2.1. The debate on Economic Reforms and Liberalisation

There has been an ongoing debate regarding the impact of the economic reforms and trade liberalisation policies undertaken by the Indian state since the early 1990s, both on the agricultural sector and on overall economic growth. Areas such as employment, food security and poverty have been the focus during the debate.

We have seen in the previous chapter that economic reform policies under the guidance of IMF and World Bank entailed macroeconomic contraction in developing countries undergoing loan-conditional adjustment policies in the 1980s according to the evaluation reports of the IMF itself and according to economists working in the Bank. Investment rates and growth rates were found to have declined in the majority of cases studied and to have declined steeply especially in intensively adjusting countries. However the bulk of the writing in India on reform policies including those from a critical viewpoint has paid scant attention to the contractionary effect of reform policies. Even though agricultural growth rate has declined sharply the analysis has been focussed more on technological factors rather than on public macroeconomic policy in the reform period and its effects on investment.

Thus it is widely accepted that the growth rate of agricultural production has declined in the 1990s in comparison with the 1980s, but this is attributed to an almost natural levelling out of the high agricultural growth during the green revolution. This underlines the need for a policy that augments supply in the sector. The bulk of the opinion is that this agricultural stagnation is because of supply side constraints.

A number of economists have welcomed the open trade policies as a step in the right direction and we may think of them as constituting the pro-liberalisation school of thought. Trade restrictions are seen by them as restrictions on the growth rate. C.H. Hanumantha Rao and Ashok Gulati (Rao & Gulati, 1994) in fact talk of ‘a clean sweep to dismantle all export controls’, which would remove the obstacles in the way
of faster agricultural development. The constraints to high growth rate are seen to be the following:

(a) A plateauing out of the rapid increase in productivity that followed the initiation of green revolution technology in 1965 while on the other hand per capita income has been rising, leading to rising demand for foodgrains.
(b) Subsidisation of inputs resulting in wastage of government resources which could have been more efficiently used for long term investment in infrastructure and resources.
(c) Inefficient use of resources resulting from restrictions in movement of foodgrain, levies in internal markets and quotas and tariff barriers in international trade.

However a distinction was made between government expenditure on subsidies and investment. Rao and Gulati (ibid) draw a positive relationship between public and private investment in the agricultural sector, and their stand is that contrary to the opinion that public investment crowds out private investment, rather it actually encourages it. Therefore government expenditure on agricultural investment is productive and new policies should not result in reduced investment. However the expenditure on subsidies is wasteful and cuts into available investment funds, and should therefore be curtailed.

The same standpoint is taken by Kirit Parikh and others (Parikh et. al., 1995), who use the Agriculture, Growth and Redistribution of Incomes Model (AGRIM) to establish that trade liberalisation is superior in terms of growth, equity and welfare. The model tries to prove that trade liberalisation accelerates economic growth by increasing allocative efficiency within the agricultural sector as well as between the agricultural and non-agricultural sectors. Investment goods liberalisation has greater impact on growth, even on agricultural growth, than agricultural liberalisation itself has, and that removal of input subsidies releases substantial amounts of resources which if used for

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9 The AGRIM model analyses equilibrium situation where domestic demand together with export demand is equated to the sum of domestic supply and imports. The base or reference period (pre-reforms) is one where policy regimes continue as in the past and policy changes are introduced in the model and their impact is studied for a seven year post reform period (1993-2000). In this period free trade i.e. the removal of all price distortions including trade quotas is assumed.
increasing investment, especially irrigation investment, can offset the adverse effects on growth and distribution and result in higher growth rate of about 1.3 per cent. Liberalisation has a net negative impact on the poor, but financing of safety net programmes from the amount saved in terms of input subsidies can protect the poor from the adverse impact. It can substantially improve their welfare over even the level in the pre-reform period.

V. M. Rao (1994) divides agriculture into three sub sectors – agro processing, green revolution crops, and other crops. So far only the green revolution crops and areas have been paid attention to at the expense of the other two sub sectors. By freeing up resources from the green revolution area, liberalisation policies also make it possible to provide support to areas producing other crops, such as pulses, oilseeds, sugarcane, jute and coarse cereals, and where producers are unorganised and likely to suffer from price fluctuations. Thus liberalisation is a means to diversify agriculture, and this is a positive development.

Regarding opening up of international trade, Gulati and Sharma (1994) maintained that it would not have any negative impact. In India the prices of agricultural goods are below their international levels so there will not be any sudden spurt in imports. India in most cases has negative values of Aggregate Measure of Support (AMS)\(^\text{10}\). In fact the agricultural sector has been taxed, albeit modestly (Rao and Gulati, 1994). Apart from this the terms of trade that were in the initial years of planning in favour of the agricultural sector have turned against the sector in the post green revolution years (after 1976-77). Therefore India will not have to reduce its support levels. India does not provide any direct subsidies to the exporters, so there is no question of reduction. In fact as late as in 2000, Gulati states that open markets would benefit South Asian countries and they would have more opportunities for exports. According to him the main problem lies not with the AOA conditionalities, but with domestic policies related to income distribution.

\(^{10}\text{Aggregate Measure of Support is a measure of the subsidisation to farmers dictated by the WTO. It includes both product specific and non-product specific support. Countries who are signatories to the AOA have to reduce the AMS given to their farmers according to a specified protocol.}\)
The agricultural sector should now also be viewed from the angle of international trade. According to Vyas (1994), while the initial reasons for following a policy for import substitution were valid and strong, they are no longer valid today. India will no longer be dependent on a single country for its imports as it was earlier on the US. On similar lines, Rakshit (2003) says that reduction of resource cost through appropriate import and export is important rather than stressing too much on self-sufficiency\(^{11}\). If international trade were made proper use of, a part of the requirement of foodgrain could be met by holding forex reserves rather than actual grain.

The supporters of the liberalisation regime use as theoretical basis Ricardo's theory of comparative advantage from free trade. It was expected (Gulati and Sharma, 1994) that reduced support levels and rationalisation of trade barriers would increase production and export of various commodities in those countries that had the comparative advantage\(^{12}\) in them. Since India is assumed to have a comparative advantage in agricultural goods it was inferred that open global markets would enable these to be sold internationally, at prices higher than those in the Indian markets. At the same time other manufactured goods which were available at lower prices than those in India would be accessible to the Indian consumer.

'Veclaiming' the role of prices as market signals is another basis for supporting liberalisation. Vyas (ibid) questions the pricing policy and the way it has been functioning in the agricultural sector in India. According to him, "The main function of prices i.e. to act as signals for allocation of resources has been made subservient to income parity and food security objectives... price policy is ...(an) inappropriate instrument for income transfer." The objectives of the price policy relating it to reasonable prices for both the producers and the consumer are mutually conflicting. The real role of prices is to act as demand signals in the market and not as a means to ensure equitable distribution.

