

GLOBALISATION AND INDIAN AGRICULTURE: PERFORMANCE UNDER A NEW PARADIGM

R.S.Deshpande¹ and M. Indira²

1. INTRODUCTION

Indian agriculture has undergone various phases of growth and development during the last five decades. The experience so far indicates a few bright spots as well as phases of stagnation marked by breaks in the process of development. Major impediments faced by Indian agriculture at the time of independence included food insecurity, constraints on resource availability, ill distribution of resources, primitive technology and regional imbalances (Dantwala, 1996). We have been partially successful in overcoming a few of these impediments and today India can pose as one of the food secure nations *albeit* in arithmetic sense (Acharya, 2002). And during the five decades we have also followed a riverine process of development and altered the model of development several times in response to the worldwide trends. The phase of globalisation is one such step that has been ushered in as a new mode of development. Therefore, we have more questions to be answered and issues to be discusses than before.

The travelogue of any development process begins with resource augmentation, productivity enhancement, employment generation, distribution and finally value addition. We have been able to work partially on the impediments faced by the Indian agriculture and now we are at the cross-road of getting into global market as a predominant player (Bhalla,1995, Ahluwalia,1996). India has achieved an important position among the producers of many commodities as well as it provides a large market for the purpose of other international players to participate in. There are a few questions that crop up at this juncture and these relate to the structure of internal and external markets with India's response to it (WTO, 1998). The domestic market governance naturally comes as the first issue to be debated and to understand India's preparedness for facing the challenge of globalization in this context. Hitherto, we have always been making our presence in international markets in response to the residual surplus. It is time now to cultivate a culture of producing for the sake of the international market and marking the presence in the process. It is easily said than done. Our markets as well as farmers will have to be equipped with

¹ Professor, ISEC, Bangalore ²Reader in Economics, University of Mysore, Mysore

infrastructure, information along with a full reform package. This paper discusses three important issues viz., (i) the pre-setting of globalization and issues pertaining to governance in agricultural sector during nineties; (ii) the process of globalization and the impediments in the domestic as well as world market; and (iii) steps needed in order to participate in the process of globalization through development governance and reforms in allied sectors.

2. PRE-SETTING

Macro-economic crisis of early nineties was the beginning of the process of calibrating trade globalisation in the economy and agriculture was no exception. Even though, the basic current emerged actually during mid eighties, it could acquire a visible drive only by early nineties (Sen, 2000, Rao, 2001). As is well known, the crisis began when the foreign exchange reserves touched a critical bottom level, adverse balance of payment condition was evident and a near debt trap situation became imminent. (Joshi and Little, 1996). An alternate view is about the very necessity of getting into the structural adjustments itself (Ghosh, 1997). If one looks carefully at the data on National Accounts Statistics, it is quite visible that the trigger of the situation leading to the crisis was located in the expansion of non-agricultural sectors during mid-eighties beginning with the historical budget presented by the then Finance Minister. The performance of the agricultural sector during that period was certainly impressive and contributed significantly to the national growth, agricultural exports were also increasing. However, balance of payment was absolutely in precarious condition and it was felt that the situation was beyond the capacity of the economy to rescue, leading to the launch of structural adjustment programme and globalisation was an unavoidable outcome of the process.

Globalisation means integration of the economy with the rest of the world. The process of integration is facilitated by flow of information, technologies, goods and services, finance, capital and people. Report of the World Commission on social dimension of globalisation observed that the key characteristics of globalisation include: Liberalisation of trade; Cross-border financial flows and Increased competition in global markets. According to the report, it has come about due to deliberate policy decisions for free trade and the emergence of information and communication technology. The essential feature of globalisation is connectivity that is facilitated by information technology revolution. This reduced the cost of communication drastically. Globalisation has several dimensions like social, cultural and economic and these impinge on welfare across sectors (Parikh et al, 1996).

The new paradigm of global economy is based on the theory that free trade among countries leads to efficient allocation of resources enhances productivity and social welfare. Under this paradigm, a country's development need not be constrained by insufficient capital resource, if it has potential. Inflow of foreign capital helps development. For example, inflow of foreign capital to Malaysia was 17.4 per cent of its GDP during 1993 and 12.7 per cent in Thailand during 1995. Rapid development of capital market is an essential feature of globalisation, which facilitates easy flow of movement of funds. However, too much dependence on foreign capital that is volatile under free global markets carries the risk of withdrawal at any moment.

Following the crisis the state of affairs was handled carefully with a battery of macro-economic tools that included liberalisation of foreign trade, devaluation of the currency and other steps in domestic macro-economic policy management (Singh, 1995). This period incidentally coincided with a few major changes in the arena of international trade, heralding the establishment of World Trade Organisation (WTO) and removal of non-tariff trade barriers. India being one among the founder members of GATT, agreed to abide by the set of regulations given under the various agreements of WTO. The macro-economic situation in the country was also undergoing a rapid transition along with significant changes in trade scenario, in this process the agricultural sector, sheer by its significance in the economy, became an important player. Naturally growth trends in agricultural sector and the domestic market conditions emerged as the initial issues to signify the frontal impact of globalisation (Rao, 2001).

