



## Strengthening the Safety Net: The PDS and Food Security in India During Recent Global Changes

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**ABSTRACT:** This study assesses the effectiveness of India's Public Distribution System (PDS) in achieving food security goals amidst recent global changes. The paper employs qualitative analysis and enquires the public distribution system of India in recent times. The food security initiative by Government of India, *i.e.*, PMGKY, to tackle the recent pandemic have proved boon in recent geopolitical challenges. The PMGKY initiative, launched to provide free food grains to over 81.35 crore beneficiaries, has played a pivotal role in mitigating food insecurity, especially during the COVID-19 pandemic. By analysing qualitative data and concurrent evaluation reports from Monitoring Institutes (MIs) across the states and Union Territories, this research evaluates PMGKY's impact on food security. The findings highlight the initiative's extensive reach, effective implementation, and strategic outreach efforts. The study explores how PMGKY has bolstered India's resilience against global geopolitical disruptions and conflicts, ensuring stable food security. The research concludes with recommendations for enhancing the resilience and responsiveness of the PDS, emphasizing the need for continued strategic interventions to sustain national food and nutrition security.

**Keywords:** Food Security, Public Distribution System, India, Globalization.

### INTRODUCTION

India's PDS has long been a cornerstone of the nation's food security strategy, designed to provide subsidized food grains to the economically disadvantaged segments of the population. Originating in the 1940s as a wartime measure, the PDS has evolved significantly over the decades, adapting to the changing socio-economic landscape and policy priorities. The organisation functions by means of a network of Fair Price Shops (FPS), which distribute necessary goods such as rice, wheat, sugar at reduced prices. Despite its noble intentions and expansive reach, the PDS has faced numerous challenges, including inefficiencies, leakages, and inequitable distribution, which have sometimes hindered its effectiveness (George and McKay 2019).

The PDS underwent a major overhaul with the introduction of the National Food Security Act (NFSA) in 2013. This legislation aimed to make access to food a legal right and expanded the coverage to nearly two-thirds of India's population. The NFSA sought to streamline the distribution process, enhance transparency through technology integration such as

digitized ration cards and biometric authentication, and improve targeting of beneficiaries. Despite these reforms, the system's effectiveness has been continuously scrutinized, especially in light of the recent global changes that have disrupted food security dynamics (Chakraborty and Sarmah 2019).

Food security, according to the Food and Agricultural Organisation (FAO), is the state in which every person has reliable and consistent access to a sufficient quantity of safe and nutritious food that meets their dietary needs and personal food preferences, allowing them to live an active and healthy life. This comprehensive concept of food security encompasses three critical and interconnected components: "the availability of food, access to food, and the absorption of food". Availability of food refers to the presence of adequate quantities of food, either through domestic production or imports, ensuring that food supplies are stable and sufficient. Access to food involves having the resources, such as money or land, to obtain appropriate foods for a nutritious diet. Finally, the absorption of food highlights the ability of individuals to consume and metabolize the food they eat, which is

influenced by factors such as health, nutrition, and sanitation practices (FAO, 2023). The past decade has witnessed significant global transformations that have impacted food security in India. Climate change has brought about unpredictable weather patterns, affecting agricultural productivity and food supply chains. The COVID-19 pandemic worsened these problems, resulting in disruptions to the supply system, higher rates of unemployment, and increasing food insecurity among vulnerable people. Additionally, geopolitical tensions and economic policies have influenced food prices and availability, posing further challenges to the PDS (Dev, 2020).

Against this backdrop, it is imperative to assess how well the PDS has adapted to these global changes and whether it continues to fulfil its mission of ensuring food security. This study aims to provide a comprehensive evaluation of the PDS's performance in recent years, focusing on its capacity to mitigate the

impacts of these challenges and its effectiveness in achieving food security goals. The study highlights the "significant role of PDS System in India in mitigating food insecurity and demonstrating its effectiveness amidst global challenges. By examining key indicators such as the adequacy and quality of food grains distributed, the efficiency of distribution channels, the inclusiveness of the system, and the transparency in operations, this research seeks to identify the strengths and weaknesses of the PDS. The study is expected to yield valuable insights into the current state of food security in India and the role of the PDS in addressing this critical issue. Furthermore, the research aims to inform policymakers and stakeholders about potential areas for improvement, ensuring that the PDS remains robust and responsive to future challenges. In doing so, it underscores the importance of a resilient food security framework in promoting economic stability and social well-being in India.