\(^{11}\) This is in contrast to Bhalla (1993) who, as discussed later, comes to the conclusion that not only is self-sufficiency in foodgrain essential for India at this point of time, but there is no scope of diversification even within the agricultural sector from food grain to cash crops.

\(^{12}\) A country has comparative advantage in producing a good compared to another country or the rest of the world if the relative cost of producing the good i.e. its opportunity cost in terms of other goods foregone, is lower than it is abroad.
For the trade policy reforms to become effective, it is necessary that they be supported by adequate domestic marketing reforms (Rao and Gulati, *ibid*.). This would involve abolition of levies and restriction on movement of foodgrains, if necessary the amendment of the Essential Commodities Act to this extent or even its complete abolition.

The entire argument in favour of liberalisation deals with its potential to increase agricultural production, while the aspect of agricultural demand does not receive more than passing attention.

Rao and Gulati (*ibid.*) do in fact note a deceleration in the growth rate of demand for foodgrains, despite a rise in the per capita income and decline in the relative price of foodgrains. They quote an IFPRI-ICAR study that concludes that with an assumed growth rate of GDP of 5 per cent, the growth rate in foodgrains demand is expected to decline in 2001-2010 from 2.5 per cent per annum in 1991-2001. However the reason they attribute to this is the changing tastes and preferences of the consumers. In other words they refer to the direct consumption of foodgrains as grains (and not as animal products) and it is Engel’s law that is seen to be at work.13 This is viewed to be a positive development because according to them it opens up possibilities for exports, which should enable the country to gain from its comparative advantage in foodgrain production.

2.2 The critics and Opponents of Economic Reforms and Trade Liberalisation

Some economists, while not systematically questioning the overall model of reforms and liberalisation, have expressed their apprehension regarding specific possible adverse outcomes. The most important issue raised by the proponents of this school is that liberalisation policies are likely to have a negative impact on agricultural growth.

Bhalla (1993) estimates the likely shortfall in foodgrain production on the assumption of unchanged distribution of income. The growth rate of per capita income is estimated to remain at the 1980-90 rate of 3 per cent per annum. This would lead to a

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13 The combination of direct consumption of grains and indirect consumption as animal products gives us the total demand for grain (excluding industrial use) and this is found to rise steeply as a country's per capita income rises. See Yotopoulos, 1985.
growth rate of food demand of 1.2 to 1.8 per cent depending on whether one assumes an income elasticity of 0.4 or 0.6. When one adds to this the expected rate of growth of the population (nearly 2 per cent per annum), the growth rate in the demand for food varies between 3.4 per cent and 3.8 per cent per annum. The growth rate of foodgrains supply, 2.7 to 3 per cent per annum during 1950 to 1980, did not create any shortfall because foodgrains demand more or less kept pace. However, after 1980, the per capita income growth increased from 1.5 per cent to 3.2 per cent and therefore demand growth rate started outstripping foodgrain growth rate, which was 2.8 per cent over the 1980s. Bhalla estimated that in order to become self-sufficient in foodgrain production, the growth rate of domestic output should be 3.5-4 per cent. This would require output to increase by 5.6 to 6.6 million tonne per year whereas the increase in output over 1951 to 1991 had been 3 million tonne per year only. This underlined the need for a pro-growth policy.

We may note that these estimates depended on assuming unchanged income distribution, while other critics of reform policies have pointed out that income distribution actually worsened with farmers suffering absolute decline in real income over the 1990s owing to the public-expenditure contracting nature of reform policies as well as exposure to falling global primary prices after 1995 (Patnaik 2003a, b). Rural development expenditure as a percentage of GDP in the 1990s declined from 14.5 per cent in the Seventh Plan (1985-90) to 5.9 per cent in 2000-01. The result was a deceleration in work participation rates from 42.2 to 40.4 per cent between 1983 and 1999-00. On the other hand, between 1995 and 2001 prices of wheat in the international market declined by between 38 and 45 per cent, the price of rice between 33 and 46 per cent, and the price of sugar and jute declined by 30.8 per cent and 24.6 per cent respectively. Along with being exposed to these declining global prices, farmers also faced declining public investment in agriculture, from Rs. 4754 crores in 1993-95 to Rs. 4312 crores in 1999-02. Total agricultural investment as a percentage of GDP declined from 1.6 to 1.3 per cent in the same time period. The combination of reduced employment from reduced public expenditure, and a decline in market prices of agricultural output resulted in a decline in rural incomes. Thus deflationary policies resulted in a worsening of income distribution, and as a result, an actual decline in per head food grains demand, rather than the predicted rise. The increase in foodgrain
demand estimated by Bhalla therefore serves as a useful indicator of the situation that might have been if policies had not caused such a worsening of income distribution.

Bhalla has further argued that liberalisation policies make agricultural goods tradable and may increase their prices vis-à-vis manufactured goods, which benefits farmers with a surplus, but is detrimental to poor agricultural labourers and marginal farmers who are net consumers of food. However, global price rise of primary products is not the same as improving terms of trade. Terms of trade for agriculture in international markets have in fact been declining. The total value of agricultural exports depends on two factors — the unit value and the quantum of exports. Between 1991 and 1996, total quantum of exports of primary products increased in response to rising world prices, at the expense of the domestic market. For example, raw cotton exports increased from 34,000 tonne in the late 1980s to an average of 200,000 tonne in the early 1990s, causing a trebling of domestic price of raw cotton and yarn. This threw many lakhs of weavers out of employment and led to closure of hundreds of power-loom enterprises and textile mills. There was also a substantial rise in paddy-displacing prawn culture for export. After 1996 global primary prices fell sharply. Quantum of exports rose much faster than value since unit values fell for many crops. Therefore there is no clear causality between free international trade and the relative prices of agricultural products. Nor is there a predictable relation between unit prices and total export values.

Bhalla (ibid.) supported a ‘realistic approach to food security’ which would be a mix of both the market approach and the interventionist approach. Basic food security must be provided through domestic production, because agriculture is a source of livelihood for a majority of the population, and also a source of development in other sectors through forward and backward linkages. He challenged the argument that India could diversify from foodgrain production to horticulture and other non-food crops. The production of such crops is possible only in areas that have a highly developed infrastructure, which are the very areas where most of the foodgrain surplus is generated. This will definitely have an adverse impact on food security. This is in contrast to the views later expressed by Parikh et al (1995) and Rakshit (2000).
Abhijit Sen and Deepak Nayyar (1993) point out that pre-liberalisation trade policy wherein international trade in agriculture was treated as a residual after meeting domestic demand, emanated out of concern about domestic prices since a significant increase in the volume of imports or exports can affect domestic prices. They argued that opening up of agricultural markets to international trade is likely to result in major changes in the prices of agricultural products since border and domestic prices have been diverging in recent years. Primary prices being lower in the Indian domestic market than in the international market, prices are likely to increase with opening up but this will not necessarily favour the exporting country. Many developing countries implementing SAP have had to export more/ import a smaller quantum of agricultural goods following devaluation of their currencies. But they have had to pay higher prices for manufactured goods because although tariffs have decreased, mark-ups have been increased. Overall this has resulted in unfavourable terms of trade for agriculture against manufacturing in world markets. On the other hand terms of trade have favoured agriculture in domestic markets in India. Since India has also started implementing SAP it will also have to face unfavourable terms of trade for agriculture.

