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Food assistance programs in China

Evolution, impact, global lessons

Fan Shenggen, Ding Xinyue and Wang Jingjing

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About the authors

FAN Shenggen is currently Chair Professor and Dean of the Academy of Global Food Economics and Policy (AGFEP) at China Agricultural University (CAU). Prior to joining CAU, he served as Director General of the International Food Policy Research Institute (IFPRI) from 2009 to 2019. He has led and conducted substantial research on public investment, food and nutrition security, poverty reduction, and food systems transformation. He is awarded as a Fellow of the Agricultural and Applied Economics Association (AAEA) and an Honorary Life Member of the International Association of Agricultural Economists (IAAE).

DING Xinyue is a postdoctoral researcher at the Academy of Global Food Economics and Policy (AGFEP), China Agricultural University (CAU). Her research focuses on the impact of nutrition, dietary structure, and nutrition-related chronic diseases, particularly obesity, on children. Her research has been published in *Applied Economic Perspectives and Policy*, *International Journal of Social Welfare*, and *Biomedical and Environmental Sciences*.

WANG Jingjing is an Associate Professor in the College of Economics and Management at China Agricultural University and a Researcher at the Academy of Global Food Economics and Policy (AGFEP). Her research focuses on food and consumer economics and dietary transition in China, particularly on investigating effective interventions to promote healthy and sustainable eating habits and measuring the impacts of such transitions. Her research has been published in academic journals such as *Applied Economics Perspectives and Policy*, *China Economic Review*, and *Canadian Journal of Agricultural Economics*.

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Sino-German Agricultural Centre (DCZ)
Room 201, Foreign Economic Cooperation Centre (FECC) of MARA
55 Nongzhan Beilu, Chaoyang District
100125 Beijing, China

T +86 (0) 10 6500 0958

E info-dcz@iacleipzig.de

W www.dcz-china.org

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KEY MESSAGES

- China eliminated extreme poverty and hunger through agricultural reforms, targeted food assistance programs, and social safety nets.
- The country now faces challenges like the “double burden” of malnutrition, requiring more targeted and sustainable food assistance policies.
- China's experiences and phased strategies offer valuable lessons for global efforts like the G20 Global Alliance against Hunger and Poverty and the UN's Right to Food concept.

Introduction

China eliminated both extreme poverty and hunger in 2020, as declared by the government (Gov.cn, 2021). This success was largely due to agricultural and rural reforms, poverty alleviation strategies, and food assistance programs specifically targeted to poor regions, communities, households, and individuals, particularly children. Agricultural and rural reforms eliminated large-scale poverty and hunger in the 1980s and 1990s, while more targeted programs were used to tackle the remaining poverty, hunger, and malnutrition after 2000.

But China is currently facing new challenges. The “double burden” of malnutrition, characterized by persistent micronutrient deficiencies (the so-called hidden hunger) and rising overweight and obesity, has led to a rapid increase of noncommunicable diseases and related health cost as well as the potential loss of human capital and productivity. Food and nutrition insecurity is largely concentrated in vulnerable groups like children, females, the elderly, and low-income populations.

Food assistance programs such as cash transfers, subsidized food distribution, food-for-work, school feeding, etc. can help improve food access and utilization for many underserved populations (Barrett, 2002; Bitler and Seifoddini, 2019). China has already implemented targeted

interventions, such as the **Student Milk Program**, the **Nutritional Improvement Program for Rural Students**, and the **Nutrition Package for Children**. While not directly focused on food assistance, China has also established social safety net programs, such as **Dibao**, a minimum livelihood guarantee system providing cash transfers to low-income households. Dibao, one of the largest such programs in the world, serves as a social safety net ensuring basic needs, including food security. These programs

contribute to mitigating food insecurity by addressing socioeconomic issues that can hinder access to adequate nutrition.