**Table 1: Various initiatives and policies implemented by different governments around the world to achieve food security goals.**

Country/Region	Program/Policy	Objective	Provisions/Mechanism	Impact
United States	Supplemental Nutrition Assistance Program (SNAP)	Financial assistance for purchasing food	Provides financial assistance to low-income individuals and families	Improves access to food for low-income households
	National School Lunch Program (NSLP)	Free or reduced-cost lunches for children	Offers free or reduced-cost lunches to children in schools	Enhances nutrition and school attendance
	Food Banks and Pantries	Distribute food to those in need	Supported by government grants and private donations	Provides food security for vulnerable populations
Brazil	Fome Zero (Zero Hunger) Program	Eradicate hunger and extreme poverty	Comprehensive strategy including food subsidies, community kitchens, and support for small-scale farmers	Reduces hunger and supports small farmers
	Bolsa Família	Conditional cash transfer program	Helps low-income families buy food and other essentials	Improves food security and poverty alleviation
China	Grain Reserve System	Stabilize food prices and ensure supply during shortages	Maintains national grain reserves	Ensures food availability and price stability
	Poverty Alleviation Programs	Improve access to food for rural populations	Government initiatives to lift rural populations out of poverty	Enhances food security and reduces rural poverty
Canada	Canada's Action Plan for Food Security	Reduce food insecurity through federal, provincial, and local programs	Includes income support, food banks, and nutrition education	Reduces food insecurity through comprehensive measures
	Nutrition North Canada	Make nutritious food more affordable in remote northern communities	Provides subsidies to make nutritious food more affordable	Improves food access and nutrition in remote areas
Global Initiatives	World Food Programme (WFP)	Provide food assistance in emergencies and improve nutrition	Works with communities to improve nutrition and build resilience	Enhances global food security and community resilience
	Food and Agriculture Organization (FAO)	Defeat hunger, improve nutrition, and promote sustainable agriculture	Leads international efforts to improve food security, nutrition, and agricultural sustainability	Supports global efforts to eliminate hunger and promote sustainable agricultural practices

This table summarizes the various initiatives and policies implemented by different governments around the world to achieve food security goals. Sources: <https://www.usaid.gov/what-we-do/agriculture-and-food-security/us-government-global-food-security-strategy> <https://www.canada.ca/en/employment-social-development/programs/agenda-2030/zero-hunger.html>

**Table 2: Various initiatives and policies implemented by the Government of India to achieve food security goals.**

Program/Policy	Objective	Provisions/Mechanism	Impact
<b>Public Distribution System (PDS)</b>	Provide subsidized food grains to low-income families	Distribution of rice, wheat, and sugar through Fair Price Shops (FPS)	Stabilizes food prices and ensures food availability to the poor
<b>National Food Security Act (NFSA), 2013</b>	Provide legal entitlement to subsidized food grains to approx. two-thirds of the population	5 kg of food grains per person per month at subsidized prices (rice at Rs. 3/kg, wheat at Rs. 2/kg, coarse grains at Rs. 1/kg)	Ensures food security for a significant portion of the population
<b>Mid-Day Meal Scheme</b>	Improve nutritional status of school-aged children and encourage school attendance	Free lunches to primary and upper primary students in government and government-aided schools	Enhances nutrition and boosts school enrollment and retention
<b>Integrated Child Development Services (ICDS)</b>	Provide food, preschool education, and primary healthcare to children under six years and their mothers	Supplementary nutrition, immunization, health check-ups, and referral services	Addresses malnutrition and health issues among children and mothers
<b>Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)</b>	Provide additional food security during crises such as the COVID-19 pandemic	5 kg of free food grains per person per month to all NFSA beneficiaries	Mitigates the impact of crises on vulnerable populations by ensuring food availability
<b>Targeted Public Distribution System (TPDS)</b>	Focus on providing food security to the most vulnerable sections of society	Divides beneficiaries into priority households and Antyodaya Anna Yojana (AAY) households	Ensures higher entitlements for the poorest
<b>National Nutrition Mission (Poshan Abhiyaan)</b>	Reduce stunting, undernutrition, and anemia among young children, women, and adolescent girls	Multi-sectoral approach leveraging technology and community involvement to improve nutritional outcomes	Improves nutritional status across target groups
<b>Agricultural Policies and Programs</b>	Ensure fair prices for farmers and support food grain production	Minimum Support Price (MSP), National Food Security Mission (NFSM), Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)	Encourages food grain production and financial stability for farmers
<b>Food Processing and Storage Initiatives</b>	Reduce food wastage and ensure better storage facilities	Promotion of food processing industries, establishment of cold chains, and modern storage facilities	Enhances food storage and reduces wastage
<b>International Cooperation and Assistance</b>	Engage in global efforts to enhance food security	Participation in international forums, collaboration with World Food Programme (WFP) and Food and Agriculture Organization (FAO)	Strengthens global food security initiatives

