

Indian Agriculture: Growth Performance and Trade Patterns

Vilas Khandare, Dilip Misal and Digambar Kharat

Abstract—Agriculture has been a way of life and continues to be the single most important livelihood of the masses. India is the second largest economy in Asia after China, as measured in terms of its GDP. The main object of the study is to examine the growth performance and trade patterns of Indian agriculture during 1990-91 to 2010-11. Agriculture including allied activities, accounted for 14.5 percent of GDP in 2010-11. On an average the percentage share of agricultural imports and exports to total national imports and exports was 4.76 percent and 14.79 percent respectively. The percentage share of principal agricultural products to total agricultural imports and exports was 88.19 percent and 66.09 percent respectively in 2010-11. The imports of agricultural products into the country mainly comprises of vegetable oil, pulses and wood and wood products, which accounts 77.71 percent of the total agricultural imports in terms of value in 2010-11.

Keywords— Agriculture trade, GDP, exports, imports.

I. INTRODUCTION

THE recent world food crisis alerted policy makers to the fact that global agricultural productivity growth has been slowing down. It also highlighted the fact that national agricultural trade policies and the current world trade rules that influence the design of these policies may not be adequate to prevent, or address such crises in the future. At the same time, changes in climatic patterns may be precursors of more food crises in the coming decades, with potentially significant negative impacts on many poor across the world. This necessitates a reconsideration of the factors that drive long term agricultural trade, and the role of agricultural trade policies and trade rules in ensuring that these trends are supportive of food security and economic development in poorer countries. India is the second largest economy in Asia after China, as measured in terms of its Gross Domestic Product. The Indian economy has seen high growth rates of more than 8percent since 2003. In 2005 and 2006 GDP grew at a rate of over 9percent. Globally India's growth is surpassed only by that of China. This is expected to continue with growth just under 7percent by 2015. High growth rates have significantly reduced poverty in India. However it's GDP per

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head is still very low (estimated at US\$ 820 in 2006), so it remains classified by the World Bank as a low income country.

II. PERFORMANCE OF INDIAN AGRICULTURE

Agriculture including allied activities, accounted for 14.5 per cent of gross domestic Product at 2004-05 prices, in 2010-11 as compared to 14.7 per cent in 2009-10. Notwithstanding the declining trend in agriculture's share in the GDP, it is critical from the income distribution perspective as it accounted for about 58 per cent employment in the country according to Census 2001. Hence growth in agriculture and allied sectors remains a 'necessary condition' for inclusive growth. In terms of composition, out of the total share of 14.5 per cent that agriculture and allied sectors had in GDP in 2010-11, agriculture alone accounted for 12.3 per cent, followed by forestry and logging at 1.4 per cent and fishing at 0.7 per cent (Table I).

TABLE I
AGRICULTURE SECTOR: KEY INDICATORS

Item	2009-10	2010-11	2011-12
GDP – share and growth (at 2004-05 prices)			
Growth in GDP (Agri. and allied)	1.0	7.0	2.5
Share in GDP (Agri. and allied)	14.7	14.5	13.9
Agriculture	12.4	12.3	
Forestry and logging	1.5	1.4	
Fishing	0.8	0.7	
Share in total G. C. F. in the Country (per cent at 2004-05 prices)			
G. C. F.	7.1	7.2	
Agriculture	6.6	6.6	
Forestry and logging	0.1	0.1	
Fishing	0.5	0.5	
Employment in the agriculture sector as share			
of total workers as per census 2001	58.2		

Source: Central Statistics Office (CSO) and Department of Agriculture and Cooperation.

III. GROWTH RATES OF AREA, PRODUCTION, AND YIELD OF MAJOR AGRICULTURAL CROPS IN INDIA

An analysis of trends in indices of area, production, and yield indices of different crops during the period 1980-81 to 2011-12 present in table II. It is observed that during the 1980s, growth in area under rice was marginal at 0.41 per cent; however, growth in production and yield was above 3 per cent. In wheat also, during 1980s growth in area was marginal at 0.46 per cent but growth in production and yield

was above 3 per cent. The growth in production and yield of coarse and cereals which was 0.40 per cent and 1.62 per cent respectively in the 1980s has improved significantly to 3.01 per cent and 4.39 per cent respectively in the 2000-01 to 2011-12 periods. During the 1980s there was negative growth in area of total pulses and growth in production and yield was 1.52 per cent and 1.61 per cent respectively. The compound growth rates of indices of area, production, and yield of sugarcane during 2000-01 to 2011-12 have declined compared to the 1980s. There has been improvement in annual growth in the indices of yield and area under oilseeds during 2000-01 to 2011-12 as compared to the 1980s.

