Intervention of One Rupee Rice in PDS: Utilisation and Impact in Andhra Pradesh and Odisha States in India

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Abstract
To find out the utilisation and impact of the scheme of pricing one kg rice at one rupee among the poor people and other beneficiaries at PDS outlets in Andhra Pradesh and Odisha states of India. For the purpose of this study, multi-stage random sampling method was used. Quantitative data was collected from the public using structured questionnaire. Data collection was done between 2nd December 2013 and 11th February 2014. The results show that more than 94.8% of poor families are utilising PDS grains in Odisha and 92.5% of BPL families are utilising PDS grains in Andhra Pradesh. In both the state’s 30% of the population is Above Poverty Line (APL) families, and they do not buy most of the commodities and more particularly in rice. As part of PDS reform, both these states have improved transparency with computerised ration shops and biometric ration cards and pin numbers. PDS outlets are more useful to poor people than for the Above Poverty Line families. This study suggests that allotments of rice for APL families must be cut to control corruption and leakages, this study also suggest that millets must be introduced in the PDS to increase nutrition security.

Keywords: One rupee rice, utilisation, impact, poor people, millets, rural, PDS, Andhra Pradesh and Odisha

Introduction
Food security has many dimensions in India and other developing countries. India’s Public Distribution System is the largest network of its kind in the world. Targeted Public Distribution System (TPDS) is a poverty alleviation programme and has contributed towards the social welfare of the poor people. In India the total number of ration cards issued by state governments and union territory are (BPL 8.71 crore, AAY 2.43 crore, and APL 13.14 crore) amounting to a total of 24.26 crore. The number of fair price shop in India is 5.13 lakh as on 31. 5. 2014 (Monthly Food grains Bulletin, 2013).

Essential commodities like rice, wheat, sugar, kerosene, cereals, salt, pulses, and oil (State Civil Supply, 2013) are supplied to the poor through fair price shops at reasonable prices. PDS schemes are used by political parties to attract the poor in the rural areas during the election time. Upon winning the election, these schemes are among the first to be rolled out as proof of delivering election promises.

A glance at the statistics on Nutrition and Health status in India seriously disturbs the mind of socially concerned persons. These statistics suggest that 20% of the population in the country are undernourished, 40% of children below the age of 3 are under weight, 80% of children in the age group of 6 to 12 years are anaemic and 33% of women
in the age group of 15 to 49 are in poor health (WHO, 2005).

Rice is an essential and staple food for the poor people who depend on PDS outlets to provide the same. Public Distribution System is a backbone of the below poverty line families in India particular for above the reason. This is an important reason why the One kg rice at one rupee scheme is introduced at the state level, which is to reduce hunger in rural India. The government of Andhra Pradesh introduced the one rupee per Kg rice from 01st Nov-2011 and Odisha has introduced this scheme on 01st Feb-2013. The amount of rice provided is minimum 12kg to maximum 25kg (AP & Odisha Civil Supply, 2013) in both states.

Government of India Introduced the Targeted Public Distribution System (TPDS) from 1st June 1997. Under this system, the population divided in two groups (BPL&APL) as per family income based. Food grains are distributed to the people at differing prices (Food grains policy 2000). Many studies found that PDS has inclusion and exclusion errors (Madhura, 2001; Hirway, 2003) and corruption and leakages are more in the rural areas (George, 2006) targeted scheme is not effective for poor (Bhargava, 2008). This Scheme is better for the urban population compared to the rural population (Indrakant, 1997). Planning commission evaluation report suggests that 58% of the food subsidised is not reaching the BPL families because of identification errors and non-transparent operations. Some studies have suggested the policy of issuing food coupons to poor people instead of PDS (Sebastian, 2009), recommended the Information Technology (IT) based Public Distribution System (Saxena, 2010). Consumption patterns are changing in both rural and urban (Ranjan, 2007) and rural poverty line reduced in Chhattisgarh and Tamil Nadu (Dreze & Reetkia, 2013). The Chhattisgarh PDS model extending coverage, improving food delivery and better transparency to remarkable revival (Raghav, 2012). These studies address some of these gaps and make us to understand the ground realities. So the present research conducted in two different states. This study used quantitatively measurement tools. The present study aims to remove some of these gaps and suggest ways to make the rural people draw greater benefits from the PDS.

**Increased food subsidy in selected states**

In the financial year 2010-12, state and central food subsidy was not adequately available in Andhra Pradesh. However from 2012-13 Rs 225.514 crores was allocated to Andhra Pradesh, which was increased to Rs 875.954 crores in 2013-2014 as on 18-11-2013(AP Civil supply, 2013).

