

Chapter – Three

Impact of WTO and AOA on India's Agriculture

Introduction

- **The aspects of Agreement on Agriculture (AOA) under WTO**
- **Impact of the AOA under the WTO Regime on Indian Agricultural Commodities**
- **Various Trade Negotiations under WTO and India's role on them.**
- **The DOHA mandate on Agricultural Trade**
- **Implications of WTO framed international Agricultural Trade Policies**
 - Under AOA on India
- **Trend of Agricultural Trade**
- **Direction of Indian Agricultural Trade in the WTO regime**
- **The Impact of WTO on the Composition of India's Agricultural Trade**
- **Trend of Agricultural Trade performance of India from the inception of WTO**
- **Conclusions**

References

Chapter Three

Impact of WTO and AOA on India's Agriculture

Introduction:

It is observed throughout the World that Agriculture plays a very important role in Trade, Country's GDP, welfare, Livelihood of people & Food security and overall development for the Developed and Developing nations particularly for countries like India. But as the developing nations are more dependent on agriculture for their economic Growth than developed nations therefore any volatility in Agricultural sector in the World has implications on the overall economies of these nations. It was expected before the WTO came into existence that the developing nations would be benefitted in the growth of agricultural Trade and GDP after signing in the multilateral organisation like **GATT/WTO** because most of them have comparative advantages in producing agricultural goods so, as the economies of the DC's open up for huge import from developing nations their overall economy would get a boost. But the Post WTO regime's reality was not according to the expectations. The reasons are (1) As directed Under **AOA (Agreement On Agriculture)** reduction of export subsidies in agriculture is advised so it is not the Subsidies which was wholly responsible for reductions of agricultural exports to the DCs from the developing nations but the **NTMs** (Non Tariff measures), various Anti dumping and market access barriers created by the DCs. As under the WTO regime the member countries are subject to huge competition in the international export market, where the DCs are equipped with full potential in the international agri-trade market with subsidies and barriers, most of the developing countries (including India) are in a difficult position, as the developing nations with overburdened population, less commercialised agricultural sector and weak Infrastructure are left with less opportunities but enormous challenges to face. In case of India it experienced a slowdown in the growth of agricultural export just after the WTO regime as the world agricultural commodity prices started falling in this period but it was not expected as India expected during the Uruguay round agreement under the GATT that it would have the comparative advantage in agri-export (as the domestic prices of agricultural commodities was less than the international prices) at that time and as the gain from trade depends upon the export competitiveness , India's export competitiveness was not according to the expectations in the post WTO regime as its domestic prices of agricultural commodities was struggling with the falling international prices as the world agricultural trade is getting distorted along with the **TOT (Terms of Trade)** because the Governments of developed nations are providing huge Subsidies and other agricultural support systems to their farmers and products to fight in the international market while the developing nations were lagging behind with less support and subsidies from the less resourced Governments, improper infrastructure & technical skills and finance therefore the term self-sufficiency in agriculture is still difficult to reach for many developing countries. These are some of the main reasons for unequal competition and market share in the world among the developed and developing nations.

3.1: The aspects of Agreement on Agriculture (AOA) under WTO

The Agreement on agriculture (**AOA**) which was formed in Uruguay round agreements in Marrakesh in Morocco in 1994 was effective from and with the inception of WTO in 1995 is a binding contract

for multilateral free and fair liberalised agricultural trade and is one of the big pillars of WTO. The AOA is standing on three major pillars named **Market access, Domestic support measures and Export subsidies**. The domestic subsidies provided by the countries distorts international trade that is why the framed rules to cut down agricultural Subsidies among all nations is a just and fair manner of trade (where developed nations would cut down subsidies by **36%** in **6** years and developing countries would cut down subsidies by **24%** in **10** years and no cut of subsidies for the least developed nations). The **AMS (Aggregate Support Measures)** provision under the AOA says that a country can give support to its agricultural productions and export on the basis that the AMS should not cross the **5%** limit for DCs and **10%** limit for the developing countries where if the minimum level is exceeded by any nation then the country has to cut down domestic supports to agriculture (**20%** for the DCs in **6** years & **13.3%** for the developing nations in **10** years). The volume and value of export subsidies should be cut down by the DCs by 36% and 24% within six years and by developing nations by 24% and 14% within 10 years.

3.2: Impact of the WTO Regime on Indian Agricultural Commodities

Most of the countries realized that institutional framework to regularise international trade like WTO was much needed when they were liberalizing their trade that is why the formation of the WTO was a significant milestone in the history of international trade.

Different wings of WTO In Part of Agricultural Trade

- **Agreement on Agriculture(AOA)**
- **Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS)**
- **Agreement on Trade Related Investment Measures(TRIMS)**
- **Agreement on Textiles and Clothing(ATC)**
- **Agreement on the application of sanitary and Phytosanitary measures(SPS)**
- **Agreement on Technical Barriers to Trade**
- **Agreement on Geographical Indication Act.**
- **Agreement on UN Convention on Bio-Diversity (CBD).**

Out of these agreements **AOA** perhaps the most important international agreement under **WTO** regime.

Agreement on Agriculture: The AOA is based on,

- **Market access**
- **Domestic Support Mechanism**
- **Export Subsidies**

The WTO Agreement on Agriculture (AOA) which has been affected since January 1995 was a multilateral trade negotiation arrangement and one of a major part of the Uruguay Round Agreement in 1994 (The Uruguay Round had been carrying since 1986 to 1994). Several contents of AOA have been discussed, verified and rectified throughout trade negotiations under different ministerial conferences of WTO from Uruguay round agreement to formation of WTO and so on. The principle contentions of AOA was to bring down Domestic subsidies provided by the countries to their agricultural trade, Export and farmers, **Eliminations of Quantitative restrictions and reduction**

of various Tariff & Non Tariff Barriers over time of all member countries of WTO where it had given special extension of time period for the developing countries including India as these countries suffer from inadequate infrastructural & institutional base for immediate reform in agricultural trade.

As per the rules of AOA and WTO Developing countries like India has agreed to maintain maximum amount of domestic Subsidies under 10% on Total domestic Production and don't want to bring it to zero level, at the same time India has agreed to eliminate all kind of QRs, Import /export license system, removing various other barriers to trade like Tariff & quotas, Non-tariff barriers like anti-Dumping measures etc. India had practically implemented all these within the given time period of 10 years by the WTO for developing countries. After removal import restrictions on 131 items at the initial period India was ready to remove restrictions and import tariff on many all other Items and for that it proposed to the WTO for Negotiation for Market Access, Domestic Support along with food security and export Subsidy for all nations particularly for the developing ones.

The Uruguay Round agreement of GATT (1986-1994) ended with formation of WTO (1st January 1995) which was the only international institution to endorse, maintain & ensure free & fair multilateral global trade among all nations. We have already mentioned that the AOA which is the content of WTO emerged after the Uruguay round of agricultural trade negotiations based on three major pillars, these are,

Market Access: Market Access can be broadly classified into three characteristics. Like

- (a) **Conversion of all non-tariff import restrictions into Tariffs.**
- (b) **All agricultural tariffs are required to be bound.**
- (c) **After binding the Tariff it is gradually reduced over a period of several years.**

Market access enables countries to liberalise and expand international trade. It means to what extent a country or a group of countries under economic union is ready to open its market for the foreign countries to access domestic market and consumers. It is an important and integral part of world trade commitment of WTO in order to regularise trade, removing tariff & nontariff barriers to help and develop international trade that how much a country is ready to open its own market to reach by the foreign exporters or global countries, in order to regularize the trade by reducing or removing tariff and non-tariff barriers between nations to facilitate smooth & fair trade. The Developed & Developing nations are agreed to reduce Non tariff & tariff barriers, quotas, quantitative restrictions in order to facilitate trade. India has also joined hand in this global program and it has reduced tariff and eliminated QRs, & license system of import & export other than maintaining a minimum level as per the WTO norms. The WTO has asked to reduce import tariff by 36% for DCs within 6 years and 24% for LDCs within 10 years respectively.

