



International Journal of Business Management:
Insight & Transformations
<https://www.eurekajournals.com/BM.html>
ISSN: 2581-4176

Revisiting India's Public Distribution System: Pathways to Food Security and Inclusive Growth: Challenges ahead

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Abstract

This paper examines the role of India's Public Distribution System (PDS) in advancing food security, poverty alleviation, and inclusive growth in a rapidly transforming economy. While India has achieved notable economic expansion, persistent challenges of hunger, malnutrition, and unequal access to resources highlight gaps in distributive mechanisms. Using secondary data from sources such as NFHS, World Bank, and policy reports, the study analyses trends in nutritional outcomes, subsidy patterns, and systemic efficiency. The findings suggest that the PDS has played a critical stabilizing role, particularly during economic shocks such as the COVID-19 pandemic, by safeguarding vulnerable populations. However, issues of fiscal sustainability, targeting inefficiencies, and limited nutritional diversity constrain its effectiveness. The paper argues for a restructured, technology-driven and nutrition-sensitive PDS to strengthen its contribution to inclusive and sustainable development.

Keywords: Public Distribution System, Poverty Alleviation, Inclusive Growth, SMART-PDS, Nutrition.

Introduction

India's aspiration for inclusive economic growth is anchored not merely in the pursuit of high GDP figures, but in ensuring that the benefits of development reach the most vulnerable and marginalized sections of society. In this context, the Public Distribution System (PDS) emerges as a critical policy instrument aimed at achieving food security, poverty alleviation, and socio-economic equity. As one of the largest food security networks in the world, the PDS has played a significant role in buffering the poor against economic shocks, price volatility, and structural unemployment.

Despite its wide reach and historical significance, the effectiveness of the PDS in promoting inclusive growth remains a subject of intense debate. Issues related to leakage, inefficiency, regional disparities, and the exclusion of intended beneficiaries have raised questions about its long-term viability and impact. Furthermore, India's evolving economic landscape—marked by rapid urbanization, digital transformation, and a growing informal sector—necessitates a re-examination of the PDS in light of contemporary challenges.

India's aspiration for inclusive economic growth is rooted in the vision of a development trajectory that not only enhances national wealth but ensures equitable distribution of resources across all sections of society. With this ambition in mind, the Hon'ble Prime Minister has articulated a compelling national objective: transforming India into a five trillion-dollar economy. This vision underscores a powerful analogy—"the size of the cake matters." A larger economy, much like a larger cake, promises more portions, symbolizing broader prosperity. However, does the size of the cake truly reflect its distribution? This question strikes at the heart of the inclusive growth debate. The sobering revelations of the **Global Hunger Index 2023**, where India ranks 111th out of 125 countries, expose the paradox of growth amidst deprivation. Data from the National Library of Medicine and the World Bank further confirm a disturbing rise in the undernourished population—from 17.63 crore in 2017 to 22.43 crore in 2021—reflecting a 28% surge. These statistics highlight that economic growth, while essential, is insufficient without effective mechanisms of distribution and social protection. Factors such as economic instability, the COVID-19 pandemic, climate change, and systemic weaknesses in food distribution have all contributed to this crisis.

Against this backdrop, the **Public Distribution System (PDS)** becomes a focal point of inquiry. This research aims to examine the PDS's role in supporting India's inclusive growth agenda. It will explore its contributions, identify the challenges it faces in the current socio-economic landscape, and propose strategic policy interventions to realign the system with the nation's transformative vision.

Literature Review

The Public Distribution System (PDS) remains one of India's most significant welfare mechanisms, aiming to ensure food security and support vulnerable populations. Anchored in the constitutional ethos of the *Right to Food*, the PDS has evolved as a practical instrument to translate this right into reality. The National Human Rights Commission emphasizes that the right to food should not remain a mere theoretical construct but must be experienced through accessible, reliable systems such as the PDS.