China's food assistance programs (FAPs) can also be contextualized within the United Nations' concept of the **Right to Food**, which emphasizes access to adequate and nutritious food for all. China's programs reflect this principle by ensuring vulnerable populations are being supported through reforming agricultural and rural development policies, poverty and hunger reduction programs, and initiatives such as school feeding programs, nutrition packages, and social safety nets. These efforts align with the UN's recognition of food as a basic human right, fostering equitable access to nutrition and addressing systemic barriers to food security. **By integrating rights-based approaches into policy, China has improved its food security while contributing to broader development goals.**

This policy brief reviews existing FAPs in China, assesses experiences and lessons from other countries, and explores their potential to further improve food and nutrition security in China. The brief also discusses how China can contribute to the recently launched **G20 Global Alliance against Hunger and Poverty** and the sustainable transformation of food systems.

Major food assistance programs in China

Agricultural and rural reforms

Although they are not labelled as food assistance programs, China's agricultural and rural reforms initiated in the late 1970s have led to a large reduction in poverty, hunger, and malnutrition by raising incomes and increasing food accessibility. The initial reform, focused on allocating land users' rights to farmers, led to rapid growth in agricultural productivity (6.6% annual increase in production and 6.1% in productivity, from 1978 to 1984) and significant poverty and hunger reduction. The development of the rural nonfarm sector and rural-urban migration by allowing movement of population further eliminated large-scale poverty (the poverty rate decreased from 96% to 49.8% in 2000, according to the World Bank, 2021). While these strategies successfully eliminated large-scale poverty and hunger, they provided limited benefits to the most isolated poor and did not adequately address hunger and malnutrition.

Consequently, the government introduced poverty alleviation agendas focusing on poverty-stricken villages through a system of subsistence allowance and fostering rural-urban migration to reduce the rural-urban poverty gap. Along with subsequent "targeted and precise poverty alleviation", **comprehensive poverty alleviation methods** (social protection, employment, relocation/migration, asset income, etc.) and a raising of the poverty line significantly reduced poverty. Undernourishment prevalence declined, dropping from 10.1% in 2000 to below 2.5% by 2010 (Faostat, 2025).

The **Food for Work Program**, initiated as early as the 1980s, helped providing food in less developed regions to build infrastructure like irrigation and rural roads. Since 2000, China has refined its approach to focus on more targeted food assistance programs. Key initiatives include the **Student Milk Program (SMP)** that began in

2000, the **Nutrition Improvement Program for Rural Compulsory Education Students (NIPRCES)** initiated in 2011, and the **Children's Nutrition Pack or Ying Yang Bao (YYB)** introduced in 2001. In recent years, China's approach to food assistance has further diversified, with the private sector and NGOs playing an increasingly active role. Notably, programs like **food banks** play active roles in providing food support to disadvantaged groups while reducing food waste.

The Student Milk Program (SMP)

China's **Student Milk Program (SMP)**, launched in 2000 by several government ministries (Agriculture, Education, and five other ministries), aims to increase schoolchildren's milk consumption. Student participation is voluntary through educational campaigns, and the government mandates prices to be just above the cost, ensuring affordability compared to similar market products. Over the last two decades, the national SMP has reached all provinces, benefiting 30 million students across 66,000 schools (Gmw.cn, 2023).

The evidence has shown that SMP significantly increases the growth in height and weight of participating students over a period of 6 months to 2 years. Primary students in the intervention group demonstrated height increases of 1cm to 1.7cm compared to controls, and secondary students in the intervention group experienced height gains of 1.5cm to 1.9cm and weight increase of 1.3kg to 2kg (Liu et al. 2002; Du et al. 2004; Hu et al. 2010; Yin et al. 2011). The program also effectively improved anemia among secondary students, with hemoglobin concentrations rising by 1.4g/L to 2.1g/L and anemia rates decreasing by 6.2% (Liu et al. 2002; Hu et al. 2010; Yin et al. 2011).