Domestic Support: The **Domestic support which** is differentiated by the WTO in three different categories (1) **green Box**, (2) **Blue Box**, (3) **Amber Box subsidies**, is different from domestic subsidy system of annual subsidy or financial help to the farmers, agricultural producers, trader, exporters etc by the government either in specific agricultural area or in agricultural marketing or infrastructural development etc

- **Amber box subsidies or Direct Support:** In case of Amber Box subsidies which are direct subsidies or product specific subsidies are highly **domestic production stimulating & trade distorting in nature** and prohibited by the WTO by saying that the Developed countries are to reduce these type of

subsidies within 6 years by at least 20% and the developing countries are asked to reduce 13% of AMS linked to direct subsidies within 10 years of time limit.

Green & Blue Box subsidies or Indirect Support: The indirect supports to domestic trade through Green & Blue Box Subsidies are not trade distorting mostly (though the Developed countries are found misusing of these subsidies) rather they are used in international trade to boost exports. The Green box subsidies are given by the Govt. on R & D on agriculture, Disease Control, Food Securities and building agricultural infrastructures to the Universities of agricultural development and many other Institutions, on the other hand Blue Box subsidies are given to the producer & farmers for limiting their production for environmental causes and agricultural development by the Government. India has a good track record of not violating domestic support regulations framed by WTO since the Uruguay round agreement as it only came to support its farmers on market price but not in product specific support.

- **Export Subsidies:** It has been found that **Export subsidies** by National's government are mostly **Trade distorting** , creating inequalities in competition of Export/import, reasons for farmers Distresses among developing countries and hindrance to sustainable development of free & fair multilateral trading system. So according to WTO it must be eliminated completely or should be reduced substantially to a very low amount. The amount also has been fixed by the WTO itself which is 36% for developed countries within 5 years and 24% for developing countries over 10 years based on the 1986-90 base period.

3.3: Various Trade Negotiations under WTO and India's role on them.

(a)The market Access: Market Access is one of the most crucial and obligatory proposal emerged in Uruguay round negotiation between member countries. The WTO proposed in this content that at least 3% access of domestic market is under binding treaty which is called **MCA (minimum compulsory access)** which will no way disturb domestic agricultural production, will not influence on the Governments of the countries to cut down domestic subsidies or farmers to stop sharing or preserving Seeds, rather it will help countries to conduct R & D on national agricultural sectors overall development. India being a committed country to international free & fair trade agreed to the MCA clause of WTO.

(b)Domestic Subsidy Reduction: The AOA norms suggest gradual reduction of domestic subsidies to the agricultural sector including farmers within 10 years of time bound for developing countries. But Indian agriculture not only suffers from domestic infrastructural & Institutional bottleneck but at the same time as its agricultural sector is not mainly commercialised in character rather mostly subsistence type that is why it is not very much encouraging for India to accept AOA norms which better fit with the agricultural structure which is commercialised in nature. That is why India has been negotiating on domestic farm support & subsidies to the farmers with the WTO.

(c) Boosting Domestic Agricultural Output: From the previous experiences of international fluctuations & volatility of price and its implications on domestic economy & people India has decided to increase its domestic production to a high limit and make itself ready for highly competitive price regime and less dependency on foreign supply of agricultural produces. For this India proposed domestic support clause to the Doha Round summit & maintaining De minimis level which was later approved by WTO.

(d) Revamping Indian Agricultural Exports: India wants to revamp its export in this liberalised trading environment and thereby boosting its economy. As after reduction of domestic subsidies the demand for agricultural produces like Rice, Spices, Pulses, Cotton etc from Developed countries like Japan, South Korea, USA, EU would rise from India as India has comparative advantage in producing these commodities at cheaper price domestically. That is why India has proposed for easy market access to these countries at the same time it has given assurance to maintain International safety and standard like SPS measures at home producing & delivering these commodities and more others.

(e) New Patent law under AOA and India: One of the main content of AOA is new IPR (intellectual property regime) called TRIPS which enables new Patent policy of patenting new inventions in agricultural, Biotechnological, and seeds sector and for that the Govt. of India has to reform all its existing rules related to these things. The new patent regimes ensure whole & sole control on seeds by the patent owner. But the Nature of Indian agricultural system is traditional & Government of India is the owner of R & D related thing on Biotech research since Independence and committed to deliver & transfer of new invention to the communities without any conditions but this new patent act by the WTO might endangered the above said provision that is why Govt. of India wanted negotiations with the WTO for farmers Rights on seed and food security related Issues.

(f) WTO has widened the right to Use Seeds: The seeds acts provisions under the TRIPS were frightening for Indian poor farmers and many other parts of the world's developing countries farmers, as it said there will be no provision for saving, exchanging and improving by anyone other than the patent owner of the variety of seed, but later on WTO assured countries that the farmers have all traditional rights on exchanging seeds and varieties of it as this clause was taken back by WTO for renegotiation on this for the sake of poorer communities of the world.

(g) Public Distributive measures & AOA : Many developing countries including India has opposed contents of AOA which suggests complete eliminations of subsidies but the WTO clarified its statements by saying that the social security issue of any individual country is completely its national priority and AOA & WTO will not intervene in these domestic arrangements and at the same time countries can give protections in social securities to its farmers, poorer communities and citizens through PDS (public distribution system for).

(h) The reduction of subsidies under WTO and India: India since Independence is maintain low domestic farm support but the clauses of WTO & AOA to cut down domestic subsidies on every aspects of agricultural sector have spread fear & anxiety among Indian farmers for loosing fertiliser & electric subsidies as most of the cultivators are subsistence type and indebted by birth so if the Government removes its hand completely from agricultural support they will no longer able to compete and continue agricultural process in this new global order. That is why agriculturists of India resisted this bill and asked the Government to refuse to the WTO to implement it In India as this will enable MNCs to control inputs prices and only rich farmers will survive in this regime.

3.4: The DOHA mandate on Agricultural Trade

In Doha (Qatar) the fourth and one of the most important ministerial conference of WTO was held from 9th November to 14th Nov. 2001 and the discussion on this round is active till date. The Doha round agreement was a good reform from the perspective of agricultural trade because unlike the

Uruguay round this round accepted the different position of the developing countries in agricultural trade by accepting the anti subsidy appeal for the developed nations from them, by reforming the Non Obligatory concession, allowing **Special & differential treatment (S & DT)** for poor and developing nations and by adopting declaration regarding the implementations of WTO policies in developing countries in Agriculture, Competitive market and other trade & investment related fields. This declaration emphasised on proper implementation of already declared agreements of WTO like **GI (Geographical Indications), TBT (Technical Barriers to Trade), TRIPS, TRIMS etc.**

3.5: Implications of WTO framed international Agricultural Trade Policies under AOA on India

