

# eSays

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## DEBATING POVERTY



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# What Role Does Food Security Play in Mitigating Poverty?

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*While the per capita availability of foodgrain has steadily increased, per capita food consumption has declined disturbingly. This has a complex impact on the poverty status of populations. Why has such a situation arisen?*

Over a billion of the seven billion people of the world are poor with incomes less than 1.25 dollars per day per person (at 2005 purchasing price of dollar). Further, 80 per cent of these poor live in 20 of the poorest countries of world. Growing populations and changing lifestyles are putting pressure on precious natural resources like land and water.

A glance at the statistics on nutrition and health status in India is seriously disturbing. The statistics reveal that 20 per cent of the population in the country are undernourished, 40 per cent of children below the age of three are under weight, 80 per cent of children in the age group of 6-35 months are anemic and 33 per cent of women in the age group of 15-49 have a Body Mass Index (BMI) below normal. This clearly calls for radical improvements in the food security programmes on a war-footing.

## **What is Food Security?**

Food security has been discussed at various forums as the primary goal of development. According to the World Food Summit (1996), “Food security is a situation that exists when all people, at all times, have physical, social, economic access to sufficient, safe, nutritious food that meets their dietary needs and food preference for an active and healthy life”. The concept of food security involves bio-physical, socio-economic, marketing and political elements. In other words, food security is not simply a function of production or supply, but of availability and stability of supply, affordability and the quality and safety of food.

In short, food security implies that food intake of the people must be adequate in both quantitative and qualitative terms to enable them to lead an active and healthy life.

Food security needs to be considered at various levels viz., global, national, state, household and individual. It is also important to note that food self sufficiency at the macro-level does not automatically ensure food security at the micro-level. For instance, food production at world level may be sufficient to feed the world's population but food production in some nations may be much below their requirement and the governments in such countries may not be in a position to ensure food security to its citizens. Likewise, a country may have food sufficiency but many households may experience food insecurity due to low purchasing power. Even within a household, for various reasons, some individuals manage to get sufficient food while others remain under-fed.

## Trends in Foodgrain Production, Availability and Consumption

**Table 1: Trends in Area, Production and Productivity of Food grains in India**

| Year                | Area   | per cent Change | Production | per cent Change | Productivity | per cent Change |
|---------------------|--------|-----------------|------------|-----------------|--------------|-----------------|
| 1950-51             | 97.32  | -               | 50.82      | -               | 522          | -               |
| 1960-61             | 115.58 | 18.00           | 82.02      | 61.00           | 710          | 36.00           |
| 1970-71             | 124.32 | 7.00            | 108.42     | 32.00           | 872          | 22.00           |
| 1980-81             | 126.67 | 1.00            | 129.59     | 19.00           | 1023         | 17.00           |
| 1990-91             | 127.84 | 0.92            | 176.39     | 36.00           | 1380         | 34.00           |
| 2009-10             | 121.3  | -6.00           | 218.2      | 23.00           | 1798         | 30.00           |
| <b>Total Period</b> |        | <b>24.64</b>    |            | <b>329.35</b>   |              | <b>244.44</b>   |

Source: *Economic Survey, Government of India*

Note: *Area in million hectares production in million tonnes and productivity in kgs per hectare.*

The area under foodgrain has increased 25 per cent from 97 million hectares in 1950-51 to 121 hectares in 2009-10 (Table 1). This increase in area, however, has not been steady. The 1950s witnessed a substantial increase (18 per cent) while 1960s registered a moderate increase (7 per cent). In the following two decades, there was only a marginal improvement in area and the last decade has actually seen a decline. This indicates a shift in cropping pattern from foodgrains to non-food grains, which may be due to relatively lower profitability in the cultivation of food crops.

The trend in foodgrains production presents a different picture. Food grain production has registered 329 per cent increase i.e., from 51 million tonnes in 1950-51 to 218 million tonnes in 2009-10. Decade wise analysis reveals that there has been an upward trend in foodgrain production at varying rate. The increase is noticeable during last two decades. In spite of only 25 per cent increase in area, foodgrain production has registered more than three-fold. The productivity of foodgrains per hectare has steadily

increased to 1800 kg in 2009-10 from a low level of 500 kg in 1950-51 (i.e. by 244 percent). The last two decades and 1960s have experienced relatively higher growth rate in productivity.