In Odisha, from financial year 2009-2014 the food subsidy was increased gradually, in 2009-10 Rs 1281.960 crores was allocated followed by Rs 2243.970 during 2010-2011. In 2011-2012 Rs 2934.710 crores was allocated and the Rs 2731.500 on 2012-2013(not included buffer subsidy) and 2013-2014 Rs in 2005.110 crores (not included buffer subsidy). Food subsidy was more than doubled under this scheme as on 18-11-2013(Odisha civil supply, 2013).

**Scale of entitlement and consumer price**

The main purpose of introducing the scheme was to help the poor people to alleviate hunger deprivation and poverty. In Odisha state rice supply scheme involved distributing to different group of people based on their socio-economic status. Beneficiaries who were part of BPL families amounted to 36, 90,027, and the scale of entitlement is 25kg, Antyodaya Anna Yojana (AAY) families are poorest of poor families in urban and rural areas. Total number of beneficiaries in AAY is 12, 53,164 and scale of entitlement is 35kg. For both families the consumer price for rice is one rupee per kg. Senior citizens over 65 years are covered under the Annapurna scheme and the beneficiaries are 63,789 families with entitlement is 10kg rice at free of cost (AP Civil supply, 2013).

In KBK region the total APL families 5, 32,133 and scale of entitlements 25kg at one
rupee whereas in the other regions of Odisha, rice is priced 9.30 rupees per kg. Under APL wheat entitlement is 7 kg and consumer price is Rs 7/Kg and sugar price is Rs 13.50/Kg (both BPL & APL). Andhra Pradesh too follows similar strategies the date on total number of beneficiaries categories wise is not available (Odisha civil supply, 2013).

Objectives
The objectives of the study are (1) to find the utilisation of One kg rice at One rupee in selected states (2) to find the impact of Public Distribution System in selected states and (3) suggest alternate policies.

Methodology of the study

Study area
The socio-economic conditions of the states selected vary. In Andhra Pradesh the study area was the three coastal districts namely (Srikakulam, Vizianagaram and Vishakapatnam). In Srikakulam district total population as per 2011 census is 26, 99,471 and total area is 5,837km, population density per sq.km is 462km and literacy rate is 52.56%. In this area, below poverty line households holding are 90.1% as on 2008. Then Vizianagaram district total population is 2,342,868, total area 6,539km, population density per sq.km is 384km and literacy rate is 50.60%. In this area, below poverty line households holding are 87.31% as on 2008. In Vishakapatnam district total population is 4,288,113, total area 11,161km, population density per sq.km is 384 and literacy rate is 60%. In this area, below poverty line households holding are 73.8% as on 2008. In Andhra Pradesh total numbers of BPL households are 40.63 lakhs, number of fair price shops are 45,322, number of ration cards in BPL is 199.93 lakh, AAY 15.58lakh and APL 29.94 lakh, are circulated. Number of ration cards per fair price shops is 542 as on 31.5.2014.

Odisha is one of the poorest states in India. Indian Planning commission report has identified that 18 districts are backward out of 30 districts in the state. The present study covered three districts namely (Kalahandi, Balangir and Koraput). It is called KBK region. In Kalahandi district total population as per 2011 census is 1,576,647, total area 7,920km, population density per sq.km 199.1km and literacy rate 60.22%. In this area, below poverty line households holding are 54.2% as on 2008. In the district Balangir district total population is 1,648,997; total area 6,575km and population density per sq.km 250.8km and literacy rate 64.72%. In this area, below poverty line households holding are 47.9% as on 2008. In Koraput district total population is 1,379,647, total area 8,807 and population density per sq.km 156.7km and literacy rate 49.72%. In this area, below poverty line households holding are 62.9% as on 2008. In Odisha state total number of BPL households is 32.98 lakh, total number of fair price shops is 30,710, number of ration cards in BPL 36.78lakh, AAY 12.65lakh and APL 34.58lakh, are circulated. Number of ration cards per fair price shops covered 274 as on 31.5.2014. In all the districts (paddy) rice is predominant food and in cultivation also second one is millets food grains.