The government of India initiated the economic reform process by adopting several measures from 1995 onwards after signing in WTO and accepting AOA rules. The main concern of the Govt. was liberalising economy to grow GDP and sectoral diversification, growth of export of Agricultural trading commodities and substituting Imports (using Tariff Barriers) and at the same time Food security & self sufficiency. The Indian agricultural sector is much diversified and self reliant as around 17% (2015-16) of India's total GDP generates from agricultural sector. India's total agricultural production was 280 million tonnes in 2015-16 as compare to 52 million tonnes in 1950-51. It is the result of Green revolution and constant supply of public Investment in developing agricultural infrastructure in the country. Then also with ever growing huge burden of population (1320 million in recent published data) and increasing demand for job & foodstuff both India needs a vibrant agricultural sector with high growth rate in Agricultural export share in world trade. Though India has a good potential in agricultural trade then also as Indian agricultural trade exhibits fluctuations which is more than any other trade. India needs to take care of it. Though enormous competition has emerged during the last decades among the countries of the world in agricultural trade, the WTO has tried to develop & provide several measures for fairly competitive environment for fair trade where there are fewer barriers & restrictions but more openness and accessibility toward other countries markets. Though there is violations of WTO framed regulations by many developed countries for their favor, there are still enormous possibilities for agricultural trade to develop. Agriculture was included under WTO through AOA negotiation in 1995. Today around **17%** of India's **GDP** (India's GDP is US \$ 2.848 trillion) is from agricultural sector and **12%** of its **total export** earning which is substantial amount to have a huge impact on nation's economy if any change occurs in the world economy. 55% of total employment comes from agricultural sector. About 70% people directly or indirectly depends on it and about 43% of India's total land is covered by agricultural sector. India became self sufficient in Food grain production decades after independence. It is now producing around 280 million metric tons of food grains in the world and ranks first in many major agricultural food crops in the world. But after liberalization phase started in the world with **WTO** (1st Jan 1995) and **AOA** many thing has dramatically changed in agricultural sector of India, for example, **Total yield or Output, Farm Pattern, Agricultural Infrastructure, Annual Compound Growth rate in Production & Export, Imports, Prices of major agricultural food and non food materials, Export Competitiveness, quantitative restrictions, tariff & non tariff barriers , export subsidy, domestic support, sanitary & Phyto sanitary measures, Geographical Indication, Trade related intellectual property rights** etc. WTO which has replaced GATT (general agreement on trade & tariff 1948-1994) was established for multilateral trade agreements among nations is committed to Free trade, Non discriminations in trade, Removal of Quantitative Restrictions, non tariff barriers between nations and free & fair competitions in trade among nations. During the 90's the Govt. of India removed Quantitative Restrictions in Imports and replaced it with new tariff system to embrace trade

liberalisation and in doing so the GOI started OGL (Open general Licence) system for trading of most of the Agri-commodities and reduced state stake for only few essential commodities (canalisation and distribution through state) like Rice , Wheat etc. One of the big logic for India's trade liberalisation policies and joining WTO was that after the reduction in subsidies by the developed nations the domestic prices of agricultural commodities in India will become less to international prices so the export demand for those will rise up.

If we summarise the agricultural trade policies in India since liberalisation, there has been several policies has been implemented since 1990s. For Instance trade policy 1992-97 (Import-Export policy declared on 31st March 1992) which had emphasised on Agri-trade liberalisation, then Import-Export policy 1997-2002 Came into existence which emphasised marketing ,expansion, commercialisation & Globalisation of Indian agricultural trade. To implement this policy the Govt. of India took many initiatives like removal of QRs (quantitative restrictions) on trade, reduction & elimination of certain controls & restrictions, tariffs & quotas on many imports etc. Then Export-Import policy 2004-2009 Came which gave outmost importance in Growth & development of Indian agriculture, this policy was leaning toward Inclusive & sustainable growth and development (Chand and Bajar 2012). Most of the major Indian agricultural export commodities like Rice, tea, Coffee, Wheat, soybean, Rape seed, Sugar, Cotton, Meat & poultry products, Ground nut etc have been made free completely in trade policy 2004-2009 to export. There remains no restrictions in importing & exporting these commodities other than for some special cases like, wheat, Maize, Egg etc for some time but ultimately after 2011 these restrictions also lifted by the Govt. of India.

The impact of trade liberalisation was different in pre & Post WTO era. The growth rate of Production of most of the Indian major agricultural Commodities decelerated in the Post WTO era other than some commodities like Cotton & Coarse Cereals as compare to Pre WTO era and at the same time the agricultural GDP growth rate also declined to **3.16%** in post WTO era as compare to **4.10%** in the Pre WTO era. One of the main causes of this was **lack of both private & public investments in Indian agricultural sector since 1990s**. The **TOT (terms of trade)** and changing relative price levels (international & domestic) also did not act according to the expectations. In spite of many initiatives taken by the Govt. of India in the field of liberalisation and reform of agricultural sector, it became quite incapable to attract or induce massive investment in the agricultural sector of India, which was quite expected & needed. The share of Indian agricultural sector to Indian GDP and Gross capital Formation also declined during the Post WTO period than the Pre WTO period as compare to other sector (Gulati 2009, Bhalla 2012). Some Studies done by researchers have revealed that other than the international and domestic price factor some very important non price factors are responsible for the deceleration of agricultural Growth during the Post WTO period. These can be concluded like (1) **Substantial amount of decrease in Public Investment in Agriculture (reduction in Subsidies in fertilisers, electricity, PDS, Irrigation, Soil Conservation, Rural infrastructure development, Agri-Credit expansion, Seed saving and support etc)** (2) **Inefficiency and Slowing down with slowing growth rate of Public investments in agricultural sector** (3) **small or fragmented farm size with incremental burden of population pressure, over dependence on reform & international demand for products went against commercialisation of agriculture at the Global level with this environmental problems hindered private investments** (Balakrishnan 2008, Bhallah 2007).

3.6: Trend of Agricultural Trade

In the Post WTO era it is noticed that AOA did not hamper much the agri-export because the AMS was already very less and below the WTO set level for India (Bhalla 1996 & Gulati 2000). India who is a founding member among 164 member nations of WTO, maintaining and obeying most of the clauses related to developing nations in WTO charters. Our study have looked into the norms and rules of WTO, how far India has followed those rules and what are the consequences has happened to India's agricultural trade since WTO and a comparison between the pre & post WTO era in trading of Indian agricultural commodities. And our Findings in this small study is that India has benefitted in many extent in agricultural trade the post liberalisation or post WTO period and trade indicators are positive in many extent. This thing has surfaced many issues that may be taken for study and research. This paper like many papers compares Indian agricultural export in the pre & post WTO era but at the same time it also took into consideration the commodity wise trade and both convergence & divergence in Indian agricultural export. India was specializing in agricultural commodity export in the pre WTO period but it left it and started gaining its expertise in agricultural commodity export in the post WTO era. So WTO has made mixed impact on Indian agricultural commodity export. Bharadwaj stated that liberalising and opening Indian economy and trade under the WTO regime would be beneficial for India as its growth of Production and export would rise but on the contrary Gill & Brar in 1996 said that India's agricultural export and production has been adversely affected by the WTO regime. To understand the Trend of Indian Agricultural Export It is necessary to understand the value of the Exports & Imports of agricultural trading commodities along with their share in percentage change in national and world agricultural productions & exports in the Pre & Post WTO era. Because this type of Data reveal the openness of an economy and the overall tendency of the agricultural commodities to be exported and agricultural policies adopted by a particular country. The world market share and share of GDP of a country's agricultural production indicates the role, power and market trust realised by a country in world agricultural export. It is easy to understand that a country's comparative advantage in trade and terms of trade regarding imports and exports can be determined by seeing the changes in the shares and values of agricultural export and production of that country both internationally and domestically. The impact of WTO on agricultural commodity trade can be understood by following the terms of trade. If the countries TOT is favorable then it will be able to import more as its exports are rising on the on the hand if it is unfavorable for the country then the country has to expense more export to bring a certain amount of Import.

This section evaluates the impact of trade liberalization on India's In the above table we can see the changes occurred in Year wise Values and Percentage share with GDP of Major Indian Commodity's Exports & Imports during the Pre & Post WTO periods. These changes were the result of Impact of trade liberalisation which India started in the early 90s. We can observe that in both the Export & Import increased in more or less steady manner during the pre & post liberalisation period but the share of Agri-export declined during the early phase of post WTO period (1998-99 to 2008-09) and after that it increased and in case of Imports its share to total national import has also declined during that period. So far what we have observed is that the fluctuations in imports & exports are more visible in the Post WTO era than the Pre WTO era.

