who note that MSMEs around schools are particularly vulnerable when external food programs reduce student demand.

Economic Impact of MBG on MSMEs

Table 4. MSMEs' Perceptions of Income Change and Competition After MBG

Indicator	Disagree (%)	Neutral (%)	Agree (%)
Daily income increased	66.6	33.3	0
Business competition increased	0	0	100

The data show that MSMEs did not experience income growth after MBG implementation. All respondents either disagreed or were neutral regarding income improvement, and none agreed that their income increased. Conversely, all MSMEs reported increased business competition. This suggests that MBG reduced student demand for MSME products and intensified competition among vendors for fewer buyers.

These findings reinforce previous evidence that school feeding programs can negatively affect informal food vendors when MSMEs are not integrated into the program's supply chain (Hermawati et al., 2025; Widyasari et al., 2025).

Economic Impact of MBG on School Canteens

To highlight changes more clearly, school canteen conditions before and after MBG are presented in a comparative format.

Table 5. School Canteen Economic Conditions Before and After MBG (n = 6)

Indicator	Before MBG	After MBG
Daily Profit (IDR)	Mostly 600,000–1,000,000	Mostly < 500,000
Number of Workers	1–3 workers	Mostly 1 worker
Average Daily Buyers	Up to 150 buyers	Sharp decline

Before the implementation of the MBG program, school canteens experienced stable student demand, relatively high daily profits, and adequate labor utilization. Following MBG implementation, canteen revenues declined markedly, accompanied by reductions in labor demand and customer volume. This shift indicates that MBG has significantly transformed the school food ecosystem by redirecting student consumption from paid canteen purchases to free meal provision.

These findings are consistent with (Hermawati et al., 2025), who report that school feeding programs can reduce both revenue and employment levels among existing school food vendors.

MBG, Digital Transformation, and Global Uncertainty

Beyond its direct nutritional and economic impacts, the findings of this study are also relevant to the broader agenda of digital transformation and increasing global uncertainty. The implementation of the Free Nutritious Meal Program (MBG) requires accurate beneficiary targeting, inter-agency coordination, monitoring of food distribution, and quality control, all of which can be strengthened through digital governance systems and integrated data platforms. Digitalization in public service delivery has been widely recognized as a key mechanism to improve efficiency, transparency, and accountability in large-scale social assistance programs (OECD, 2023; World Bank, 2021).

Moreover, escalating global uncertainty reflected in food price volatility, macroeconomic instability, climate-related shocks, and disruptions in global and domestic supply chains poses increasing risks to household food security and the sustainability of local economic actors, particularly in developing countries (FAO et al., 2025; World Bank, 2025). Rising input costs and fluctuating food availability can directly affect small-scale food vendors and MSMEs operating around schools, whose business models depend heavily on daily student consumption. In this context, the MBG program functions as a stabilizing social protection instrument that helps secure students' access to adequate nutrition during periods of economic uncertainty and external shocks.

However, the findings of this study indicate that without careful and inclusive policy design, large-scale public food provision may unintentionally redistribute economic risks to school canteens and surrounding MSMEs. Centralized food procurement and standardized meal distribution, if not accompanied by mechanisms that integrate local vendors into the supply chain, can weaken local economic resilience and reduce employment opportunities. Therefore, aligning MBG implementation with strategies that strengthen local participation and adaptive capacity is essential to ensure that nutritional objectives are achieved alongside sustainable local economic development under conditions of global uncertainty.

Conclusion, Implications, Suggestions, and Limitations

This study demonstrates that the Free Nutritious Meal Program (MBG) produces a dual economic impact within the school ecosystem, thereby contributing not only to policy evaluation but also to broader theoretical discussions on public intervention and local market dynamics. For students, MBG significantly reduces daily food expenditure, increases savings opportunities, and enables households to reallocate resources toward other essential needs. These outcomes reinforce human capital theory, which emphasizes nutrition as a foundational input for cognitive development, learning concentration, and long-term productivity. In this regard, MBG effectively fulfills its core objective of improving nutritional adequacy as a means of strengthening future human resources.

Conversely, the program generates adverse economic effects for school canteens and surrounding MSMEs, reflected in declining daily income, reduced buyer volume, and increased competitive pressure. From a theoretical perspective, this finding aligns with the crowding-out effect in public economics, where government provision of goods can partially or fully displace private market activity. The results also resonate with policy implementation theory, which emphasizes that centralized procurement and standardized distribution mechanisms such as those embedded in MBG can unintentionally marginalize local actors if complementary inclusion strategies are absent. As noted by (Ariska et al., 2025), although their study focuses on human resource and logistical planning, the institutional design they describe helps explain the income contraction experienced by canteens and MSMEs in this study. Thus, this research contributes

theoretically by illustrating how well-intentioned social policies may generate distributional trade-offs within localized microeconomic systems.

The findings further contribute to development economics literature by highlighting the interaction between social protection policies and informal or semi-formal local economies. While MBG succeeds in achieving nutritional targets, it simultaneously alters consumption patterns and reshapes school-level food markets. This underscores the importance of viewing school feeding programs not only as welfare interventions but also as market-shaping instruments that influence livelihoods and local economic resilience. Therefore, this study extends existing frameworks by integrating human capital formation with local economic sustainability in the analysis of public food programs.

