

## Some Analytical aspects of Indian Agriculture in the Context of Libralisation

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### Abstract

Higher agricultural growth requires both public and private investment in irrigation and other rural infrastructure. However, the rate of investment in agriculture has declined since the early 1980s. An important reason has been that in most states a large proportion of the government budget is required for huge subsidies on power, transport and water and on the inefficient functioning of both power and irrigation systems. In addition, policy-makers are considering decentralizing and privatizing irrigation projects, leasing distribution systems to panchayats and forming irrigation cooperatives to establish and collect water charges and to manage and maintain distribution channels.

**Key words:** Analytical aspects, Agricultural commodities Allied Activities.

### Introduction

There is a general agreement among economists and policy-makers that India has export potential in some agricultural products. In addition to traditional commodities, such as tea and coffee, exports of many new commodities, including fish products, rice, fruits and processed food, have shown a rapid increase. Some studies argue that there is major scope for increasing exports of food grains such as rice and wheat. In the short term, however, the competitiveness of several agricultural commodities is gradually being eroded because of high inflation attributed to the new economic policy.

The practical approach to trade liberalization suggests that the new liberal climate should make it possible to dispense with many coercive instruments such as compulsory procurement, zonal restrictions and limits on stocks, and to make more effective use of markets at both the national and international levels.

### Agricultural Policy and its Impacts:

With India's membership in the WTO, Indian agricultural policies underwent significant changes. Agriculture became more integrated into the world commodity market and conformal to the liberal policy regime advocated by the IMF. The gradual abolition of input subsidies on fertilizers, irrigation, electricity and credit, removal of trade restrictions on agricultural commodities so that the domestic prices are not out of tune with world prices, unification of prices so that the current system of dual markets in food grains and other agricultural commodities disappears, drastic curtailment of food subsidy confining the Public Distribution System only to the deserving poor, removal of all restrictions on the choice of what to produce, where to sell etc, freedom of operations for agri-business and so on, the Indian agriculture began assuming a new structure, markedly in contrast with the pre-1990 one. The structural changes have been observed in the land-use pattern for raising different crops. But fragmented small landholdings and poverty among the farmers severely limit the cultivation of crops for the market. The infrastructure for storage, transport, processing, grading and rating quality-standards are underdeveloped. Farmers are ignorant of the sophistication of global markets, as their experience is limited to primitive operations. The demand for most of the Indian farm products is very low on account of poor quality and quality control system. Therefore, with the poor prospects and scope for the export of Indian agricultural

produce, the exporters face difficulties both in the domestic and foreign markets. For instance, Indian tea is a high-cost product. When cheaper tea comes into the market, the country's high-cost tea producers lose out. Yet, export oriented agriculture is gradually reducing the area of food cultivation, as more and more land is being used for cash crop production. The growing costs of agricultural inputs and shrinkage of the market for agricultural produce are not only causing problems for farmers, but are also affecting rural employment severely. There is widespread migration of agricultural workers to other states and to cities. With these changes, the agro-based industries have not been able to pick up momentum so as to provide a thrust to the industrialization process.

Table 1.1

## CAGR of India's Agricultural Production - Food grains

CAGR (During Periodicals)	Cereals				Pulses	Total Food grains
	Rice	Wheat	Coarse Cereals	Total		
1951-60	4.12	5.01	2.72	3.73	3.85	3.75
1961-70	1.19	6.82	1.51	2.33	-1.29	1.85
1971-80	1.90	4.31	1.11	2.33	-0.39	2.07
1981-90	3.62	3.58	0.35	2.85	1.49	2.73
1991-00	2.02	3.57	-0.01	2.20	0.86	2.10
2001-10	1.59	1.89	2.43	1.85	2.68	1.90
1951-2010	2.53	4.69	0.94	2.66	0.56	2.44

From the given table, CAGR has been calculated during different decadal periods. During the period 1951-60 total amount of rice, wheat and coarse was 4.12, 5.01, 2.72 respectively and the average of the total was 3.73. While the rate of Pulses was calculated 3.85 during this period. The total food grains was calculated 3.75 during this period.

The CAGR during 1981-90 the amount of rice, wheat, coarse cereals amount was calculated 3.6, 3.58, 0.35, while the rate of total average was 2.85 but in case of pulses it was observed again positively (1.49). But total food grains were 2.73 in the same.

The CAGR during 1991-00 the amount of rice, wheat, coarse cereals amount was calculated 2.02, 3.57, while it was negative (-0.01), while the rate of total average was 2.20 but in case of pulses it was observed 0.86. But total food grains were 2.10 in the same.

The CAGR during 2001-10 the amount of rice, wheat, coarse cereals amount was calculated 1.59, 1.89, 2.43, while the rate of total average was 1.85 but in case of pulses it was observed again 2.68. But total food grains were 1.90 in the same.