Table3.1: Year wise Values and Percentage share with GDP of Major Indian Commodity Exports & Imports during the Pre & Post WTO periods. (Values in Crores)

Year wise Count	Indian agri-Commodity Exports			Indian Agri-Commodity Imports		
	Total Value of Agricultural Exports	Share of Agri-Export to total National Export (in Percentage)	Share of Agri-Export to national GDP (in percentage)	Total Value of Agricultural Imports	Share of Agri-Import to total National Import (in Percentage)	Share of Agri-Import to national GDP (in percentage)
1990-91	6012.77	18.48	3.89	1205.85	2.8	0.79
1991-92	7838.12	17.79	4.36	1478.24	3.08	0.83
1992-93	9040.31	16.85	4.46	2876.26	4.53	1.41
1993-94	12586.54	18.06	5.38	2327.34	3.17	0.98
1994-95	13222.75	15.98	4.91	5937.20	6.61	2.21
1995-96	20397.75	19.17	6.96	5890.12	4.79	2.02
1996-97	24161.28	20.34	6.83	6612.61	6.77	1.88
1997-98	24843.44	19.10	6.62	8784.20	5.71	2.35
1998-99	25510.65	18.24	5.94	14566.49	8.16	3.37
1999-2000	25313.65	15.92	5.57	16066.74	7.44	3.53
2000-2001	28657.36	14.22	6.21	12086.24	5.28	2.64
2001-2002	29728.60	14.23	5.97	16256.23	6.63	3.26
2002-2003	34653.93	13.57	7.13	17608.82	5.94	3.62
2003-2004	37266.53	12.71	6.85	21972.67	6.13	4.04
2004-2005	41602.64	11.07	7.35	22811.86	4.54	4.04
2005-2006	49216.95	10.77	7.73	21499.24	3.27	3.38
2006-2007	62411.41	10.91	8.64	29637.84	3.52	4.12
2007-2008	79039.73	12.04	9.44	29906.23	2.94	3.57

2008-2009	85951.66	10.23	9.10	37183.02	2.70	3.95
2009-2010	89341.32	10.56	8.29	59528.03	4.36	5.51
2010-2011	117483.62	10.27	8.89	57334.33	3.40	4.35
2011-2012	187609.32	12.79	12.50	82809.16	3.54	5.53
2012-2013	232041.12	14.21	14.10	109610.67	4.10	6.65
2013-2014	268469.04	14.18	14.09	105149.02	3.86	5.53

Source: RBI, Handbook of Statistics on Indian Economy

3.7: Direction of Indian Agricultural Trade in the WTO regime:

The Direction of agricultural trade implies that how much a country has been able to diversify its trade in commodity wise, country wise and volume wise. Whether the country's imports or exports has widened or shrink during post WTO period and diversification or concentration in export of agricultural commodities to countries are also important. As our study will proceed in the next chapter we have discussed about it and find that for most of the major Indian agricultural trading commodities export have been diversified in the Post WTO regime than that of the Pre WTO Regime.

3.8: The Impact of WTO on the Composition of India's Agricultural Trade:

The Composition of Agri-trade means the amount of Import & Export of agri-commodities and changes in their amount of their trade. It implies that if a commodity has higher Export growth, higher share in the market and low variability or long term stability in the market, then it has high impact for overall growth of export on the other hand the commodity will have less impact on overall export or import if the opposite happens to it. For country like India in the Post WTO era the term export promotion become quite popular in place of import substitution. Branding, Packaging, Promotions, providing Export subsidies & incentives, Financing, Lowering production & Export tariff and making agricultural trading infrastructure is used in the Post WTO period to increase and giving a boost to the export of agricultural and allied products. In the both pre & post WTO era India has been quite capable to substitute imports of agricultural goods, raw materials, intermediate goods and most agricultural goods and its export promotions in this period have resulted in huge earning of foreign currency through agricultural export, domestic specialisation in producing and growth in Agri-production and self reliance in agriculture. In the Post WTO too India has been capable to save foreign exchange to drain out from the country for importing agricultural products and at the same time it has been able to increase its earning of foreign currency by exporting agricultural commodities by export promotions and invested it in the development of domestic agriculture.

India has always followed a balanced way for the benefit of both producer & consumer in the agricultural sector and it is found that most of the major Indian agricultural export commodities are competitive in the international market as per the Nominal protection coefficient shows (Gulati 2007).

Table 3.2: The average values & Percentages Shares of the major Indian Agricultural Commodity Exports to total national Agricultural Exports of India. (Triennium Wise Average)

Comm odities	The Value of export of Major Indian Agri-Commodities during the Pre & Post WTO Era. (Values in crores)					Export Share (in %) of Major Agri-Commodities to total Agri-Export during the Pre & Post WTO Era.				
	1991-93	1997-99	2001-03	2006-08	2011-13	1991	1997-	2001-03	2006-08	2011-13
Food Grains	803.64	4759.91	5646.58	10676.2	33618.97	10.54	19.20	18.22	16.90	18.79
Ground Nuts	24.34	343.95	248.56	545.08	3803.95	0.31	1.39	0.81	0.85	2.11
Tea	1087.66	1726.08	1720.01	1907.51	3976.71	14.26	6.94	5.56	3.01	2.23
Spices	332.91	1414.78	1590.08	3149.99	12137.04	4.35	5.71	5.14	5	6.77
Rice	215.70	2671.31	1960.46	4939.16	7769.08	2.84	10.75	6.33	7.81	4.35
Meat	209.60	768.45	1346.71	3266.22	13596.63	2.76	3.08	4.33	5.18	7.60
Cashew	619.28	1437.63	1963.72	2361.88	3685.34	8.11	5.78	6.32	3.75	2.07
Fruits Veget ables	382.93	1014.26	1825.25	4036.42	8293.20	5.03	4.07	5.88	6.38	4.64
Pulses	60.08	261.82	498.98	2149.15	6852.05	0.78	1.04	1.60	3.41	3.82
Paper	00.00	00.00	1601.72	4537.14	8907.81	00.0	00.0	5.17	7.20	4.97
Marine Product	1381.86	4287.66	6397.88	7297.22	15658.98	18.10	17.25	20.62	11.57	8.76
Oil Meals	1030.54	2957.41	1931.67	6111.03	13042.24	13.52	11.92	6.24	9.67	7.27
Sugar	182.73	384.19	1309.58	3033.57	7591.44	2.40	1.52	4.23	4.80	4.25
Coffee	320.54	1616.87	1091.25	1808.56	4053.08	4.21	6.50	3.53	2.85	2.27
Wheat	55.48	233.39	1168.39	197.69	3850.10	0.74	0.95	3.76	0.32	2.16
Cotton	447.49	867.776	104.67	5670.61	18293.67	5.87	3.48	0.33	8.99	10.23
Basma ti Rice	579.93	1603.40	2018.74	3390.24	15146.85	7.59	6.47	5.52	5.36	8.47
Guarg um Meal	97.86	542.95	493.82	1110.18	13483.24	1.27	2.20	1.60	1.75	7.52
Tobacco	371.46	862.94	899.26	1648.17	4280.36	4.86	3.46	2.89	2.62	2.38
Others	270.24	1310.10	2113.05	4580.15	9835.71	3.53	5.28	6.81	7.23	5.48
Total Exports	7630.41	24836.41	31013.30	63132.6	179044.7	100	100	100	100	100

Source: RBI, Handbook of Statistics on Indian Economy (GOI)

The above table shows the average value & Percentage Share of major Indian Agricultural Commodity Export & Import to total national Agricultural Export & Import of India (Triennium Wise Average). Here we can see that the Composition of Indian Agricultural commodity export have changed in the Post WTO era as compare to the Pre WTO era. For Example the Export Competitiveness of major traditional Indian agricultural commodities like Rice, Tea, Coffee, Oil Meals, Marine products, etc was very high as their export share as percentage to total agricultural export was very high during the Pre WTO era but they have lost this share and are struggling to compete in the world market to retain their old position in the Post WTO era on the Other hand commodities like Spices, Sugar, Guar Gum meals, Meat, Cotton, Paper ,Pulses, Wheat, Basmati Rice have improved their position enormously in the export share during the Post WTO period where wheat, basmati rice & Pulses emerged to be the most significant export items followed by Cotton and Marine products.