IV. INDIAN AGRICULTURAL TRADE

India agricultural is the most important sector absorbing two-third of the labour force and contributing one fourth of the

total gross domestic products. Table III presents the India's imports and exports of agricultural commodities during 1990-91 to 2010-11. The performance of this sector has been spectacular in the post-independence era. The country which faced a serious food shortage has now started generating exportable surpluses. In 2010-11, the value of exports of agricultural products was Rs. 120185.48 crore as against Rs. 28657.37 crore in 2000-01 and Rs. 6012.76 crore in 1990-91. Whereas, the value of imports of agricultural products in 1990-91 was Rs. 1205.86 crore which goes up to Rs. 12086.23 crore in 2000-01 and it was 56196.20 crore in 2010-11.

TABLE II
COMPOUND GROWTH RATES OF AREA, PRODUCTION, AND YIELD

1980-81 to 1989-90				1990-91 to 1999-2000			2000-01 to 2011-12		
Area, Production, Yield				Area, Production, Yield			Area, Production Yield		
Rice	0.41	3.62	3.19	0.68	2.02	1.34	0.04	1.72	1.68
Wheat	0.46	3.57	3.10	1.72	3.57	1.83	1.22	2.37	1.14
Coarse Cereals	-1.34	0.40	1.62	-2.12	-0.02	1.82	-0.75	3.01	4.39
Total Pulses	-0.09	1.52	1.61	-0.60	0.59	0.93	1.70	3.47	1.91
Sugarcane	1.44	2.70	1.24	-0.07	2.73	1.05	1.37	1.96	0.58
Total Oilseeds	1.51	5.20	2.43	-0.86	1.63	1.15	2.08	4.45	3.39
Total Food grains	-0.23	2.85	2.74	-0.07	2.02	1.52	0.43	2.32	2.91

Source: Department of Agriculture and Cooperation.

In the first decade of globalization the exports of agricultural products shows 4.76 times growth and imports shows 10.02 times growth during 1990-91 to 2000-01. In second decade of globalization the India's export of agricultural products increased by 4.09 times and imports increased by 4.65 times during 2000-01 to 2010-11. During 1990-91 the percentage share of agricultural imports to total national imports of India was 2.79 percent it was reached up to 8.17 percent in 1998-99 and it has stood at 3.5 percent in 2010-11. In 1990-91 the

percentage share of agricultural exports to total exports of India was 18.49 percent it has been reached up to the highest of 20.33 percent in 1996-97 and in 2010-11 it stood at 10.47 percent. On an average the percentage share of agricultural imports to total national imports was 4.75 percent during 1990-91 to 2010-11. Where as the percentage share of agricultural imports to total national imports was an average 14.80 percent during globalization period.

TABLE III
INDIA'S IMPORTS AND EXPORTS OF AGRICULTURAL COMMODITIES

(Value in Rupees Crore)

Year	Agri. Imports	National Imports	% to National Imports	Agri. Exports	National Exports	% to National Exports
1990-91	1205.86	43170.82	2.79	6012.76	32527.28	18.49
2000-01	12086.23	228306.64	5.29	28657.37	201356.45	14.23
2001-02	16256.61	245199.72	6.63	29728.61	209017.97	14.22
2009-10	59528.34	1363735.55	4.37	89341.33	845533.64	10.57
2010-11	56196.20	1605314.63	3.50	120185.48	1148169.56	10.47

Source: D. G. C. I. & S., Ministry of Commerce, Kolkata.

V. INDIA'S EXPORTS OF PRINCIPAL AGRICULTURAL PRODUCTS

The share of India's agricultural exports in total exports trade (by value) has so far varied between 10.22 percent to 20.33 percent during 1990-91 to 2010-2011, with greater importance being attached to export of processed foods, which bring substantial value-addition in exports. During 2001-02, agricultural products exported from the country stood at more than Rs. 29728 crore in values of which the marine products alone contributed impressive 19.84 percent.

During 2006-07 the highest percentage share of agricultural products to total agricultural products marine products contributed 12.82 percent followed by oil meals 8.82 percent and rice other than basmati 6.80 percent. During 2010-11, marine product contributed as high as 9.61 percent share in total agricultural exports followed by oil meals 9.02 percent, rice basmati 8.80 percent and sugar 8.60 percent. It is observed that the percentage share of principal agricultural products in total agricultural exports was 79.43 percent in 2001-02, 60.80 percent in 2006-07 and 66.09 percent in 2010-11 (Table IV).