**Table 2: Trends in per capita Availability of Food grains in India**

| Year         | Rice       | per cent change | Wheat       | per cent change | Other cereals | per cent change | Cereals    | per cent change | Pulses     | per cent change | Food Grains  | per cent change |
|--------------|------------|-----------------|-------------|-----------------|---------------|-----------------|------------|-----------------|------------|-----------------|--------------|-----------------|
| 1951         | 158.9      | -               | 65.7        | -               | 109.6         | -               | 334.2      | -               | 60.7       | -               | 394.9        | -               |
| 1961         | 201.1      | 26              | 79.1        | 20              | 119.5         | 9               | 399.7      | 7               | 69.0       | 13              | 468.7        | 18              |
| 1971         | 192.6      | -5              | 103.6       | 30              | 121.4         | 1               | 417.6      | 16              | 51.2       | -26             | 468.8        | 0               |
| 1981         | 197.8      | -11             | 129.6       | 25              | 89.9          | -26             | 417.3      | -1              | 37.5       | -27             | 454.8        | -3              |
| 1991         | 221.7      | 12              | 166.8       | 28              | 80.0          | -12             | 468.5      | 12              | 41.6       | 10              | 510.1        | 12              |
| 2001         | 190.5      | -15             | 135.8       | -19             | 56.2          | -6              | 386.2      | -18             | 30.0       | -28             | 416.2        | -19             |
| 2005         | 177.3      | -7              | 154.3       | 13              | 59.4          | 5               | 390.9      | -1              | 31.5       |                 | 422.9        |                 |
| 2009         | 188.4      | 6               | 154.7       | 0               | 63.9          | 7               | 407.0      | 5               | 37.0       | 23              | 444.0        | 6               |
| Total Period | 19per cent |                 | 135per cent |                 | -42per cent   |                 | 21per cent |                 | 40per cent |                 | 1243per cent |                 |

Source: Economic Survey, Government of India.

Note: Availability in gm per day.

The per capita availability of foodgrain is a good indicator of food security. Mere increase in food production does not automatically result in net availability of food grains. Due to remarkable increase in food grain production the per capita food grain availability has steadily increased from 395 gm per day in 1951 to 444 gm in 2009 (i.e. by 12 per cent) (Table 2). Item-wise analysis reveals that the availability of wheat during the same period increased from 66 gm to 154 gm per day (i.e. by 135 per cent). Similarly, the availability of rice has increased from 160 gm to 188 gm per day (i.e. by 19 per cent). This increase, however, has been accompanied by some fluctuations. In contrast, there has been drastic decline (42 per cent) in per capita availability of other cereals. On the whole, there has been an improvement in per capita availability of cereals from 334 gm to 402 gm per day (i.e. by 21 per cent). Pulses, like other cereals, exhibit a declining trend in availability from 60 gm to 37 gm (i.e. by 40 per cent). In short, there has been an improvement in per capita availability of food grains and superior cereals like rice and wheat accompanied by reduction in per capita availability of coarse cereals and pulses. Mere improvement in the per capita availability of either foodgrain or cereals will not ensure improvement in per capita consumption of those items. The per capita consumption of foodgrain depends upon several factors like per capita income of household, open-market prices and the changing food tastes of people, etc in addition to the availability of foodgrain. Reliable estimates of consumption of cereals can be obtained from the results of Household Consumer Expenditure Surveys conducted by

National Sample Survey Organisation (NSSO) (Table 3). The results reveal that there is a steady decline in per capita consumption of cereals in both rural and urban regions of India. The per capita daily consumption of cereals in rural area has declined from 509 gm in 1972-73 to 378 gm in 2009-10. During the same period, it has declined from 375 gm to 330 gm in the urban area.

