



The effectiveness of food security schemes in improving livelihood pattern in Bihar- A case study of Purnea district, Bihar

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Introduction and overview

The Public Distribution System (PDS) represents India's most expansive and sustained welfare program, designed to address food security and agricultural stability (Svedberg, 2012). This multifaceted initiative serves a dual purpose: it ensures affordable access to essential food grains for low-income households while simultaneously providing economic security to farmers. Under the PDS framework, the government procures staple food grains, primarily wheat and rice, directly from farmers at a predetermined Minimum Support Price (MSP). This mechanism shields agricultural producers from unpredictable market fluctuations, guaranteeing them a stable income. On the consumer side, the PDS operates through an extensive network of Fair Price Shops (FPS), which are licensed by the government to distribute these food grains at subsidized rates to economically disadvantaged households. The primary objective is to ensure that these households meet their minimum caloric and nutritional requirements, thereby mitigating hunger and malnutrition.

Historically, the PDS was a universal program, accessible to all households regardless of economic status until 1992. That year marked a significant shift when the system was restructured to focus on delivering food security to poor and vulnerable populations, particularly those residing in remote, isolated, or climate-vulnerable regions. This transition aimed to enhance the program's efficiency by prioritizing those most in need. By 1997, the PDS was further refined into the Targeted Public Distribution System (TPDS), introducing a more precise mechanism for identifying and supporting eligible households.

The PDS operates as a centrally sponsored scheme, but state governments wield significant autonomy in its implementation and management. The central government's role is primarily limited to identifying poor households across states and allocating food grains accordingly. This identification process is critical for ensuring equitable distribution of resources. However, states have the flexibility to augment the program by allocating additional resources, which leads to considerable variation in PDS coverage and eligibility criteria across India. For example, most states employ an inclusion-exclusion methodology to determine PDS eligibility, using socio-

economic indicators such as income, occupation, or asset ownership. In contrast, Tamil Nadu has adopted a universal PDS model, extending coverage to all households irrespective of economic status (Khera,2011b). This state-level variation underscores the decentralized nature of the program, allowing states to tailor the PDS to local needs and priorities. However, it also introduces disparities in access and benefits, with some states offering broader coverage or more generous subsidies than others.

Objectives

1. To know the salient features and performance of PDS System in Bihar and Purnea commissionerary.
2. To identify the status of PDS in Purnea commissionerary.
3. To find out the situation of PDS schemes through households survey.

Data sources

1. For better understanding the Public Distribution scheme, data have been taken from Department of food and consumer protection, Government of Bihar.
2. A households survey from 203 households from Srinagar Block, Purnea.

Methodology

Cross tabulation analysis have been done for carving the real situation of Food Schemes.

Food Security Scheme in Bihar

In Bihar, the Public Distribution System (PDS) has been implemented against the backdrop of widespread poverty and the state's chronic dependence on financial assistance from the central government. The persistence of deep-rooted poverty in Bihar has made the population heavily reliant on PDS allocations to ensure basic food security. According to the *Economic Survey 2016–17*, the Government of Bihar identified nearly 14 million households as Below Poverty Line (BPL) and an additional 3 million households under the Antyodaya category. In contrast, the central government allocated food grains for only 6.9 million households, at the rate of 35 kilograms per month (Government of Bihar, 2017). This gap between state-identified households and centrally supported beneficiaries highlights the critical importance of PDS in addressing food insecurity across Bihar.

Within the PDS framework, wheat and rice constitute the most significant commodities, although sugar and kerosene are also distributed under the system. The enactment of the National Food Security Act (NFSA), 2013, brought structural reforms to the PDS in Bihar, which is now implemented through two distinct schemes. First, under the Antyodaya Anna Yojana (AAY), each Antyodaya household receives 35 kilograms of food grains per month—comprising 21 kilograms of rice and 14 kilograms of wheat. Second, the Priority Household (PHH) Scheme entitles every eligible household member to 5 kilograms of food grains per month—consisting of 3

kilograms of rice and 2 kilograms of wheat. As reported in the *Economic Survey of Bihar, 2017*, the operational details of these schemes are summarized in the following table.

