



The Effects Of Reforms To The Public Distribution System In Chhattisgarh On Food Security

Jasmine Joshi Research Scholar, MATS University.

Dr. Umesh Gupta HoD Commerce Department MATS University.

Abstract

Although a rapidly growing developing country, India has a larger food-insecure population than all of Sub-Saharan Africa. Given the prevalence of chronic malnutrition, the Government of India spent nearly 1 percent of the gross domestic product in the past year on the Public Distribution System (PDS), its system of subsidies for food grains and other essential commodities. Despite the importance of effective food aid in the country, a large share of PDS food grains do not reach their intended beneficiaries. However, the Indian State of Chhattisgarh instituted a number of PDS reforms in the early and mid-2000s in an effort to improve the distribution of PDS food grains. We find that both PDS consumption and food security improved in response to the reforms.

Keywords: Food security, India, Chhattisgarh, Public Distribution System, National Food Security Act Acknowledgment

Introduction

Recent estimates indicate that there are roughly 870 million malnourished people in the world, despite increases in the availability and stability of food supply around the globe (FAO, 2012a; Fan, 2012; Meade and Rosen, 2013). Many researchers, policymakers, and other commentators have concentrated on measuring various aspects of malnourishment, examining strategies to better deliver food assistance, and examining the effects of food assistance on a variety of household outcomes due to the difficulty for so many households to consistently obtain adequate sustenance on their own (FAO, 2012b; Barrett, 2002; and Behrman and Deolalikar, 1998). Through the Public Distribution System (PDS), which is intended to sell principally rice, wheat, sugar, and kerosene to low-income households at subsidised rates, India has long established measures to assist ensure appropriate access to food. The PDS food grains are purchased by the Central Government from farmers all over India, and the rice and wheat are then given to various State governments. Through a network of Fair Price Shops, states are responsible for providing PDS goods to families (FPSs). Prior to 1997, the programme was accessible to all households and its main goals were to stabilise food prices and ensure their availability following the 1950s and 1960s' high food costs and food shortages (Radhakrishna et al., 1997). The Targeted Public Distribution System, which provided significant food subsidies to India's poorest households, replaced the PDS in

1997 (Government of India (GOI), Ministry of Consumer Affairs, 2002). Numerous factors have led to widespread criticism of the PDS. The programme has primarily been criticised for being extremely wasteful. According to estimates, in 2010 about 41% of grain subsidies did not reach the intended recipients (Dreze and Khera, 2011).

However, a considerable number of food insecure and low-income households have been excluded from receiving subsidised food grains as a result of the PDS's design (GOI/Ministry of Consumer Affairs, 2002). These two aspects assist to explain why, despite spending almost 1% of a fast expanding GDP on maintaining the PDS (Sharma, 2012), India continues to house close to 40% of the world's population who experiences food insecurity (UN/FAO, 2012a; Fan, 2012; Meade and Rosen, 2013). Even though PDS performance has generally been subpar, certain States have demonstrated advances in the distribution of PDS food grains (Khera, 2011b). It is challenging to determine how to best enhance the PDS in States where it still performs poorly because the reasons for the recent improvement are not fully understood. The National Food Security Act (NFSA), which will significantly increase the number of households eligible for food grains given by the current PDS, makes the problem even more urgent.

One of the States where the distribution of PDS food grains has improved recently is Chhattisgarh (Khera, 2011b). Due to the State's experience, it makes for a particularly compelling case study. By absorbing a number of mainly impoverished and rural districts from the State of Madhya Pradesh, the State was created in November 2000.

The State has a greater incidence of food insecurity than the rest of India due to the relative poverty of the area (Government of India (GOI), National Sample Survey Organization, 2007). Chhattisgarh implemented several changes to the way it distributed PDS food grains starting in early 2001 and continuing throughout the decade. However, the State government's changes, which were started in late 2004, have drawn the most attention and are frequently held responsible for the improvement in Chhattisgarh's PDS (Dreze and Khera, 2010). These well reported revisions were introduced in two phases. In December 2004 considerable changes were made to the management of PDS commodity shops and the distribution of grains to those shops. Later, in 2007, the State greatly increased the list of households eligible for grains at the lowest prices and decreased the rate at which PDS grains were sold. Chhattisgarh modified these changes throughout time, adding auditing and transparency procedures for the distribution and receipt of PDS goods. Recent polls show that the PDS is running considerably more effectively now than it did earlier in the decade in Chhattisgarh (Khera, 2011b; Puri, 2012). Many government officials, academics, and observers have urged other States to imitate the post-2004 reforms implemented in Chhattisgarh because of the shifting perceptions of the PDS in the State, and many provisions from these reforms have been incorporated in the current proposals to expand the PDS.