**Table 3: Trends in per capita Consumption of Cereals in India**

| S.No. | Year    | Rural |     | Urban |     |
|-------|---------|-------|-----|-------|-----|
|       |         | A     | B   | A     | B   |
| 1     | 1972-73 | 15.26 | 509 | 11.24 | 375 |
| 2     | 1977-78 | 15.25 | 508 | 11.62 | 387 |
| 3     | 1983    | 14.8  | 493 | 11.30 | 377 |
| 4     | 1987-88 | 14.47 | 482 | 11.19 | 373 |
| 5     | 1993-94 | 13.40 | 447 | 10.63 | 354 |
| 6     | 2004-05 | 12.12 | 404 | 9.94  | 331 |
| 7     | 2009-10 | 11.35 | 378 | 9.39  | 313 |

Source: Various Rounds of NSSO on Household Consumer Expenditure Surveys.

Note: 1. A= Consumption for 30 days in kgs. B= Daily consumption in gm.

2. 1999-2000 estimates are discarded due to 40per cent difference in estimates obtained from two reference periods viz., week and month.

In sum the trends are:

- In spite of moderate increase in area under food grain (from 97 to 121 million hectares i.e by 25 per cent) there has been a boost in food grains production (from 50 to 218 million tones i.e. by 330 per cent) during post-independence period mainly due to remarkable increase in yield rate (from 500 to 1800 Kgs per hectare i.e by 245 per cent).
- In per capita terms during the same period there has been improvement in availability of foodgrain (from 400 to 445 gm per day) and superior cereals like rice (from 160 to 190) and wheat (from 66 to 155) but a reduction in availability of coarse cereals (110 to 64) and pulses (from 60 to 32).
- There is a steady decline during 1972-73 to 2009-10 in per capita consumption of cereals in both rural (from 509 to 378 gm per day) and urban (from 375 to 313) regions of India.

*The Paradox:* In short, while per capita availability of foodgrain in India is increasing per capita consumption of foodgrain is declining. This appears to be paradoxical in nature. This may happen when (1) Government procures foodgrain from domestic

producers and uses it only for building buffer stock, (2) Government encourages domestic producers to export foodgrain and puts restriction on imports, and (3) Government procures food grains from domestic producers but distributes only a small part of it to consumers and major part of food grains procured is used for building buffer stock. In first two cases, due to Government policy, open-market price rises. In response to this, consumers' especially poor consumers reduce their food grains consumption. In the third, the aggregate consumption depends upon various factors like (1) Scale of ration, (2) Ration price, and (3) Change in open-market price etc.

Over the decades the government has adopted several policies and programmes for providing food security to the people, in general and to the poor, in particular. Some of the programmes have been intended to improve income levels of the people by providing wage employment or by improving the skills and earning capacity of the people and thereby increase their food intake. Other programmes aim at promoting food consumption by providing food at a subsidized rate. They include public distribution system, mid-day meals programme for school going children, supplementary feeding to anganwadi children, etc. Some of these programmes are universal in nature while others confine to a particular segment of the population.

In recent years the Government has depended solely on domestic procurements to manage the public distribution system. The procurement of food grains with some fluctuations has increased from 20 million tonnes in 1991 to over 30 million tonnes in 1999. In the following decade it doubled i.e., 60 million tonnes by 2009. The fluctuations in procurement mirror the fluctuations in domestic production. It has been argued that such procurement policies favour farmers growing surplus foodgrain rather than the poor consumers. Huge procurement during good agriculture years prevents a crash in the open market price of foodgrain and thereby protects the farmers. On the other hand, procurement on a lower scale during bad agriculture years enables the farmers to sell a larger share of their produce at a higher price in the open market.