### Objectives

The study aims to assess the following objectives-

1. To Evaluate the Effectiveness of the PDS in Mitigating Food Insecurity Amidst Recent Global Challenges
2. To Identify Interventions for Enhancing the Resilience and Responsiveness of the PDS

### LITERATURE REVIEW

The study explores the literature of the recent past where geopolitical challenges has caused threat to food security over the world. The literature concerning same have been reviewed.

Molotoks, *et al.* (2021) Analyse the impacts of land utilisation, population expansion, and climate change on worldwide food security till 2050 via the FEEDME modelling framework. Researchers discover that although climate change does affect future crop yields, the primary factor driving the rise in food insecurity is population expansion. Their results, based on different scenarios of climate and socio-economic changes, indicate that countries with lower population growth fare better in terms of food security. To mitigate the adverse effects of rapid population growth, the authors recommend strategies like improving maternal health care, enhancing food access equality, closing the yield

gap, and adjusting trade patterns. These measures are essential for preventing severe future food insecurity arising due to climate and other geopolitical challenges. Bhattacharyya (2022) examines the impact of the COVID-19 pandemic on food security in India, highlighting the complex interplay between disasters, economic challenges, and food systems. The study notes a significant increase in global disasters, with food insecurity expected to rise sharply, affecting up to 3.5 billion people by 2050. The pandemic exposed severe weaknesses in food systems, disrupting supply chains, markets, and labour availability, leading to increased hunger. Bhattacharyya emphasizes the need for sustainable strategies to ensure food availability and accessibility for those below the poverty line. The study also explores the role of civil society in governance and distributive justice and suggests enhancements to the Targeted PDS (TPDS) to better address food security in post-pandemic and future disaster scenarios. The research relies on secondary data from various reports and publications, offering insights into mitigating hunger and improving food security resilience in India. Mottaleb *et al.* (2022) Analyse the consequences of the Russia-Ukraine conflict on the worldwide food security of wheat. Given that both countries are major wheat exporters, the dispute worsens food insecurity,

especially in developing nations that rely on wheat imports. The study utilises data from 163 nations spanning the years 2016 to 2019 and applies the conditional mixed process estimating approach to measure the effects on wheat price, consumption, and calorie intake. The findings suggest that a 1% reduction in global wheat trade could result in a 1.1% increase in producer prices, which in turn could lead to declines in per capita wheat consumption, daily calorie intake, and protein intake. More precisely, if the wheat exports from Russia and Ukraine decrease by 50%, it might lead to a 15% increase in wheat prices. This increase in costs would result in a decrease in consumption and dietary energy intake by at least 8%. In order to alleviate these negative consequences, the authors propose a number of policies. They suggest increasing domestic wheat production in the near future by implementing enhanced agronomic techniques. It is recommended to increase wheat farming into new regions in Africa, East Asia, and South America in the future. Furthermore, it is strongly recommended that foreign donor organisations provide assistance to the ongoing wheat research and development efforts in order to improve world food security.