Based on Chhattisgarh's experience, pilot initiatives have been developed in Haryana and Punjab.

Even the Supreme Court has questioned why the rest of the nation cannot use Chhattisgarh as a model.

The NFSA has also integrated several provisions from the post-2004 reforms to help eliminate inefficiencies in States where the PDS performs badly. A few politicians have even gone so far as to demand that the Government of India expand the NFSA's coverage, rations, and price range to embrace additional components of the post-2004 reforms. However, it's crucial to remember that Chhattisgarh's PDS underwent several improvements that may have contributed to the improvement in PDS performance before the well-publicized revisions mentioned above. Particularly, as the State government started issuing licences to independent retailers in 2001, there was an upsurge in the number of Fair Price Shops. Aside from that, Chhattisgarh started putting the Decentralized Procurement (DCP) plan into action in 2002 by acquiring PDS food grain directly from State farmers. The following State government continued this later plan. This research further examines the changes in food consumption in Chhattisgarh during the reform period to better understand the impact the post-2004 reforms had on food security as well as the role they played in the PDS's turnaround. We examine data on food security and PDS consumption from the National Sample Survey Organization's Consumer Expenditure surveys conducted in the rounds of 1999/2000 (55th), 2008 (61st), and 2009/10 (66th) (NSSO).

We compare Chhattisgarh's consumption of PDS grains and the percentage of the people experiencing food insecurity to State pre-reform levels. To consider local and national shocks that might be affecting consumption over the time period, we additionally compare changes in PDS consumption and overall calorie consumption in Chhattisgarh to changes in States bordering Chhattisgarh. Overall PDS consumption in Chhattisgarh has increased over the past ten years, and this growth is significantly more than the changes in neighbouring States. Despite this increase in PDS consumption following the significant PDS reforms implemented by the State, it is challenging to fully ascribe the PDS consumption increase to the post-2004 changes. Our findings show that the increase in PDS participation began to take place before the well publicised reforms were put into place, which shows that past reforms and other variables were responsible for a significant amount of the improvement in Chhattisgarh. It would be challenging to anticipate whether other States that implemented only a portion of Chhattisgarh's post-2004 PDS reforms would experience the same level of success as Chhattisgarh; the existence of a prior, rising trend in PDS consumption further complicates this forecast. Additionally, we discover that between 1999/2000 and 2004/05, the average calorie consumption improved and the proportion of the population consuming less than 2,100 calories per day decreased as the availability of PDS food grains in Chhattisgarh significantly increased. We find little evidence of an improvement in food security during this period, despite the fact that the availability of PDS food grains kept growing between 2004/05 and 2009/2010, as the global financial crisis and the rise in food prices had a significant impact on nutrition across the entire country.

Findings

Thus, Chhattisgarh's PDS has improved, which has helped to lower the state's food insecurity rate. Given the PDS's subpar performance in Chhattisgarh prior to its reversal, improving it other States where it performs less well is both feasible and useful in reducing the rate of food insecurity. However, despite these improvements, the State did not fare any better than the rest of the nation in protecting itself from the financial crisis or the rise in food prices, so further development of both national and state policies aimed at helping households facing sudden economic hardship is required.

This study ignores the potential negative implications that PDS procurement of food grains has on agricultural markets, even while it finds positive nutritional advantages of the growth of PDS food grains. Many claim that the government-mandated Minimum Assist Price (MSP) is set both to support farmers' incomes and to stabilise food prices, and that, given the MSP's continually high level, the former purpose frequently predominates the latter (Rakshit, 2003). Some studies claim that by reducing investment in agricultural industries, these interventions in agricultural markets actually hurt the economy as a whole (Kumar et al., 2003). Given the anticipated rise in procurement under the NFSA, whatever effects government purchases of food grains have on agricultural prices are expected to be amplified, and several officials are worried about the consequences on agricultural markets (Gulati et al., 2012).

PDS delivery changes in Chhattisgarh started soon after the State was formed in late 2000. Under the Sarvajanic Nagrik Poorti Vitran (SNPV) Scheme, the State government started granting private companies licences to acquire and run FPSs in June 2001. Between 2001 and 2004, the number of FPSs in the State increased, with over 60% being privately owned and run.

In line with this rise in complaints, PDS shop practises came under scrutiny. Around 1,200 of the 1,525 cases brought against FPSs over this time period involved private dealers (GOI/Department of Food and Public Distribution, 2006).