India's agricultural sector cannot be compared with that of many countries significantly participating in the international trade. Among the major constraints faced by the sector prominent is the lowest average size of holdings as a base for production. About 80 million small and marginal farmers inhabit the sector with only a small proportion of farmers generating sizeable marketable surplus. Market conditions in factor as well as product markets are far from satisfactory; and finally India never had a sustained presence in the international trade to participate proactively in the process of globalisation. These overt constraints provoked the use of terminology like 'level playing field' while analysing comparative performance of India *vis a vis* its trading partners. It is quite clear that the production as well as domestic and international trade environment in India is not comparable to many of its competitors but finally that needs to be achieved in the process. Therefore, the

significant question crops up whether agriculture will stand at the receiving end? How this should be avoided, is a major policy issue to wrestle with.

3. AGRICULTURE AND GLOBALISATION

Over the last five decades, Indian agricultural sector performed under various constraints. The exemplary performance during late sixties, mid seventies and early eighties helped to overcome the problem of aggregate food insecurity. The performance of the last two years of eighties was a landmark and that was not exceeded in the following decade (See Figure 1). It is argued that the annual growth of agriculture GDPs shows a declining trend in the post-reform period. While it has grown at an annual rate of 3.4 percent during 1980s, it registered only 1.8 percent growth between 1997-98 and 2000-02. Growth rate was 4.7 percent between 1992-93 and 1997-98. Similarly, it is also argued that there is a decline in area, production and productivity of all crops. While area under all crops has shown a marginal increase in growth rate during 1990s, production and yield have shown a decreasing trend. But as can be seen from figure 1, that the decade of nineties has recorded positive growth in GDP in most of the years except for a few years, but while comparing the aggregate growth analysts tend to conclude with a bad performance during nineties. Probably the peak achieved at the end point in the decade of eighties leads to such a conclusion. One point however is quite clear that the performance during eighties of the agriculture sector was quite supportive.

The growth rates seen from the table 1 indicate that the long-term performance of the sector is quite satisfactory, though not exemplary. But the growth rates mask a lot than they reveal. What is important to note here is that the growth during recent past as well as during the last three decades has come from the technological inputs. Globalisation may further usher in new technological opportunities. A comparison of the growth rates in the two decades of eighties and nineties can be quite deceptive and therefore we have resorted to view the trends over the entire period. Figures 2 and 3 present this picture.

Figure 3.1: Growth in GDP originating from Agriculture

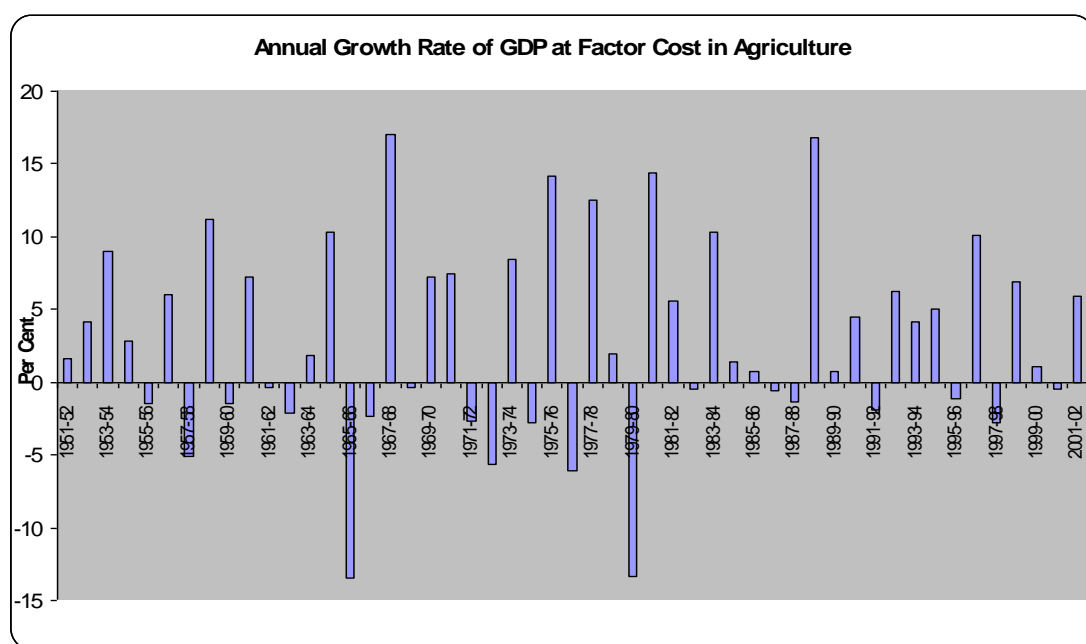
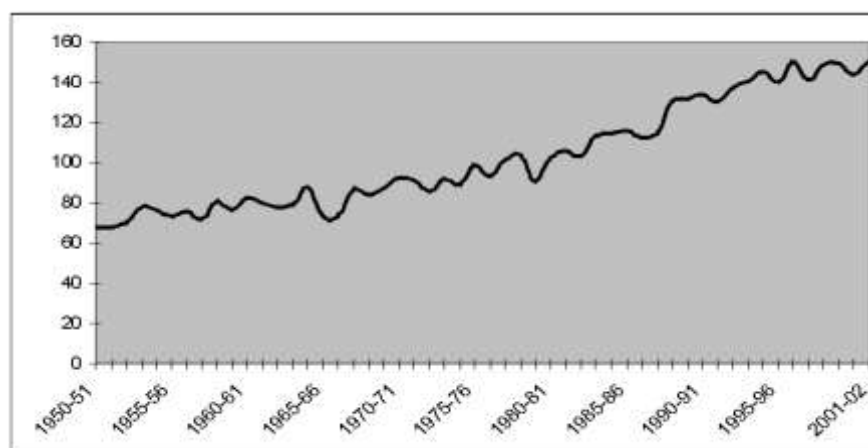


