

THE IMPACT OF WTO ON INDIAN AGRICULTURE

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Abstract:

India is a powerhouse of global agriculture. It is the world's largest producer of milk, pulses, and spices, and has the world's largest cattle herd (buffaloes) with the largest area under wheat, rice and cotton. It is the second largest producer of rice, wheat, cotton, sugarcane, farmed fish, sheep & goat meat, fruit, vegetables and tea. The country has some 195 million hectare under cultivation of which some 63 percent are rain fed (roughly 125 million hectare) while 37 percent are irrigated (70 million hectare). In addition, forests cover some 65 million hectare of India's land. Indian agriculture has undergone significant changes and transformation during 1995 to 2015. Land reforms and development of irrigation and other infrastructures played a major role in output growth. The problem identified in the existing agreement on patents, tariff, subsidies, trade and agriculture indicate that the developing countries are waking up to the need to ensure that India has to take the lead in ensuring that the WTO regime is used to maximum advantage to protect the interests of developing countries including India. World Trade Organization (WTO) provides equality policies and resolution among the membership countries and not divides the developed countries' products, and developing countries' products in International market level. Liberalisation of Indian agriculture under the World Trade Organization (WTO) and Free Trade Agreements (FTAs) has always been a sensitive issue due to the crucial role played by the sector in GDP growth and economic development. In particular, it examines issues of critical importance for India, such as market price support, import surges, food security and special and differential treatment (S&DT) at the WTO, while also providing insights from negotiations. The World Trade Organization (WTO) played a key role in assessing trade performance of Indian agriculture over the years. It has supported the instinctive development of agricultural trade and the export and import of Indian agricultural commodities. There are so many problems in Indian agricultural field which may be solved after adopting the latest technologies as well as the national and international policies.

Key Words: Agriculture, GDP, Export, Import.

1. Introduction

After independence the agricultural productivity of India was very low due to **dependency on monsoon** as well as traditional tools and equipment's. More than 80 percent of the population of rural areas was dependent on agriculture for their livelihood [1]. Contemporary economists divide the history of India's economic growth into two phases; the first 45 years after Independence and next three decades of the free market economy. The years preceding the economic liberalization were chiefly marked by instances wherein economic development policies were made in association with World Trade Organization (WTO) [2]. The manpower for agricultural engineering research in the ICAR system was qualitatively and quantitatively inadequate, for facing successfully the numerous problems of developing equipment and technologies for mechanization of agriculture for maximizing efficiency of costly inputs like plant protection chemicals, seeds, fertilizers, irrigation water, and energy sources to increase higher production and productivity, reduction of drudgery, waste utilization, and generating income and employment in rural areas [2]. There is lot of concern about the impact of trade and other reforms followed since 1991 on growth rate of agricultural output, export import, food security, nutrition, regional equity, price stability, farm income, welfare of consumers and producers as affected by changes in prices brought about by economic reforms [3].

2. WTO and India

The World Trade Organization is an international organization that supervises the rules between member countries. Memberships of WTO impose certain obligations on all the countries but it also provides protection against unjust practices, particularly from the richer countries [4]. Being a member of WTO, India would secure many concessions, as China has recently made to the USA and to Europe so as to gain their approval for its membership. In the absence of international rules of the trade, the developing countries like India would be at the mercy of the rich developed countries. In the wake of globalization, agricultural products and commodities will have to play a more major role in international trade [5]. Despite large volumes India is not as yet a major player in the world commodity market except in tea, coffee, cashew, soya meal, spices and rice. It is imperative to improve upon this situation by enhancing India's trade competitiveness and achieving the status of a net exporter for commodities in which

India has comparative advantage [6]. India's basic objectives in the ongoing negotiation on WTO Agreement are [7]:

- To create opportunities for expansion of agricultural exports through meaningful market access in developed countries.
- Elimination of export subsidies to achieve a fair and market oriented trading system.
- To have meaningful special and differential treatment for developing countries to address their legitimate development including food and livelihood security and rural development.