As of June 30, 2023, the Press Information Bureau reported that 80.10 crore beneficiaries under the National Food Security Act (NFSA) are availing PDS benefits through 5.45 lakh Fair Price Shops (FPS) across the country. This vast reach underlines the PDS's central role in food security and its importance in fostering inclusive growth.

Scholarly works have critically examined the functioning and impact of the PDS over the years. Reetika Khera (2011), in her article "*Revival of the Public Distribution System*," challenges the notion that the PDS is beyond repair. She presents evidence from several Indian states showing

that targeted reforms and effective state-level initiatives have revitalized the PDS, especially in rural areas. Her findings underscore that while issues remain, the PDS is far from dysfunctional and can be a potent tool for addressing food insecurity.

Qazi Muhammed Baseer Ahmed's (2003) study of the PDS in Aurangabad offers a dual perspective by assessing its impact on both rural and urban Below Poverty Line (BPL) populations. He emphasizes the need to address inefficiencies in distribution and highlights the enduring popularity of the PDS among economically weaker sections, stressing its continued relevance in the welfare framework.

However, challenges to efficiency remain pervasive. Ashok Gulati (2014), in his analysis of the PDS under the National Food Security Act, points to the critical issue of leakages and diversion. Nationally, up to 40% of allocated food grains fail to reach their intended beneficiaries. The problem varies significantly across states-Bihar reports leakages as high as 71%, whereas Tamil Nadu and Chhattisgarh exhibit near-zero diversion due to more robust systems. These disparities highlight the urgent need for governance reforms and technological interventions to improve accountability.

Surabhi Mittal and A. Amarendar Reddy (2022), in their ICAR-based study, emphasize the untapped potential of the PDS in addressing undernutrition. They advocate for the inclusion of diverse and nutrient-rich crops in the PDS basket, which would simultaneously enhance farmers' income and improve national nutritional outcomes. Their work underscores how a redesigned PDS could contribute to both economic and human development.

The Ministry of Information and Broadcasting's *Master Plan for a \$5 Trillion Economy* reiterates the strategic role of health and nutrition in economic growth. It asserts that the active involvement of citizens, particularly those living below the poverty line, in development efforts is essential. In this context, the PDS emerges not just as a welfare mechanism but as a developmental lever that supports the broader ambition of economic transformation.

Lastly, the National Library of Medicine (2019) identifies the NFSA (2013) as a catalyst in strengthening the PDS. It argues that beyond food security, the Act can stimulate agricultural productivity, reduce hunger and malnutrition, and accelerate India's march toward becoming a major global economy.

Taken together, the literature illustrates a complex yet promising picture. While operational and structural issues challenge the PDS's effectiveness, its transformative potential-if appropriately reformed and aligned with broader developmental goals-remains significant.

Objectives

This paper tries to:

1. Analyze the role of Public Distribution System as a catalyst in the inclusive economic growth of the country
2. Identify the challenges in implementing PDS and
3. Suggest appropriate strategies to improve the PDS and reduce leakages further.