Table 3.1: Growth Performance Over Five Decades: 1949-50 to 2001-02

Crops	1949-50 to 1964-65			1967-68 to 2001-02		
	Area	Prod	Yield	Area	Prod	Yield
Rice	1.21	3.50	2.25	0.62	2.78	2.20
Wheat	2.69	3.98	1.27	1.38	4.34	2.92
Coarse Cereals	0.90	2.25	1.23	-1.44	0.54	1.90
Cereals	1.25	3.21	1.77	-0.02	2.77	2.32
Pulses	1.72	1.41	-0.18	0.30	0.81	0.74
Food Grains	1.35	2.82	1.36	0.01	2.51	2.12
Oilseeds	2.07	3.20	0.30	1.31	3.32	1.60
Non Food grains	2.44	3.74	0.89	1.36	3.20	1.68
All Crops	1.58	3.15	1.21	0.34	2.78	1.90

Source: *GoI (2003). Agricultural Statistics at a Glance, 2003.*

Figure 3.2: Growth in the Index Numbers of All Crop Productivity



If one looks at the performance of the agricultural sector over the five decades in terms of growth in crop productivity, it is quite clear that the sector has witnessed alternative cycles of growth and stagnation. The performance between 1980 and 1995 was quite ideal but after that a phase of stagnation seem to have emerged strongly. This is more visible in the non-foodgrain sector than in the foodgrains. This seems to be a matter of serious concern, especially when we are looking a growth strategy from globalisation and trade angles.

Figure 3.3: Growth in Productivity of Non-foodgrains: 1950-2002

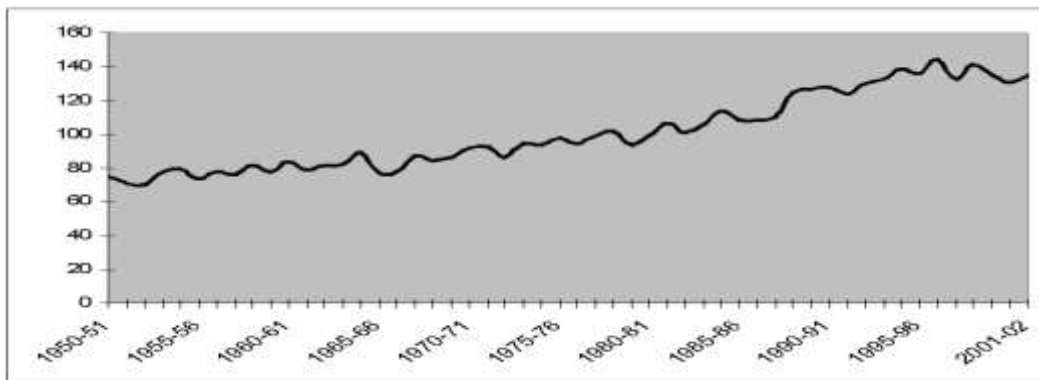
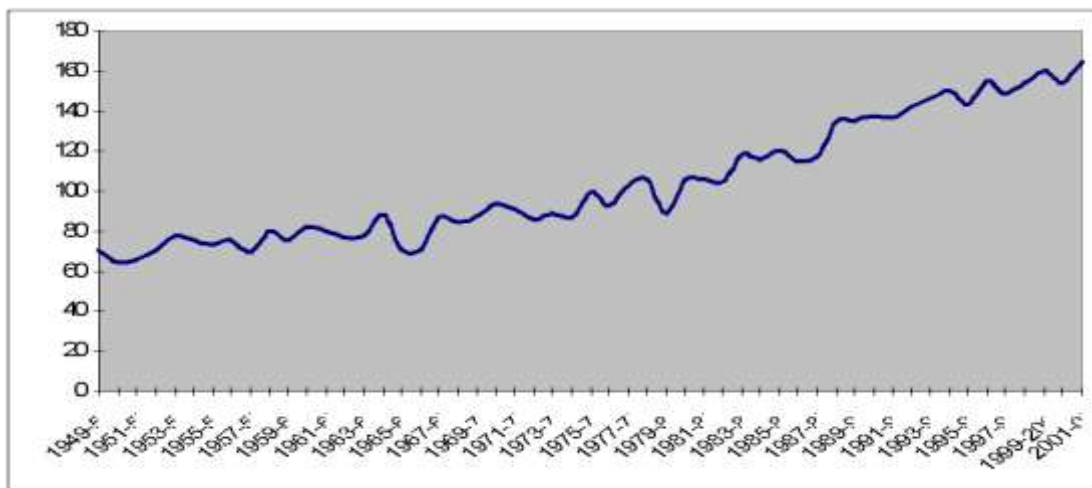


Figure 3.4: Growth in Productivity Index of Foodgrains.