Table 1.2

## CAGR of Gross Domestic Product in different Activity in India (at current prices)

CAGR	Agriculture & Allied Activities	Agriculture	Industry	Mining & Quarrying	Manufacturing
1951-60	3.52	3.51	7.89	8.31	7.65
1961-70	11.82	11.89	10.15	10.94	9.70
1971-80	9.04	8.68	14.80	18.22	14.21
1981-90	11.36	11.29	14.33	16.57	13.72
1991-00	13.06	13.06	14.88	13.16	14.74
2001-10	9.70	8.04	13.85	14.83	14.38
1951-2010	10.42	10.23	13.29	15.07	12.85

From the given table, CAGR has been calculated during different decadal. During the period 1951-60 total amount of Agriculture & Allied Activities, Agriculture, Industry, Mining & Quarrying, Manufacturing was 3.52, 3.51, 7.89, 8.31, 7.65 respectively.

The CAGR during 1961-70 the amount of Agriculture & Allied Activities, Agriculture, Industry, Mining & Quarrying, Manufacturing was calculated 11.82, 11.89, 10.15, 10.94, 9.70 respectively.

But in case of sixty years CAGR it was 1951-2010 it was 10.42, 10.23, 13.29, 15.07 as well as 12.85 during the same. From the above Calculated CAGR it was observed that the rate of Gross Domestic Products (at current prices) has been in a fluctuated trend.

Table 1.3

## CAGR of Gross Domestic Product in different Activity in India (at current prices)

CAGR	Electricity, Gas & Water Supply	Services	Construction	Trade, Hotels, Transport & Communication	Financing, Insurance, Real Estate & Business Services	Community, Social & Personal Services
1951-60	14.76	6.81	8.28	7.49	7.40	5.12
1961-70	17.97	10.63	13.72	11.85	8.39	10.81
1971-80	18.80	12.85	11.73	14.99	10.77	12.82
1981-90	17.32	15.36	16.06	15.77	15.11	14.79
1991-00	17.52	16.48	15.84	17.27	15.76	16.20
2001-10	8.59	15.23	19.92	15.16	15.97	12.31
1951-2010	16.44	13.28	14.06	14.22	12.36	12.80

From the given table, CAGR has been calculated during different decadal. During the period 1951-60 total amount of Electricity, Gas & Water Supply, Services, Construction, Trade, Hotels, Transport & Communication, Financing, Insurance, Real Estate & Business Services was 14.76, 6.81, 8.28, 7.49, 7.40, 5.12 respectively.

The CAGR during 1961-70 the amount of Electricity, Gas & Water Supply, Services, Construction, Trade, Hotels, Transport & Communication, Financing, Insurance, Real Estate & Business Services was calculated 17.97, 10.63, 13.72, 11.85, 8.39, 10.81 respectively.

The CAGR during 1971-80 the amount of Electricity, Gas & Water Supply, Services, Construction, Trade, Hotels, Transport & Communication, Financing, Insurance, Real Estate & Business Services was calculated 18.80, 12.85, 11.73, 14.99, 10.77, 12.82 respectively.

But in case of sixty years CAGR it was 1951-2010 it was 16.44, 13.28, 14.06, 14.22, 12.36 as well as 12.80 during the same. From the above Calculated CAGR it was observed that the rate of Gross Domestic Products (at current prices) has been in a fluctuated trend.

### **The Rural Economy and the Common Man after Globalization:**

The Indian agriculture has two main roles to play in the overall economy; first of providing food to the mass within the economy, and the second, to provide the commodities - food grains, fibers, oilseeds and other cash crops that make the inputs to the industries in the economy as well as the stuff that would earn the foreign exchange. In an economy where no less than the one third of the population is below poverty line, the first role of the Indian agriculture is not to be brushed aside in the dazzle of the flourishing multinationals-led industries and the drizzle of the foreign lucre.

In the 1990s, food grain output in India fell below the population growth rates. The last time such a situation occurred was in the 1960s. The opening up of Indian agriculture to trade boosted the demand for non-food crops for export. Although total agricultural output still rose during the 1990s, liberalization reversed the recovery the country was making in per capita food availability, undermining the food security of the country. Within the first half of the 1990s, growth of food output had decelerated to 1.7 per cent compound every year. During the same period population grew at 1.9 per cent compound every year. The thrust on exports of agricultural produce has resulted in a significant change in cropping patterns. Indian producers have been diverting more and more cultivable land from food grains and pulses to the production of oilseeds, cotton, horticultural crops, prawn culture, animal husbandry etc. In addition, the land on which no well-defined property rights exist are being fenced off and export crops are being sown either directly by the agri-businesses or by farmers they contract. A rapid increase in prawn culture has made many nearby plots saline and unsuitable for cultivation, forcing their owners into the ranks of the landless labour. Rapid growth of exports of animal products implies that a greater proportion of the declining grain output is being used as fodder. Area under food grain cultivation in 1999-2000 was 4.6 million hectares less than in 1990-91. The most severe decline has been in coarse grains and pulses, which are the main food grains of the poor. Gross area under coarse grains fell by almost 6.8 million hectares between 1990-91 and 1999-2000. For pulses the area fell by 2.4 million hectares. However, area under rice in 1999-2000 was 1.9 million hectares higher than in 1990-91 and area under wheat went up by 4.4 million hectares during the same period.