Data collection
In this study, Multi-stage sampling technique was adapted to select the districts. The study area covered 2 states, 6 districts, 12 mandals, 24 villages and (from each village 50 respondents were selected). 1200 rural household families are covered. In this study data was collected from 2nd December 2013 to 11th February 2014. The data was collected through structured questionnaire model. The questionnaires and discussion were prepared in the local languages with the help of the colleagues of the author (Telugu in Andhra Pradesh & Oriya in Odisha). The questionnaire covered the respondents household’s socio-economic variables, satisfaction of rice delivery and other food grains, sufficiency of food grains, buying capacity of poor people and problems of fair price shops. The simple frequency technique was used for data analysis in this study.
Results

Socio-economic variables in selected household data
The present study described the demographic variables such as gender, educational qualification, family occupation, household members, total no. of children, caste, agricultural land owned, household assets, membership in SGHs and MGNREGA and bank & post office accounts.

In Andhra Pradesh female respondents are higher 90.6% and Odisha state female respondents are 89% because this study mainly focused (food security in households) on home makers. In education qualification, illiteracy rate is highest in Odisha state 65% (up to 5th std only 22.5% and 5th to 10 std only 12.5%). But in Andhra Pradesh only 29.8% are illiterate (up to 5th std 31.6%, 5th to 10std 26%, pre-degree or HSc is 8.2% and degree is 3.8%) compare to the rural education status are very low in Odisha than Andhra Pradesh. Family occupation was- agriculture farmers 64%, industrial labour is 14%, causal labour 11% and business families’ and government services are 11% available in Andhra Pradesh. In Odisha agricultural farmer’s 75% industrial labour is 10%, casual labour 10% business families and government services 5%. In this study both states agricultural famers are high in percentage. In Andhra Pradesh schedule castes families are at 73% and schedule tribes 17%, OBC are 9.6% and general categories are not available in rural areas. In Odisha state schedule tribes are high at 92.3% and schedule caste only 7.6% is covered there is no other categories family. Most of the families are joint system- in rural odisha is 69.8% and nuclear family is 30.2%. In Andhra Pradesh joint family are 65.8% and nuclear family is 34%. The number of children per family is high in odisha in a range of 3 to 6 children at 82% and 1 to 2 children 12% no children in nuclear family 6% in most of the family’s female children are high in 76% but all children appeared weak and unhealthy during interaction of the author, most of the student are studying in government schools. In Andhra Pradesh family children 76% are join families (3 to 6 children) 1 to 2 children are nuclear families 18% and 6% percent no children in nuclear family. Children studying in government schools are 73.5% and private schools 26.5%. The study assessed the ‘Standard of Living Index’ (SLI) along the lines of the index used in the National Family Health survey (NFHS) has been created using household asset and the data collected in these districts. In this study 94% of the people scored high, in availability of household assets in Andhra Pradesh and it was opposite in Odisha, only 24% of the people have household assets availability, rest of them are comes under non-availability (electricity, LPG, cooker, mixer, grinder, bicycle, two wheeler etc.).

Agricultural lands are owned by 6-10% only in both states. Most of the Odisha state poor families are members of MGNREGA 84% and remaining 16% SHGs members. In Andhra Pradesh membership of MGNREGA is 82% and 18% are SHGs. The main reason for buying food grains from PDS is to save the money for their children education and other needs. In both state all people have account in either the post office or the banks.

Utilisation of PDS
The present study covered the ration cards in Andhra Pradesh. BPL families (rice cards) 75%, APL cards 18% and AAY cards 4% and Annapurna cards 3%. In Odisha state BPL families 70% APL 12%, AAY 11% and 7% Annapoorna cards. Purchasing capacity of food grains is 95.5% in both states BPL, AAY and Annapurna for beneficiaries are buying rice and other food grains. In both states total rural APL families are 30%, these families are not buying any commodity in ration shops. This is an important point to watch as allotment of food grains to APL families quota was misused by sending to black markets. It leads the way to corruption and leakages in
rice and other commodities. This is happening in the urban areas as well.

The poor families are satisfied with the low cost of price of rice (one Kg rice one rupee). The present research measured the satisfaction in two different ideas one is Quantity and another is Quality. In Quantity; normally a family of 3 will get 12kg rice. A family of 5 members and more in a family gets 20 to 25kg at same cost. The family members who are satisfied on one rupee rice in fair price shops are 85% in Odisha and 89% in Andhra Pradesh.

Regarding Quality of rice; these measurements are three types, good quality, average quality (eatable) and poor quality (not eatable). In Odisha 80% respondents suggests that rice quality is average, good quality is 8%, poor quality is 12%. In Andhra Pradesh suggest that eatable quality of rice is an average 82%, good quality of rice 7% only poor quality of rice distribution 17%. This result shows that poor quality of rice is still being distributed in rural areas. The poor people are suffering a lot when utilizing the poor quality rice. No effective action was taken yet to prevent the supply of poor quality rice. The study suggests over all that in Odisha 97% and in Andhra Pradesh 96% is satisfied.