The trend in food grains distributed through PDS in 1990s has varied in a narrow range of 18 to 20 million tonnes. In 2000 and 2001 it declined to a low level of 13 million tonnes inspite of huge procurement during those years. Only after 2002 has the foodgrain distributed through PDS exhibited an upward trend. It more or less steadily increased from 18 million tonnes in 2002 to 41 million tonnes in 2009. However, the pace of increase in foodgrain distributed does not match with the pace of increase in foodgrain procured. This is confirmed by a sharp decline in foodgrain distributed as a percentage of foodgrain procured. In the earlier years most of the foodgrain procured was used for distribution through PDS. However, in later years a substantial portion of foodgrain procured has been used for building buffer stocks. Critics question the rationality of building excessive buffer stock

The off-take of foodgrain from PDS during earlier years was low on account of high

issue price under universal public distribution system. Further, off-take from backward states was relatively low due to their financial constraints. The introduction of targeted public distribution system in 1997-98 and other food based welfare programmes in the later years has improved the off-take of food grains from the Public Distribution System.

### **Unlearnt Lesson**

The full potentialities of PDS have not been realised because of some elements of the programme are unduly emphasised while scant attention is paid to relevant others. For instance, the ration price of foodgrain is over-emphasized while the scale of ration does not receive the same attention. There has been scant attention paid to developing adequate criteria for identifying BPL households although the programme clearly defines the number of households.

Whether it is National Food Security Act or Chhattisgarh Food Security Act or the Re. 1 per kg Rice Scheme of Andhra Pradesh, all the schemes tend to focus more on the price of foodgrain to be distributed and not on the quantity of foodgrain to be distributed. The scheme does not aim to meet full requirement of cereals of even poorest of the poor households. A poorest of the poor person requires about 9-10 kg of cereals per month. The recent National Food Security Act envisages to supply only 7 kg of foodgrain to the poorest of the poor (assuming five members in family). Households are forced to depend upon open- market to meet their remaining requirements (i.e. about one- third of his total requirement). Households belonging to general category are forced to buy half of their total requirement from open- market as they are likely to receive about 5 kg of food grains from PDS. Therefore, any increase in open-market price of food grain severely affects vulnerable sections of the population and their food security is endangered.

The use of procured foodgrain to build buffer stocks rather than distribution through PDS aggravates the situation contributing to the poor consumption of foodgrain. The availability of foodgrain (rice and wheat) based on long-term growth rate is likely to be 190 million tonnes. Out of this, 50 million tonnes of foodgrain is required for implementation of the proposed scheme, which works out to be 30 per cent total production or 50 per cent of marketed surplus. If for some reason, the procured food grains are not fully distributed through PDS, then the poor will get small quantities from PDS and will have to pay high prices for food grains in the open -market. The magnitude of leakage from PDS depends to a great extent on the gap between open market price and PDS price.

A better way of providing food security to the poor and to insulate them from the adverse impact of spiraling inflation would be to increase the scale of rationing i.e. quantity distributed through PDS, and expand the number of items distributed through PDS. It is reasonable to supply rice through PDS at Rs. 2 per kg when the open- market

price is Rs. 3 per kg. It is ridiculous to supply rice at Re.1 per kg through PDS when the open- market price is Rs. 25. A person buying 5 kg of rice from PDS and 5 kg from open- market to meet his minimum requirements of 10 kg spends  $1 \times 5 + 25 \times 5 = \text{Rs. } 130$ . There is nothing wrong, if Government supplies 10 kg at Rs. 8 per kg. In such a scenario, a person has to spend only Rs. 80 to meet his minimum requirement instead of Rs. 130. In other words, his food expenditure would be only about half of his earlier expenditure. Simultaneously, there will be drastic reduction in the subsidy burden to be borne by the Government .

The National Food Security Act aims to cover about 75 per cent of rural households and 50 per cent of urban households. The Central Government determines the state-wise number of beneficiaries and it is left to the concerned state to identify them. If the method for identifying beneficiaries is not efficient, there will be large targeting errors. With the passage of time undeserving households enjoy the benefits of PDS while the deserving are eliminated. There is a need to focus on the criteria for identifying poor households.

There has been a three-fold increase in foodgrain production in the decades after independence as has its per capita availability; but the per capita consumption of foodgrain has declined. Resolving this paradox is critical in ensuring food security and reducing the impact of poverty.

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