4. TRADE SECTOR PERFORMANCE

Among the major changes that took place in the trade policy during nineties, five were of greater significance for agricultural sector. First, the EXIM policy of March 1990, introduced liberalisation of imports of certain commodities including capital goods and raw materials. Relaxation of licensing policy, foreign exchange availability and reduction in cash margins of imports were introduced to facilitate trade. Second, alongwith introduction of the Special Import License Scheme, relaxation in export control were launched as important steps to ease the existing controls on trade. All this indicated export encouragement on one side and import relaxation on the other. Further, the trade policy that was earlier characterised only by short-term changes, essentially protective to combat exigencies, was tuned to a long-term consistent policy with an outward look (Sen and Das, 1992; Sen and Mukhopadhyay, 1994). Third important set of modifications included the extension of the Exim Scrip facilities to a number of agricultural commodities, decanalisation, and significant shifting of commodities from restricted and prohibited lists to free list took place during 1994 (Sen, 2000). Thus the percentage of free trade items increased from 22per cent in 1995 -96 to 58per cent by 2000. Fourth, the EXIM policy of 2001, gave special importance to the agricultural sector through the creation of the Special Economic Zones and Agricultural Export Zones wherein the state governments were required to identify product specific Agricultural Export Zones and encourage trade. Quantitative Restrictions (QRs) were initially removed on 111 items. Finally, the changes announced by Government of India on 1st April 1999, 2000 and 2001 became historical in the process of liberalisation of agricultural trade. India's proposal of a six-year phase out (by 2004) of the Quantitative Restrictions was agreed by the European Union and Australia but not by United States. Later as per the agreed programme with WTO, the Government of India brought out a new OGL list containing 894 items and partially liberalised imports of 414 items bringing them under the Special Import License (SIL). Close on the heel of this step, QRs on 715 items were removed on 1st April 2001 of which nearly 170 items belonged to agriculture. Through this process the trade restrictions on most of the items originating from agricultural sector were put on OGL list. This was also recently followed by a long-term policy document on foreign trade. These policies in the process of Globalisation brought forth issues dealing with the impact of international markets on agricultural sector.

Globalisation of trade has opened up quite a few concerns for the agricultural sector. On the positive side it is argued that Globalisation has unwrapped the prospects for Indian agriculture to make its presence felt in the international market. India has demonstrated comparative advantage in quite a few commodities therefore, it was rightfully expected that India would emerge as a significant player in trade of these commodities. It is expected that Globalisation will help to boost up exports and meet the import bills apart from enhancing foreign exchange reserves. But at the same time that will increase import-intensity of exportable commodities. Opening of trade will also help to augment export competitiveness and improve the quality of production. In these circumstances a clear long-term export oriented production strategy can be chalked out. The demand for processed agricultural products will increase and that will have a substantial value addition to the farmers' produce.

Table 3.2: Growth Rates in Agricultural Exports

Region	Average annual growth rates (%)					
	1955-60	1960-70	1970-80	1980-90	1990-95	1955-95
World	3.5	5.2	16.6	3.6	6.9	6.7
Developed country	2.7	5.4	14.9	4.3	6.2	6.4
Developing countries	4.7	4.7	24.0	2.7	8.8	8.2
(a)Developing Asia	6.4	4.4	23.5	3.9	11.1	8.7
(b) India	1.5	1.7	13.4	3.5	12.5	5.5

Source : Bhalla (2004); Originally from: 1.UN, Yearbook of International Trade Statistics, various issues. 2. UNCTAD Handbook International Trade Statistics, various issues.

The export performance of the agricultural sector during the decade of nineties has been quite satisfactory (Table 3.2). There are some commodities that have recorded positive growth performance, and at the same time we have witnessed declining exports of a few important commodities (Table 3.3). Marine products, cashew, tea, basmati rice and spices have shown significant increase in exports. But at the same time oil meals, non-basmati rice, coffee, meat preparations, fresh vegetables and fruits have shown decline in exports. On the negative side, it is feared that sudden shortages and hoardings of certain important commodities may be deleterious impact on economy. This however, could be managed provided through long-term market intelligence strategies and development of appropriate institutions to meet such contingency.

Table 3.3: Export performance of Agricultural Products: 1995-2000
(Exports in US\$ millions)

	1995 - 96	1996 - 97	1997 - 98	1998 - 99	1999 - 00
Marine products	1012.31	1129.86	1208.72	1038.15	1181.55
Cashew	369.97	362.41	377.13	386.76	566.42
Tea	350.63	292.38	505.47	538.23	407.99
Basmati Rice	254.69	351.74	454.10	446.03	401.10
Spices	237.58	338.92	379.76	387.96	393.23
Castor oil	222.31	176.84	155.21	159.72	245.37
Guargum meal	68.02	100.40	146.82	172.93	189.15
Tobacco Unmanufactured	113.38	186.21	247.17	136.00	184.87
Processed fruits and juices	61.25	59.05	73.51	69.12	113.29
Pulses	39.47	37.10	97.22	53.00	93.56
Seasame and Dairy products	77.02	77.61	81.51	79.07	85.88
Tobacco manufactured	20.40	27.15	41.51	45.03	44.55
Poultry and Dairy products	17.59	34.90	31.80	23.04	22.76
Floriculture products	18.01	17.87	23.37	25.18	20.94
Shellac	18.78	14.75	15.65	15.52	18.85
Fruits/Vegetables seeds	12.32	11.86	14.41	15.32	15.55
Share of these commodities in total Agriculture exports per cent	47.29	46.88	58.11	59.52	72.40

Source : *Bhalla (2004)*.

5. IMPORT PERFORMANCE

Increase in imports of the agricultural commodities is one of the possibilities of globalisation. It makes available goods and services on competitive prices to the consumers, but at the same time unabated imports may cause severe disincentives to the domestic producers. On the negative side it is feared that sudden import surges may occur in the market. Increased intensity of exports may facilitate entry of new-private traders and the market margins as well as undue profiteering will increase. These can act as strong disincentives to the producers. Such a situation

will be common in the case of the commodities, which have higher income elasticity of demand. The process of increased trade will not only generate export-import price parity but also integrate the World market prices with domestic prices. Therefore, the prices in the domestic market of these commodities are likely to increase to keep pace with international prices. In other words the international prices may normatively guide domestic price movements. This in turn may lead to price instability and increased price fluctuations. The worst consequence of such situation is the likely disincentive it will create among the domestic producers.