TABLE IV
INDIA'S EXPORTS OF AGRICULTURAL PRODUCTS
(Value in Rs. crore)

Commodity	2001-2002		2006-07		2010-2011 (P)	
	Value	% to Agric. Exports	Value	% to Agric. Exports	Value	% to Agric. Exports
Rice (Bas.)	1842.77	6.20	2792.81	4.47	10581.51	8.80
Rice(other)	1331.37	4.48	4243.10	6.82	220.25	0.18
Wheat	1330.21	4.47	35.35	0.06	0.74	0.00
Tea	1719.22	5.78	1969.51	3.16	3174.50	2.64
Coffee	1094.92	3.68	1969.00	3.15	2912.07	2.42
Spices	1496.97	5.04	3157.90	5.06	7870.14	6.55
Cashew	1788.68	6.02	2291.18	3.67	2598.15	2.16
Oil Meals	2262.93	7.61	5504.32	8.82	10845.91	9.02
Guargum	403.09	1.36	1125.79	1.80	2805.75	2.33
Sugar	1728.29	5.81	3127.47	5.01	10339.01	8.60
Meat	1193.28	4.01	3314.03	5.31	8775.90	7.30
Marine	5898.34	19.84	8001.04	12.82	11547.97	9.61
Wood	1524.37	5.13	415.22	0.67	7763.30	6.46
Total	29728.6	100.00	62411.4	100.00	120185.48	100.00

Source: As per Table III.

VI. INDIA'S IMPORTS OF PRINCIPAL AGRICULTURAL PRODUCTS

India's agricultural imports on the other hand constitute only a small portion of countries total imports and is barely about 5.70 percent on an average of the total imports into the

country during the period from 1990-91 to 2010-11. The share of India's agricultural imports in total import trade (by value) has varied between 2.71 percent to 8.17 percent during 1990-91 to 2010-11.

TABLE V
INDIA'S IMPORTS OF AGRICULTURAL PRODUCTS
(Value in Rs. crore)

Commodity	2001-2002		2006-07		2010-11 (P)	
	Value	% to Agric. Exports	Value	% to Agric. Exports	Value	% to Agric. Exports
Pluses	3160.16	19.44	3891.91	13.13	6979.95	12.42
Wheat	0.84	0.01	5850.49	19.74	236.37	0.42
Fruits (C&N)	756.76	4.66	1913.11	6.45	3684.26	6.56
Spices	503.87	3.10	738.9	2.49	1358.78	2.42
Vegetable	6464.97	39.77	9539.9	32.19	29442.11	52.39
Cotton	2053.62	12.63	663.07	2.24	604.38	1.08
Wood	2283.87	14.05	4684.35	15.81	7251.27	12.90
Total	16256.61	100.00	29637.86	100.00	56196.20	100.00

Source: As per Table 3.

During 2010-11 agricultural products imported by the country stood at Rs. 56196.20 crore in value of which vegetable oils contributed impressive 52.39 percent. During 2010-11 the percentage share of wood and wood product in total agricultural imports was 12.90 percent followed by pulses 12.42 percent. The imports of agricultural products into the country mainly comprises of vegetable oil, pluses and wood and wood products, which accounts 77.71 percent of the total agricultural imports in terms of value in 2010-11 (Table V).

VII. CONCLUSION

Agriculture has been a way of life and continues to be the single most important livelihood of the masses. India is the second largest economy in Asia after China, as measured in terms of its GDP. High growth rates have significantly reduced poverty in India. However it's GDP per head is still

very low (estimated at US\$ 820 in 2006), so it remains classified by the World Bank as a low income country. The World Development Report 2008 states that over one third of the population of India was living below the poverty line in 2004-2005, managing on less than \$1 a day. Agriculture including allied activities, accounted for 14.5 per cent of gross domestic Product at 2004-05 prices, in 2010-11 as compared to 14.7 per cent in 2009-10. In terms of composition, out of the total share of 14.5 per cent that agriculture and allied sectors had in GDP in 2010-11, agriculture alone accounted for 12.3 per cent. In 2010-11, the value of exports of agricultural products was Rs. 120185.48 crore as against Rs. 28657.37 crore in 2000-01 and Rs. 6012.76 crore in 1990-91. In the first decade of globalization the exports of agricultural products shows 4.76 times growth and imports shows 10.02 times growth during 1990-91 to 2000-01. In second decade of globalization the India's export of agricultural products

increased by 4.09 times and imports increased by 4.65 times during 2000-01 to 2010-11. On an average the percentage share of agricultural imports to total national imports was 4.75 percent during 1990-91 to 2010-11. Where as the percentage share of agricultural imports to total national imports was an average 14.80 percent during globalization period. The share of India's agricultural exports in total exports trade (by value) has so far varied between 10.22 percent to 20.33 percent during 1990-91 to 2010-2011. It is observed that the percentage share of principal agricultural products in total agricultural exports was 79.43 percent in 2001-02, 60.80 percent in 2006-07 and 66.09 percent in 2010-11. The share of India's agricultural imports in total import trade (by value) has varied between 2.71 percent to 8.17 percent during 1990-91 to 2010-11.

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