Sj Balaji & Babu (2022) the impacts of the Russia-Ukraine war on India's food security and economy. The conflict has significantly disrupted global food and energy supplies, causing price surges that particularly affect low-income, food-deficit nations. India, with its substantial import dependency on crude oil, edible oils, and fertilizers, faces heightened economic instability and inflation. The study highlights that India imports over 89% of its crude oil, with prices rising by 27% from February to June 2022. Edible oil prices, especially sunflower seed oil (86% sourced from Ukraine and Russia), have also surged dramatically. Fertilizer imports from conflict regions, crucial for Indian agriculture, have seen similar price increases, leading the government to double its fertilizer subsidy. The brief evaluates the potential income, food, and nutritional impacts on India's farmers, poor, and vulnerable populations due to these disruptions. It also discusses the Indian government's policy responses, including subsidies, social safety nets, and trade diversification, aimed at mitigating the war's adverse effects.

Mabrouk and Pawar (2021) explore the interconnections between food security and migration in rural India during the COVID-19 pandemic. The study investigates whether migration serves as a risk-reduction strategy for households facing food insecurity. Using statistical analysis, the authors identify key factors influencing food security, including gender, household size, agricultural production, savings, migration, and regional differences. They find that increased agricultural production significantly enhances household food security, with a 17% higher likelihood of being food secure per additional unit of production. Conversely, each additional household member migrating for work is associated with a 2% decrease in the likelihood of food security. The study

emphasizes the importance of boosting agricultural productivity and managing rural migration to achieve long-term food security, especially in the context of crises like the COVID-19 pandemic.

## RESEARCH METHODOLOGY

This research employs a qualitative approach to assess the effectiveness of India's PDS in addressing food insecurity amidst recent global challenges. The study focuses specifically on the Pradhan Mantri Garib Kalyan Yojana (PMGKY) as a case study within the broader PDS framework. Data was gathered from multiple sources, including government reports, academic literature. Analysis provided qualitative insights into the PDS's performance, challenges faced, and potential interventions for enhancement. Analysis employed provided key insights into findings.

**Data Analysis.** The "Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)" is a central government initiative aimed at providing free food grains to 81.35 crore beneficiaries, including "Antyodaya Anna Yojana (AAY)" households and "Priority Households (PHH)" beneficiaries. The program's comprehensive approach ensures that no individual goes hungry and aims to address the nutritional needs of the most vulnerable sections of society.

This initiative, starting from January 1, 2024, and continuing for five years, with an annual food subsidy of Rs. 2.13 lakh crore, intends to bolster the "National Food Security Act (NFSA)" by ensuring accessibility, affordability, and availability of food grains across all states (Government of India, 2023).

During the COVID-19 pandemic, PMGKAY played a crucial role in mitigating economic disruptions by distributing additional free food grains to NFSA beneficiaries. This included 5 kg of rice or wheat per person per month, effectively doubling the regular entitlements. Implemented in seven phases from April 2020 to December 2022, PMGKAY distributed a total of 1,015 LMT (Lakh Metric Tonnes) of food grains across the country.

Evaluation of PMGKAY reveals its widespread impact and success:

— **Beneficiary Reach:** More than 75 crore beneficiaries received food grains monthly during FY 2020-21 and FY 2021-22, with similar distributions expected in FY 2022-23.

— **Implementation Effectiveness:** According to concurrent evaluation reports from Monitoring Institutes (MIs) across States/UTs, 98% of surveyed households reported receiving their full entitlement under PMGKAY.

The initiative's success is underscored by strategic measures such as extensive beneficiary awareness campaigns through banners, hoardings, and social media across multiple languages. Inter-ministerial collaborations with departments like Railways, Petroleum, and Information & Broadcasting further enhanced outreach and effectiveness. PMGKAY not

only addresses immediate food security needs but also aims to sustainably alleviate financial hardships among vulnerable populations, demonstrating a robust long-term commitment to national food and nutrition security.