Table 3.4: Agricultural products showing decline in Export growth during 1995-96 to 1999-2000

Items	Exports in US\$ million(1999-2000 prices)				
	1995 - 96	1996 - 97	1997 - 98	1998 - 99	1999 - 00
Oil Meals	703.18	985.44	925.44	461.43	370.43
Non-Basmati Rice	1113.00	542.20	454.03	1046.54	316.41
Coffee	449.98	402.20	456.93	410.63	315.17
Meat and preparations	187.73	199.86	217.77	217.77	180.44
Fresh vegetables	89.04	94.27	84.31	84.31	81.63
Fresh fruits	68.92	68.90	74.58	74.58	66.59
Misc.processed items	161.81	215.41	68.85	60.62	62.39
Groundnuts	68.62	91.86	152.56	33.19	42.34
Processed vegetables	42.74	32.93	31.39	39.75	38.17
Cotton raw including wastes	60.94	443.90	221.41	49.17	18.64
Spirit and beverages	13.37	56.75	19.83	16.80	16.21
Suger and Molasses	151.62	303.89	68.68	5.81	8.74
Other cereals	5.08	13.71	3.39	2.06	1.88
Wheat	109.81	196.91	0.11	0.32	0.00
Share of these commodities in total Agriculture exports per cent	52.71	53.12	41.89	40.48	27.6

Source : Bhalla (2004)

Table 3.5: India's Import of selected agricultural commodities 1990-91 to 2001-02*(In US Million \$)*

Commodities	1990-90	1991-92	1993-94	1994-95	1998-99	1999-00	2000-01	2001-02
Rice		4	18	3	0	6	3	2
Wheat		0	40	0	266	179	1.8	1.4
Cereals & prep	102	66	35	26	25	222	19.4	18.2
Pulses	268.2	121	186	199	322	82	109.2	662.6
Sugar	5.2	0	0	727	127	256	7	7
Fruit & nut*	41	41	69	11	155	136	176	158
Milk/Cream*	3	3	5	2	1	25	2	2
Cashew nuts	75	108	154	220	207	276	211	90
Crude Rubber	126	74	109	118	160	143	152	174
Wool raw	102	80	119	112	161	114	100	131
Cotton raw	0	2	6	161	22	289	259	430
Jute raw	11	2	11	20	14	32	18	20
Vegetable Oils	181.6	101	53	199	745	1857	1334	1356
Pulp & W paper	255	121	151	202	284	256	282	295
Agri Imports	915	598	805	1884	3292	3432	2388	3045
Agri Exports	3354	3203	4028	4226	6626	5773	6256	6154
Total Imports	24075	19411	23306	28654	41484	49671	50536	51413

Source: *Bhalla G S (2004)***6. OVERALL TRADE PERFORMANCE**

According to the average shares in total import bill Pulses, Soyabean oil, Silk, Rice, Natural rubber, Rapeseed mustard oil, Cotton lint, milk and Cream and Cereals are at the top of our import list. Among the imports of processed products Sugar, Resins, Milk and Cream, Cheese, Curds, Jute and Fibers and Vegetable oils top the share of total imports. The commodity composition of imports and exports along with the earlier growth rates indicate the likely trends in import demand across products. In order to assess the possible trends in import demand, we have grouped the commodities by cross classification based on the share of imports and exports. The groups are indicated below.

Table 3.6: Share in Import-Export

Share of Import/Export	Imports	Exports
Below 0.10 per cent	Groundnut oil, Cheese and Curd, Soyabean Cake, Sunflower Seeds, Cereals, NES, Coffee Green, Canned Meats, Onions	Lemons, Limes, Tomatoes, Pineapple, Copra, Citrus Fruits, Bananas, Cotton Seed, Soyabean, Milk & Cream, Canned Meat, Soyabean Oil, Potatoes
0.10 to 0.50 per cent	Coconut Oil, Pepper (Black, White, Long), Milk and Cream, Evaporated and Condensed Tobacco unmanufactured, Tea, Linseed Oil, Grapes, Copra, Oilseed Cake.	Grapes, Sugar, Cereals, Wheat, Silk, Linseed Cake and Meal, Jute and Fibres, Cotton seed Cake, Apples, Eggs in Shells, Sugar Raw, Centrifugal, Oranges, Tangerines.
0.50 to 2.00 per cent	Wheat, Jute and Blast Fibres, Wheat and Meslin, Sugar Sugar total raw	Soyabean Cake and Meal, Sesame Seed, Coffee Green, Pulses, Sunflower Seed Cake
Above 2.00 per cent	Pulses, Soyabean Oil, Silk, Rice, Natural Rubber and Gum, Rapeseed Mustard Oil, Cotton lint, Milk and Cream dry, Cereals	Tea, Rice, Cotton lint, Tobacco, Unmanufactured, Castor Oil, Pepper, Rapeseed and Cake, Onions, Cereals, Oilseed Cake and Meal, Groundnuts.

These four groups indicate different categories under import and export scenario. Commodities having higher share in the import bill indicate constraints on domestic availability and hence are likely to continue in future provided these do not feature under higher export share group. From table 3.6 we can get four groups based on the past import and export performance and their characteristics.