It was expected that after the trade liberalisation Export of Indian agricultural commodities would improve than before but the picture was different in the Post WTO era as the average growth rate of agri-export declined from approx 23% in the Pre WTO era to approx 18% in the Post WTO era but this was faster than the average growth of agricultural GDP during this time and faster than the world average growth rate also which was 7.9% and 7.7% during the Pre & Post WTO era. During this entire period (1990-2014) the average growth of Indian agricultural export was higher than world agricultural export. The Average growth rate(nominal prices) of Indian Agri-Export was approx 19% as compare to approx 26% average growth in Import during the entire time (from1990-2014). During the Post reform period India witnessed a sluggish growth in agri-export at the same time the growth of Agri-import also showed a slowdown during this time. In most of the time the amount of import growth was higher than the export growth but amount of agricultural trade surplus remained there. The Indian agricultural average GDP growth was 11.8% during the Pre & Post WTO era (1990-2014) but the Indian agricultural average GDP growth was quite higher i.e. 15% in Pre WTO era as compare to only 11% in the Post WTO era.

The consistent higher proportional value of India's export & import to global export & import shows India's increasing integration to the world market (this ratio increased from about 4 in Pre WTO era to about 14 in Post WTO era). In the post liberalisation period both the export & import market (with domestic & international) became integrated as the price movement in both of these markets becomes linked in this time. This was the result of external trade flow in globalisation period. Some researchers like Gulati, Bajar showed that the inter linkages of domestic and international prices of agricultural trading commodities in India during the Post WTO period as the Increase in price of some commodities like Wheat, Cotton, Ground nut, Mustard, sugar rice etc have increased in the post WTO era from Pre WTO era which was quite consistent and kept parity with the international price. It is also observed by these researchers that the volatility of agricultural trading commodity prices in the international market was higher than domestic market in the post WTO period.

3.9: Trend of Agricultural Trade performance of India Since the early 90s.

Indian agricultural trade performance in the pre WTO period (if we take 10 years before the WTO) was quite satisfactory i.e. the volume of trade in agriculture was approximately 18% of the total export at that time. The agricultural commodity export in the post WTO period has been inconsistent as it has been fluctuating since 1995. It has never been stable since then. For example It was 19.14% in 1996 and rose up to its highest level i.e. nearly 21% of total export of the country in 1997. But from 1998 it has been fluctuating rather declining. For example it was around 10% of the total export in 2006 as it was declining continuously since 1998. After that a series of agricultural export fluctuation

has been occurring in Indian economy every consecutive year. For example it fluctuated and it was recorded around 13% in 2016-17 (latest). If we compare this value with the pre WTO record then it is quite dissatisfactory. It is much lower than the pre WTO estimation. Though the compound annual growth rate of post WTO period was higher than that of the pre WTO era, in the post WTO period, in 2015 the CAG of agricultural export was 12.35% as compare to 7.16% in 1996). Thus it is visible that an average annual growth in agricultural commodity export in the post WTO period is declining and much less than the Pre WTO period, which implies a negative impact of WTO on Indian agricultural commodity export. Though WTO and AOA was meant to establish to flourish and improve fair growth of trade. In the following we shall discuss and focus on some important tabular expression of data regarding Indian agri-trade during and prior the liberalisation phase, which will help us understanding the role of WTO policies and AOA on Indian agricultural export trade on selected and multiple commodities.

Table 3.3: Year Wise Total Exports (in US\$ million & Quantity in MT), Growth of Agri-Exports of Indian Major Agricultural Commodities in the Pre & Post WTO era.

Year	India's Total Agricultural Exports	Quantity of Agricultural Export in Metric tonnes	Year Wise Growth of Values Rate of Total Agricultural Exports	The Percentage of Agricultural Exports To India's Total Exports
1987-88	586.16	10,61,153.44	--	22.78
1988-89	554.98	9,15,062.75	-5.31	20.06
1990-91	515	9,88,182.51	-7.20	18.49
1991-92	739.36	22,88,992.11	43.56	17.93
1992-93	666.37	14,70,638.41	-9.87	16.92
1993-94	897.27	20,01,497.74	34.65	18.11
1994-95	933.72	20,92,122.73	4.06	16.05
Average	615.243	1545378.53		18.62
CAGR	6.88%			
1995-96	2355.95	20,92,122.73	152.32	19.13
1996-97	2160.47	61,19,907.23	-8.29	20.50
1997-98	1940.12	39,80,849.06	-10.19	18.93
1998-99	2286.14	60,10,199.87	17.83	18.17
1999-00	1681.72	34,00,436.16	-26.43	15.68
2000-01	1996.54	47,33,808.13	18.72	13.5
2001-02	2144.85	75,04,857.93	7.43	13.5
2002-03	2803.94	1,15,33,053.00	30.72	12.8
2003-04	3134.66	1,19,16,945.49	11.79	11.8
2004-05	3775.13	1,19,60,591.93	20.43	10.1
2005-06	4218.01	1,03,94,825.88	11.73	9.9
2006-07	4693.05	1,05,29,404.61	11.26	10.3

2007-08	7311.37	1,54,28,409.71	55.79	11.3
2008-09	7540.03	1,31,48,884.31	6.16	9.5
2009-10	7343.98	1,12,55,522.03	-2.60	10.0
2010-11	9307.86	1,15,67,531.24	26.74	9.9
2011-12	17321.15	1,98,10,171.89	86.09	17.19
2012-13	21,739.85	3,01,72,963.87	25.51	16.34
2013-14	22,706.53	3,00,01,581.50	4.45	15.34
2014-15	21,489.34	2,71,34,311.45	-5.36	13.50
2015-16	16,412.76	2,04,69,770.49	-23.62	14.02
2016-17	16,212.45	2,12,71,453.91	-1.22	15.20
2017-18	18,576.87	2,22,93,598.89	14.58	13.2
Average	8658.82	1,27,27,426.14		13..31
CAGR	9.39%			

Source: APEDA, DGCIS.

Though the above table shows that Indian agricultural export has increased over the years from US \$ 3590 million in the Pre WTO era to US \$ 17335 million in the post WTO era, the amount of average share of agricultural export has gone down from 17.5% in the pre WTO era to 13.62% in the post WTO era [6]. In this time the CV (coefficient of Variation) has showed much variation, like it was 5.7 in the pre WTO period and become 25.20 in the post WTO era. This may be as a result of increase in export of non-agricultural commodities rather than agricultural commodities.

Table 3.4: Five yearly Compound Annual Growth rate (CAGR) of Indian Agricultural Import & Export commodities.

Period	Agricultural Export (in %)	Agricultural Import (in %)
1991-1995	21.77	48.97
1996-2000	5.56	28.50
2001-2005	9.76	17.22
2006-2010	16.08	29.01
2011-2015	31.72	22.05

Source: Ministry of Agriculture, Government of India.