The authors put forward the 'large country' argument to say that international terms of trade for India will worsen when its share of trade increases. World prices of many tradable products will go down because the participation of India will raise the global supply of those products significantly. This would have a negative impact on the balance of trade since the export earnings would not increase correspondingly with the increase in the quantum of exports. Similarly when India increases its imports on a large scale the price of those importables in the world market will increase.

Another important impact of export orientation is a likely reduction in domestic consumption, if the new policy of export orientation is put into practice immediately without giving time for an increase in output. With the price of cereals and cotton manufactures going up, the cost of living of industrial workers is likely to go up. Unilateral trade liberalisation, induced in part by conditionalities imposed in the SAP, had preceded the multilateral obligations contemplated in the Dunkel Text. Together these two rounds of liberalisation would raise world prices of goods that India imports. The authors point out that the changes would be all encompassing and would
affect the entire economy. The increases in the price of wage goods in the agricultural sector would definitely have a negative impact on food security. The authors recommend that in view of the price instabilities in the world market and the expected declines in the standards of living, it would be inappropriate to replace the current buffer stock policy by one where international reserves are built up and reliance is put on trade only. In fact the article goes so far as to opine that there would be sudden price rises due to currency speculation resulting in food price rises and possibly the spectre of widespread famines which India had been able to eradicate, would rise again.

The Sen-Nayyar thesis deals with the large-country phenomenon in isolation, without taking into account the large-scale subsidisation of goods by developed countries. Thus the problem with opening up of the economy was not high prices of imported wage goods but rather the complete opposite; low prices of subsidised imported foodgrains which affected domestic prices as well, and undermined the incomes of Indian farmers.

According to Vaidyanathan (1996) there is hardly any direct intervention of the state in the production and investment decisions of the farmers. Intervention by the state takes place only in terms of laws and regulations concerning ceilings on landholding, tenancy laws, and other land reform legislation. State policies related to support prices, procurement, taxes and subsidies as well as foreign trade, affect the prices of agricultural products relative to inputs, the relative prices of different crops and prices of farm products relative to those of manufactures. Therefore, the intervention of the state in production and investment in the agricultural sector is indirect. The author strongly challenges the case for privatisation in these areas; however unless the public sector's effectiveness in mobilising resources and managing these facilities is improved, trade and price policy reform will have no significant impact on the pace of agricultural growth.

A third group of economists reject the entire liberalisation model, basing their critique on various aspects of the loss of the capacity to formulate independent policies favouring the mass of the domestic population, and argue that there is an adverse impact of IMF-guided policies in virtually every sphere of the economy. The Indian
government first proposed to take an IMF loan in 1981, which was opposed by a group of economists led by Ashok Mitra\textsuperscript{14} mainly on the ground that first, the loan was not necessary and second, loss of sovereignty would follow, since the state's economic policies would then no longer be autonomous but be influenced and directed by the IMF 'conditionalities'. After taking the first tranche of the loan the government at that time did not continue with it. Broadly the same group of economists with a number of new additions have expressed their unhappiness with the adoption of the neo-liberal economic reform policies and trade liberalisation, which were adopted a decade later by the Indian government under the IMF conditionalities from 1991, following a temporary crisis created by the first Gulf War. Within the broad perception of loss of sovereignty these economists have provided a detailed critique of the adverse impact even when the growth rate of the economy as a whole has been high, on several related areas - on resources for development, on employment, on income distribution, and on food security and poverty.


2.3. 'The Agrarian Crisis'

During the pre-reforms decade of the 1980s in India foodgrains and non-foodgrains grew at a reasonably high rate of 2.85 and 3.77 per cent respectively, both well ahead of the population growth rate of 2.1 percent, but during the reforms decade of the

\textsuperscript{14} Former Chief Economic Advisor to the Prime Minister and later Finance Minister of West Bengal. Their critical papers were published under the title The IMF Loan - Facts and Issues (Govt of West Bengal, 1981)
1990s this declined significantly to 1.66 and 1.86 percent (Economic Survey 2001-02) while the population growth rate declined only to 1.8 percent. Thus the food grains growth rate fell below the population growth rate while non-food grains became equal to it. The all-crops growth rate which was 3.2 percent in the 1980s accordingly almost halved to 1.7 percent in the 1990s. The situation in the new century worsened further with the food grains output growing at only 0.34 percent up to 2006-07, at only one – fifth of the population growth rate estimated at 1.7 percent. Thus per capita output of food grains in particular fell during the reform period, more sharply so in the period 1996-2006 than earlier. Unemployment rates both rural and urban rose and the growth rate of rural employment declined between 1993-4 and 2004. If labour coefficients in agriculture had remained constant employment should have declined at the same rate as output growth decline but actual employment decline was even greater since labour coefficients also fell. The contribution of ‘agriculture and allied activities’ to GDP declined over the decade of the 1990s from over one-third to about a fifth but the population dependent on this sector declined very little, indicating falling per head income.

Further there was a decline of all primary product prices globally from the mid-1990s. By 1997 India started experiencing farmer suicides owing to rising indebtedness in a number of regions where export crop production was prominent. Nagraj (2008) estimates that as many as 166,304 farmers committed suicide in India in the ten year period between 1997 and 2006\(^{15}\). The number of farmers’ suicides increased from 13,622 in 1997 to 17,060 in 2006, an increase of 25 per cent.\(^{16}\) The combination of all these factors has led to the designation of the situation as an ‘agrarian crisis’. Official claims of rural poverty reduction started to sound hollow. It had been pointed out (U. Patnaik 2004, 2007) that in fact the current consumption expenditure and nutrition data showed that poverty was rising and not falling if the official nutrition standards

\(^{15}\) The title to land was taken as the criterion for identifying the farmer and this often left out a genuine farmer from the count. For example, a tenant farmer who leased in land and hence did not have a title to the land could be denied the status of a farmer; so also a farmer if the title was in his father’s name. (Nagraj, ibid.)

\(^{16}\) The Situation Assessment Survey of Farmers of the National Sample Survey, done in its 59th round during the year January-December 2003 reported that as many as 40 percent of the farmers did not like farming and ‘were of the opinion that, given a choice, they would take up some other career’ (National Sample Survey, 2005; p11); 27 percent found it ‘not profitable’; another 8 percent reported that it is ‘risky’. This gives some indication that this could be an important reason for the suicides.
were applied. Such adverse trends cannot happen in isolation. They have been the result of broader macroeconomic policies both at the national and the international levels.