Table 3.7: Import-Export Category, Commodity Characteristics and prices

Share of Exports or Imports	Group Characteristic
i. High exports – Low Imports	<ul style="list-style-type: none"> - Domestic production satisfies domestic demand - Exportable surplus exists - External demand pull - World price higher than domestic price
ii. Low Exports – High Imports	<ul style="list-style-type: none"> - High domestic demand – Low export demand - Domestic production not sufficient to meet demand - Negligible exportable surplus - Domestic price higher than world price
iii. High Exports – High Imports	<ul style="list-style-type: none"> - High domestic demand – High export demand - Exportable surplus exists - Import intensive exports - Fluctuating world and domestic prices
iv. Low Exports – Low Imports	<ul style="list-style-type: none"> - Low domestic demand – Low export demand - Exportable surplus does not exist - Inconsistency in relative price advantages between world prices and domestic prices

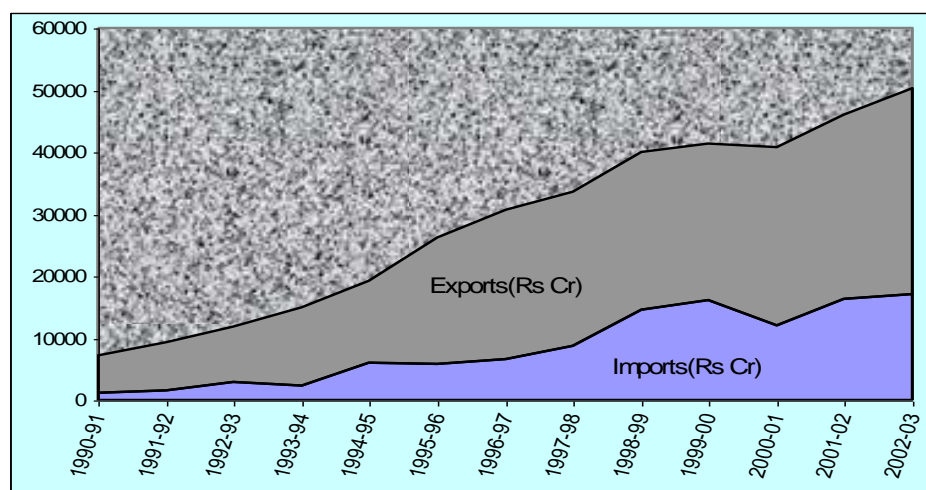
If we categorise the commodities in the above groups, it becomes possible to indicate the commodities which have high potential in changing the import shares. The last group with low share of exports and low share of imports indicates possibilities of increased imports. In this group we have Grapes, Copra, Oilseed cake, Groundnut Oil and milk and Condensed cream. Presently we have low shares of imports of these commodities probably due to low domestic demand or the domestic production just adequately meeting the domestic demand. It is expected that the demand for these products may increase due to increase in incomes and as the production does not yield any exportable surplus the import demand will increase. The second group of commodities, where the import demand is likely to increase, comprise of the commodities with higher share of exports coupled with higher share of imports. Here even though the domestic production meets the domestic demand

and generates exportable surplus there are four reasons for increasing import demand. (1) There is a possibility of qualitative differences in the commodity that is exported as well as imported (forming substantial share in both). (2) The time lag between and emergence of domestic demand for consumption and production may also create such a situation. In such cases imports are resorted to satisfy the domestic demand initially and as the domestic production generates exportable surplus, the commodity is exported. (3) High share in exports and high share in imports occur when there are high fluctuations in the relative prices (price ratios between world and domestic prices). Imports are resorted to when the world prices are below the domestic prices and exports in the opposite situation. (4) The import demand increases if the import contents in the factors of production of an exported commodity increases. In such case the situation of high import and high exports can prevail.

7. TRADE BALANCE

Trade balance reflects a one-stroke performance of the trade scenario. We tried here to look into the performance of the sector in terms of trade balance. On the count of trade performance the agricultural sector did not under perform during eighties. The macro-economic crisis that emerged at the beginning of nineties was largely the creation of the non-agricultural sector. The trade performance of agricultural sector picked up in 1988 significantly. What is striking in the decade of nineties is the increased trade balance in agricultural sector in the later period and that has a positive sign. If this is read along with the overall trade balance of the economy, the role of agricultural sector becomes clear. Figure 3.5 makes shows the satisfactory position of the

Figure 3.5: Trade performance of agricultural sector during Nineties.