Ying Yang Bao (YYB)

China's **YYB Project**, launched in 2001, is designed to improve the nutritional status of infants and toddlers in rural areas. It is a soybean powder-based complementary food supplement

enriched with multiple vitamins, including vitamin A, D, B1, B2, and B6, and essential micronutrients such as folic acid, calcium, iron, and zinc. The YYB Project provides a nutritional supplement package to rural children under two years old, aiming to combat stunting and anemia through fortified complementary foods. By the end of 2018, the program covered 715 nationally impoverished counties across 21 provinces (regions, municipalities), benefiting a cumulative total of 7.22 million children. The central government has invested approximately 2.8 billion yuan in total funds.

Evaluations have demonstrated significant improvements in children's height, weight, and anemia reduction among those aged 4 to 24 months. Wang et al. (2007) reported higher hemoglobin levels and Height-for-Age Z (HAZ) scores in children who received 24 months of intervention, suggesting a reduced risk of anemia and stunting, both of which are critical for better physical and cognitive development. Huo and Chen (2015) further emphasize the program's effectiveness, observing a substantial decrease in anemia rates (from 35% to 8.2%), improved age-specific height and weight Z scores, and a higher development quotient (from 95.5 to 97.2) among children receiving YYB treatment compared to the control group.

Nutrition Improvement Program for Rural Compulsory Education Students (NIPRCES)

China's NIPRCES, or **school meal program**, is a national scheme that improves the nutrition and health of rural compulsory education students through government financial support. To promote the further development of rural education and achieve educational equity, the central government has steadily increased its investment in the program over the past decades. Initially set at 3 yuan per student per day, the subsidy has been progressively increased to 5 yuan by 2021, equivalent to 3.99 yuan in 2011 adjusted price.

Besides funding nutritious meals for students in compulsory education, the program also focuses on constructing and upgrading student canteens to provide safe and nutritious meals. As of 2021, NIPRCES covered 1,552 counties in 28 provinces, benefiting about 37.9 million students annually, with a cumulative central government investment of 196.7 billion yuan, excluding other subsidies and school canteen construction expenses (Gov.cn. 2021).

Research indicates that students who participated in the NIPRCES program showed significant improvements in physical development and mental health compared to non-participants. Post-implementation, growth development measured by the Height-for-Age Z-score (HAZ) increased by 0.22 to 0.45 standard deviations (SD), cognitive abilities by 0.337 to 2.497 SD, and math test scores by 0.195 to 1.105 SD. In addition, psychological health improvements were noted, with a 7.2 percentage point increase in reporting good health and a significant reduction in negative emotions by 0.112 SD (Wang et al., 2023; Fang and Zhu 2022; Wang and Cheng, 2022).

Affordable Food Shops (AFS) in Nanjing: Program overview and impact evaluation

The **Affordable Food Shops (AFS) program** was launched in 2011 by the central government to stabilize urban food prices through subsidies to food retailers. The program aimed to make basic food items, including vegetables, fruits, and staple goods more affordable for low-income urban residents. In Nanjing, the program's implementation involved annual fiscal expenditures of around 8 to 11 million RMB between 2015 and 2019. The program provided financial support for food stores through tax exemptions, reduced utility costs, and direct subsidies for store setup and operation. For example, Nanjing's establishment subsidy was 100,000 RMB per store, while the operational subsidy averaged 55,000 RMB annually (Zhong et al., 2023).

The program targeted high-traffic areas with significant low-income populations. Participating

stores were required to offer at least 15 types of vegetables and maintain a minimum store size of 50 square meters. Additionally, pricing regulations stipulated that vegetables and fruits must be priced 15% lower than the market, while other essential foods like grains, oil, and meat, were subject to a 5% price reduction.

Despite rapid growth in store numbers, with 91% of shops being privately owned by individual entrepreneurs, the program had limited success. From 2011 to 2018, Nanjing consumers saved approximately 420 million RMB, but per capita savings were modest—around 46 RMB per person annually, which accounted for only 0.8% of the average annual food expenditure. The program faced challenges such as limited impact on food insecurity, poor targeting of subsidies, competition from supermarkets, and varying subsidy levels across cities. Consequently, the program was discontinued in early 2020.