Table-1 Allotment and lifting of Rice and Wheat under PDS in Bihar

Year	Wheat			Rice		
	Allotment	Lifting	Lifting percentage	Allotment	Lifting	Lifting percentage
2013-14	10566	10021	94.8	13407	12919	96.4
2014-15	19660	18637	94.8	29483	27919	94.7
2015-16	20965	20536	98.0	31446	29709	94.5
Source- Department of food and consumer protection, Government of Bihar.						

The data provided by the Department of Food and Consumer Protection, Government of Bihar, presents the allotment and lifting of wheat and rice under the Public Distribution System (PDS) for the years 2013–14 to 2015–16. In 2013–14, the state was allotted 10,566 metric tonnes (MT) of wheat, of which 10,021 MT was actually lifted, resulting in a lifting efficiency of 94.8 percent. For rice, the allotment stood at 13,407 MT, while the lifting was 12,919 MT, giving a higher lifting percentage of 96.4. This shows that during this year, Bihar was able to utilize most of its allocated food grains, with rice slightly outperforming wheat in terms of efficiency.

In 2014–15, the allotments for both food grains increased substantially. The wheat allotment rose to 19,660 MT, nearly double the previous year's allocation, while the lifting was 18,637 MT, maintaining the same efficiency level of 94.8 percent as in the previous year. Rice allotment also more than doubled to 29,483 MT, with 27,919 MT lifted, giving a lifting efficiency of 94.7 percent. Although the efficiency percentage for rice dropped slightly compared to 2013–14, it still remained above 94 percent, indicating consistent utilization despite the significant increase in allotment.

The year 2015–16 witnessed further growth in allotments. Wheat allotment was 20,965 MT, and lifting reached 20,536 MT, which translated into a lifting percentage of 98 percent—the highest across the three years. This indicates an almost complete utilization of the allotted wheat, reflecting improved management and efficiency in the distribution system. In contrast, rice allotment in the same year stood at 31,446 MT, with 29,709 MT lifted, resulting in a lifting efficiency of 94.5 percent. While the efficiency was slightly lower than wheat, it still reflects a high level of utilization given the large volume of food grains involved.

Overall, the analysis of the three-year period demonstrates that Bihar consistently lifted more than 94 percent of its allocated wheat and rice from the central pool, which highlights the effectiveness of the PDS in the state. Wheat utilization showed a steady improvement, reaching a peak efficiency of 98 percent in 2015–16, while rice maintained a stable efficiency level of around 94–96 percent. The increasing allotments year after year also underline the government's commitment to ensuring food security, and the high lifting percentages indicate that

the state was successful in making use of the majority of the food grains allocated to it for distribution to the beneficiaries.

Food Security Scheme in Purnia

When we examine the district-wise trend of the Purnia commissionerary, which consists of four districts—Purnia, Katihar, Araria, and Kishanganj—a broadly similar pattern emerges across all of them. This uniformity can largely be attributed to their comparable socio-economic conditions, such as livelihood patterns, agricultural dependency, and demographic characteristics. As a result, the performance of these districts in terms of food grain lifting under the Public Distribution System (PDS) is relatively consistent. Importantly, the lifting percentages recorded in these districts are slightly higher than the overall state average of Bihar, suggesting better utilization of allotted food grains and more effective functioning of the distribution system at the commissionerary level.

Table-2 District wise allotment and lifting of wheat and rice under NFSA during 2015-16

District	Wheat			Rice		
	Allotment	Lifting	Lifting percentage	Allotment	Lifting	Lifting percentage
Purnia	730	730	100	1096	1082	98.7
Kishanganj	396	394	99.4	594	557	93.8
Araria	689	665	96.4	1034	975	94.3
Katihar	676	676	100	1013	988	97.5
Bihar	20965	20536	98	31446	29704	94.5
Source- Department of food and consumer protection, Government of Bihar.						

The district-wise analysis of food grain allotment and lifting under the Public Distribution System (PDS) in Bihar, as reported by the Department of Food and Consumer Protection, provides valuable insights into the efficiency of implementation. The data for Purnia, Kishanganj, Araria, and Katihar districts for the year 2015–16 shows that all four districts performed well in terms of lifting the allotted food grains. In Purnia, the wheat allotment was 730 metric tonnes (MT), and the entire quantity was lifted, giving it a perfect lifting efficiency of 100 percent. Similarly, rice allotment in the district was 1,096 MT, of which 1,082 MT was lifted, resulting in a high lifting percentage of 98.7. This indicates an almost complete utilization of the allotted quota.