Structural Adjustment Programmes enforced on debtor countries by the IMF in from the 1980s onwards have entailed contractionary macroeconomic policies. The reduction in government expenditure that forms part of the SAP conditionalities has weakened the growth rate, reduced incomes and nutritional levels, and increased poverty in these countries. These countries have adopted a regime of free trade, vigorously following 'export promotion' of the primary goods that they specialise in; but the falling world prices of these goods have pushed the international terms of trade against them and their export revenues have not improved proportionately. On the other hand removal of protection meant imports rose so that overall the balance of trade has not improved. The nature of imports and exports also indicates the distributional changes within these countries. Imports are more and more related to the capital goods required for the production of durable consumer goods demanded by the elite, while domestic production is more and more oriented towards the goods demanded by the first world, at the expense of goods of domestic mass consumption. In agriculture this has resulted in a change in the cropping pattern from food grain to cash exportable production. Seven million hectares of food cropland was diverted to export crops by the mid-1990s.

The most important danger of adopting neo-liberal policies was the threat to food security, not only in India but also in all other poor developing countries. U. Patnaik anticipated the decline in food grains output per capita in India and analyzed the causes in terms of a critique of the Ricardian theory of comparative advantage and on actual historical experience of developing countries on which they based their arguments in support of open international trade (U. Patnaik, 1992, 1994, 1996 et. seq.) Developing countries had two growing seasons and produced a much larger range of crops including the specifically tropical crops which advanced Northern countries could not produce at all. U. Patnaik (2000, 2005) argued that the conclusion of Ricardo's theory of comparative advantage which said that both countries entering into specialization and trade necessarily benefited, was not correct because the theory contained a material fallacy. Its conclusion of mutual benefit was based on the
premise ‘both countries produce both goods’ in the pre-trade situation but the premise was factually untrue since advanced countries could not produce tropical crops at all. If India was observed to export coffee to Britain and import machinery from it, this could not be explained in terms of comparative cost since coffee could not be produced in Britain, so the ‘cost of production of coffee’ did not exist and relative cost could not be defined at all for comparison with relative cost in India.\footnote{Patnaik, 2005, ‘Ricardo’s Fallacy’. Relative cost is the number of units of coffee which can be produced by withdrawing labour from producing a unit of machinery and putting that labour in producing coffee. Relative cost has to be calculated for both countries and compared. Clearly it cannot be even defined for Britain while it can be defined for India. The same argument applies in every case where a tropical primary product is involved. Ricardo’s own example of cloth and wine production in Portugal and England did not conform to his own premise since warm temperate Portugal could produce cloth and grape wine while cold temperate England could produce cloth but not grape wine.}

Historically today’s advanced countries in their process of capitalist industrialization depended on imports of wage goods and raw materials, and had secured these by establishing colonial plantation systems. This import dependence increased in modern times with further rise in Northern incomes and diversification of their consumption to include more perishable fresh agricultural products. A steady supply of these products is secured by the trans-national food companies by establishing contract farming with third world peasants in almost all developing countries. This is the main rationale which was provided by the developed countries to promote open international trade and for which reason this formed one of the cornerstones of the IMF loans to developing countries.

However land is different from any other means of production because it is not the product of human labour. It has to be thought of as similar to the fossil fuels since its physical supply cannot be increased (U. Patnaik, 1994). Even gross sown area had become static in China and India. Increasing external demands on limited tropical lands meant that foodgrains growing land in the developing countries was necessarily diverted to export crops and the food grains growth rate declined as did per capita grain output. Far from gaining, the developing country specialising in export crops lost out in terms of food security for its population and suffered decline in foodgrains availability and in nutrition levels. This became even more inevitable under adjustment policies since there was a cut-back in investment in agriculture, so the possibility of raising yields enough to compensate for area decline also disappeared.
A large number of case studies have been cited of the postulated inverse relation between primary exports and food availability, ranging from colonial times (including India where availability per head fell by 29 percent in the inter-War period) to the adjusting and trade liberalizing countries in Latin America and sub-Saharan Africa from the 1970s onwards (see U. Patnaik, 1996, 2000, 2007) all of which saw varying extent of fall in per head food grains output and availability.

The objective of the advanced countries in promoting free trade with developing countries was to import the crops they could not produce or could produce in small volumes, while the developing countries would become markets for export of Northern surpluses of grain. The foodgrain imported from the developed countries is highly subsidised and cuts into the domestic markets of developing countries. At the same time land in developing countries is diverted to the production of the crops that the Northern countries could not produce. Moreover, as U. Patnaik argues, foodgrain imports into developing countries do not take place to an adequate extent to compensate for output decline, so availability also is observed to fall. This happened because the same process of economic reforms, adjustment and trade openness which led to the area shifts, also at the same time were public expenditure contracting, which produced unemployment and deflated incomes by the extent of the Keynesian multiplier, thus reducing mass purchasing power and aggregate demand for necessities. This was termed by the author as ‘standing Keynes on his head’. Thus there is a struggle for the use of globally limited land resources, and certain regressive demand management policies are used by the organisations representing advanced country interests, to contain the demand and absorption of basic food by poor populations so as to alter the crop output structure towards their own requirements. The same impact had been achieved under direct colonial control through heavy taxation.

18 Keynes himself advocated demand management to reduce unemployment and lift countries out of depression whereas the opposite was the case with Fund-guided policies which reduced levels of activity and raised unemployment for this served a specific purpose benefiting advanced countries. Hence ‘standing Keynes on his head’ is an appropriate description.

19 Ranis, G & Stewart, F. (1993) critique the Hymer-Rensinck model of the colonial impact and Rural Non Agricultural (RNA) activity in the development process. According to the H-R model, under colonial rule, labour was induced to move out of the production of non-traded domestic non-agricultural production and into non-domestically consumed cash crops for export. The purchase of imported manufactures, which substituted for domestically produced non-agricultural goods, was made possible by production of agricultural exportables. Ranis and
The present 'global recession' was initiated by a temporary overproduction of agricultural goods in the developed countries. This reduced the price of these goods in the world market. As developed countries farmers faced falling prices, these countries subsidised their products further in order to capture global markets. This kept sending the wrong signals and increased the production further. Overproduction in relation to their own domestic demand led the developed countries to push their way into the market of the developing countries through enforcement of liberalisation policies, thus undermining the income of the local farmers. The strategy for this is the enforcement of free trade in these countries along with the policy of reducing the fiscal deficits by reducing government spending. It must be stressed that the pressures to 'reduce the fiscal deficit' by 'reducing unproductive expenditure' (subsidies, human resource and rural development expenditure) has resulted in decline in income by a much larger extent through the working of the Keynesian multiplier, thus reducing the purchasing power of their populations and driving them into poverty.

This resulted in a skewed income distribution in these countries whereby the poor majority, including the farmers, lose purchasing power and the capacity to demand.

