Public Distribution System (PDS) and food security:
A brief survey of literature

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Abstract

Objectives: To present a review of existing literature on the role of public distribution system in achieving food security in India.

Methods/Statistical analysis: This is mainly a review paper, in which we critically evaluate the previous studies on public distribution system. The paper begins with a discussion on the conceptual evolution of food security. An attempt has been made to assess role of PDS in strengthening the first two components of food security, they are food availability and food access in India.

Findings: It is found that there has been a shift in the focus of studies from issues related to production at the national level to factors influencing food security at the household level. Though the public distribution system has been major food security programme in India, it was often criticized for its urban bias and pro-rich nature. Thus with an aim to reach poor, Targeted Public Distribution System (TPDS) was implemented in 1997. TPDS also came under attack for its targeting error, leakages of food grains, poor geographical coverage, and not benefiting poor much. Further, recently implemented national food security act is also targeting in nature and therefore would not be free from problems embodied in the distribution system.

Application/Improvements: The National Food Security Act (NFSA) is only partially implemented. Many promising provisions in the act such as entitlement for special groups and protection from starvation have to be implemented immediately to eliminate starvation.

Keywords: PDS, Food Security, Food Availability, Access to Food, Urban Bias and Targeting.

1. Food security: conceptual evolution

The conceptual framework of household food security has been undergoing considerable modifications. Extensive research in this area since 1980s has brought in new elements towards understanding the nature and causes of food insecurity. During world food conference of 1974 the emphasis was on increasing food production and creating a coordinated system of national and international grains reserves [1,2]. Thus earlier time household food security was viewed a measure to link national, regional, and community level food supply to household food consumption and individual nutritional status and relate agricultural policy to issues of nutrition [3].

It was the concept of ‘food entitlements’ in 1982 which shifted the focus from production to economic access [4]. However, even before this, a similar set of ideas pointing to the relevance of economic factors were also found in literature on food policy and nutrition. For instance, a ‘functional classification of undernourished population as basis for food and nutrition planning’ was developed in 1973 [3]. Interestingly, the classification was an integration of ecological, demographic, and economic factors. Further, he classified the deficiency pattern into three namely, chronic, seasonal and occasional and categorized nutrient deficiency into various micro and macro nutrients. A similar sort of argument was put forth by another study [5], which viewed food security as a human problem as it is primarily one of the welfare vulnerabilities of distinct categories people within the population such as the urban poor, the rural landless and small marginal farmers.
Nevertheless, at the core of theoretical framework of food security is the concept of ‘Entitlement’. The entitlement approach revolutionized the analysis of food security by bringing household level factors into focus. Entitlement refers to resources bundle over which an individual can establish command. The resources bundle consists of productive assets, inherited properties, returns on labour, and transfer payments that are critical in determining the livelihood status and purchasing power of a person. The approach also incorporates risks associated with the bundle and extent of livelihood vulnerability resulting from them [6]. The sustainability of livelihood that can be attained through the mitigation of risk related to the individual’s entitlement bundle assumes a decisive role in case of food security [7].

Therefore food insecurity is recently seen as a livelihood failure [8]. The entitlement approach as a household centered analysis had its own limitations, of which relevant are neglect of Intra-household distribution of food, cultural accessibility, and temporal dimension of vulnerability. Due to the multidimensional nature of interrelated factors influencing food security, no single definition can capture all the dimensions. However, individual studies have attempted to adjust these factors to suit their needs and priorities [9]. The priorities are different for different groups who undertake the studies. The national governments tended to focus on food production with the aim of achieving self-sufficiency, while the international organizations and academic literature give preference to consumption and nutritional outcomes. However, most of the studies have made use of the definition proposed by world food summit of 1996, which delineated food security as a situation “when all people, at all times have both physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”. The definition encompasses key elements of household food security, importantly the four components of food security; they are food availability, food access, food utilization and food stability.

2. Purpose of the study

The main objective of this paper is to present a review of existing literature on the role of public distribution (PDS) in promoting food security in India. Although there are four components of food security, in this study we focus only on the role of PDS in strengthening the first two components of food security, they are food availability and food access in India. In the forthcoming sections we examine the role of PDS, urban bias in PDS and reasons for the introduction of TPDS. We also go through some of the studies discussing the targeting error and other efficiency issues of PDS. Finally the implications of national food security act are also elaborated.