Methodology

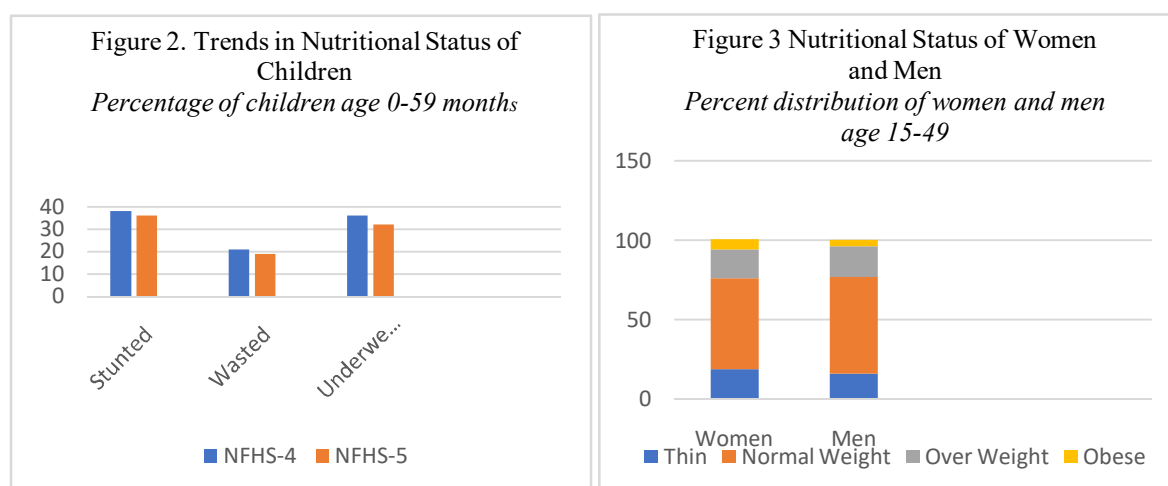
This study adopts a descriptive research design and is based on secondary data sourced from credible and authoritative institutions. Key data have been obtained from the World Bank, National Family Health Survey (NFHS), published academic journals, policy reports, and the document titled *Agriculture and Food Policy for a \$5 Trillion Economy*.

To ensure analytical rigor, the study incorporates a detailed examination of reports and databases provided by organizations such as the Food Corporation of India (FCI), PRS Legislative Research, and the National Sample Survey Office (NSSO). These sources have been systematically reviewed and interpreted to support the research objectives and validate key findings.

PDS as a Catalyst for Uplifting the Marginalized

Persistent hunger and malnutrition pose significant barriers to sustainable development, creating a vicious cycle that is difficult for affected individuals to escape. Despite India's rapid economic growth over the past two decades, a considerable segment of the population continues to remain excluded from the benefits of this progress. Millions still face food insecurity, chronic hunger, and widespread malnutrition, while the country simultaneously witnesses a growing incidence of obesity.

According to the most recent National Family Health Survey (NFHS-5), approximately 36 percent of children under the age of five are stunted, 19 percent are wasted, and 32 percent are underweight—indicating a critical public health concern. The nutritional status of adults aged 15-49, as depicted in Figure 3, further underscores the severity of undernutrition among both women and men during the 2019-21 period.



Source: NFHS-5Source: NFHS-5

Recent research indicates that household food consumption remained significantly lower even several months after the nationwide lockdown in 2020, compared to the pre-lockdown period. A survey conducted by the Centre for Sustainable Employment at Azim Premji University found that over 75 percent of households reported reduced food intake during the lockdown. While

there was some recovery in the post-lockdown phase, approximately 60 percent of households continued to consume less than they did before the pandemic. The impact has been particularly severe on disadvantaged households; nearly half of the informal sector workers surveyed reported a decline in their food consumption relative to pre-lockdown levels.

Against this backdrop, the Public Distribution System (PDS) has emerged as a crucial instrument in the government's strategy to provide a safety net for the poor and marginalized, especially in the post-pandemic context. As a vital component of the poverty alleviation framework, the PDS plays an indispensable role in supporting those who cannot depend solely on market mechanisms to meet their basic nutritional needs.

PDS as a Pillar of Social Protection and Economic Stability

A social protection program such as the Public Distribution System (PDS) does not operate in isolation; rather, it forms an essential component of a broader, cross-sectoral policy framework aimed at promoting inclusive development and enhancing the well-being of the wider population. By intersecting the domains of agriculture, food security, and economic stability, the PDS contributes significantly to national development objectives.

Farmer Welfare and Economic Empowerment

One of the critical components of the PDS is its linkage to agricultural procurement through the **Minimum Support Price (MSP)** mechanism. Under this arrangement, the government procures food grains from farmers at pre-determined prices, which are typically higher than prevailing market rates. This policy not only cushions farmers against the uncertainties of market price fluctuations and supply shocks but also ensures a predictable and stable return on their investment.