In Kishanganj, the wheat allotment was 396 MT, and the district lifted 394 MT, which translates into a lifting efficiency of 99.4 percent. For rice, 594 MT was allotted and 557 MT lifted, giving a comparatively lower efficiency of 93.8 percent. Although slightly lower than that of wheat, the figures still reflect a good utilization rate of rice. In Araria, wheat allotment stood at 689 MT, of which 665 MT was lifted, achieving a lifting efficiency

of 96.4 percent. Rice allotment in the district was 1,034 MT, and 975 MT was lifted, giving an efficiency of 94.3 percent. Both wheat and rice in Araria demonstrate high but slightly less than full utilization of the allotted quota.

Katihar district performed exceptionally well in wheat distribution, with 676 MT allotted and the entire amount lifted, recording 100 percent efficiency. Rice distribution also remained high, with 1,013 MT allotted and 988 MT lifted, resulting in 97.5 percent efficiency. The data highlights Katihar as one of the best-performing districts in terms of both wheat and rice lifting.

At the state level, Bihar as a whole was allotted 20,965 MT of wheat and successfully lifted 20,536 MT, achieving an efficiency rate of 98 percent. For rice, the allotment was 31,446 MT, out of which 29,704 MT was lifted, yielding a lifting efficiency of 94.5 percent. These state-level figures show that while wheat utilization was extremely high and close to full, rice lifting remained slightly lower but still above 94 percent.

Overall, the district-wise performance illustrates a consistently high level of efficiency in lifting the allotted food grains under the PDS. Districts such as Purnia and Katihar achieved complete utilization in wheat, while rice lifting percentages ranged between 93 and 99 percent, reflecting strong but slightly variable performance across districts. When viewed at the state level, Bihar demonstrates commendable efficiency in ensuring that the majority of food grains allocated from the central pool were actually lifted for public distribution. This reflects not only the commitment of the government to food security but also the effectiveness of administrative mechanisms in implementing the PDS in these regions.

Food Security During Primary Survey

During the field survey, an attempt was made to capture the ground realities of food distribution at the grassroots level in Purnea district. While official statistics indicate that the coverage of the Public Distribution System (PDS) in Bihar is relatively high, the situation on the ground is marred by corruption, irregularities, and discriminatory practices. Rice, being the primary staple food for the majority of poor households in the district, constitutes the most demanded item under the PDS. However, almost all surveyed households—with the exception of General Caste Muslims—reported experiences of discrimination in accessing their entitled share. A recurring complaint was that high-quality rice was diverted to more affluent households, who were largely from upper castes and certain Other Backward Caste groups, while poorer households received inferior quality grains. In addition to this, instances of under-measurement by local ration dealers were frequently reported, further deepening the sense of exploitation among marginalized groups.

Number of beneficiaries households		
Category	Total number of households	Percentage of the total
BPL	82	40.39
Antyodaya	42	20.68
APL	52	25.62
No Ration Card	27	30.31
Total	203	100
Source- primary survey		

The survey covered a total of 203 households across different villages in the Srinagar block of Purnea district. Among them, 82 households were classified as Below Poverty Line (BPL), 42 as Antyodaya (the poorest of the poor), 52 as Above Poverty Line (APL), and 27 households reported having no ration card at all. This distribution not only reflects the socio-economic stratification of the local population but also highlights the varying degrees of vulnerability in relation to food security. Particularly, the absence of ration cards among some households points to their exclusion from state welfare schemes, leaving them entirely dependent on market purchases or informal arrangements.

With the distribution of ration under the PDS, scheme improved the food security of the poor and vulnerable households. The surveyed households were asked a range of questions given below

1. Is your family getting food in the subsidized rate?
2. What rate your household pay for food grains?
3. Any problem/s regarding corruption and irregularities in the supply of foodgrain?
4. What is there any issue related to the midday meal and meal provided in Anganwadi Kendra of your children?
5. Is the food security reduces the number of seasonal migrants from ur locality, your village and your panchayat?