After looking into these accusations, the State Advisor for the Supreme Court produced a report criticising private dealers' involvement in the PDS. Additionally, Chhattisgarh revamped their rice PDS procurement process. Chhattisgarh started taking part in the DCP scheme in 2002. Under this programme, state governments buy rice and wheat directly from local farmers at the MSP and receive reimbursement from the federal government for the price of the rice. The amount of rice purchased increased by 340 percent between 2002 and 2010, from 1.5 million metric tonnes to 5.1 million metric tonnes.

A committee headed by the Principal Secretary of Food and Civil Supplies looked at Chhattisgarh's tribal districts' vulnerable groups' food security concerns in 2004.

Following its inquiry, the committee decided to revoke the private FPS licences in six tribal regions throughout the State and hand control of the private FPSs over to community organisations.

The State government subsequently issued the 2004 Public Distribution (Control) Order, which prohibited private dealers from operating FPSs anywhere in the State and only allowed operation by local Gram Panchayats (village or small-town governments), cooperative societies, self-help organisations, and forest protection committees. Other reform requirements included in the Order were delivery to FPSs by the first week of each month, disclosure of FPS allocation amounts to Gram Panchayats and other local organisations, and inspections and social audits at certain intervals. A 75,000 rupee (Rs) interest-free loan was then provided to each FPS, and the commission on goods sold was increased from 8 to 45 rupees (Rs) per quintal. These actions were taken by the government to strengthen the financial viability of FPSs. The number of FPSs in Chhattisgarh increased to 10,400 by 2009. 14 Additionally, Chhattisgarh expanded the PDS's geographic reach. Launched in April 2007, the Mukhyamantri Khadyann Sahayata Yojana (MKSY) programme gave ration cards to households that had been classified as BPL in either the 1991 or 1997 BPL surveys but were left out of the 2002 survey. By adding over 2 million people to the list of those eligible for rations, or around 8% of the State's total population, this strategy boosted the number of people who might receive them. A few smaller reforms also took place after 2004, such as the computerization of records, the use of electronic weighing machines for rations, the visible marking of households to indicate the rations they were receiving, and the public display of a list of all ration card holders at the FPS. These citizens registered to receive "short message service (SMS) alerts" that reported grain movements. Stakeholders in Chhattisgarh attribute the state's PDS improvement over the previous ten years to changes carried out after 2004. (Puri, 2012). The vast majority of survey participants in 2009–10 reported obtaining their full grain ration, that they did not receive subpar grains, that the FPSs operated on a set schedule, and that they were overwhelmingly satisfied with the way the PDS was run (Khera, 2011b). Despite this development in the PDS, reform efforts are still ongoing. The Food Security Act of 2012 was passed by the Chhattisgarh State government in 2012, for instance.

Information and Calculating Caloric Consumption in the Home

This paper compares PDS and total calorie intake in Chhattisgarh after the post-2004 changes to consumption in Chhattisgarh before those reforms in order to evaluate the impact of PDS reforms. While this comparison suggests that post-2004 reforms played a role, part of the measured change in PDS consumption may have been caused by secular trends or shocks that affected the entire region or the nation. To be sure that policy changes or other shocks to the entire country are not the cause of the results, we must also compare this change in PDS consumption to changes in border States.

This study relies on estimates of household consumption from PDS sources and estimates of total calorie consumption from NSSO consumer expenditure surveys. Every year, the

NSSO conducts surveys on a variety of subjects, and every five years, it performs a more thorough survey of consumption and employment. The 1999/2000 (55th), 2004/05 (61st), and 2009/10 (66th) rounds of these larger consumer surveys, each of which surveyed over 100,000 households throughout all of India, are used in this research. Each consumption survey offers information on meals eaten outside the home, the quantity and cost of consumption of roughly 170 different food products, as well as the origins of each food item (cooked, purchased, etc.). Each survey records consumption of PDS rice, wheat, sugar, and kerosene in distinct amounts from other family purchases. The survey also provides information on a wide range of household and individual variables, including the size of the household, its location, the members' ages and educational levels. This report uses the average calories included in each of these food items as provided by Gopalan et al. to convert the amounts of food ingested to calorie values (1989).

These surveys therefore provide straightforward estimations of the calories consumed from PDS rice, wheat, and sugar. Estimating total household calorie consumption, which is necessary to do quantitative analyses of food security in Chhattisgarh before and during the reform period, is problematic for a number of reasons. First, when converting purchases of processed foods into caloric terms, there may be errors. It can be challenging to match specific nutritional data to several of the processed food categories, including "Salted Refreshment," "Cake/Pastry," and "Other Processed Food." Additionally, the data set only presents the value of a few processed food categories because some of these ambiguous food products appear in a variety of various formats and it is challenging to report quantities.