According to the Ministry of Agriculture and Farmers Welfare, Government of India, the MSP for paddy and wheat has witnessed a cumulative increase of approximately **118% and 103%**, respectively, between 2011 and 2023. These figures underscore the government's commitment to strengthening agricultural income and incentivizing production.

Furthermore, the Union Budget articulates a strategic vision of transforming Indian farmers from subsistence producers to globally competitive exporters. In this context, the PDS can function as a **catalyst** by guaranteeing demand, supporting infrastructure, and encouraging production surpluses that can transition into exportable commodities. By stabilizing the domestic agricultural economy, the PDS contributes directly to achieving the national goal of a **\$5 trillion economy**.

Price Stabilization and Market Efficiency

Another vital function of the PDS is its role in **price stabilization**, especially in times of economic distress or agricultural shortfalls. The Food Corporation of India (FCI), operating under the Ministry of Consumer Affairs, maintains a **strategic buffer stock** of essential food grains in public warehouses across the country. This stock acts as a safeguard against seasonal volatility, crop failures, and emergency situations.

For instance, during the COVID-19 pandemic, when normal supply chains were severely disrupted, the FCI's buffer stock-**almost twice its typical volume**-played a crucial role in ensuring a steady supply of food grains. This prevented price surges and ensured food availability for millions, especially among low-income and vulnerable groups.

In the absence of such reserves, the country could have faced severe food inflation and widespread hunger. Hence, buffer stocking under the PDS serves not only humanitarian goals but also supports **macroeconomic stability**, particularly in maintaining **inflation targets** and **consumer confidence**.

Challenges

Economic Viability and Fiscal Sustainability

While the PDS is a cornerstone of India's food security architecture, its long-term **economic viability** is subject to intense debate, particularly given the substantial fiscal outlay it entails:

- **High Subsidy Burden:** The government allocates a significant portion of its budget to food subsidies under the PDS. For instance, the food subsidy bill in FY2023-24 was over ₹2 lakh crore (approximately **2.5% of GDP**). This places a heavy strain on public finances and diverts resources from other critical sectors such as health, education, and infrastructure.

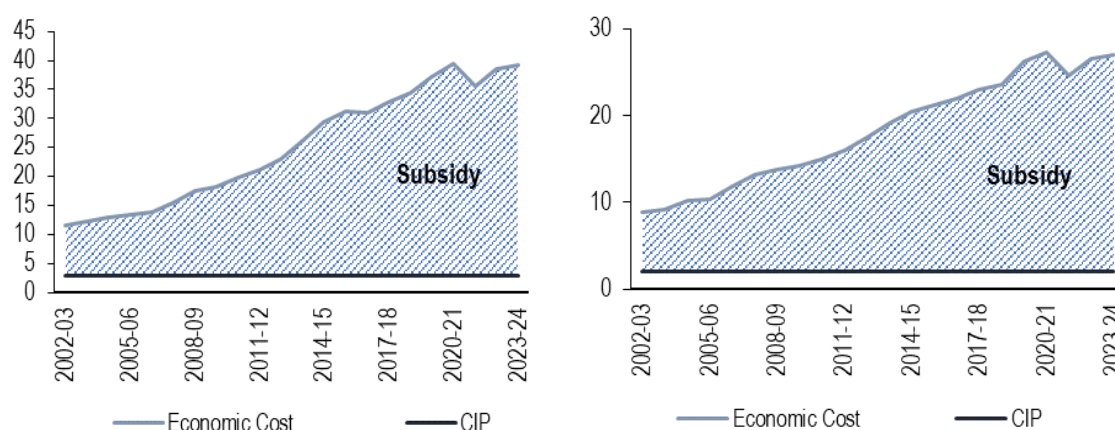
Rising Food Subsidy Bill: The government's Food Subsidy Bill is determined by computing the difference between the Economic Cost (EC) incurred in procuring food grains and their Central Issue Price (CIP). The Central Issue Price (CIP) denotes the subsidized rate at which essential food grains are distributed to eligible beneficiaries through government programs like the Public Distribution System (PDS) in India. This subsidized price, established by the government, is typically lower than the overall economic cost involved in acquiring, storing, and disseminating these food grains. Notably, these prices have remained unchanged since July 1, 2002. The comparative data for Food Subsidy (EC-CIP) concerning wheat and rice is presented in Table 1 below. To enhance clarity, Figures 4 and 5 visually represent this data for Rice and Wheat, respectively. According to the Economic Survey of India 2021, there is growing concern about the unmanageable nature of the food subsidy bill.