Food assistance under emergency

China's **disaster response system**, initially focused on natural disasters like earthquakes, has evolved since the SARS outbreak in 2002 and the Wenchuan earthquake in 2008 to encompass various emergencies. It now includes inter-organizational collaboration, rapid response efforts, and distribution of essential supplies, which are crucial in minimizing disaster impact on communities (Hu et al., 2021).

While studies evaluating the effectiveness of emergency assistance in China are still scarce, the country adopted **digital coupons** during the pandemic. Since March 2020, over 200 cities in 31 provinces implemented multiple waves of government-issued digital coupons to ensure food security, local employment, and economy stability (Lin et al., 2020). These coupons, mostly small-valued and often taking the form of conditional discount (e.g. “spend RMB 40, get RMB 10”) primarily targeted the food and catering (93%) and the travel (64%) sectors (Lin et al., 2020; Xing et al., 2023). Notably, food and catering accounted for 70% of redeemed coupons,

suggesting positive effects on the food industry (Lin et al., 2020). Studies using Alipay data show evidence of high effectiveness in stimulating consumption, with government subsidies leading to a multiplier effect (Liu et al., 2021; Xing et al., 2023). Half of the coupon effect impacted daily consumption like food and beverages (Liu et al., 2021).

Food assistance supported by the private sector and NGOs

Public assistance programs, while crucial, may not fully address food insecurity for all vulnerable populations. **Private food assistance programs** play a complementary role by filling gaps in coverage and eligibility. The **Oasis Food Bank**, a pioneering charity food bank, serves as a prime example in China. Established as the first non-government-led food assistance initiative in China, **it collaborates with supermarkets and food companies to collect surplus food for distribution to vulnerable populations.**

From 2014 to 2021, the Oasis Food Bank has significantly expanded its operations, collecting surplus food from 312 donors and distributing it to 360 non-profit organizations across the nation, thus supporting nearly 1.25 million people. This has contributed to substantial **waste reduction** and provided essential food aid at no cost. Driven by the introduction of anti-food waste legislation and growing social awareness, this innovative model collected a total of 15.51 million yuan in 2021.

Oasis Food Bank also provides targeted support to households facing challenges due to illness or disability by providing food packages containing staples and donated items like milk powder and honey (valued at approximately 120 RMB/month). In 2021 alone, monthly food packages were distributed to 228 households. To further enhance its reach and efficiency, Oasis Food Bank launched a Taobao store and introduced a mobile food bank program in Shanghai (serving 30 community sites monthly, potentially helping

an additional 10,000 people) in 2023 (Oasis Food Bank, 2023).

How China's FAPs can learn from other countries?

Many countries including both developed and developing countries have implemented various types of food assistance programs. These different forms of assistance may provide important lessons for China.

Direct food distribution programs, also known as in-kind food distribution, are designed to provide free food to individuals or families in need. Alternatively, **food vouchers or stamps** can be redeemed for food at designated retailers. The U.S. SNAP program is a typical such program. In China, the food rationing system through coupons was implemented between the 1950s to 1990s to provide affordable food for urban residents as part of the industrialization strategy. The rationing system was abolished in the early 1990s as part of market reform. Today, China does not have such a national program to distribute food directly to the poor. The only exceptions are the "Grain and Oil Stamp/Card" program implemented in Shanghai and emergency reliefs that also distribute food in addition to providing shelters and other aids. A study by the Academy of Global Food Economics and Policy (AGFEP, 2023) shows that if China implements direct food distribution, particularly of more nutritious food such as fruits and vegetables, the cost effectiveness in reducing hidden hunger or micronutrients could be very high.

China today provides **support for grain production**, mainly through outprice support. Evidence shows, however, that these subsidies can potentially jeopardize environmental sustainability and may not necessarily confer advantages to the producers (AGFEP et al., 2022). It may also distort the market and is not consistent with WTO rules.