The above table shows that agricultural export was adversely affected after the WTO during the early years after India's signing in WTO, but there after again Indian agricultural sector became competitive in the global market by raising the export level. In that time the import also declined sharply but it further started increasing since 2006-07.

Table 3.5: Percentage Share and value of Indian Agricultural exports to World Agricultural Exports (Value Expressed in US \$ in Millions)

Year	World	India	India's Share in World agricultural Exports
Pre WTO			
1990	414724	3506.01	0.81
1991	418237	3361.02	0.80
1992	447886	3676.00	0.83

1993	429336	4167.03	0.96
1994	500913	4399.01	0.89
Average	442218.82	3821.814	0.858
CAGR(1990-1994)	3.85	4.64	1.9
Post WTO			
1995	583201	6323	1.00
1996	592869	7041	1.17
1997	589231	6862	1.18
1998	560559	6236	1.10
1999	543821	5834	1.08
2000	552252	6400	1.16
2001	554132	6264	1.12
2002	582531	7024	1.20
2003	683335	7936	1.16
2004	788083	8589	1.08
2005	851846	10135	1.18
2006	943675	12354	1.30
2007	1127666	16019	1.42
2008	1348135	21250	1.57
2009	1181390	16383	1.38
2010	1366468	23105	1.69
2011	1659523	34322	2.06
2012	165672	42357.51	2.56
2013	1744834	43358.93	2.48
2014	1765406	39291.57	2.23
2015	1568337.01	34494.40	2.2
Average	1011620.76	17217.49	1.562
CAGR(1995-2015)	4.82	8.41	3.83

Source: WTO, International Trade Statistics

The above table shows that India's average exports share in the world in the Post WTO period became as high as **(1.562%)**, which was quite low (**0.858%**) in the pre WTO era. This means that there has been tremendous shift in share of Indian Agricultural export in the post WTO period. Other than this India's share of agri-export in 1995 was 1% which had improved to 1.69% in 2010, 2.06% in 2011 and 2.2 in 2015. This sudden increase of share of Agricultural export globally brought India to leading exporters of agricultural commodities in the World. Though the share has gradually declined from 2.56% in 2012 to 2.20% in 2015 with negative growth in these consecutive years, India still holds a good position in agricultural export market.

Table 3.6: Share of Few Agricultural Commodities in Percentage in India's Total Exports in Pre-WTO Period

Commodities	1990-91	1991-92	1992-93	1993-94	1994-95	Average
Agriculture & Allied products	18.49	17.91	16.91	18.08	16.11	17.5
Tea	3.31	2.79	1.80	1.49	1.19	2.116
Oil meal	1.91	2.11	2.89	3.29	2.20	2.48
Fruits & vegetables	0.70	0.72	0.61	0.61	0.52	0.634
Tobacco	0.81	0.93	0.92	0.70	0.30	0.732
Marine products	2.89	3.30	3.22	3.71	4.28	3.48
Spices	0.72	0.80	0.70	0.81	0.71	0.748
Cashew	1.41	1.52	1.38	1.52	1.49	1.464
Coffee	0.80	0.82	0.71	0.79	1.31	0.886
Rice	1.39	1.69	1.79	1.82	1.52	1.642
Wheat	0.11	0.30	0.12	0.13	0.11	0.154

Source: RBI, Handbook of Statistics on Indian Economy

Table 3.7: Share of Few Agricultural Commodities in Percentage in India's Total Exports in Post-WTO Period

Commodities	1994-95	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	2002-03	2003-04	2004-05
Agriculture & allied Products	19.12	20.49	18.96	18.18	15.67	13.48	13.48	12.79	11.78	10.09	9.88
Tea	1.12	1.19	1.39	1.59	1.10	1.01	0.81	0.69	0.60	0.49	0.38
Spices	2.19	2.90	2.59	1.39	1.01	1.02	1.09	0.62	1.09	0.79	1.09
Rice	4.19	2.59	2.62	4.39	1.88	1.41	1.49	2.18	1.39	1.79	1.32
Fruits & Vegetables	3.23	3.38	3.39	3.09	3.23	3.09	2.79	2.68	2.09	1.66	1.68
Marine Products	0.21	1.31	0.60	0.21	0.04	0.10	0.20	0.02	0.31	0.10	0.60
Wheat	0.32	0.62	0.0	0.0	0.0	0.20	0.60	0.70	0.80	0.41	0.10
Oil Meals	0.82	0.41	0.60	0.52	0.62	0.62	0.60	0.61	0.69	0.62	0.60
Tobacco	0.81	1.00	1.13	1.09	1.12	0.81	0.69	0.71	0.52	0.52	0.49
Cashew	1.10	1.11	1.14	1.10	1.51	0.89	0.91	0.79	0.61	0.73	0.61
Coffee	1.41	1.22	1.32	1.22	0.92	0.62	0.51	0.41	0.40	0.32	0.31

Cont....

Commodities	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Average
Agriculture	10.28	11.32	9.48	10.01	9.88	17.17	14.09	13.77	12.65	13.13	13.6

& Allied Products											2
Tea	0.32	0.30	0.31	0.31	0.30	0.31	0.32	0.3	0.21	0.30	0.634
Spices	1.02	1.22	1.19	0.91	0.92	0.92	0.89	0.79	0.79	1.01	1.21
Rice	1.19	1.71	1.29	1.31	0.89	1.58	2.09	2.49	2.51	2.19	2.08
Fruits & Vegetables	1.42	1.11	0.81	1.19	1.04	0.39	0.62	0.72	0.72	0.79	1.86
Marine Products	1.09	1.29	0.33	1.09	1.11	1.09	1.20	1.58	1.79	1.71	0.76
Wheat	0.0	0.0	0.0	0.0	0.0	0.10	0.61	0.50	0.0	0.32	0.2
Oil Meals	0.6	0.51	0.60	0.8	0.51	0.83	1.01	0.89	0.41	0.21	0.61
Tobacco	0.62	0.59	0.71	0.73	0.72	0.31	0.33	0.31	0.32	0.43	0.65
Cashew	0.41	0.31	0.30	0.32	0.21	0.29	0.22	0.31	0.31	0.32	0.63
Coffee	0.31	0.32	0.30	0.20	0.29	0.32	0.29	0.31	0.30	0.32	0.54

Source: RBI, Handbook of Statistics on Indian Economy

The above tables demonstrate the average percentage share in export of selected agricultural commodities Pre & Post WTO era. These tables show that there is both positive and negative impact of WTO regime on different agricultural export commodities, for example there is positive impact of WTO on export of **Rice, Wheat, Spices, and Fruits & Vegetables** but on the other hand there has been negative impact of WTO on some selected agricultural commodity export. For example The average percentage share of export of **Tea, Coffee, Tobacco, Cashew, Oil meals, and Marine products** has reduced from **2.12,0.88, 0.72, 1.46, 2.48,3.48%** in the Pre WTO era to **0.63,0.54,0.65,0.63,0.61,0.76%** in the post WTO period respectively. We also see in these tables that the average share of agricultural exports in total exports has declined from 17.5% to 13.62% in the post WTO era. This may be as a result of increase in the share of non agricultural commodity share in India's total export.

Table3.8: Compound Annual Growth Rate (CAGR) of Import of some of the major Indian Agricultural Commodities in Pre and Post WTO Period

Commodities	Pre-WTO Period 1986-95	Post-WTO Period 1996-2016
	Value	Value
Meat	13.30	20.21
Cotton	44.61	31.20
Fruits &Vegetables	4.11	13.39
Oil meal	13.81	8.22
Rice	10.7	8.61
Tea	-15.09	6.92
Marine Products	20.49	8.12
Sugar	1.33	17.09
Tobacco	13.5	12.19

Cashew	12.41	5.79
Coffee	24.29	5.61
Spices	10.59	16.39

Source: Based on data from RBI, Handbook of statistics on Indian Economy

From the above table it is visible that Compound Growth Rates of Exports of major Indian Agricultural trading Commodities including Tea, Meat & meat products, Spices, Horticulture Crops including Fruits & vegetables and Sugar, has gone up, where of coffee, Oil meals, Marine products, Cotton & onion has gone down during this period. In case of compound growth rate of Import has gone up for Sugar, Wheat, Rapeseeds, mustard Oil, Soya bean Oil, Cotton, Jute, Ginger and Tobacco considerably.