3. Indian Agriculture Scenario

India is currently the world's second largest producer of several [dry fruits](#), agriculture-based [textile](#) raw materials, [roots](#) and [tuber](#) crops, [pulses](#), farmed fish, eggs, coconut, sugarcane and numerous [vegetables](#). India is ranked under the world's five largest producers of over 80% of agricultural produce items, including many [cash crops](#) such as [coffee](#) and [cotton](#), in 2010. India is one of the world's five largest producers of livestock and [poultry meat](#), with one of the fastest growth rates, as of 2011. In fiscal year ending June 2011, with a normal monsoon season, Indian agriculture accomplished an all-time record production of 85.9 million tonnes of wheat, a 6.4 percent increase from a year earlier [8]. Rice output in India hit a new record at 95.3 million tonnes, a 7 percent increase from the year earlier. Lentils and many other food staples production also increased year over year. Indian farmers, thus, produced about 71 kilograms of wheat and 80 kilograms of rice for every member of Indian population in 2011. The per capita supply of rice every year in India is now higher than the per capita consumption of rice every year in Japan. India exported US\$ 39 billion worth of agricultural products in 2013, making it the seventh largest agricultural exporter worldwide, and the sixth largest net exporter. This represents explosive growth, as in 2004 net exports were about US\$ 5 billion. India is the fastest growing exporter of agricultural products over a 10-year period, its US\$ 39 billion of net export is more than double the combined exports of the European Union (EU-28). It has become one of the world's largest suppliers of rice, cotton, sugar and wheat. India exported around 2 million metric tonnes of wheat and 2.1 million metric tonnes of rice in 2011 to [Africa](#), [Nepal](#), [Bangladesh](#) and other regions around the world. As per the 2015 [FAO](#) world

agriculture statistics India is the world's largest producer of many fresh [fruits](#) like banana, mango, guava, papaya, [lemon](#) and vegetables like chickpea, okra and [milk](#), major [spices](#) like chili pepper, ginger, fibrous crops such as [jute](#), staples such as [millets](#) and [castor oil](#) seed. India is the second largest producer of [wheat](#) and [rice](#), the world's major [food staples](#) [9].

4. WTO and Agriculture Policy

The agreement on Agriculture (AoA) is a WTO treaty that was negotiated during the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) and formally ratified in 1994 at Marrakesh, Morocco [10]. The AoA came into effect in 1995. The provisions of the WTO Agreement on Agriculture relate mainly to three broad categories of agriculture and trade policy, which are discussed below.

A. Market Access: This includes:

- Tariffication – implies all non-tariff barriers to be abolished and converted to tariffs. Non-tariff barriers include variable levies, minimum import prices, quotas, state trading measures, discretionary licensing, etc.
- Tariff reduction – members were obligated to reduce tariffs by 24 percent in 10 years.
- Access opportunities – Minimum access equal to 3 percent of domestic consumption in 1986-88 will have to be established for the year 1995 rising to 5 percent at the end of the implementation period. This head includes improving access to markets by removing trade barriers.

B. Domestic Support: This concerns the policy support and subsidies given by countries to enhance domestic production. WTO has classified agricultural subsidies and policies into different boxes, which are explained in a section below in detail.

C. Export Subsidies: Here, there are provisions related to member countries' commitments to reduce export subsidies.

- Developed countries are mandated to reduce their export subsidy volume by 21 percent and expenditure by 36 percent in 6 years, in equal installment (from 1986-1990).

- Developing countries need to reduce export subsidy volume by 14 percent and expenditure by 24 percent over ten years in equal installments.

5. Agriculture from 1995 to 2015

In addition to growth in total output, agriculture in India has shown an increase in average agricultural output per hectare in last 60 years [11]. The table below presents average farm productivity of India over farming years for some crops. Improving road and power generation infrastructure, knowledge gains and reforms has allowed India to increase farm productivity from 30 percent to 200 percent.

Table-1: Agriculture production of India, from 1995 to 2015 (Average production, Kg/Ha)

Year Crops	1970–1971	1990–1991	2010–2011	2014- 2015
Rice	1124	1741	2242	4058.6
Wheat	1308	2282	2939	3534.2
Pulses	525	579	690	442.4
Oilseeds	580	772	1326	1593.7
Sugarcane	48323	65396	68597	80105.4
Tea	1183	1652	1670	2213.7
Cotton	107	226	511	1157.5

Table -1 shows the average production of common Indian crops which has gradually increased in every fiscal year. Despite these gains in farm production, losses after harvest due to poor infrastructure and unorganized retail cause India to experience some of the highest food losses in the world. As per the WTO agreement India has to develop the technology to meet the target of trade market in agriculture.