Stewart argue that essentially the same type of policies can be continued by post colonial governments as well. They have dubbed this set of policies as the 'unfavourable postcolonial archetype', in which the import substitution goods sector takes the form of urban industry and it is encouraged at the cost of domestic agriculture and non-agricultural goods. Within the agricultural sector exportables are more encouraged than foodgrains for domestic consumption. This is done especially because export earnings are required to fuel the import substitution process - thus the same process that happened in the colonial period will continue. This argument however does not take account of the Keynesian multiplier - spending on urban industry involves wage payments and generates by a multiple, demand for foodgrains, for cloth requiring raw cotton, etc. Exports in an independent country do give the economy foreign exchange while export earnings under colonialism were entirely appropriated by the imperialist power. It is the falling global prices of the exportable goods that have resulted in low export revenues for developing countries, and it is only because income deflating adjustment policies, involving cutbacks in public expenditure in rural investment and subsidies, are initiated, that demand for foodgrains is compressed. Therefore export promotion in itself will not be 'unfavourable' to the post-colonial economies; so there is no basis for the equation drawn by the authors between a situation of independence and of colonial subordination.

This point has been elaborated in U. Patnaik (2003a) where a parallel is drawn with the interwar agricultural depression of the 1920s, when deflationary policies were undertaken as a remedy to counter the BoP and fiscal deficit problems arising from initial fall in agricultural prices and export earnings. This was done with the orthodox understanding that in an economy there is a fixed pool of savings and increasing the level of government spending would reduce private investment and have no positive net impact. Keynes put forward the counter argument that savings is fixed only when full employment of resources was already reached since income on which savings depends, cannot then be raised further. But the actual situation was the reverse, namely unemployment of resources. In this situation savings was not fixed. Since savings depended on the level of income this level could be raised through investment. Increased Government spending would result in use of the unemployed resources, thus raising the level of employment and income which would raise savings to the extent required to finance the increased government spending.

20 This point has been elaborated in U. Patnaik (2003a) where a parallel is drawn with the interwar agricultural depression of the 1920s, when deflationary policies were undertaken as a remedy to counter the BoP and fiscal deficit problems arising from initial fall in agricultural prices and export earnings. This was done with the orthodox understanding that in an economy there is a fixed pool of savings and increasing the level of government spending would reduce private investment and have no positive net impact. Keynes put forward the counter argument that savings is fixed only when full employment of resources was already reached since income on which savings depends, cannot then be raised further. But the actual situation was the reverse, namely unemployment of resources. In this situation savings was not fixed. Since savings depended on the level of income this level could be raised through investment. Increased Government spending would result in use of the unemployed resources, thus raising the level of employment and income which would raise savings to the extent required to finance the increased government spending.
Consumers in the developed countries on the other hand are enabled to get cheaply the goods that could never be produced in their own countries, while farmers receive support for their inefficiently produced agricultural goods and obtain access to the large markets of the developing countries where their goods can be sold. The end result is a contradictory situation of rising farm debt and poverty, combined with increasing incomes of an emerging class of urban elite who promote the growth of manufactured product markets in the developed countries through their own imports.

The implications of these deflationary policies on India have been observed post 1991. The Seventh Plan (1975-80) had seen public expenditures on rural development, employment generation and infrastructure rise to 13.2 per cent of the GDP. Rural employment was diversified as state development expenditure rose, such that 29 per cent of rural workers were reporting non-farm employment. A sharp fall in the headcount ratio of rural poverty resulted. However all these positive trends were reversed as the SAP was implemented. Rural development expenditure, including spending on infrastructure, was reduced to only 7.8 per cent of the GDP by 1992, and has stagnated since then. Poverty rose sharply, while the rate of agricultural growth slowed down, and there was shift in land use and cropping pattern towards export crops. On the industrial front, there was initial industrial boom due to the pent up demand of the top 10 per cent of the population, but it petered out after a few years. Industrial stagnation set in from 1996. The demand deflating macroeconomic policies and the import of global price declines resulting from trade liberalisation led to a severe loss of rural purchasing power and therefore decline in foodgrains demand. Despite per head foodgrains output falling, large food stocks built up because offtake from the PDS and open market sales declined, as demand fell even faster than supply was falling, entailing steeply declining availability per head (U. Patnaik, 2003b). In the last few years since 2003, however the decline in foodgrain output per head has become faster than the decline in foodgrain availability per head.

After the introduction of the TPDS in 1997, there has been a decline in food grain offtake from the Fair Price Shops. Food stocks have been building up, so the decline in food grain availability cannot be explained in terms of a deficiency in supply, but
through a deficiency in demand. The decline in offtake has been explained by the official sources (Economic Survey) in terms of dietary diversification and the increased procurement of wheat and rice because of ‘too high’ MSP, which has in the end caused mismatch between demand and supply. The official explanation therefore centres on oversupply. However the fact is that stocks have been increasing before the increase in MSP. Apart from this it was the low MSP of cotton and sugarcane that forced farmers who grew these crops, to sell to the government part of the food grain that they also grew for self-consumption. This was done at the cost of their own consumption and nutritional levels, to make up for the loss in the sale of sugarcane and cotton. In short the so-called oversupply theory does not explain the decline in purchasing power that has caused actually a decline in demand and a consequent fall in offtake. Diets can show diversification when the nutritional levels of the lower-income groups are declining.

The agrarian crisis also has a domestic and more deep-rooted reason apart from the neo-liberal policies. The root of the agrarian crisis lies in the prevalence of landlord dominated land reforms. This is in contrast to peasant dominated redistribution of land, where land is seized without any compensation being paid to the landlord, and redistributed to the poor peasants. This breaks the monopoly of land ownership, and the agricultural capitalists originate from the ranks of the peasants themselves. In the case of landlord capitalism, landlords give up a part of their land and are compensated for the same, while they may reclaim the rest of the land from their tenants for self cultivation – thus capitalists are created from among the landlords rather than from among the peasantry. Thus effective control of land remains with the capitalists who emerge from the landlord class (Patnaik, 1988, 2003a). Landlords-turned-capitalists thus retain adequate hold over the means of production to increase their scale of production and undertake intensive farming with irrigation, high value crops and modern technology, and commodity sales are monopolised by this agrarian class. On the other hand small and poor peasants, part- or full-tenants as well as landless labourers remain deprived of control over means of production, and their returns as wages or tenant share of the total output are constantly squeezed by the classes engaged in sale and appropriation of surplus. These small-scale or subsistence producers, therefore face a contracting purchasing power. In fact the impact of adjustment programmes has been simply to speed up the demand compression of
these lower deciles of the population. The fact of per capita availability being lower than per capita production in fact indicates this lack of ability to demand foodgrains which are produced, creating large stocks, a situation interpreted falsely by the government as 'oversupply' resulting from 'dietary diversification'.

2.4. Food policy and the Public Distribution System

In the light of the liberalisation policy the entire food policy and specifically the PDS has become the subject of discussion. The main areas of critique have centred on the burden on the exchequer created in the process of procurement, storage and distribution, and also the lack of effectiveness of the responsible institutions and the PDS.