Table 1: Calculation of Food Subsidy (in Rs. Per kg)

Grains	Economic Cost (EC)		Central Issue Price (CIP)		Food Subsidy (EC-CIP)	
	2002	2023	2002	2023	2002	2023
Rice	11.7	39.2	3	3	8.7	36.2
Wheat	8.8	27	2	2	6.8	25

Source: prsindia.org

Figure 4: Subsidy per kg of Rice (in Rs. Per kg) Figure 5: Subsidy per kg of Wheat (in Rs. Per kg)



Source: FCI; PRSSource: FCI; PRS

This rise in Food Subsidy Bill has been mainly due to rising Minimum Support Price which escalates Economic Cost and fixed Central Issue Price which has been constant since two decades. Rising Food Subsidy is a challenge to be addressed as it deflects the government funds away from investment towards expenditure.

Allocation Vs Offtake: As per the Foodgrain Bulletin for December 2023 published by the Department of Food and Public Distribution, the percentage of offtake in past few years has been around 90%.

Table 2: Offtake of Rice + Wheat for 2020-24 compared to the allocation under NFSA (in thousand tons)

Year	Allocation	Offtake	% of Offtake
2023-24	41501.681	37585.965	90.06%
2022-23	55096.309	51314.345	93.14%
2021-22	54866.713	48560.549	88.51%
2020-21	54815.412	51804.174	94.51%

Source: Foodgrain Bulletin for December 2023

With only 90.06% offtake (2023), the accumulation of stockpiled food grains for extended durations results in increased maintenance costs and heightened wastage. Occasionally, when released into the market, it can bring down market prices, adversely affecting farmer welfare instead of enhancing it. This surplus of unused grains represents a missed opportunity, as these stocks could have been utilized for exports, thereby contributing to more foreign exchange and fostering greater prospects of economic growth.

- **Cost Inefficiencies in Procurement and Storage:** Procuring grains at MSP and maintaining large buffer stocks through the Food Corporation of India (FCI) results in high carrying costs, wastage, and inefficiencies. Issues like excess procurement, poor inventory management, and inadequate warehouse infrastructure exacerbate the cost burden.
- **Crowding Out of Private Sector:** The dominance of the government in procurement and distribution can sometimes crowd out private players in the agriculture and retail sectors, leading to price distortions and disincentivizing market-based solutions.

- **Limited Nutritional Impact Relative to Cost:** While the PDS ensures caloric sufficiency, its contribution to improving **overall nutrition** remains limited. The system primarily distributes rice and wheat, with minimal focus on pulses, fruits, vegetables, or fortified foods, which are essential for balanced nutrition.

Operational and Structural Challenges

Despite its critical role in ensuring food security, the Public Distribution System (PDS) in India faces several operational and systemic bottlenecks that affect its efficiency and effectiveness:

- **Leakages and Diversion:** A major challenge faced by the PDS is the widespread diversion of subsidized food grains into the open market. Leakages in the supply chain, from procurement to distribution, reduce the quantity and quality of grains reaching the intended beneficiaries. According to various estimates, the leakage rate in the PDS has ranged from **30% to 40%** in some states.