Utilisation of rice
Rice is important and staple food for poor people. The present study find out the utilisation of food grains particular in rice consumption (about the allotment of rice). In BPL, AAY and Annapurna families are 94.8% in rural families are utilising PDS food grain (rice) and only 5% families are used rarely in Odisha. In Andhra Pradesh (BPL, AAY and Annapurna) 92.5% rural people fully utilised food grains particular rice, only 7.5% is rarely used.

Changes in consumption
Allotment of rice in fair price shops (minimum 12kg to maximum 25kg based on family members). The study found that rural family members are high and family health conditions are very poor. The study found that insufficiency of rice to the families are more in rural about Odisha 85% and in Andhra Pradesh 89%. The poor people are not buying cereals because very poor quality distribution from ration shops. A majority of respondents in Odisha and Andhra Pradesh (both above 86%) are buying millets (Jowar, Ragi, Maize and other millets at open market at low price). Millets are more nutritious than rice at less cost to the poor. Jowar in Andhra Pradesh and Maize in Rajasthan respective of (Indrakant, 2000) and (Reetika, 2011) suggested more consumption of millets than rice. Introducing millets in PDS is not a new ideas, the possibility was already noted in the 10th five year plan and was promised by the National Policy for Farmers in 2007. According to Food and public distribution website ‘coarse grains’ have already been made available under the Targeted PDS at 50% of economic cost for BPL families, 70% of above poverty line families and at Rs 200 per quintal for AAY families in certain states (Food grains policy 2007).

People’s preference between free rice, cash transfer, millets
Food security was an important concern among rural and urban poor households. In the sense of food security that poor households derive from getting an assured access to the monthly quota of food grain through the PDS to many of households a preference for food (Himanshu, 2011 & Raghav, 2012). But the present study finds that the rural people’s preferences in both states either free rice, cash transfer and inclusion of millets.

Very clearly they state that preference between free rice is 32%, cash transfer only 19% and 49% millets in both states. In the selected states the PDS is better in rural, most of the people suggest that do not want free rice and cash transfers. In general, rural poor said that “give some good food to improve our health”. Most of the respondents depends on millets grains. Very interestingly, tribal female stated that our primary health centre (PHC) medical officer...
said that ‘consumption of millets is good for health.

 Reasons for preferring free rice
The state of Tamil Nadu introduced free rice distribution in universal PDS considered all is BPL family’s concepts (Trithah, 2003). The same concepts in Odisha people only 14% and Andhra Pradesh 18% respondents are preferred in free rice distribution. The main important reasons are: In rural areas most of the families, members are high and children are more. MGNREGA wages help to buy PDS grains, some time they cannot buy the food grains due to delayed wages MGNREGA. In rural families unemployment is for long time (except during agricultural season). Among the rural tribal female respondents said ‘our monthly food expenditure is high, to concentrate our children school fees, medical and festival expenditure is more. Some respondent’s who are physical challenged (either male or female) suggesting that “they want to have free rice with better quality”. As per statements above, the respondents prefer free rice with better quality.

 Reasons for preferring cash
Most of the respondents feel misusing of items, corruption in FPSs and dissatisfaction about the quality and quantity of food grains especially of rice. This is one of the main reasons for preferring cash. This study finds that only 8% of people in Odisha and 11% of Andhra Pradesh are selecting the cash transfer. Major reasons are: the quantity was incorrect due to old weighting machines. 28% of female respondents are insisting that rice quality is very poor. It is not edible rice, we are using only for our pet animals. Some female respondents said that “if cash is possible, we will buy better quality and quantity of food grains in open markets. We have banks and post office accounts” they can credit directly to our accounts.

 Reasons for preferring millets
Interestingly most of the respondents are showing preference for millet grains. In Odisha 28% prefer millets and Andhra Pradesh 21% prefers millets. The main reasons for using millets are to improve the health conditions. Millets contains high protein than rice. In rural area, the families’ health condition is very poor. Most of the children become Anaemic and under weights. The primary health centre (PHC) rural medical officer advises that people, ‘should eat nutritious food like millets’. Due to their poor health condition, rural people preferring millets like jowar, maize, sama, sorghum, finger millet, pearl millet, foxtail millet, barnyard miller and little millet.