3. Public distribution system, availability and access

At the household level food availability means maintaining adequate stock of appropriate food within the reach of individuals, through household’s own farm production or commercial imports from other domestic or international markets or through government transfer mechanisms [10]. Here the own food production by the households to a greater extent can reduce dependence on market forces. Changes in supply factors, especially the supply shocks resulting from the shortage of rain fall and drought, can increase the price level of food items. This kind of price shock has a tendency persist for some time. This is more evident in case of cereals and pulses. Such sort of risk and vulnerabilities can be avoided by the production for own consumption at household level. However, agricultural production need not always be subsistence oriented or for households’ own consumption. Indian agriculture became largely commercialized under British rule by the middle of the 19th century. Industrial revolution took place in Britain brought about higher demand and price for raw materials, consequently Indian farmers shifted to commercial crops [11]. Most of the commercial crops were export oriented. The commercialization and market orientation further strengthened with the development of railways and other infrastructure. Thus the area under these crops increased after independence. However, some states still preferably produce food crops especially cereals like rice and wheat. Even these productions are also market oriented because these produces were sold to either government procurement or private traders.
Thus, typical subsistence agriculture is no longer seen in India, though some farmers cultivate some food items like pulses and vegetables or keep apart some food crops for consumption. Access can be of two types; physical access and economic access. Physical access means regular supply of food. On the other hand economic access refers to adequate purchasing power. Transfer mechanisms run by government and aid agencies also play vital role in both physical and economic access. Public Distribution System (PDS) has been the major food distribution programme in India which ensured both physical access and economic access.

Besides supplying essential commodities, it has been facilitating implicit transfer of purchasing power through subsidized price. The system has undergone several intuitional changes. While British government introduced food grain rationing in 1939, public distribution system in its present form with nationwide network of Food Corporation of India (FCI) warehouses and procurement mechanisms was established in 1965 [12]. The food grains price committee set up in 1964 recommended the establishment of Food Corporation of India to carry out procurement operations and also agricultural prices commission to determine Minimum Support Prices (MSP), a price support given to farmers while procuring food grains and other commodities.

The food policy in India has been functioning at two tier level. At the operational level, Food Corporation of India with the directions of central government procures food from farmers by providing minimum support prices and then stores the food grains in warehouses and finally transports them to deficit states for distribution. At the distribution level, public distribution system administered by state government undertakes the distribution of food grains to consumers through its outlets. Thus food subsidy takes two forms. First one is producer subsidy provided to farmers through minimum support prices which are regularly increased by agricultural prices commission. Second one is consumer subsidy provided to consumers in the form of subsidized prices of commodities distributed through public distribution system. Although initially aim of public distribution system was to stabilize the food prices and food consumption, later on it became most important poverty eradication programme in India [13].

Thus a need for accelerating food production is felt by the government to meet the increasing requirement of food grains for distribution through outlets of public distribution system. It was towards this end, India initiated new agricultural policy with the application of modern agricultural technology, seed-fertilizers and high yield variety seeds. As a result of this seed-fertilizer-water-policy there has been phenomenal increase in food production in India what we celebrated it as ‘Green revolution’. Resultantly, India achieved self-sufficiency in food production in 1970s and has sustained since then.

4. Urban bias in PDS and introduction of TPDS

The public distribution system has been criticized on several grounds such as urban bias and leakages of food items. It was argued that public distribution system is urban biased [14]. Public distribution system had benefited urban rich than rural poor. This argument was empirically verified on the basis of four criterion and it was found that public distribution system is not urban biased, rather it is rural biased [15].

Considering criterion of public distribution system quantity per market dependent, it was shown that public distribution system is rural biased at all India level for rice, coarse cereals, sugar and cloth, as they altogether account for more than 60% of total PDS purchases. But another study [16] contradicted this argument by stating that larger share of consumption of certain commodities by rural population can be misleading indicator since this does not consider relative rural population, lower PDS prices in rural areas and own produce consumption by rich farmers. He shows that effect of public distribution system is marginal on rural population in the backward states and there is urban bias in the consumption of commodities from public distribution system. Besides urban bias, there were also large scale leakages from public distribution system and as a result public distribution system and food subsidy came under attack in the policy circle.

Therefore, a need to reform public distribution system was felt in the context of structural adjustment programme of 1991, to reduce food subsidy by retargeting the poor, which would help in reducing budget deficit [17,18]. But the reform was mainly focused on PDS and distribution part by reducing consumer subsidy and neglected the inefficiency of Food Corporation of India in procuring and processing food grains and also did not touch producer subsidy. The producer subsidy given in the form of minimum support prices have been much politically influenced by the big land lords in producer states [13].
Several scholars and policy makers suggested various methods for reforming public distribution system, and all these were either methods of targeting poor or methods of excluding some groups [19]. It was suggested, a commodity based targeting a system, where public distribution system supplies only commodities that are likely to be consumed by the poor such as coarse cereals was suggested [20]. A similar kind of method was suggested, where only inferior varieties of rice and wheat would be distributed in order to restrict the utilization of PDS to the poor and destitute [21].