## DISCUSSION

Food security is a critical issue addressed differently by governments worldwide, each tailoring their strategies to specific national challenges and resources. The United States' Supplemental Nutrition Assistance Program (SNAP) provides financial assistance to low-income individuals, reflecting a direct approach to mitigating hunger through economic support (Gundersen, 2019). Brazil's Fome Zero program emphasizes a comprehensive strategy combining cash transfers, school feeding, and support for smallholder farmers to tackle hunger and poverty. In Ethiopia, the Productive Safety Net Program (PSNP) links food security with community development projects, building resilience against food shortages (Abay *et al.*, 2022). Programs in Bangladesh and Kenya, like the Vulnerable Group Development (VGD) and National Drought Management Authority (NDMA), focus on empowering vulnerable populations and managing environmental challenges, respectively. These diverse strategies underscore the multifaceted nature of food security, demonstrating that a combination of immediate relief, long-term resilience building, and sustainable agricultural practices are essential to addressing this global challenge. In India, the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) ensures the provision of free food grains to millions of vulnerable households, highlighting the importance of a robust public distribution system during crises.

Assessing the effectiveness of India's PDS in achieving food security goals during recent global changes reveals a comprehensive and robust mechanism that has successfully mitigated food insecurity amidst various challenges. The implementation of the "Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)" has played a crucial role in ensuring India's food security remains robust and resilient in the face of geopolitical changes and global conflicts. Despite COVID-19 turmoil and wars affecting food production and distribution in various parts of the world, India's proactive measures through PMGKAY have shielded its population from the adverse impacts of these global disruptions (Yadav and Agarwal 2021). Firstly, PMGKAY's systematic approach in providing free food grains to millions of beneficiaries, including Antyodaya Anna Yojana (AAY) households and Priority Households (PHH) beneficiaries, has created a buffer against potential food shortages. By guaranteeing essential food supplies through regular distributions of 5 kg of rice or wheat per person per month, PMGKAY has mitigated the risks associated with fluctuating global food markets and supply chain disruptions.

The findings should be compared with recent studies on similar food security programs to highlight PMGKAY's unique contributions. For instance, the efficiency of the U.S. Supplemental Nutrition Assistance Program (SNAP), as discussed by Gundersen (2019), parallels PMGKAY's direct food distribution approach. Similarly, Ethiopia's Productive Safety Net Program (PSNP), which links food security to community development, provides a contrasting strategy that emphasizes broader development goals, unlike PMGKAY's immediate relief focus (Abay *et al.*, 2022). The study by Yadav and Agarwal (2021) on PMGKAY's role in shielding India from global disruptions can be contrasted with Brazil's Fome Zero program, which integrates various strategies including cash transfers and agricultural support. These comparisons and references validate PMGKAY's effectiveness and demonstrate its distinct contributions to food security.

Moreover, PMGKAY's implementation has been marked by its efficiency and responsiveness to crises. During the COVID-19 pandemic, for instance, the initiative swiftly scaled up its operations, doubling the entitlements to ensure adequate nutrition for vulnerable populations affected by economic uncertainties and lockdowns. This flexibility and quick adaptation demonstrate PMGKAY's capability to respond effectively to unforeseen challenges, including those stemming from geopolitical tensions or global conflicts impacting food availability elsewhere. Furthermore, PMGKAY's comprehensive outreach and distribution networks have strengthened India's food security infrastructure. Through extensive beneficiary awareness campaigns and collaborations with multiple government departments, the initiative has enhanced its reach and ensured that food grains reach those in need across the country. This decentralized approach has not only improved accessibility but also minimized the potential disruptions caused by geopolitical changes affecting global food trade routes or agricultural production in other regions.

## CONCLUSIONS

The assessment of India's PDS in achieving food security goals during recent global changes demonstrates its remarkable effectiveness, especially through the implementation of the PMGKAY. This initiative, which provided free food grains to over 81.35 crore beneficiaries, was crucial in mitigating food insecurity during the COVID-19 pandemic and amidst geopolitical conflicts. Key findings reveal that PMGKAY ensured extensive reach and compliance, with more than 75 crore beneficiaries receiving their entitlements and 98% of households reporting full receipt. Effective strategic measures, including widespread awareness campaigns and inter-ministerial collaborations, facilitated efficient distribution and high public engagement. Despite global supply chain disruptions, PMGKAY maintained stable food distribution, demonstrating the resilience of India's PDS. The initiative not only provided immediate relief

but also contributed to the long-term goal of sustainable food and nutrition security in India, significantly strengthening the PDS against global challenges.

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