Leakages and Corruption: Leakage refers to the portion of food grains that is intended for distribution but is not consumed by the eligible beneficiaries. It represents a diversion or loss within the distribution system, preventing the intended recipients from accessing the allocated food grains. Leakages can be calculated by comparing National Sample Survey Data on Household Purchases with Offtake of Foodgrains published by Department of Food and Public Distribution as done by many researchers. The table 3, reproduced from CACP shows the percentage of leakage of foodgrains during the years 2004-05 and 2009-10. It must be noted that the latest data available on consumption by NSS is of 2009-10.

Table 3: Offtake compared to consumption of food grains (all India) in million tons

Cereal	Year	Offtake	Consumption as per NSS	Leakage	Leakage (in %)
Rice	2004-05 -	16.5	9.9	6.5	39.8
	2009-10	23.4	17.5	5.9	25.1
Wheat	2004-05 -	12.9	3.6	9.3	72.4
	2009-10	18.9	7.8	11.2	59.1
Total (Rice + Wheat)	2004-05 -	29.4	13.5	15.9	54.1
	2009-10	42.4	25.3	17.1	40.4

Source: Commission for Agricultural Costs and Prices.

The table illustrates a significant proportion of food grain leakage into the market, primarily attributed to corrupt practices and the involvement of middlemen, preventing the intended beneficiaries from receiving their allocated share. Many researches have published the flaws in the Public Distribution System. Economist researches have shown that PDS damages from approximately 61% rejection errors and 25% addition of a beneficiary i.e. misfiling of the underprivileged as non-poor and vice versa. (Debbarma, 2018) Karat (2008) emphasized that the Planning Commission's assessment revealed the exclusion of 57% of the impoverished from the Below Poverty Line (BPL) system. According to the National Sample Survey report, on a pan-India basis, 70.5% of rural households either did not possess a card or held an Above Poverty Line (APL) card, resulting in their effective exclusion from the Public Distribution System (PDS) (Swaminathan 2008).

- **Inclusion and Exclusion Errors:** Errors in identifying eligible beneficiaries remain persistent. While some deserving households are left out of the system (**exclusion errors**), ineligible ones

continue to receive benefits (**inclusion errors**). These errors stem from outdated or incomplete socio-economic data and inefficiencies in the implementation of the National Food Security Act (NFSA).

- **Quality of Food Grains:** Beneficiaries often report poor quality of food grains supplied through the fair price shops. Improper storage and transportation contribute to deterioration in quality, raising concerns about nutritional adequacy and safety.
- **Regional Disparities:** The effectiveness of PDS varies across states. States like Tamil Nadu and Chhattisgarh have been more successful in PDS implementation, while others lag due to weaker administrative capacity and poor monitoring systems.
- **Administrative Corruption and Lack of Accountability:** Weak grievance redressal mechanisms and lack of transparency in procurement and distribution processes contribute to corruption and reduce trust in the system.

Recommendations

The challenges mentioned should not be viewed as an indication that the Public Distribution System (PDS) is inherently flawed. Instead, each challenge presents an opportunity for growth and improvement. The focus should be on optimizing the benefits provided by the PDS, aiming for efficiency, lower costs, and reduced errors, rather than dismissing the entire scheme. Recognizing and addressing challenges can lead to enhancements that make the PDS more effective and impactful. Here are some constructive recommendations.

The following recommendations highlight key areas for reform:

1. SMART-PDS: Leveraging Technology for Transparency and Efficiency

The introduction of **SMART-PDS (Scheme for Modernization and Reforms through Technology in Public Distribution System)** represents a pivotal step towards digitization and automation of PDS operations. As emphasized by Shri Piyush Goyal, Union Minister of Consumer Affairs, SMART-PDS aims to:

- **Automate supply chain management** to ensure real-time tracking of food grain movement.
- **Reduce human intervention** to curb corruption, delays, and pilferage.
- **Enable biometric authentication** at Fair Price Shops (FPS) to verify rightful beneficiaries using Aadhaar-based ePoS devices.
- **Facilitate data analytics** for demand forecasting, stock management, and beneficiary tracking.