The scopes for these two methods were empirically verified and it was found that the consumption pattern of poor have undergone changes against coarse cereals and in favor of superior cereals [22]. Further, it is noted that interregional differences in cereals and calorie intakes were caused by disparities in food grain availability than in income, implying larger role for PDS in supplying subsidized food to poor. Food stamps were also proposed to be given to persons belonging to target groups and holders of these stamps can exchange them to purchase the commodities equivalent to the value. It was recommended that PDS can be substituted by an employment generation scheme that provides equivalent amount of subsidy [22].

However targeting is not considered as right method for a country like India where hunger and food insecurity is widespread [19]. Targeting may involve social costs and may exclude the needy people. It has been pointed out that even to satisfy the daily cereal requirement per person recommended by ICMR, an additional 32.4 million tons of cereals needs to be distributed through PDS. This fact suggested that even to reach poor PDS needs to be expanded rather than reducing its size. Nevertheless, the food subsidies to consumers for basic cereals declined after 1991 as a result of fall in the quantity of food grains supplied through PDS and continuous increase in prices of PDS commodities.

Due to the problems of increasing subsidy costs and targeting error of consumer subsidies, the most significant change in food policy was initiated in June 1997 with the introduction of Targeted Public Distribution System (TPDS). Aim of TPDS has been to provide subsidized food only to BPL families and APL families would be provided food grains comparatively at higher price, which is equal to 90% of the FCI’s economic costs. However, because of the large difference between TPDS price and open market price, huge amount of food grains were diverted to black market, although the offtake statistics show an improvement [23]. The leakages of food grains coupled with limited purchasing power of poor curtailed them from making use of TPDS fully.

5. Targeting errors in TPDS

Some micro level studies have identified targeting errors under TPDS [24,25]. Targeting errors can be of two types, firstly errors of wrong exclusion, which means exclusion of really poor and deserving households from BPL list, secondly errors of wrong inclusion, which means inclusion of non-poor households in BPL list. A study [24] examined these two types of targeting errors in the context of a village in Maharashtra, using two sets of data collected in 1995 and 2000, aim of which was to compare the changes in targeting errors after the introduction of TPDS. Their analysis suggested decreased incidence of wrong inclusion and on the other hand increased incidence of wrong exclusion with a shift from universal PDS to targeted PDS.

A similar kind of study [25] estimated the proportion of wrongly excluded and wrongly included households using primary data collected from eight villages of Rajasthan. It is found that among the BPL households defined as per the official criteria; about a quarter have been wrongly included. Moreover, 44% of eligible households are excluded from BPL list. Both these studies have raised concerns about the appropriateness of official criteria of 1997 based on assets and income for identifying BPL households because of the absence of reliable data of income of poor households and also of many conceptual issues in defining assets.

Incomes of poor households are quite uncertain and not consistent throughout the year, particularly of the casual workers and employees of informal sector whose earnings depend on level of employment. The targeting errors were further ascertained by consumptions expenditure data of national sample survey in 2004-05, which in case of exclusion errors revealed that only 40% of rural poor households and 27% of urban poor households possessed either BPL or AAY entitlements. In case of inclusion errors it was noted that 68% of non-poor rural households 51% of non-poor urban households were included BPL or AAY list. It was argued that a set of food insecure is larger than the set of poor in India [32]. Therefore any attempt to target the food distribution only to poor would penalize food insecure non-poor households.
6. Efficiency Issues of PDS

Besides targeting errors, studies have also exposed some other efficiency issues of public distribution system in India. Serious one among these issues is the illegal diversion of food grains to open market with the help of corrupted officials. According to a study [26], 55% of subsidized grains were illegally diverted. Further poor households received only 29% of total subsidy expenditure, rest 43% was eaten up by illegal diversion and 28% is absorbed by excess operational cost. Another study [25] estimated the trends in diversion of grains from PDS to open market in for previous 10 years by matching official off take figures with household purchase data of national sample survey. It was found that in 2004-05, 54% of grain was diverted, and however in 2007-08 this declined to 44%. Utilization level of PDS by poor households has not been satisfactory due to several impediments such as poor quality of grains, insufficient geographical coverage, irregular working time etc. In [27] a comparative study on the efficiency of public distribution system in Andhra Pradesh and Maharashtra [28], it was shown that utilization rate is low in Maharashtra because of inadequate geographical coverage. Some evidences for the inferior quality of PDS wheat was advanced by study [29], which according to them would induce switch out of PDS, which in turn would directly affect open market prices. Analysis of the utilization of PDS by households in Rajasthan reveals lower utilization of PDS entitlement due to supply constraint and the households purchased wheat from open market at higher prices [30].