Bhalla (1993) argues that the PDS needs to be overhauled and its presence in poor states like Bihar and Orissa strengthened, and adequately extended to rural areas. Private traders can to some extent be involved in procurement. The costs of maintaining buffer stocks are much higher than originally estimated, and foodgrain prices are going down in the international market, disproving the report of the Technical Group on Food Management. This means that it would be less costly to depend to some extent on imports, rather than to maintain large buffer stocks.

Costs of the Food Corporation of India

The discussion on food policy has centred on the two issues of targeting of the PDS and the costs of the FCI. The issue of food subsidy is discussed by Madhura Swaminathan (1999). The author challenges the notion that food subsidy is too high but - in reality it is 0.5 per cent of India's GDP and 2.35 per cent of the total government expenditure, and it has remained constant in proportion. This means that even eliminating the subsidy entirely will not solve fiscal problems.

The author also challenges the contention that the FCI is inefficient in its costs of operation. The economic costs of procurement and distribution of both wheat and rice (the two main items under the PDS) have been increasing between 1990 and 1999,
while the average sales realization did not rise as fast. Thus unit subsidies have been increasing rapidly. However the increase in procurement price and statutory charges were responsible for the high economic costs. These two items are not within the jurisdiction of the FCI. Therefore the author feels that it is not correct to label the FCI as inefficient in its management of costs.

Comparing the PDS to private traders, FCI was able to provide rice more cheaply than private traders to urban areas of deficit states. On the other hand the private traders were able to provide wheat at lower prices especially in the surplus states (states of Northern and Central India). The study also shows a rural/urban divide, indicating imperfections in the markets. No unambiguous conclusion can be drawn regarding the price efficiency of the FCI.

Two indicators from Tyagi (1990) are used by Swaminathan (1999) to study the operational efficiency of the FCI – (i) subsidy + procurement price and (ii) economic cost + procurement price. The performance of the FCI has improved according to ratio (i), and according to ratio (ii) it improved till mid 1990s and then deteriorated. Again the results do not provide clear indication of whether the FCI is efficient.

However, for Swaminathan this ‘inefficiency’ does not invalidate the efforts of the FCI. On the same issue, Shikha Jha (2001) mentions a number of ‘indirect benefits’ of the PDS (which is a function of the FCI). These indirect benefits related to its influence on the aggregate demand (AD) for foodgrains and consequent supply response to the resulting change in prices. The increase in demand for foodgrain resulting from foodgrain subsidy leads to multiplier effects, raising overall growth of the economy. The increased demand due to food subsidy for a given supply of foodgrain results in increased prices and hence an increase in producers’ surplus.

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22 The subsidy is defined as the difference between economic costs and the price obtained from sales (or sales realisation) i.e.,
subsidy = economic cost – sales realisation;
where economic cost is defined as the sum of procurement price, procurement cost and distribution cost. Therefore,
subsidy = (procurement price + procurement cost + distribution costs) – sales realisation.
Rakshit (2003), however, defines costs of the FCI differently. According to his analysis, costs of food policy are twofold: use of resources in implementation of the policy and distorting effects of taxes to finance the policy. While comparing the costs of the FCI with private trade both these costs must be taken into account.
Apart from this PDS also serves to stabilise prices. Since PDS has all these indirect benefits there is a need to explore other ways of reducing inefficiency rather than simply reducing the size of the PDS.

**Price policy and the MSP**

One of the objectives of the food policy in India is to provide adequate price support to the farmers: however this also is a form of subsidy and therefore has come under heavy criticism in the context of liberalisation. Support prices are of two types – procurement prices and minimum guarantee or minimum support prices. In the recent years the two have almost become equivalent to each other.\(^{23}\)

Mihir Rakshit (2003) brings out the issue of viability of the support prices. When the FCI tried to dispose a part of its stocks in the open market, it drove the market price below the MSP. The issue price of foodgrain has increased, and the rise has been more than proportional to the increase in the WPI/ CPIAL. The different variables involved in the food market are interrelated, which is not taken cognisance of by the government in its price policy. He explains this interrelation through a food market equilibrium model with the variables \(P_r\) (rationing price), \(Q_r\) (quantity of foodgrain rationed), and \(P_{om}\) (open market price). Increased MSP, for example, requires increased \(Q_r\) or reduced \(P_r\) if FCI is not to be saddled with additional stocks. Because these relations have not been recognised, there is a mismatch between the demand and the buffer stock levels.

Many authors have criticised the MSP as being the root cause of the cost ineffectiveness of the FCI. Jha (ibid.) identifies the MSP as the main cause of the rising food subsidy bill. MSP is required because of low income and consumption levels in India, supply being greater than demand and consequent decline in prices, however it is the level at which it is fixed that is unviable. On the same note, Rakshit (ibid.) contests the calculations of the MSP by the CACP. The CACP works out MSP on the basis of the average cost (AC) of production, while in reality it is the marginal cost (MC) that reflects the true supply response of farmers. Also in CACP’s calculations a number of imputed costs are included so that at any level of output the

\(^{23}\) This de facto merging of the two concepts has also come under criticism – see the comments of Vyas (1993) discussed elsewhere in this paper.
price per unit $P > MC$, which is a position of disequilibrium, pushing up production, so that procurement and stockholding always exceed FCI targets.

Swaminathan, however, opposed A.K. Sen’s stand (quoted in Swaminathan, 2002) that the high level of MSP is the cause of the malnutrition in the agricultural sector. Her argument is that price support to cultivator needs to continue in the light of the extent of distress sales of foodgrains by small peasants. The procurement prices, which are now the same as the MSP, are relatively high, resulting in higher levels of procurement, but that in itself is not an issue since the level of malnutrition and nutritional vulnerability in the country is quite high. The real issue is that the government has expanded neither the delivery system of the PDS nor the purchasing power of the consumers, through which it can be ensured that people actually receive the foodgrains.

**Targeting in the PDS**

The introduction of the Targeted Public Distribution System in 1997 has raised a lot of controversy regarding the effectiveness of targeting and the extent to which the poor are truly covered by its benefits.

A clear argument in favour of the universal system is presented by Swaminathan. Several issues related with the calculation of the number of poor make targeting an unsuitable policy to ensure that foodgrain reaches the needy. The question of accurate measurement of the per capita expenditure (PCE) for the purpose of calculating the population below the poverty line, movements in and out of poverty, coupled with the fact that the poverty line is fixed at a destitution level of income – all these factors mean that the poverty line is a doubtful measure of real nutritional inadequacy.

Non-income measures of poverty used at the field level are both unjust and arbitrary as proved by Swaminathan through her study of a Maharashtra village (Swaminathan and Misra, 2001), and the results underestimate the number of poor. For all these reasons there are a number of errors in calculation of the BPL population. Errors are classified into errors of wrong inclusion (E mistakes) and errors of wrong exclusion (F mistakes). While UPDS has higher risk of erroneous inclusion, TPDS has higher risk of erroneous exclusion. It is a trade-off between the two types of errors and
priority should be given to elimination of F mistakes since F mistakes have social (welfare) consequences while E mistakes result only in additional expenditure to the government.  