- **Productivity:** Although India has attained self-sufficiency in food staples, the productivity of its farms is below that of Brazil, the United States, France and other nations. Indian [wheat](#) farms, for example, produce about a third of the wheat per hectare per year compared to farms in France. Rice productivity in India was less than half that of

China. Other staples productivity in India is similarly low. Indian [total factor productivity](#) growth remains below 2% per annum. Several studies suggest India could eradicate its hunger and malnutrition and be a major source of food for the world by achieving productivity comparable with other countries [12].

- **Agricultural Export and Import:** Sheeba and Reena (2016) found that the trade balance between export and import of agricultural in India is positive [13]. The surplus trade balance shows in the case of agricultural goods, we have a strong export opportunity for the study period, and we have surplus production for a few chosen commodities [14].

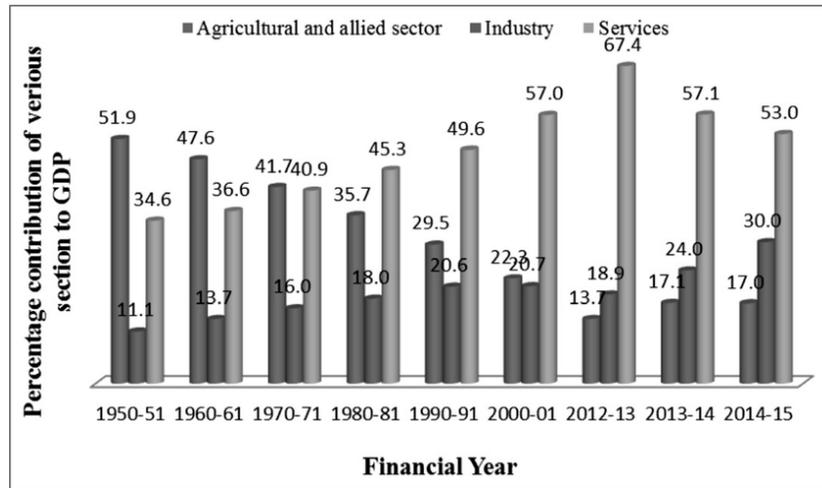
Table 2: Export, Import and Balance of Trade for Agricultural Goods in India (in Crores)

Year	Agricultural Exports	Agricultural Imports	Balance of Trade
1995-96	28657	12086	16571
1996-97	29729	16256	13472
1997-98	34654	17609	17045
1998-99	36415	21973	14443
1999-2000	41603	22812	18791
2000-01	45711	15978	29733
2001-02	57768	23000	34768
2002-03	74673	22550	52124
2003-04	81065	28719	52345
2004-05	84444	54365	30079
2005-06	113047	51074	61973
2006-07	182801	70165	112637
2007-08	227193	95719	131474
2008-09	262779	85727	177051
2009-10	239681	121319	118362
2010-11	215396	140289	75107
2011-12	226652	164727	61925
2012-13	251564	152095	99469
2013-14	274571	137019	137552
2014-15	291653	142631	149022
Total	2800056	1396113	1403943

From the table 2 it is apparent that since 1995 India the agricultural export and import of India has increased gradually which results into the balance of trade of Indian economy [15].

- **Agricultural Contribution to GDP:** The contributions of agriculture in the Indian economy have been increasing over the years from 1995-2015 [16].

Fig-1: Contribution of Agriculture, Industry and Service sectors to GDP in India.



According to the economic survey, the share of agriculture in gross domestic product (GDP) reached was minimum (11.1 percent) in 1950-51 which was gradually increased in 1960-61 (13.7 percent), 1970-71 (16.0 percent), 1980-81 (18.0 percent), 1990-91 (20.6 percent), 2000-01 (20.7 percent). There was a decrease in the fiscal year 2012-13 (13.1 percent). However, it was increased in 2013-14 (17.1 percent) followed by slight decrease in 2014-15 (17.0 percent) [17]. Modern farms and agriculture operations have changed over the years primarily because of advancements in technology, including sensors, devices, machines, and information technology. Personalized e-commerce stores and market places have brought farming products like fertilizers, seeds, machines and equipment that help farmers grow quality products. Educational portals let farmers know innovative things about farming that increase the contributions of agriculture to the economy [18].

6. Problems of Agriculture in India

It is a well known fact that around 65 percent of India's agriculture depending on rain and more than half the population on agriculture, too little or too much rain is always a harbinger of trouble [19]. So, in such agricultural circumstances, it is important to know the major reasons Indian agriculture which is as follows:

(i) Rural- Urban Divide: India's most of the farming is done in rural areas of the country which has witnessed an improvement in rural fortunes, but not enough to bridge rural-urban gap.