These subsidies need to be repurposed to support more nutritious food production, for example fruits and vegetables, and provide direct

food distribution to the people in need as discussed above. A study also shows that both smallholder producers and poor consumers can benefit from this policy change (AGFEP 2023). The reform of the EU's Common Agricultural Policy (CAP) can provide an important lesson for China. The CAP reform converted production subsidies to funds for improving infrastructure, the environment, and farmers' well-being.

China also implements one of the largest social protection programs in the world, the **Rural Dibao**. The program began in 2014 and provides cash benefits to over 29 million households and 53 million individuals. The principal aim of the Dibao program is to mitigate poverty, ameliorate the living standards of rural inhabitants, and ensure adequate food accessibility. However, the link between Dibao and the enhancement of food and nutrition security through improved diets needs further exploration.

China could also learn from other countries about integrated FAPs and targeted programs. **Integrating FAPs with complementary interventions, such as education and capacity building programs**, has proven highly successful in improving the growth and reducing anemia rates of low-income, rural infants and children, as seen in programs like Mexico's Conditional Cash Transfers program and Brazil's Zero Hunger initiative (Parker and Todd, 2017). While general FAPs form the foundation for tackling food insecurity, **targeted programs are critical for specific demographics (children, women, elderly) facing amplified vulnerability**. Children, in particular, are a key target group as even modest investments in their nutrition can have far-reaching positive impacts on their health and well-being. Many countries have adopted maternal and child health and nutrition programs targeting vulnerable populations like pregnant women and children under five to combat malnutrition. Programs like the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) in the U.S. and the Healthy Start scheme in the U.K., which distributes vouchers for specified

healthful meals to low-income pregnant/post-partum women, infants, and children, have successfully improved the nutritious dietary intake of households without altering their food expenditures.

How China's lessons could contribute to the G20 Global Alliance against Hunger and Poverty and the Food System Transformation Agenda

Under Brazil's presidency, **G20 launched the Global Alliance against Hunger and Poverty** in 2024 with the mission to facilitate mobilization and enhance alignment between national and international support, including public and private financial resources, as well as knowledge-sharing to enable the large-scale implementation of evidence-based policy instruments and programs, led by and owned by countries, centered around those most affected by extreme poverty, hunger, and people in vulnerable contexts (Global Alliance, 2024).

China's experience and lessons could be particularly useful for the Alliance mission. **One of the biggest lessons from China is a well sequenced and prioritized strategy with three distinct phases.** The first phase is marked by rapid agricultural growth due to the reform of the agriculture and rural sector, including the introduction of the household production responsibility system and price/market reforms. Smallholder-led agriculture growth in land scarce countries often has the largest impact on poverty and hunger reduction. This growth also provides a foundation for the overall economy to take off.

The second phase is the development of rural enterprises and the diversification of economic activities in rural areas. Nonfarm employment and rural-urban migration must follow once

agricultural productivity has reached a certain level. Pre-mature exiting from agriculture can do more harm. The African experience has clearly shown that without high agricultural productivity, premature migration to nonfarm and urban sectors compromises regional food security and nutrition, and rural migrants remain stuck in a poverty trap (Djurfeldt 2015). Rural-urban migration works in reducing poverty only when nonfarm and urban sectors can provide decent jobs (Haggblade, Hazell, and Reardon, 2010).

The third phase focuses more on antipoverty and food assistance programs to target poor regions, communities, households, and individuals. Even before large-scale poverty reduction through sectoral and regional development is exhausted, social safety nets must be established to cover those who have not benefited from growth and development. Productive social safety nets such as food for work programs helped millions of poor people increase income and ensure their access to food. In many western regions in China, these programs were also instrumental in building rural infrastructure like irrigation and rural roads and in conserving and protecting natural resources.