Following Deaton and Subramanian (1996), we first determine the number of nonprocessed calories ingested per rupee spent on those food items in order to estimate the number of calories included in those sources. Assuming that processed foods are twice as expensive as nonprocessed calories, we increase the value spent on processed foods by half to estimate the number of calories that a household consumes for every rupee spent on nonprocessed foods. Second, to precisely calculate the actual number of calories consumed by family members, the calories consumed in meals eaten outside the home must be taken into consideration. For instance, if poorer households are more likely to have meals at work, estimating a household's calorie consumption just by the food items purchased is likely to be inaccurate. Even though the NSSO data set contains comprehensive information on the number of meals consumed by household members away from the home, a method for accurately determining the caloric content of those meals still needs to be developed. The calories in meals eaten outside the home are calculated using a method developed by Deaton and Subramanian (1996) by examining how many fewer calories the household consumes for each extra meal eaten. The most accurate estimate, obtained using simple regression techniques, indicates that households consume 475 less calories for each meal eaten outside the home. We add this number to the total number of calories consumed by households for each meal eaten outside the home. Numerous other research employ comparable techniques, despite the fact that the method is far from perfect and incorporates a sizable degree of measurement

error into estimates of food insecurity (Tandon and Landes, 2011). (Deaton and Dreze, 2009). Estimating the number of calories in meals eaten outside the home is covered in appendix 1 of the guide. Finally, we are unable to account for the calories that home members prepare but provide to guests. The number of these meals is reported in the 2004–2005 and 2009–2010 rounds of the consumption surveys, but not in the 1999–2000 one. Therefore, we simply disregard the number of meals served to non-household members in order to maintain a consistent estimate of calorie consumption throughout the analysis. The majority of families do not provide any meals to guests or other non-household members, despite the fact that this poses a considerable challenge to accurately assessing household calorie consumption. This is especially true for families who lack access to food.

Adding the estimated calories from non-processed food, estimated calories from processed food, and estimated calories from meals eaten away from the home yields estimates of the total amount of calories consumed by households. Calorie intake totals for individuals are computed once the baseline estimates of total calorie consumption are determined to enable comparisons with individual consumption benchmarks.

Conclusion

We investigate how Chhattisgarh's post-2004 PDS reforms affected both food security and PDS usage. Between 1999/2000 and 2009/2010, there were two noteworthy shifts in PDS consumption. First, there was a substantial rise in the average number of calories ingested from PDS cereals. Second, there was a considerable rise in the amount of calories acquired per rupee spent on PDS grains, indicating that PDS grain consumption among the poorest households increased. We also show that the rise in PDS consumption occurred prior to the implementation of the post-2004 changes. Together, these findings imply that Chhattisgarh's PDS was improved as a result of the post-2004 reforms. However, Chhattisgarh's prosperity was also greatly aided by changes implemented before 2004 and unobservable elements present during both times. Additionally, it is unclear if the post-2004 PDS changes would have been as effective without the earlier reforms and the hidden forces that were accelerating PDS advancements before the reform. Following the PDS reforms in Chhattisgarh and the rise in PDS consumption, we find that food security in Chhattisgarh improved between 1999/2000 and 2004/05, but there was no difference between 2004/05 and 2009/10 as food insecurity increased significantly across India as a result of the financial crisis and rising food prices. As a result, there was an initial improvement in food access at the same time as the PDS expansion. The PDS in Chhattisgarh continued to improve, but given the dramatic shocks later in the decade, there was not a similar increase in access to food over the subsequent time period. Curiously, the rising food prices and increased availability of food grains in Chhattisgarh actually increased the effective subsidy for PDS grains for Indian households in the State (Khera, 2011b). Households appear to have been overwhelmed by the entire effect, though, and even an increase in PDS consumption was unable to fully counteract the consequences of these unfavourable income shocks. As a result,

households experiencing abrupt economic difficulties may be better targeted. The NFSA will be affected by the results mentioned in this study in several ways. First off, Chhattisgarh's post-2004 reforms are mostly reflected in the NFSA's measures intended to increase PDS openness. These findings show that it is challenging to foresee how these provisions will affect States when the distribution of PDS food grains is still uneven given a prior increasing trend. Second, the expansion of subsidised food grains proposed in the NFSA has the potential to increase food security in States where the PDS functions well, given the potential impact that expanding the PDS in Chhattisgarh may have had on reducing food insecurity prior to the global food and financial crises.

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