From a policy implication perspective, the results emphasize the need for public nutrition programs to balance social welfare objectives with the economic sustainability of local micro-enterprises. The observed crowding-out effect suggests that school-level policy implementation can significantly reshape market behavior and affect the livelihoods of small vendors. If appropriately designed, MBG holds the potential to generate positive multiplier effects by integrating MSMEs into its supply chain, thereby transforming potential displacement into inclusive growth. An implementation model that actively involves local food providers would enhance policy coherence between nutrition, education, and local economic development.

Based on these findings, stronger collaboration among schools, local governments, and MSMEs is recommended to ensure that MBG benefits all stakeholders. Practical strategies may include sourcing selected food components from MSMEs, implementing rotational vendor participation schemes, or redefining the role of school canteens to complement rather than directly compete with MBG meals. Schools may also facilitate vendor adaptation by supporting product diversification and disseminating information on changing student consumption patterns. At the policy level, partnership or compensation mechanisms could be introduced to mitigate long-term income losses among school-based vendors, thereby strengthening local economic resilience alongside nutritional improvements.

This study is subject to several limitations. The relatively small sample size, particularly among canteen operators and MSME respondents, may limit the generalizability of the findings. The focus on a single school environment also restricts the ability to capture regional variation in socioeconomic conditions and MBG implementation models. Additionally, reliance on before–after perceptions and self-reported data introduces potential response bias. Future research should expand the sample scope, adopt longitudinal designs, and incorporate quantitative economic modeling to estimate multiplier effects and welfare trade-offs associated with integrating MSMEs into public food program supply chains.

BIBLIOGRAPHY

- Ariska, H. T., Faisol, A., & Nugroho, P. A. (2025). Optimization of Human Resource Planning to Support the Free Nutritional Meal Program in Order to Achieve a Strong National Defense. *Journal of Industrial Engineering & Management Research*, 6(6), 21–26. <https://doi.org/10.7777/jiemar.v6i6.652>
- Basit, M., & Ramadani, H. (2025). Analisis Implementasi Program Makan Bergizi Gratis Terhadap Perkembangan Ekonomi. *Journal of Economics Development Research*, 1(2), 49–54. <https://doi.org/https://doi.org/10.71094/joeder.v1i2.105>
- Dunn, W. N. (2017). *Public Policy Analysis: An Integrated Approach* (6th ed.). <https://doi.org/https://doi.org/10.4324/9781315181226>
- FAO, IFAD, UNICEF, WFP, & WHO. (2025). *Food Security And Nutrition In The World*. <https://doi.org/https://doi.org/10.4060/cd6008en>
- Food and Agriculture Organization of the United Nations. (2019). *School Feeding and Possibilities For Direct Purchased From Family Farming*. <https://www.fao.org/3/i3413e/i3413e.pdf>
- Hermawati, L., Nur, M., Abdullah, A., & Rizaldi, M. R. (2025). Dampak Kebijakan Makan Bergizi Gratis Pada Pedagang Kantin: Sebuah Analisis Teori Konflik Max Weber. *Jurnal Ilmiah Wahana Pendidikan* 11, 155–160. <https://doi.org/10.59246/muqaddimah.v4i1.1817>
- Institute for Development of Economics and Finance. (2024). *Efek Pengganda Program Makan Bergizi Gratis*.
- International Labour Office. (2015). *Small And Medium-Sized Enterprises And Decent And Productive Employment Creation*. In International Labour Conference. Report IV. http://www.ilo.org/wcmsp5/groups/public/@ed_norm/@relconf/documents/meetingdocument/wcms_358294.pdf
- Kemendikdasmen. (2024). *Pedoman Makan Bergizi Gratis (MBG)*.
- Kemendikdasmen. (2025). *Program MBG; Langkah Strategis Pemenuhan Gizi dan Penguatan Karakter Siswa*.
- Merlinda, A. A., & Yusuf, Y. (2025). Analisis Program Makan Gratis Prabowo Subianto Terhadap Strategi Peningkatan Motivasi Belajar Siswa di Sekolah Tinjauan dari Perspektif Sosiologi Pendidikan. *Ranah Research : Journal of Multidisciplinary Research and Development*, 7(2), 1364–1373. <https://doi.org/10.38035/rj.v7i2.1360>
- OECD. (2023). *OECD Digital Government Index*.
- Peraturan Presiden Republik Indonesia. (2024). *Perpres No. 83 Tahun 2024*. 211799.
- Ruffini, K., Öztürk, O., & Pekgün, P. (2023). In-Kind Government Assistance and Crowd-Out of Charitable Services : Evidence from Free School Meals. *Journal of Public Economics*. <https://doi.org/10.1016/j.jpubeco.2025.105391>
- United Nations Children’s Fund. (2019). *The state of the world’s children 2019: Children, food and nutrition*. <https://www.unicef.org/reports/state-of-worlds-children-2019>

- Widyasari, S. Y., Larasati, A., & Alam, W. Y. (2025). Evaluasi Kebijakan Makan Bergizi Gratis di Sekolah Dasar: Implikasi Terhadap Kesehatan Anak dan Pemberdayaan Ekonomi Lokal. *Innovative: Journal Of Social Science Research*, 5(4), 1727–1736.
- World Bank. (2021). *Data For Bites Lives*. International Bank for Reconstruction and Development .
- World Bank. (2025). *Global Economic Prospects* (Issue June). <https://doi.org/10.1596/978-1-4648-2193-6>
- World Health Organization. (2024). *Malnutrition*. <https://www.who.int/news-room/fact-sheets/detail/malnutrition>