But while agriculture has benefited from trade policy changes, it has suffered in other respects, most notably from the decline in public investment in areas critical for agricultural growth, such as irrigation and drainage, soil conservation and water management systems and rural roads. As pointed out by Gulati and Bathla (2001), this decline began much before the reforms and was actually sharper in the 1980s than in the 1990s. They also point out that while public investment declined, this was more than offset by a rise in private investment in agriculture, which accelerated after the reforms. However, there is no doubt that investment in agriculture-related infrastructure is critical for achieving higher productivity, and this investment is only likely to come from the

public sector. Indeed, the rising trend in private investment in agriculture could easily be dampened if public investment in these critical areas is not increased.

Some of the policies that were crucial in promoting food grain production in earlier years, when this was the prime objective, are now hindering agricultural diversification. Government price support levels for food grains, such as wheat, are supposed to be set on the basis of the recommendations of the Commission on Agricultural Costs and Prices, a technical body that is expected to calibrate price support to reasonable levels. In recent years, support prices have been fixed at much higher levels, encouraging overproduction. Indeed, public food grain stocks reached 58 million tons on January 1, 2002, against a norm of around 17 million tons. The support price system clearly needs to be better aligned to market demand if farmers are to be encouraged to shift from food grain production toward other products.

Agricultural diversification also calls for radical changes in some outdated laws. The Essential Commodities Act, which empowers state governments to impose restrictions on movement of agricultural products across state and sometimes even district boundaries and to limit the maximum stocks wholesalers and retailers can carry for certain commodities, was designed to prevent exploitive traders from diverting local supplies to other areas of scarcity or from hoarding supplies to raise prices. Its consequence is that farmers and consumers are denied the benefit of an integrated national market. It also prevents the development of modern trading companies, which have a key role to play in the next stage of agricultural diversification. The government has recognized the need for change and recently removed certain products—including wheat, rice, coarse grains, edible oil, oilseeds and sugar—from the purview of the act. However, this step may not suffice, since state governments may be able to take similar action. What is needed is a repeal of the existing act and central legislation that would make it illegal for government authorities at any level to restrict movement or stocking of agricultural products (Planning Commission, 2001a).

**Table 1.4**  
**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1953.820	3.359		581.608	.000
a2	-.416	.179	-.567	-2.328	.024
a4	-.066	.146	-.020	-.453	.652
a6	-1.868	.325	-.183	-5.744	.000
a7	.544	.083	1.705	6.561	.000

a. Dependent Variable: years

From the given table coefficients of standard error as well as t-values (581.608, -2.328, -0.453, -5.744 and 6.561 respectively), where Beta is constant (0.000, -0.567, -0.020, -0.183 and 1.705 respectively) again the significance level is 0.000, 0.024, 0.652, 0.000 and 0.000 respectively, which implies that there is no significant difference between calculated value as well as tabulated values of a, a6 and a7, where null hypothesis is accepted while in case of a2 and a4 it is rejected due to positive significant difference.

**Table 1.5**  
ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16750.610	4	4187.653	629.215	.000 <sup>a</sup>
	Residual	359.390	54	6.655		
	Total	17110.000	58			

a. Predictors: (Constant), a7, a6, a4, a2

b. Dependent Variable: years

From the given table regression model as well as analysis of variance have been introduced, where the degree of freedom has been calculated, in case of ANOVA test significance level is 0.000 so Null Hypothesis is accepted which implies the production of Food grains has been improved significantly. It again explain that the performance of Food grains in terms of productivity has been improved due to economic reforms.

### Conclusion

No economic reforms can succeed in India without ensuring adequate growth of exports of goods and services to ensure longer-term viability of its balance of payments. While anti-dumping measures need to be strengthened to protect Indian industry from unfair import competition, the longer-term reforms must continue to lower import duties to levels comparable to those in leading Southeast Asian countries. Simultaneously, measures should be taken by the government to replace quantitative restrictions through appropriately determined tariffs.

While some agricultural reforms have already been carried out, these are highly inadequate. Primacy must be given to the agriculture sector in all future reforms since many more jobs can be created in the agricultural sector, broadly defined, including activities related to rural industrialization and overall rural development. Both on-farm and off-farm employment potential must be fully exploited. This will raise incomes of farmers and rural labor on a sustainable basis and provide a much-needed boost to demand for industrial products and services, thus spurring all-around economic growth. There is an urgent need to raise public investment in agriculture substantially. Areas needing investment include: irrigation; watershed development; rural infrastructure; drinking water; housing and sanitation. This will help raise the productivity of Indian agriculture to international levels and help in promoting rural (and interlinked urban) prosperity in India. Second-generation reforms must reduce the perennial anti-agricultural bias by permitting free<sup>®</sup> exports of all primary products. This will provide a major boost to India's exports consistent with the rules set by the World Trade Organization. Simultaneously, India must improve its marketing infrastructure. Agricultural reform will unleash high growth rates in agriculture, on which nearly sixty percent of India's population is still dependent for employment. Agricultural prosperity will help to markedly reduce endemic rural poverty.

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