3.8.1: CAGR, (Country wise Annual Compound Growth Rate) of India's Major Agricultural Commodity Exports in Pre and Post WTO Period

India's Major Agricultural Commodities	Pre WTO Era (1989-90-1994-95)	Post WTO Era (1995-96 – 2009-10)
	Value	Value
Tea	-8.08	2.7
Fruits &Vegetables	20.42	8.01
Oil meal	9.37	5.59
Cashew	4.88	3.22
Sugar and Molasses	1.30	17.01
Spices	2.34	9.54
Marine Product	8.79	3.17
Cotton	44.51	30.92
Rice	-5.51	6.12
Coffee	4.75	0.38
Tobacco	-0.53	8.47
Meat	13.27	18.81

Source: RBI, Handbook of statistics on Indian Economy

Table 3.9: In the following Table we have estimated (taking decadal averages of prices) the Nominal Protection Coefficients (NPC) results of Indian major agricultural commodities traded to compare NPC value change in the Post WTO period.

Agricultural Commodities	Pre WTO Era (1986-1995)	(1996-2012)
	Average	Average
Tea	1.65	1.16
Banana	0.53	0.33
Cashew nuts	1.15	1.12
Ground Nuts	0.65	0.58

Soya bean	0.94	1.27
Sesame Seeds	0.86	0.68
Rice	1.18	1.06
Potato	0.93	0.43
Sesame seeds oil	0.77	0.43
Wheat	1.79	1.26
Apple	2.03	1.64
Cotton	0.79	0.78
Tobacco	0.32	0.42
Jute	1.79	1.14
Rubber	1.26	1.33
Rapeseeds oil	2.96	1.95
Pepper	1.06	1.04
Cake of Rapeseeds	1.27	0.96
Onion	0.86	0.78
Soya bean oil	1.33	2.50
Linseeds oil	2.14	1.63
Ground Nuts oil	2.17	1.42
Sugar	2.76	1.53
Linseeds	4.37	3.05
Coffee	1.46	2.07
Cake of Coconuts	3.85	2.54

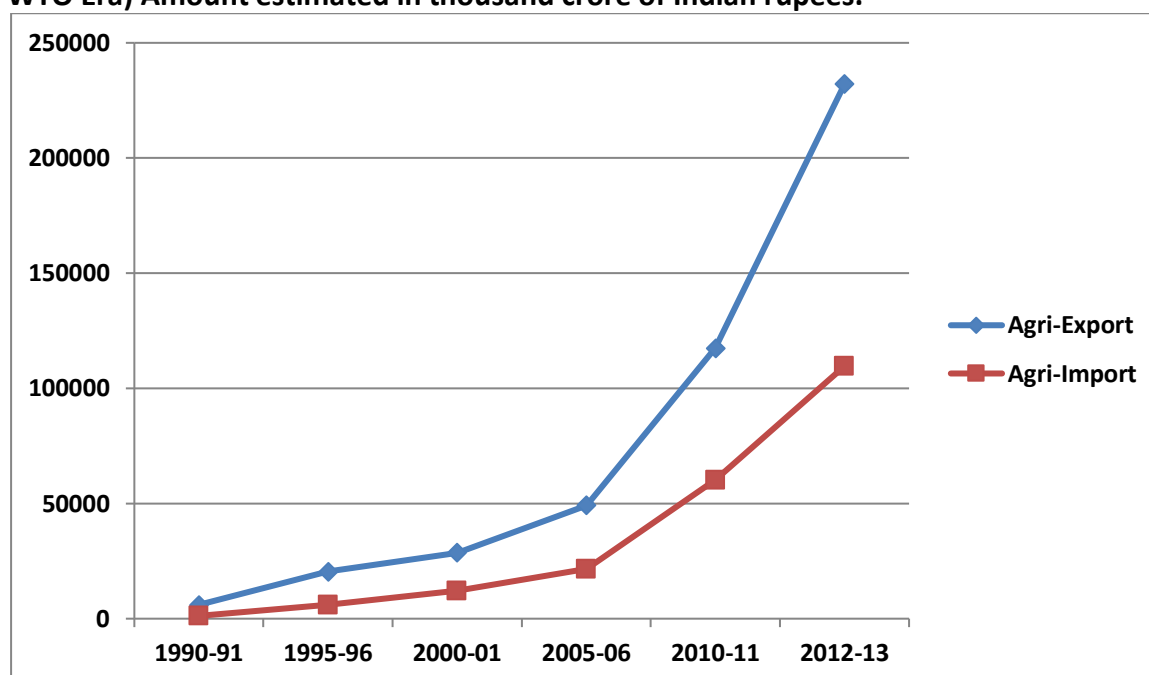
Source: FAO Data interpretation.

The NPC is a ratio shows the trading agri-commodity is exportable or Importable
 $(NPC = P_i^d / P_i^w)$

P_i^d = Domestic price of commodity i. P_i^w = World reference price of commodity i, adjusted for transportation, handling and marketing expenses.

Here, $NPC < 1$ indicates the commodity is exportable and $NPC > 1$ indicates that the commodity is importable. Other than some notable cases like Ground Nut, Sesame Seeds, Onion, Potato, Banana, Cotton, tobacco and Soya bean most other agricultural trading commodities remained in higher than unity value in the Post WTO period. The value of NPCs of mostly all commodities has gone down in Post WTO period comparing to the Pre WTO era which can help boosting export growth of Indian agricultural commodities.

Table 3.1: Agricultural export, import of India from 1990-91 to 2012-13 (During Pre & Post WTO Era) Amount estimated in thousand crore of Indian rupees.



Source: Director General of Commercial Intelligence & Statistics, Ministry of Commerce, Government of India

The above table shows how Indian export has been increasing faster than the Import. In the whole period import was lowest as compare to export was in 2000-01. After 2010 India removed bans on few agricultural commodities export including Wheat, as a result of this export of agri-commodities surged and in 2011 to 120000 crore approx. In the next two years both import and export got doubled. The export reaches 232000 crore and the import became 110000 crore approx. In this time the CAGR of agricultural export and import in the post-WTO period shows that the Agri- export growth rate came down first from 21.78% (1991-95) to 5.5%(1996-2000) then again rose to 16.07% in 2006-10, and rose faster after that to 31.71% during the next five year. It reveals that agricultural trade liberalisation effected Indian agri-trade adversely in the first ten years of liberalisation and thereafter the agricultural sector become competitive globally and export growth took it pace.

Table 3.10: Several Major destinations for the export of Indian agricultural Commodities during 2014-15.

Importing Countries	Share in Percent	Importing countries	Share in Percent	Importing Countries	Share in Percent
USA	11.50	CHINA	2.51	PAKISTAN	1.30
VIETNAM	9.28	JAPAN	2.45	KUWAIT	1.26
IRAN	8.43	SOUTH KOREA	2.01	NEPAL	1.25
UAE	4.98	UK	1.84	GERMANY	1.20
SAUDI ARABIA	4.84	BELGIUM	1.78	ITALY	1.18
BANGLADESH	3.55	NETHERLANDS	1.72	RUSSIA	1.16
MALAYASIA	3.09	BENIN	1.42	YEMEN	1.10

INDONASIA	2.70	EGYPT	1.40	OTHER COUNTRIES	24.12
THAILAND	2.55	FRANCE	1.38		

Source: ITC data base, Switzerland.