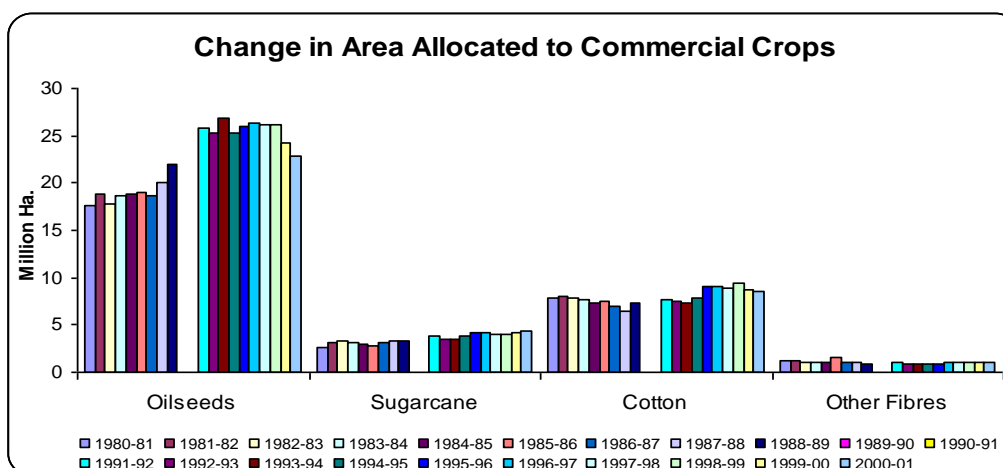
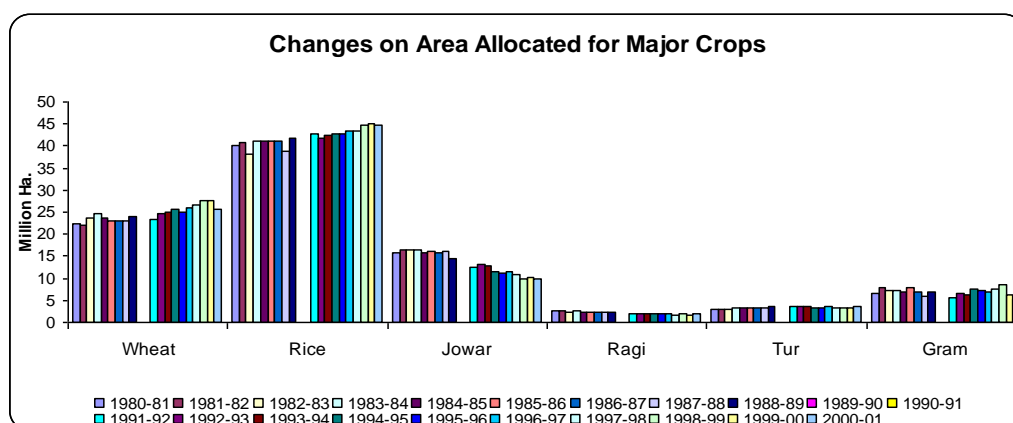
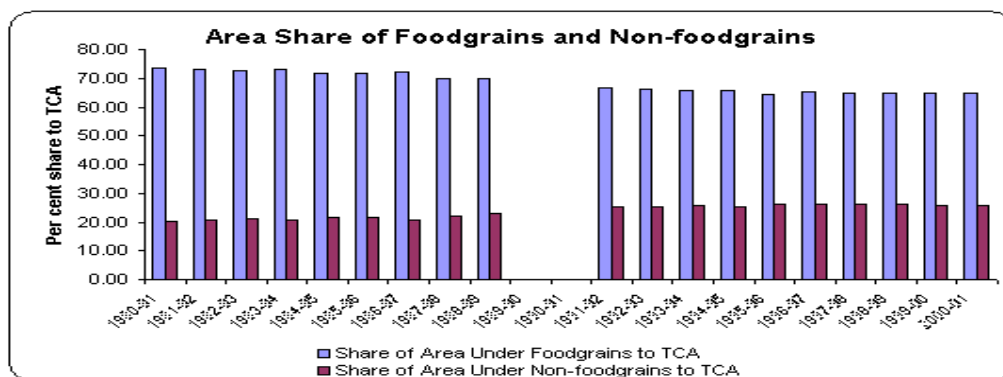
8. IMPACT CONCERNS

The process of globalisation has spurred strong debates about its feasible impacts on the agricultural sector. Several views are expressed beginning from a possibility of significant destruction to our philosophy of rural development to the emergence of market as the sole correcting mechanism. It is argued that the flow of capital to the rural sector will reduce, preference will be more towards the market oriented crops impinging the food security, poor farmers may face hard situation to sustain in farming, corporatisation of agriculture may take place. According to many, agriculture sector is the last sector to witness any changes induced by globalization. This is partially due to delay in making appropriate policy changes and due to the forward and backward linkages of agriculture sector with other sectors. There is a time lag in 'trickle down'. On the other hand the proponents of the globalisation vouch that most of the maladies will be rectified through market process and that is under the assumptions that markets have the capability of correcting the imperfections in the Indian context. Reality however, lies somewhere in between.

9. CHANGES IN CROPPING PATTERN

Diversification of agriculture in order to meet the changing demand is adopted as one of the important strategies by several countries to cope up with the volatile prices through deliberate policy changes and encouragement of private participation. Diversification is in favour of high value export-oriented crops under contract or buyback system. According to a recent study (Joshi et al, 2004), agricultural diversification increased in all south Asian countries. Fruits and vegetables have shown good performance during 80s and 90s. The study revealed the shift from crops to livestock sub-sector during 80s and 90s in all regions of India except Eastern and North-eastern states. Within the crop sub-sector, non-food grain crops have gradually replaced food grain crops. The shift is more towards non-food grain crops like oilseeds, fruits, vegetables, spices and sugarcane. Regional pattern of diversification showed that southern region is highly diversified followed by western region (Gulati and Kelly, 1996). It was observed that crop diversification results in increased employment opportunities. For example, it was estimated that one hectare shift in area from wheat to potato would generate 145 additional man-days. Similarly, one hectare from coarse cereals to onions would generate 70 man-days of employment. According to the authors, diversification has not affected the food

security adversely because there is a change in the consumption basket and the shift is more towards non-cereal food in both rural and urban areas. Crop diversification has a positive impact on non-traditional items.