Another lesson from China's experience is the extensive social protection coverage it has achieved. Despite national and international efforts, the majority of the poor in developing countries are not under any social protection schemes (less than 15%, according to the World Bank). The Dibao program in China, a minimum livelihood guarantee system, has been the government's response with great potential to address the new challenges of social protection in a more market-based economy since 2007. Furthermore, the effective implementation of emergency programs under COVID-19 and natural disasters, facilitated by improved internet connectivity and the application of digital IDs, has proven successful in delivering essential goods like foods, medicines, and other necessities to the poorest segments of society.

Thirdly, Chinese FAPs have a strong focus on children. Most of the programs after 2000 are all related to improving infants, pre-school and school children's education, nutrition, and health.

Recognizing the critical role of early childhood nutrition in future human and economic development, China has gradually improved both coverage and quality of school meals. This has significant effects on school children's academic performance and health. Countries in Africa, South Asia, and Latin America could learn from the Chinese experience to increase their investments in school feeding programs.

Fourth, China fully embraced digital technologies to enhance the targeting and reach of poor and malnourished populations. The digital tools used during COVID-19 are a notable case. Since person-to-person contacts were not allowed, internet platforms and community chat groups facilitated food flows efficiently and effectively. The widespread adoption of digital payment platforms, online food delivery services, and telehealth demonstrate the potential of data-driven programs to effectively deliver foods and necessities to targeted populations in a timely manner.

Finally, the food systems concept has been used and mainstreamed to the design of FAPs. **Food provided for school meals must meet nutrition and health standards and must also be sourced sustainably.** Although nutritionists are actively involved in school meal planning, the sustainability of food sources is not always fully integrated. Incorporating school gardens and locally produced food sources can enhance sustainability and provide valuable opportunities for food education. The Brazilian school feeding program serves as a prominent example of how supply programs can contribute to the sustainable transformation of food systems. By prioritizing locally produced goods from family farms and fostering strong relationships between school managers, family farms, and farmers' organizations, this program demonstrates a successful model for integrating sustainability into

food assistance. Similarly, city and rural community kitchens must also meet nutrition standards and promote healthy and sustainable diets.

Conclusions

Drawing lessons from past and ongoing initiatives and international experiences, this policy brief highlights the need for a multifaceted approach, particularly through integrated FAPs, to improving nutrition programs in China, taking into account the country's stage of development and unique needs of different populations. While China's earlier development efforts successfully addressed undernourishment during the initial stages of poverty alleviation, a more targeted approach is necessary to address the specific needs of vulnerable populations. China's success in large-scale poverty alleviation and early childhood nutrition underscores the importance of such focused strategies.

Further improvement can be achieved through targeted approaches, such as social protection and targeted interventions tailored to pregnant women, individuals with disabilities, and the elderly. Additionally, future efforts should address the "double burden" of malnutrition and prioritize better governance, multi-sector collaboration, evidence- and data-based evaluation, and novel technologies. To combat these challenges, a combination of food voucher programs and the establishment of affordable food shops could be explored. Food voucher programs would provide low-income individuals with subsidies that can be redeemed for nutritious food at designated outlets, ensuring essential nutrition and stimulating local economies. Drawing lessons from Nanjing's affordable food shops, while acknowledging their limitations in addressing food security, the effectiveness of such initiatives could be enhanced by incorporating digital techniques to precisely target low incomes in need, particularly in urban and rural areas where access to supermarkets or fresh produce markets is limited. These programs could prioritize offering

subsidized, locally sourced food, making healthy options more accessible to the population. Partnerships with private sector actors, local farmers, and cooperatives could further reduce food distribution costs and enhance the availability of affordable products.

Finally, China could contribute to the global efforts in tackling malnutrition and poverty, for example by sharing its experience and lessons through South-South cooperation and by mainstreaming a food systems approach to FAPs. Especially China's active participation in the Global Alliance against Hunger and Poverty is key to the success of the Alliance's vision and mission. China's food assistance programs can also serve as an example of implementing the United Nations' Right to Food, which aims to ensure adequate and nutritious food for all.