(b) Lack of Investment in Agriculture: There has been a paucity of fresh investments in agriculture sectors. The tenants lacked investible resources which adversely affected agricultural productivity. As a result, investments in agriculture were lackluster and the sector suffered [20].

(c) Lack of Effective Policies: Despite several efforts done by the governments in order to solve the problems related to agriculture in India, India has no coherent agriculture policy in place. India has focused more on its industrial development than it has thought about its agricultural development.

(d) Negligence of Natural resources: India has not preserved and developed its natural resources when it comes to farming. Little was done in order to preserve resources mainly related to irrigation. The severity of the situation is evident from the stories of migration and severe water crisis in Maharashtra and elsewhere.

(e) Impact of Demonetization: Incidences of stress in agriculture have begun to appear because of demonetization such as increased wastage of perishables, breaks in the supply chains, lower revenues that show up as trade dues instead of cash in hand and when credited into bank accounts with limited access affect the sector.

(f) Excessive Interventions on Prices; In India there are several restraints on price control. Many experts argue that the solution to farm distress lay in dismantling the system of state controls that were in effect a massive tax on farming.

(g) Inadequate Irrigation Facilities: Government statistics have rarely shown any increase in the total net irrigated area in India. In reality, minor irrigation structures are very important for recharging of wells, flood control and drought mitigation.

(h) Sluggish Fertilizer Industry: In India, the fertilizer sector has not witnessed any major fresh investment in the last 15 years. Such scenario is arising when the highest growth in demand for fertilizers in the world is in India.

(i) Dependency on Monsoon: In India, most of the agricultural areas are un-irrigated which are directly linked with the production and yield of the kharif crops which are rain-fed in most agricultural states.

(j) Inefficiency of Farmer Producer Organizations: In India, Farmer producer organizations (FPOs) must be strengthened. Incentives can be given to commodity-specific FPOs to develop value chains. For example, FPOs for pulses can be developed on a large scale.

7. Future Prospects of Agriculture in India

The need of the hour is to devise appropriate domestic policies, policy reforms in association with WTO, heavy investment and infrastructure. India should adopt new technology to improve efficiency and competitiveness of domestic produce in international market. Beside these following suggestions will be helpful in the development of agricultural trade of India [21]:

- India has a greater challenge to counter the export of traditional items from the developing countries. In this regard, prioritization, innovation of the new commodities and processing efficiency, marketing and transport infrastructure, maintaining quality, stable supply etc should be developed.
- Merger and mutual understanding among several related departments like irrigation, fertilizer, food, agriculture, etc. for better coordination and synergy.
- Public investment in agriculture has to be raised, because modernization of agriculture commodities, market facilities for international competitiveness and particularly in R&D including extension.
- The work of improvement, development and standardization of indigenous implements should be carried out in co-ordinated manner with due regard to different soils, climatic conditions and cultural practices prevailing in various regions of the country.
- Promising types of foreign implements should also be tried out under various soil and climatic conditions in different regions with a view to evolve successful designs.

8.Conclusion

Since independence, the progress in agriculture has been somewhat steady. The sector grew at about 1 percent per annum in the first half of the 20th century. During the post-Independence era, the growth rate nudged about 2.6 percent per annum. Expansion of farming areas and the introduction of high-yielding varieties of crops were the major factors of growth in agricultural production. WTO regime is used to maximum advantage to protect the interests of developing countries. World Trade Organization should provide the equality policies and resolution among the membership countries and not divide the developed countries' products, and developing countries' products in International market level. Better understanding and agreements have to be negotiated for better prosperity. The country is also likely to become a major producer of genetically modified/engineered crops. The problem identified in the existing agreement on patents, tariff, subsidies, trade and agriculture indicate that the developing countries are waking up to the need to ensure that India has to take the lead in agricultural trade market. Beside these constraints it has progressed both in terms of yield and structural changes. The Indian road network has become one of the largest in the world with the total road length increasing from 0.399 million km in 1951 to 4.70 million km as of 2015. Consistent investment in research, land reforms, expansion of scope for credit facilities, and improvement in rural infrastructure were some other determining factors that brought about an agricultural revolution in the country. The country has also grown strong in the agri-biotech sector. The Rabobank report reveals that the agri-biotech sector has been growing at 30 percent in the past few years.

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