The concurrent occurrence mounting food grain stock and widespread undernourishment has been a matter of policy concern in India. This is result of large scale procurement of food grains by the government, the aim of which has been primarily to provide price support to politically powerful farmers in grain surplus states, and also inadequate distribution of food grains to poor people. Therefore since 1992-93 procurement of food grains has been higher that the supply. This reckless policy has resulted in high food price inflation in the presence of large food grain stocks in granaries. In his theoretical note the popular view that poor storage facility was the main reason for inflation was refuted and instead this is attributed to excess procurement and less release of food grains [31]. Thus the government needs to have a certain set of rules to release food grains in the time of inflation. It was suggested to release food grains in small batches at a fixed price per unit to traders or consumers.

7. National food security act and emerging challenges

The draft of the national food security bill prepared by the National Advisory Council (NAC) was published by the government on 21st January 2011 for welcoming suggestions from public. Despite the fact that there is a general consensus among the committees drafted and evaluated food security bill on the need of a universal food security act, finally targeting poor as defined by Tendulkar Committee was recommended due to constrains in food grain procurement and management. Confronting the proposed food security bill, it argued that universal food security act is not only desirable but also a more efficient and feasible way to ensure food security for all [32]. They suggested an alternative system with universal entitlement which is to be linked to the minimum support price. While the system includes three groups like NAC proposal, the inclusion and exclusion was based on results from pilot survey for the BPL census, and to be delinked from the official poverty estimates. It was revealed that the shift from in kind transfer to direct transfer would result in inflationary pleasure, worsen the crisis of under nutrition and increase the risk of farmers [33]. It is cautioned that the huge financial implications of food security act [34].

The analysis suggested a higher fiscal cost than what was estimated due to the cost of increasing food subsidy and cost of setting up or running new institutions and bureaucracies. Although the bill has been criticized on several grounds since then, act is almost similar to the bill. The national food security act was passed in the parliament on 10th September 2013 to ensure food nutritional security to the vulnerable groups. The act guarantees that up to 75% of the rural population and 50% of urban population will be provided subsidized food, altogether covering about two thirds of the population. Based on the general division of population into three categories namely, priority, general and excluded the food entitlement is subdivided in to three categories. The priority households will be provided 35 kg (equivalent to 7 kg per person) of rice at ₹3 and wheat at ₹2.
The general households will be provided 20 kg (equivalent to 4 kg per person) of rice at ₹3 and wheat at ₹2. The third group excluded will be totally delinked from the ambit of PDS. The act was expected to be path breaking step towards India’s combat against food insecurity and under nutrition as it makes access to food the basic right of every individual. It encompasses the three major existing food security programmes, Public Distribution System, Integrated Child Development Scheme, and Midday Meal Scheme. Public Distribution System will continue to be targeted one, while Integrated Child Development Scheme and Midday Meal Scheme are universal in nature. The act includes special programmes for pregnant women, children, destitute persons, and homeless persons. Besides the nutritional support, pregnant women will also receive maternity benefit of not less than ₹6000. Children up to 14 years will receive nutritional means either through Integrated Child Development Scheme (ICDS) or through Midday Meals Scheme.

It also includes innovative schemes like community kitchen, grievance redressal cell, social audit and technology supported information and monitoring system for procuring and distributing food grains. The concerns about the slow implementation of food security act because of the political difference between central government and state governments were also raised [35]. Unfortunately most of the schemes announced under act are now neglected and presently the focus is on categorizing the household into three groups on the basis of official methodology and restricting subsidized food grains to target groups. Presently 32 states or union territories are implementing food security act, out of which union territories Chandigarh and Puducherry are providing direct cash transfer of food subsidy to the beneficiaries.

8. Summing up

This study reviewed the existing studies on the role of public distribution in enhancing food security with a special focus on the availability and access. We noted that focus of the discussions of food security shifted from self-sufficiency in production at the national level to access to food at household and individual level. While informal public distribution system was prevalent during pre-independence, only after its formal inception in 1965 it became a major food poverty eradication programme in India. However it was often criticized for its urban bias and pro-rich nature. Thus in the context of structural adjustment programmes, with an aim to reduce food subsidies, targeted public distribution system was implemented in 1997. Even TPDS has also not been free problems, as many micro level studies reported that there are targeting errors under the system. There were also other issues like leakages of food grains, food price inflation resulted from excess procurement and insufficient geographical coverage. The recent implementation of national food security act is also not happening at required pace, as only the division of households into various groups is underway, and many other related schemes are neglected.

9. References

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