The household survey in Purnea district brought to light several critical issues concerning food security and the functioning of the Public Distribution System (PDS). A prominent finding was the lack of dietary diversity among households, cutting across different categories of ration cardholders. More than 90 percent of Below Poverty Line (BPL) and Antyodaya households reported consuming meals without vegetables or pulses, relying largely on staple grains. Even among Above Poverty Line (APL) households, nearly half (50%) acknowledged a similar deficiency, indicating that nutritional inadequacy is not confined only to the poorest groups. Direct village-level observations further reinforced these claims, showing that the daily diet of many families consisted primarily of

rice and potatoes, prepared in different forms. Such monotonous dietary practices reflect both the economic constraints of households and the limited capacity of the PDS to ensure balanced nutrition.

These local findings resonate with earlier national-level evaluations. The Planning Commission's performance review of the PDS (2005) estimated that nearly 75 percent of PDS foodgrains in Bihar failed to reach intended beneficiaries, a much higher figure than the national average of 57 percent. This discrepancy highlighted the deep-rooted governance and accountability issues in Bihar's food distribution system, making it one of the most leakage-prone states in India.

In response to these challenges, the Bihar government, under the leadership of Chief Minister Nitish Kumar, introduced a PDS coupon system in 2007 as a reform measure aimed at curbing corruption and improving transparency. Under this scheme, each household was provided with 12 coupons annually, entitling them to fixed quantities of wheat, rice, and kerosene. The distribution of coupons was carried out through gram panchayat members, under the supervision of Block Development Officers (BDOs), and the entire process was video recorded to maintain accountability. At the local Fair Price Shop (FPS), beneficiary households were required to submit a coupon each month in exchange for the specified commodities. FPS owners, in turn, submitted these coupons to block or district authorities to receive the next month's stock allocation. On paper, this system represented a well-structured attempt to reduce leakages and illegal diversion, and it was widely hailed as a pro-poor initiative at the time of its introduction.

However, findings from the Purnea district survey suggest that the intended benefits of the coupon system did not fully translate into reality. Despite the reform, most BPL and Antyodaya households reported being unable to use all of their coupons during the preceding 12 months. Complaints centered around maladministration at the local level, irregularities in the supply chain, and persistent manipulation by FPS dealers. In practice, many households still faced difficulties in accessing their entitled commodities, with allegations of partial distribution, denial of stocks, or demands for bribes. This indicates that while the coupon system was a progressive step toward transparency, it failed to tackle the entrenched corruption and weak accountability mechanisms within the local PDS infrastructure.

Conclusion

In conclusion, the field survey in Purnea district reveals that while the Public Distribution System (PDS) has the potential to improve food security for poor and vulnerable households, its impact remains severely undermined by corruption, discrimination, and weak implementation mechanisms. The widespread diversion of high-quality grains to affluent and upper-caste groups, coupled with under-measurement and irregularities by ration dealers, has left marginalized households with inadequate and poor-quality supplies. The persistence of monotonous diets dominated by rice and potatoes, even among Above Poverty Line households, underscores the failure of the PDS to address nutritional needs beyond mere calorie intake.

Although the introduction of the coupon system in 2007 was a well-intentioned reform aimed at reducing leakages and ensuring transparency, the survey findings show that it has not significantly altered ground realities. Most BPL and Antyodaya families continue to face barriers in accessing their entitlements, citing maladministration, supply shortages, and manipulation by local Fair Price Shop dealers. This reflects the persistence of systemic flaws and elite capture in welfare delivery, where policy innovations remain cosmetic without robust monitoring, accountability, and community participation.

Ultimately, the findings highlight a critical paradox: despite wide coverage and repeated reform efforts, the PDS in Bihar continues to reproduce inequality and exclusion at the grassroots level. Unless structural corruption is addressed and mechanisms for transparent, accountable, and equitable distribution are strengthened, the system will remain unable to fulfill its promise of ensuring food security and reducing vulnerabilities among the state's poorest households.

The PDS remains a pivotal instrument in India's efforts to achieve food security and support its agricultural sector. Its evolution from a universal to a targeted system reflects a strategic focus on the most vulnerable, while state autonomy allows for localized adaptations. However, ongoing efforts are needed to address operational inefficiencies and ensure equitable access to benefits. The PDS's dual role in supporting both consumers and producers underscores its significance as a comprehensive welfare mechanism, balancing economic and social objectives in one of the world's largest food distribution systems.

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