 Computerised PDS
The World Food Programme (WFP) and State Government have jointly introduced a new computerised Targeted Public Distribution System (TPDS) in Bhubaneswar, state capital of (Computerised PDS in Andhra Pradesh, 2012). The state government issued new ration cards to the all eligible families based on the National Population Register (NPR in 2011). The new upcoming ration cards data digitization with reference to NPR will be based on the learning from the model with the support by the WFP. This model was first introduced in Rayagada municipality with full support on electronic based computerisation of fair price shops (fps) include better coverage such as, grievance redressal mechanism, social audit, convergence with unique identity for enrolment, beneficiary authentication to ensure accountability and better transparency in the distribution of food grains in addition to strengthening the components of New Computerised Targeted Public Distribution System running successful and the satisfaction of Rayagada region. A similar was process implemented in Andhra Pradesh districts like East Godavari and Rangareddy districts pilot projects was better successful in 36 fair price shops (FPSs). In the same model will be replicated in both states.

 Mobile van
Odisha state introduced mobile vans to distribute essential food commodities at the door-step of the poor people in remote inaccessible areas. At present 74 mobile vans are available in 15districts in the state
to follow the lifting, door-step delivery to gram panchayat level. Decentralised procurement of paddy scheme, increase in scientific godowns in rural and urban areas to maintain long term storage of food quality and capacity.

**Better improvement in PDS**

The study suggests the following measures to improve the PDS. In the rural areas particularly in villages ration shops can be made available within 3km distance. Poor people can be given smart ration cards. New computerised fair price shops can be introduced in rural area. The BPL families will get better access to ration food grains.

As they are satisfied with one rupee rice scheme this scheme may be continued. The poor people’s buying capacity are improved because the help of MGNREGA and hence this scheme may be continued. In rural areas more effective food delivery and better transparency may be implemented in both states.

**District wise satisfaction of rice**

Before concluding, the important findings in districts level satisfaction in rice for poor household with six parameters: fewer prices, essential of rice, depended of PDS rice, support the scheme, quality and quality.

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Interestingly, in most of the respondents are suggesting that affordable price of rice is highest scores 23% to 34% in both states. In Koraput districts most of the respondents are depended PDS rice is 35% in Vishakhapatnam is 28% in normally all the districts respondents are depended on PDS rice 22% to 28%. In third categories essential of PDS rice is 13% to 21% in selected districts. In other categories are fewer percentages in quality, quantity and support the one rupee schemes. In most of the respondents are suggesting that “we are depended and essential of PDS rice, the main reasons for affordable price”.

**Conclusion**

The one kg rice one rupee scheme was more a successful programme in selected states in terms of making the Public Distribution System more impact and efficient of leading and running in the states. In odisha state was very poor in early, but now after launched in this scheme rural poor was more utilised rice and other commodities. To more significance level of PDS is successful in the poor state. In Andhra Pradesh now has divided in two parts but in coastal region is more effective utilisation of PDS grains particular in rice.

Targeted Public Distribution System is very largest food entitlement programme in India. It is accessed by more than a one third of the total population in India. This study suggests that BPL families are more benefitted in PDS; APL households are not buying any commodities from PDS outlets. One kg rice for one rupee scheme is effective in all selected districts. Despite this, a number of individuals are having health problems. This is the main reason why people are shifting to the consumption of millets. Millets may be distributed through the PDS to reduce the health issues faced by the rural families.
The present study found 30% of Above Poverty Line (APL) families are not buying any food grains from fair price shops. In Tamil Nadu Universal Public Distribution System, introduced free rice distribution to all families like (rice cards) irrespective of categories (BPL & APL). The APL families sell their ration cards to black marketers, so leakages are due to free rice distribution in the state (Mahendran & Indrakant, 2014). In Karnataka One kg rice scheme (Anna Bhagya), the rural poor say that quality of rice is very poor. APL families are not considering ration grains (Mahendran, 2014). In Kerala state APL families are very rich (Rajan, 2011). In this point of view, in southern states above poverty line (APL) families are not willing to buy the ration products. These allotments are going to black markets; it leads to corruption and leakages in rural and urban areas. This study suggests that food grains should be given only for BPL, AAY and other cards, but not for APL cards. This study suggests that “Food Only for Poor People not for Rich People”, if we concentrate on this point, we will have better reforms in PDS in future. This will reduce food subsidy burden on the state government. The fair price shops in the rural areas are using old weighing machines which are inaccurate. In rural area there is no vigilance check up and also administrative weakness.

Study Area in Odisha

![Study Area in Odisha](image)

![Study Area in Andhra Pradesh](image)

Figure 1: Location map of selected districts in andhra pradesh and Odisha, India
Figure 2: Districts wise satisfaction in PDS rice

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The Official web site in State Governments food and civil supply (www.foododisha.in) and (www.apcivilsupplies.gov.in).