References

- Academy of Global Food Economics and Policy, China Academy for Rural Development, Zhejiang University, Centre for International Food and Agricultural Economics, Nanjing Agricultural University, Institute of Agricultural Economics and Development, Chinese Academy of Agricultural Sciences, & International Food Policy Research Institute. (2022). *China and global food policy report: Reforming agricultural support policies for transforming agrifood systems*.
- Academy of Global Food Economics and Policy, China Academy for Rural Development, National Institute for Nutrition and Health, Chinese Center for Disease Control and Prevention, Centre for International Food and Agricultural Economics, International Food Policy Research Institute, Food and Land Use Coalition, & World Resources Institute. (2023). *Food policy report: Promoting sustainable healthy diets for transforming agrifood systems*.
- Barrett, C. B. (2002). Food security and food assistance programs. In *Handbook of Agricultural Economics* (pp. 2103–2090). Elsevier.
- Bitler, M. P., & Seifoddini, A. (2019). Health impacts of food assistance: Evidence from the United States. *Annual Review of Resource Economics*, 11(1), 261–287.
- Djurfeldt, A. A. (2015). Urbanization and linkages to smallholder farming in sub-Saharan Africa: Implications for food security. *Global Food Security*, 4, 1–7.
- Du, X., Zhu, K., Trube, A., Zhang, Q., Ma, G., Hu, X., Fraser, D. R., & Greenfield, H. (2004). School-milk intervention trial enhances growth and bone mineral accretion in Chinese girls aged 10–12 years in Beijing. *British Journal of Nutrition*, 92(1), 159–168.
- Fang, G., & Zhu, Y. (2022). Long-term impacts of school nutrition: Evidence from China's school meal reform. *World Development*, 153(5), 105854.
- FAO. (2025). *Suite of food security indicators*. Accessed July 25, 2024, from <https://www.fao.org/faostat/en/#data/FS>
- Global Alliance Against Hunger and Poverty. (2024). *Global Alliance Against Hunger and Poverty*. Retrieved from <https://globalallianceagainsthungerandpoverty.org/>
- Gov.cn. (2021a). The Ministry of Finance allocated 26.034 billion yuan to support improving the nutrition of rural students (In Chinese). Accessed September 30, 2021, from https://www.gov.cn/xinwen/2021-09/30/content_5640573.htm
- Gov.cn. (2021b). Xi Jinping: Speech at the National Poverty Eradication Summary and Commendation Ceremony (In Chinese). Accessed February 25, 2021, from https://www.gov.cn/xinwen/2021-02/25/content_5588869.htm
- Gmw.cn. (2023). To promote the "Milk Drinking Scheme for Students," we must adhere to the principle of voluntary expansion of coverage (In Chinese). Accessed January 28, 2023, from https://guancha.gmw.cn/2023-01/28/content_36325628.htm