The United States food stamps programme estimated the poverty line to be thrice the estimated food expenditure, since it was calculated that about one-third of the expenditure of poor families is on food. If this is taken to be the criterion of poverty in India, and eligibility for subsidised food calculated accordingly, Swaminathan (2000) estimates that 95 per cent of the population of India would be classified as poor. Even if we use a food share of 60 per cent to identify the poor, the cut-off used in China to identify a poverty line, 80 per cent of the rural and 60 per cent of the urban population could be classified as 'poor'. On the basis of this estimate, the author argues that there is no ground for any selectiveness or targeting in the PDS.

The above provide an argument as to why targeting is not practically an effective method in reaching the poor. Apart from this, the norms of distribution are also different in the TPDS and the UPDS. While in the UPDS foodgrain was provided on individual basis, in TPDS it is provided on per household basis, and the amount is reduced. States that earlier provided more foodgrain have been penalised since they now have to purchase the additional foodgrain from the FCI at APL prices and distribute it at BPL prices (Swaminathan 2002).

Swaminathan (2000) challenges the entire rationale of targeting. Targeting has been implemented in a number of countries that signed the Structural Adjustment Programme. The impacts on nutrition and poverty in all these countries have been dismal. Since India has implemented the SAP in 1991 the PDS has been further dismantled and weakened. The first change has been in the foundations or the principles underlying the objectives of the system. Since the introduction of the SAP government documents have been advocating the reduction, even the abolition of the public distribution system. According to the author, "Since even the promoters of the orthodox structural adjustment now admit that these policies worsen deprivation, the

\[24\] Jha (2000) however holds the opinion that the system of targeting is necessary because 'untargeted programmes are not only a burden to the government's budget but also spread subsidies thinly across the entire population'. Thus it is better to concentrate the subsidies on the few needy rather than the entire population.
suggested panacea is that reduction in food subsidies be accompanied by targeting.” Thus targeting is seen as a first step to complete removal of the PDS.

There is a decline in the offtake of foodgrain from the PDS in case of the APL category because of higher prices and in the BPL category due to lack of access of BPL cardholders to ration shops. The reason for this pointed out both by Swaminathan (2000) and Rakshit (2003), is that with the exclusion of APL families from PDS it is likely that a number of Fair Price Shops became unviable and ceased to operate regularly to service only a small number of BPL cardholders.

Jha (2001) argues in favour of other means of increasing the cost effectiveness of the PDS rather than simply reducing its size. Towards this objective, she suggests a different process for targeting. She recommends geographical targeting through indirect identification mechanisms. Geographical targeting that uses the place of residence as the main criterion for eligibility can provide an effective way of identifying the poor where there are substantial disparities in living conditions across geographical areas. This way of geographically targeting subsidies is expected to be less administratively costly and can be facilitated by the local administration.

**Buffer stocks**

A major item of subsidy cost is the maintenance of buffer stocks. Again this has come in for a lot of criticism in the post liberalisation era. M. Raghavan (2003) and Rakshit (ibid.) suggest keeping a flexible figure, with a basic minimum fixed stock for all years, and accumulation of buffer stock during surplus years and decumulation during scarcity years. Optimum buffer stock according to Rakshit depends on

- Loss due to stockholding (opportunity cost in terms of lost National Product)
- Coefficient of variance in foodgrain output.

If proper investment is made in agricultural infrastructure, such as irrigation etc. the sensitivity of agriculture to monsoon will reduce the need for buffer stock for cushioning the supply side shocks will be reduced. M. Raghavan also says that procurement should be decentralised as introduced in 1997. However chronically food
deficient states cannot undertake procurement and Centre should support the purchase on behalf of these states. He feels that a minimum combination of buffer stocks and foreign exchange reserves should be held in all years, with variations in them as the economy experiences shocks.

2.5. Intersectoral terms of trade

The terms of trade between agriculture and manufacturing have an important bearing on agricultural price policy. Put very simply, terms of trade favouring agriculture indicate that the prices of agricultural commodities are relatively higher as compared to non-agricultural commodities, and this would be likely to provide an incentive for agricultural growth. Terms of trade which reflect the relative prices of the agricultural sector indicate the direction that the growth of the sector is likely to take.

Thamarajakshi (1969) was the first to define intersectoral terms of trade. The definition is drawn from Viner’s definition of international terms of trade between two trading partners. Very broadly, intersectoral terms of trade refer to the ratio of price level in the two (agricultural and manufacturing) sectors.

Discussion has centred round both the methodology of calculation of the terms of trade, as well as the implications of the trends in the terms of trade in India. Thamarajakshi’s 1969 analysis (with base year 1960-61) indicates that purchase of agricultural goods for final consumption by the non-agricultural (NA) sector has grown faster than NA goods purchased by the agricultural sector for final consumption. On the other hand intermediate goods have been purchased at a faster growth rate by agriculture from NA than by NA from agriculture. According to her calculations, both net barter terms of trade (NBTOT) and income terms of trade (ITOT) have changed in favour of the agricultural sector between 1950-51 and 1965-66.

The difference between the cost incurred by NA on the purchase of agricultural goods and the cost incurred by agricultural sector on the purchase of non-agricultural intermediate goods is very low (only 0.13), which shows that the expenditure on technical inputs is comparatively high and indicates modernization. According to Thamarajakshi, the TOT have moved in favour of agriculture in the first three plans.
The rise in purchases of NA inputs by the agricultural sector show technical development and the rise in final agricultural goods purchased by NA indicate increased contribution of the agricultural sector in the economy (1950-51 to 1965-66).

In her later paper extending the series for calculation of TOT, Thamarajakshi confirms that this trend has continued till 1974-75. There was a marginal decline in the terms of trade after 1974-75 (Thamarajakshi 1990). Output growth has been faster in terms of both foodgrains and non-foodgrains in the second period (1974-75 to 1987-88). In this period, the rural sector’s demand for non-agricultural goods increased considerably. There was a lot of modernization in this period but there was not a proportionate increase in output with the increase in inputs used i.e. output elasticity of input use is greater than 1. Production techniques have improved for cereals but not for agricultural raw materials, so terms of trade have declined for cereals more than for agricultural raw materials.

However, a study by Kahlon and Tyagi (1980) shows that the terms of trade have moved against agriculture. They use a different base year, the triennium ending 1971-72, and state that the increase in the relative price of agricultural commodities (terms of trade) in the late 1960s is a result of factors other than the increase in prices actually received by the farmers.

**Impact of terms of trade movement on the agricultural sector**

Discussion has centred around the issues of the impact that prices are likely to have on agricultural growth and on distribution of that growth within the agricultural sector.