10. EMPLOYMENT AND POVERTY

Employment in agricultural sector registered a negative trend. Employment on usual status basis has registered a growth rate of 1.54 percent during 83-93 but showed a meagre growth rate of 0.18 percent during 93-94 and 99-00. Same is the case with current daily status (2.23 per cent and 0.21 per cent) respectively. Real agricultural wages also increased at a lower growth rate in 1990s (2.5per cent per annum) compared to 80s(5per cent). Wages of female casual labour in agriculture increased by 3.09 percent in 80s and 2.93 percent in 90s. There are differences across states in the growth of real wages. While Kerala and Tamil Nadu registered highest growth (7.9per cent and 6.7per cent) between 1000 and 2000, Assam and Rajasthan registered negative growth rate of -0.7 and -0.8 percent respectively (Table 3. 9).

Table 3. 8: Growth of Employment in Agriculture (Usual Status) in India

Period		Growth of Employment in Agriculture
1983-1993-94	Rural	1.38
	Urban	1.54
1993-94 to 1999-00	Rural	0.18
	Urban	-3.4

Source: *Brajesh Jha (2004). "Economic Policies for Augmenting Rural Employment in India", Institute of Economic Growth, Delhi*

Table 3. 9: Growth rates of Real Agricultural wages Across The States between1990 and 2000.

State	Growth rate(%)
Andhra Pradesh	1.3
Assam	-0.7
Bihar	0.3
Gujarat	5.1
Haryana	2.7
Karnataka	3.2
Kerala	7.9
Madhya Pradesh	1.8
Maharastra	1.6
Orissa	0.7
Punjab	-0.8
Rajasthan	2.8
Tamil Nadu	6.7
Uttar Pradesh	2.5
West Bengal	1.6
All India	2.5

Source: Dreze and Sen (2002)

It is clearly borne out by the data that employment has not been increasing despite growth in agricultural sector. That provokes investigation into the search for a connection between the process of globalisation and typologies of employment. The experience of the last decade brings out that the growth in the agricultural sector has been generating more forces for casualisation of employment and the trends in casualisation are quite bold across the country. These trends are sharper in the agriculturally lagging regions. That leads us to the question of the quality of growth in the agricultural sector in the wake of globalisation in addition to the location of growth across regions. At the same time one cannot deny the influence of the quality of growth in the non-agricultural sector also. The trends in capital formation suggest that the employment scenario is a direct derivative of capital formation in the sector. In that context, a pragmatic policy is needed which is pointedly focused on efforts to correct the trends in capital formation and especially inducing the private capital formation at a higher rate of growth. Directing the growth inducing factors towards important components in agricultural sector is an undisputable pre-requisite of such a policy.

11. EMERGING SCENARIO

The impact of globalisation on agricultural economy involves both governance as well as analytical issues. The first set of issues address to the basic analytical concern namely :Can one take the decade of nineties as the period representing globalisation in the agricultural sector? Have all the significant changes in the governance of market took place during 1990-91 to facilitate globalisation? And such other queries derive no satisfactory answers. This is pertinent on the face of the fact that a large number of steps in governance were taken at distinct points of time during the decade of nineties and all of it did not happen at any one point of time. The globalisation of trade in agricultural sector was significant probably only in the post 1995. Moreover, one has to assume some gestation period for settling down the impact parameters. Second question points towards the data on trade of agricultural commodities at sub-national level. This is a major issue in governance while analysing the impact of globalisation. We have not yet developed a foolproof method to record commodity wise data on trade originating from individual states. Commodities move towards ports of destination mostly by road or rail. These are unrecorded in the statistical system by their place of origin and purpose of

movement. Therefore, the reliability of data at sub-national level is quite questionable. Third issue relates to the question about testing the hypothesis related to changes due to globalisation by adopting the usual 'before and after' approach. A good number of changes take place independent of the trade related factors. Lastly, one must be wary about the level of aggregation across commodities and regions while computing various trade related parameters like trade sensitivity, market access, aggregate measures of support etc (Datta and Deodhar, 2000). It is necessary to discuss how one goes about these in terms of methodology.

The second set of issues relate to the study of growth behaviour across crops and regions in the face of the changes in the trade policies. It is essential to identify the crops and regions that have lagged or performed well in this period, and the reasons for such differential growth behaviour. The location of the trade sensitive commodities in the Indian context will help to monitor the changes that occur in their trade pattern (Following WTO, 2003). Discussions may address to this concern. There are a few methodological problems in the computation of commodity- region specific trade sensitivity indices. It is necessary to map these and discuss about the variables that will enter into such computations. Discussion on this will be quite useful. Lastly, where and how do we set the trigger for activating the ameliorating measures, in the case of an alarming situation caused by import surges? Such situation can be confronted in these trade sensitive commodities.

The third set of issues deals with the impact of globalisation on the domestic prices. The methodological questions about the measurement of market and price integration between the world and domestic market needs to be discussed carefully (Nayyar and Sen, 1994 and Deshpande and Naika, 2004). It is also necessary to decide the appropriate price data from among the available price series (FHP, WSP, MSP, Averages of selected markets etc) to be used for arriving at the measures of integration. This is more pertinent in view of the lack of domestic market integration. The character of the world market, the mechanism of price formation and the likely changes in price policy are a few important concerns for discussion (Chand, 2001). Even when we have problems about the intra-regional, inter-market integration, the global integration of the domestic markets needs to be understood carefully. In the face of this, how one should look at global integration, is an intriguing question. Similarly, the choice of the border prices across trading partners *vis a vis* that of the countries is also a ticklish issue. The concern about the food security in the context of globalisation has been voiced vociferously (Sharma, 1994,2000, Shiva, 1999). While

one cannot sideline the importance of food security in the context of India and the probable vulnerability, it will be imprudent to keep away from the forces of change in the present context. It is quite possible that any attempt to shy away from 'pro-active trade led growth' policy may land us in to another worst situation.

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