- Haggblade, S., Hazell, P., & Reardon, T. (2010). The rural non-farm economy: Prospects for growth and poverty reduction. *World Development*, 38(10), 1429–1441.
- Hu, X., Kapucu, N., Shi, J., & Zhu, Z. (2021). Disaster policy and emergency management reforms in China: From Wenchuan earthquake to Jiuzhaigou earthquake. *International Journal of Disaster Risk Reduction*, 52, 101964.
- Hu, Y., Chen, W., Zhang, Y., Zhao, X., & Yin, S. (2010). The relationship of long-term school milk consumption and their attention, cognitive ability among children (In Chinese). *Chinese Journal of Preventive Medicine*, 44(12), 1111–1114.
- Huo, J., & Chen, J. (2015). Ying Yang Bao: Improving complementary feeding for China's children. *Journal of Nutritional Science and Vitaminology*, 61(Supplement), S186–S186.
- Lin, Y., Shen, Y., & Sun, A. (2020). The economic effect of Chinese government's consumption voucher policy. *Economic Research Journal*, 55(7), 4–20.
- Oasis Food Bank. (2023). The country's first mobile "food bank" takes off (In Chinese). Accessed 2023.
- Parker, S. W., & Todd, P. E. (2017). Conditional cash transfers: The case of Progres/Oportunidades. *Journal of Economic Literature*, 55(3), 866–915.
- Wang, H., & Cheng, Z. (2022). Kids eat free: School feeding and family spending on education. *Journal of Economic Behavior & Organization*, 193, 196–212.
- Wang, J., Ding, X., & Fan, S. (2024). Food assistance programs in China: Evolution, challenges, and potential for improvement. *Applied Economic Perspectives and Policy*.
- Wang, J., Hernandez, M. A., & Deng, G. (2023). Large-scale school meal programs and student health: Evidence from rural China. *China Economic Review*, 79, 101974.
- Wang, Y., Chen, C., Wang, F., Wang, K., & Yu, D. (2007). Effects of nutrient-fortified complementary food supplements on growth of infants and young children in poor rural areas in Gansu Province. *Journal of Hygiene Research*, 1, 78–81.
- World Bank. (2021). *Rural poverty reduction and economic transformation in China: A decomposition approach*. Retrieved from <http://documents.worldbank.org/curated/en/653101636992070146/Rural-Poverty-Reduction-and-Economic-Transformation-in-China-A-Decomposition-Approach>
- Xing, J., Zou, E. Y., Yin, Z., Wang, Y., & Li, Z. (2023). "Quick response" economic stimulus: The effect of small-value digital coupons on spending. *American Economic Journal: Macroeconomics*, 15(4), 249–304.
- Yin, J., Hu, Y., Chen, W., Zhao, X., & Yin, S. (2011). The relationship between long-term consumption of school milk and the growth and development of children (In Chinese). *Journal of Hygiene Research*, 40(5), 650–651.
- Zhong, T., Crush, J., Song, Y., Si, Z., Scott, S., & Peng, Y. (2023). Urban food insecurity and the impact of China's affordable food shop (AFS) program: A case study of Nanjing City. *Applied Geography*, 154, 102924.

Table 1. Food assistance programs in China

Program /initiative	Beginning/ending time	Leading agency	Beneficiaries	Objectives	Challenges	Impact
Food Coupon	1955-1993	Central and local governments	Urban residents	Provide basic subsistence security for low-income urban people	Limited the development of commercial production; did not protect the rights and interests of rural residents	--
The Student Milk Program	2000-now	Seven ministries and bureaus	Primary and secondary school students	Develop students' milk drinking habits and reduce the risk of malnutrition	Declining milk supply, urgent need to restructure promotion agencies; Lack of data, analysis and evaluation results for impact tracking.	By 2022, benefiting 30 million students.
YYB₁	2001-now	NGOs, private sector entities, philanthropic foundations, and academic institutions	Children under 2 years of age in poor rural areas	Reduce children's mortality and improve children's nutritional status	Lack of data, analysis and evaluation results for impact tracking.	By 2018, a total of 2.8 billion yuan had been spent, benefiting 7.22 million people.
NIPRCES₂	2011-now	The State Council	Rural compulsory education students	Improve the nutrition status of Chinese rural students in compulsory education	Dietary structure is unitary; cafeteria staff lacked knowledge of nutrition; logistics funds are not guaranteed.	A total of 196.734 had been spent, of which 26.034 billion yuan had been spent in 2021, benefiting 37.95 million students annually.
Oasis Food Bank	2014-now	Non -profit organization	The poverty	Help the poor and reduce food waste	Still in the early stages of development and need policy support.	By 2021, a total of 15.51 million yuan of food had been spent, benefiting 7.22 million people.

Source: Wang, Ding, and Fan (2024)

₁ YYB is short for the Ying Yang Bao Program.₂ NIPRCES is short for the Nutrition Improvement Program for Rural Compulsory Education Students.



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