Thamarajakshi (1977) dispels the idea that prices are the decisive factor in agricultural growth. Statistical analysis in this article indicates that the relations between output and terms of trade are weak. When agriculture is passing through a phase of transformation, increase in the aggregate supply is basically a technological phenomenon facilitated by a favourable price climate. Therefore terms of trade are not the decisive factor for agricultural growth. In Indian agriculture, both the terms of trade and technology have improved, but in case of foodgrains, the author tries to show through statistical analysis that the entire output rise has been a result of non-
price factors (factors other than the terms of trade). On the other hand, increase in agricultural prices does make inputs for the industrial sector more expensive and ultimately lead to inflation.

Thamarajakshi (1977) also states that agricultural and urban poor are net buyers of food. Therefore increase in food prices would actually go against their interests and in favour of large farmers. The increased prices may lead large farmers to adopt improved techniques, while on the other hand it may simply be absorbed into increasing prices for land. Certainly the largest share of the benefits of improved terms of trade is reaped by the large farmers (Patnaik 1972). It was found that the largest farmers contribute the largest share of marketable surplus, since they retain a lower proportion of the total output for consumption and payment of wages etc.

Tyagi (1979) however challenges this view. He says that the conclusion that improved terms of trade would harm the poor, is based on an understanding that the poor depend on the market for their foodgrain needs, and that the incomes of the poor are independent of the prices of foodgrains. How can we assume that there is no change in the incomes of the poor with the change in farm prices, when the poor do contribute their labour on agricultural production? In support of his argument, the author uses data from 1956-57 to 1971-72 to argue that in a period of rising prices, real wages in agriculture increase, and vice versa, so that high agricultural prices are in favour of agricultural labour also.

The importance of the terms of trade in improving the economic position of the agriculturist has been the focus of much discussion. U. Patnaik (1988) however terms this intense discussion as a ‘theoretical red herring’. This is because there can be no single homogeneous impact on all agriculturists, and an analysis of the impact of terms of trade on the ‘average cultivator’ is not relevant because the ‘average cultivator’ is a myth. In fact it is completely possible that terms of trade may improve and this improvement may benefit only those agriculturists (large-scale producers)

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25 Large scale producers in agriculture need not be large size owners/operators of land. The scale of operation depends on whether the land is irrigated or dry, whether low-productivity or high productivity techniques of production are used, whether high-value or low-value crops are produced, etc. Intensity of cultivation depending on the extent of capital invested decides the scale of production. Acreage holding is not a determinant of marketed output. A dryland farmer with a large landholding but low-productivity inputs and low-value crops will probably
who contribute the bulk of the marketed output; and on the other hand the net buyer of
food who is a seller of labour power would face an increase in prices with no (or less-than-proportional) increase in wages, and a deterioration in economic position. It is
not likely that the increase in prices will be proportionally passed on to the seller of
labour. The same unequal distribution may occur in a situation of 'deteriorating terms
of trade' – the labourer could face the brunt of the decline in prices through a squeeze
on wages by the owners of capital who try to cut costs and retain their surplus.

S. L. Shetty (1971) says that the increase in the terms of trade for the agricultural
sector is due to crop failure in 1965-66 and due to decline in incomes in agriculture,
and therefore does not benefit the agricultural sector.

Thamarajakshi has argued that the terms of trade do not have a major impact on
production. This naturally leads to the question – then what is the role of price policy
in agricultural production? In answer to this, Thamarajakshi (1977) states that
technological innovation and not price policy can help a balanced production pattern.
When new technology is available only to certain crops, it would divert acreage to
these crops. On the other hand the shortfall in the production of other crops that have
not benefited from these new techniques would not set right the situation. This
argument however begs the question of farmers' primary motivation in investing in
new technology – that of profitability, which will not occur unless output prices
increase relative to input prices.

Price policy has two principal functions – to maintain the tempo of technical change
by providing insurance to farmers against a fall in crop prices, and to even out year-
to-year fluctuations in these prices. The major problem is the intraseasonal differential
in prices, which may be even higher than the carrying (storage) costs. This reflects
inefficiency in the market structure, weak holding capacity of the farmers, and high
speculation in commodity markets.

produce only for subsistence while a small landholder, but one who has access to irrigation
and technology and the means to produce high value crops would be more likely to produce
for the market (Patnaik 1987). The appropriation of surplus from production will be based on
class of the producer, which can be accurately measured by labour exploitation rather than
by size of land operated.
2.6. **Methodology of the present study and sources of data**

The objective of the present study has been spelt out in the previous chapter - to try to ascertain how the rural peasantry and labour have fared with respect to food security during the period of economic reforms in Gujarat.

This study seeks to situate developments in Gujarat, a relatively high growth state, in the larger macroeconomic context of demand depression in the economy following from neo-liberal policies. It compares past policies with present ones and as such deals with past and present data. The methodology combines analysis of secondary data with analysis of a primary field survey. Secondary data also deals with two levels: the broader all-India level and the specific context of Gujarat state and districts within the state.

Data have been used on the broader direction of development in the state in terms of the income of the various productive sectors, as well as levels of poverty and employment. At a more sector-specific level, we have used data on production and acreage of various foodgrain and non-foodgrain crops, on total and per capita foodgrain availability, market prices and fluctuations, on distribution of land between agricultural and non-agricultural uses, irrigation facilities and access to irrigation, and on prices in the Public Distribution System and its spread.

Data at the all-India level has been acquired from government publications and online sources such as the various Economic Surveys, Reports of the Reserve Bank of India, publications of the Central Statistical Organization and the National Sample Survey Organization. Aggregate data on Gujarat and the districts is acquired from the publications of the Department of Agriculture, Government of Gujarat, such as the Socio-Economic Surveys of Gujarat and the Gujarat government Statistical Abstract. Chronological information on market arrivals and prices of various crops, as well as distribution of various foodgrain through the PDS is acquired through the Monthly Reviews of Gujarat published by the Centre for Monitoring the Indian Economy (CMIE).

Use is also made of studies done by various research institutes in Gujarat on issues related to agriculture and food security. These institutes include the Indian Institute of
Management (Ahmedabad), the Gujarat Institute of Development Research (GIDR),
the Mahatma Gandhi Labour Institute (MGLI), and the Centre for Social Studies
(CSS) and so on. A number of NGOs have done intensive micro-level studies on
these issues as well; their resources are used for a clearer micro-level picture.

Apart from secondary data, the study also uses primary data on foodgrain production,
foodgrain availability, availability of irrigation, land use, and public distribution of
foodgrains. For this purpose a random sample of 200 rural households from Dangs
and Banaskantha districts of Gujarat is used. These two districts have been selected
since they have high levels of population below the poverty line relative to other
districts in the state, and therefore likely to face the maximum issues of food security.
Data provided from the household survey is analysed along with data from the
secondary sources to draw conclusions about the situation of poverty and food
security in the state.