3.10: Conclusions:

From the above discussion and after the analysis of the trend of Indian agricultural export in the pre and post WTO era we see that there has been huge fluctuations occurred in India's agricultural Export and Import in the Post WTO period as compare to the Pre WTO period. The share of agricultural export as compare to total export has gone down drastically in the early phase of trade liberalisation under WTO but as it accommodated itself with the international market competition later in the post 2000, the amount of share slightly improved. After 2012 we found that amount of Export volume has gone high up, and it got doubled as compare to early 2010 data. But the data shows a negative aspect in case of export share of agricultural commodities to countries total export in this period. The share of agri-export as compare to the total export of India has gone down in the post WTO period though the amount of volume of export has gone multiple times up as compare to the pre WTO period. As it was expected that after the AOA and WTO the amount of Export share of Agricultural commodity would go up and it will help improving country's agri-export, but on the contrary it has fallen during the post WTO period, however on the other hand India's share of agricultural commodity Export in the World has gone up to 1.56% in the Post WTO period as compare to 0.858% in the Pre WTO period. This implies that under WTO India's export share in agriculture has improved. In many research studies it is found that there (1) **exists divergence in Indian agricultural commodity exports, as in the pre WTO period it is found that India has made effort to specialize in agricultural commodity export in which it has comparative advantage but in the post WTO period no such attempt was made where we can see any specialisation of agricultural commodity export.** It implies that **the WTO has not laid India to gain expertise in the export of agricultural product where it has comparative advantage.** When we go into further analysis of impact of WTO on few selected agricultural trading commodities (2) we came to know that several commodities are there on which the impact of WTO regime has been positive, for example commodities like **Rice, Spices, Fruits & vegetables** have increased their share in export in the post WTO period, while commodities like **Tea, coffee, Tobacco, Cashew, Oil Meals, Marine products** has shown negative impact of WTO on them, as their export share has fallen down in the post WTO era.,(3) Despite that the Indian agricultural export has increased in absolute term in the post WTO period. **The average share of agricultural export in total export from India has fallen down from 17.5% in the Pre WTO period to 13.62% in the post WTO era,** which may be as a result of much increase in the share of non agricultural export in India's total export. (4) **Furthermore the value of NPCs of mostly all commodities has gone down in Post WTO period comparing to the Pre WTO era, which implies that exporting capacity or export competitiveness has increased in the Post WTO era.** India along with many countries of the world had started initiatives to liberalise and reform its Agricultural sector along with other sectors as a part of Structural adjustment program of GATT in the early 90s. In doing so it first removed QRs and brought tariff regime and then reduced the amount of both export & Import tariffs later on. Then it tried to liberalise its agricultural export through export reform & support and maintain the AOA norms under WTO regime but as its AMS to agriculture was already to the minimum optimum level that's why it didn't have to cut down its support to agriculture further. All these was done to make the domestic price level more competitive in the international trade to

increase agri-export and market share but the change in TOT & price regime didn't encourage and attract private & public investment much during that period leading to decelerated growth in both Agricultural production (GDP at constant prices) and export of major Agricultural commodities occurred in India in the Post WTO period. The Indian agricultural sector realised increased share of agri-export to the agri-GDP, increased Export & Import of agri-commodities, increased interconnectivity and integration with the world agricultural economy causing fluctuations in price level and increased surplus in agri-production in the Post WTO regime due to liberalising or opening of the economy. As more and more integration of Indian economy with the world is taking place the inter temporal fluctuations in prices of export commodities is becoming more visible as a result of which the Govt. of India frequently changes its export regulation policies which still exist in India to protect the consumers from international price volatility of agricultural commodities. But in this integrated world economy it **may be recommended** that frequent change in import/export regulations may hinder the stability of domestic price level and interest of the domestic and international consumers so for consistency and stability in domestic and world market Govt. should formulate stable agricultural trade policies consistent with the WTO policies and commitments. Thus in conclusion we can say that WTO has a mixed impact on India's Agricultural commodity Export. In one side WTO impacted negatively where many selected agricultural commodities export share has been declined than pre WTO era and at the same time WTO didn't help to gain expertise in agricultural trade, on the other hand it has helped increasing export share of many other agricultural trading commodities and at the same time it has helped India to gain world agricultural export market share by improving India's position in the global agricultural export.

References:

- Ahulwalia, Montek. 2002. "Economic Reforms in India Since 1999: Has Gradualism Worked?", *Journal of Economics Perspective*, **16**.
- Anderson, K. and Tyres R. (1993): "More on Welfare Gains to Developing Countries from Liberalising World Food Trade", *Journal of Agricultural Economics*, Vol. [44], No. [2], May, pp: [189-204].
- Anoopkumar, M. (2012): "Commodity Price Instability under Globalization: A Study of India's Plantation Crops": NRPPD Discussion Paper (13), pp. 1-56.
- Balakrishnan P, Golait R, Kumar P (2008) Agricultural growth in India since 1991.
- Bhalla GS, Singh G (2012) Economic liberalization and Indian agriculture. Sage: New Delhi
- Bhattacharyya, R. (2011). Revealed comparative advantage and competitiveness: A case study for India in horticultural products. [*International Conference on Applied Economics, Perugia. 25- 27 August*]
- B. Sheshagiri & G. G. Honkan (2011): "Impact of W.T.O on Indian Agriculture: Performance and Prospects"

Chand R, Bajar S (2012) Agricultural trade liberalization policies in India: Balancing producer and consumer interests.

Deepika, M.G. and Deshpande, R.S.(2003). Trade Policy and Determinants of Trade in Agriculture (Working Paper No.18)

Datta, Samar K (2000). "Problems and Prospects of India's Rice Trade in a WTO Regime", *Journal of Indian School of Political Economy*, **12**[5] FAO year Book: (2007)

Gill, S.S. and Brar J.S.(1996). "Global Market and Competitiveness of Indian Agriculture: Some Issues," *Economic and Political Weekly*, August [10], p. [2175]

Gulati, A. and Sharma A. (1994). "Agriculture under GATT: What it holds for India". *Economic and Political Weekly*, **31**.

Landes R, Gulati A (2009): Farm sector performance and the reform agenda.

Nilotpal, P. (2000): "India and WTO-A Study of the Impact on Indian Economy", [New Delhi, Cibra Books]

Reserve Bank of India (2014): Handbook of statistics on the Indian economy 2013–14. Reserve Bank of India: Mumbai.

Reserve Bank of India (2015): Handbook of statistics on the Indian economy 2014–15. Reserve Bank of India: Mumbai

Rani, Pooja (2015): "A Study of WTO and Agriculture Sector in India", *International Journal of Multidisciplinary Research and Development*, ISSN (2349-5979), 2(9); pp.[456-459].

Solanki, Sandeep, P., "Impact of WTO on India's Foreign Trade: "Trends and Prospects", 88th IEA, Annual Conference Volume, Part – I, pp.[537].

Tripathi, A. and Prasad, A.R.(2009). Agricultural development in India since in determinants: A study on progress, performance and determinants. *Journal of Emerging Knowledge on Emerging Markets*, **1**(1):[63-92]

Tyagi,V.(2012).India's agriculture: Challenges for Growth & development in present scenario *IJPSS* **2**(5):[2249-5894]

Vyas, V.S. (1994). Agricultural Price Policy: Need for Reformulation", in G.S.Bhalla (Ed.) (1994),[*Economic Liberalization and Indian Agriculture, Institute for studies in Industrial Development, New Delhi*].

World Bank (2014) "World Development Report"

World Trade and Development Report (2013): Cancun and Beyond. [New Delhi]