States and Union Territories must be incentivized to accelerate adoption of SMART-PDS modules by linking funding support to reform milestones. This initiative is crucial in ensuring that grains reach the last mile efficiently, transparently, and securely.

2. A Holistic Approach to Managing Food Subsidy and Economic Costs

India's rising food subsidy burden, coupled with the mounting **economic cost of grain procurement, storage, and distribution**, calls for a balanced fiscal strategy. A multi-pronged approach could include:

- **Rationalizing Minimum Support Prices (MSP):** Ensure that the MSP recommended by the Commission for Agricultural Costs and Prices (CACP) is the upper limit for procurement, avoiding excessive procurement at inflated prices.
- **Revising Central Issue Prices (CIP):** The CIP for food grains under NFSA has remained unchanged since 2002-03. A moderate and phased increase in CIP, especially for Above Poverty Line (APL) and non-priority households, can ease fiscal pressure without affecting the most vulnerable.
- **Identification of Critical Gaps:** A robust audit of procurement practices, transportation inefficiencies, and warehousing bottlenecks can help plug leakages and reduce redundant expenditure.

3. Redefining the Role of FCI: From Sole Custodian to Market Facilitator

The **Food Corporation of India (FCI)** plays a central role in PDS operations but needs to evolve into a more flexible and globally integrated entity. Potential areas for reform include:

- **Export of Surplus Grains:** Engage in strategic exports of surplus food grains to global markets, particularly through partnerships with food-deficient nations and international aid programs.
- **Open Market Sale Scheme (OMSS):** Expand the use of OMSS and **e-auctions** to regulate grain prices domestically and prevent distress sales during harvest seasons.
- **Infrastructure and Staff Modernization:**
 - Invest in **scientific warehousing**, cold storage, and grain handling systems to minimize wastage and quality deterioration.
 - Conduct **regular training programs** for PDS personnel on the use of digital platforms, inventory control, grievance redressal, and citizen engagement.
 - Develop **public awareness campaigns** to educate beneficiaries about their entitlements, grievance mechanisms, and rights under the NFSA.

4. Nutritional Diversification and Integration with Other Schemes

To address the **limited nutritional impact** of the current PDS, the system must evolve beyond rice and wheat:

- Include **nutrient-dense items** such as millets (aligned with the International Year of Millets 2023), pulses, and fortified staples in the PDS basket.
- Link PDS with **Integrated Child Development Services (ICDS)** and **Mid-Day Meal (MDM)** schemes for better convergence and coverage.
- Promote **local procurement** from farmer-producer organizations (FPOs) to ensure freshness, reduce carbon footprint, and empower small-scale farmers.

Conclusion

In India's aspiration for **inclusive and equitable growth**, the Public Distribution System (PDS) serves as a cornerstone for advancing food security and social justice, particularly for the most vulnerable. Anchored in the principles of "**Sabka Saath, Sabka Vikas**" and the global

commitment to “**Leaving No One Behind**,” the PDS embodies the moral and developmental imperative of ensuring that no citizen is excluded from the nation's progress. While the system has demonstrated its value in buffering against economic shocks and hunger, persistent challenges such as inefficiencies, leakages, limited nutritional diversity, and fiscal burdens continue to undermine its full potential. Addressing these requires a future-ready approach—leveraging digital innovations like SMART-PDS for transparency, diversifying food offerings to meet nutritional needs, and reimagining institutional roles such as that of the Food Corporation of India to enhance agility and efficiency. Food, as a universal human necessity, transcends socio-economic divides, making equitable access not merely a policy priority but a unifying national responsibility. As the world faces intersecting crises of hunger, climate change, and economic inequality, India has a historic opportunity to lead by example—by reaffirming its commitment to resilient, inclusive food systems that nourish both people and the economy for generations to come.

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