Chapter 5

Agricultural Trade—Policies and Patterns

5.0 Introduction

In India like any other developing country, the central problem of food policy is how to reconcile the conflicting objectives of providing low food prices to consumers and remunerative prices to farmers. Maintaining stability in these prices is an equally important objective of food policy. Trade policies that are designed to regulate the volume of trade flows are found to be an effective instrument in imparting stability to domestic prices along with affecting the performance of the marketing system by influencing the average level of prices, inter-crop price ratios and the price-spread in the domestic market. As the policy is required to reconcile the objectives of growth and equity, it has always occupied an important place in economic and political debates.

As discussed in the previous chapter, the decade of the 1990s witnessed two very significant developments. The first development relates to liberalization of economic policy as part of the economic reforms programme initiated in 1991. The second development concerns the new international trade regime following the Uruguay Round Agreement and formation of WTO. The analysis of the previous chapter also highlights the fact that during the post-reform period volatility in domestic market prices of agricultural commodities has come down compared to the decade of the 80s but at the same time the long-run trend of international prices has a possible effect that can damage domestic agriculture independent of volatility by affecting the average level of domestic prices. This raises an obvious question regarding the role played by trade policy during the post-reform period in terms of imparting stability to domestic prices and influencing the average level of prices. It is in this perspective, the present chapter considers the trade policy regime for agriculture in the national context outlining its rationale and structure over the past quarter of a century. To this end, evolution of agriculture trade policy is discussed in section 5.1. This is followed by commodity specific developments in the external trade policies in section 5.2. An attempt is made to analyze the performance of agricultural export and import along with changes in composition of the agriculture trade basket in section 5.3. Since, the
actual trade outcome is dependent on many factors and trade policy at best gives an idea about government intentions, therefore, an attempt is made to analyze the export and import pattern of selected agricultural commodities in section 5.4, in the light of the domestic demand and supply situation along with changes in international prices and India's agriculture trade policy. Section 5.5 draws together some conclusions that emerge from the analysis.

5.1 Evolution of agriculture trade policy

India's foreign trade policy in the sphere of agriculture which regulated the volume of both exports and imports till the reform initiated in 1991 was primarily dictated by two important considerations, a quest for import substitution and a concern for food self-sufficiency. In most of the commodities, foreign trade flows have been perceived as a residual whether we consider exportables or importables. For exportables, the difference between actual domestic production and estimated domestic consumption has determined the surplus available for export. For importables, the difference between estimated domestic production and desired domestic consumption has determined the volume of imports. The major instruments used to implement these policy goals comprise quantitative restrictions (either in form of licences or quotas), canalisation or a combination of both. The role of the State Trading Corporation (STC) and the co-operative federations was emphasised as canalising agencies for agricultural trade.

However, this scenario has witnessed significant changes after 1991 when India started a process of stabilization and adjustment. Under the structural adjustment programme the Rupee was devalued by 18 per cent against the dollar and the exchange rate was left to be determined by market forces. Following this, new initiatives were taken in the trade policy area to create an environment which provides a stimulus to export while at the same time reducing the degree of regulation and licensing control on foreign trade. Scope of canalisation for both exports and imports was narrowed. The aim of these policy changes was to (a) strengthen export incentives (b) eliminate substantial import licensing and (c) ensure optimal import compression as necessitated by the balance of payments situation.

1 Traditional exports which originate in the agricultural sector, both plantation crops such as tea or coffee and cash crops such as tobacco or spices, that have always been an important source of foreign exchange earnings for the economy since the colonial era, constitute the exception to the rule.
The new export-import policy announced on March 31st, 1992 for the period 1992-1997 introduced by far the most liberal trade policy regime the country has seen since Independence. The main feature of the policy was that trade was free except for a small negative lists of imports and exports. Imports of 3 items were banned, 80 items restricted, and 8 items canalised. Till 1992, agricultural exports and imports in the country were strictly regulated through quantitative restrictions (QRs) such as quotas and licenses or channelled through some trading organisation or some combination of both. With the new trade policy initiated in 1992, three major changes were effected in agricultural trade. First, channelling of trade was abandoned and government stopped determining the value or nature of the imports or exports, except for exports of onion and import of cereals, pulses and edible oils. Second, most of the quantitative restrictions on agricultural trade flows were dismantled. Three, there was some reduction in tariffs.

The move towards trade liberalization during the period was triggered both by internal policy assessments as well as external developments such as the WTO Uruguay Round Agreements. Beginning in 1996, strong pressure was put on India by several developed countries to remove all kinds of quantitative restrictions on imports as it was found that India was not suffering from a balance-of-payments problem and this required a WTO member country to remove quantitative restrictions. Thus in order to make its policy consistent with WTO obligations, India removed the QRs on 714 items including 142 commodities belonging to the category of agricultural commodities during 1999-00. On April 1st, 2001 India eliminated the last quantitative restrictions on 715 six-digit tariff lines including 142 tariff lines pertaining to agriculture.

The trade policy announced for the period 2002 to 2007 has taken a number of measures to prevent any negative impact of QR removals on the agricultural sector. Import of agricultural products like rice, wheat, maize, other coarse cereals, copra and coconut oil were placed in the category of State Trading. The government also monitors imports of a number of agricultural products considered to be sensitive, including milk products, fruit and nuts, coffee, tea, spices, cereals, and edible oils. The authorities maintain that the only measure that can be taken in case of a surge in imports of these products is an increase in the applied rates of customs duties within their respective bound rates.
In recent years, agricultural exports have received special attention from the government. Under the Special Focus Initiative package for agriculture, in its export-import policy 2002-07, India took additional steps to boost exports of agricultural products. Agri-export zones were established to encourage exports of certain products. The Vishesh Krishi Upaj Yojana (special agricultural products scheme) which was introduced in 2004 promotes exports of fruit, vegetables, flowers, minor forest produce, dairy, poultry, and their value-added products. Though over the years India has gradually removed prohibitions, licensing, and other restrictions on exports, in order to maintain domestic supplies and stability in domestic prices notifications were made from time to time to restrict exports or lift export restrictions.

In summary, though the protection in agricultural trade has declined over time, India continues to use trade policy instruments to support its overall goals of food self-sufficiency and price stability. Thus, tariffs, import licences and export restrictions as the main instruments of trade policy, continue to be used from time to time to ensure sufficient domestic supply of key products. The section below analyzes how these key trade policy instruments were used over time in case of key crops like, wheat, rice, oilseeds and sugarcane, in order support the overall goals of food self-sufficiency and price stability.

5.2 Commodity specific external trade policy

5.2.1 Wheat

From the 1980s to early 1990s India protected its wheat sector with quantitative restrictions on both imports and exports. Wheat trade has been under government control, and the import and export quantities reflect government decisions made during each year as well as across the years in managing supply, demand, stocks and food prices to strengthen domestic food security. Quantitative controls on exports were administered through the Food Corporation of India (FCI). According to the trade policy followed from 1988 to 1991, the export of wheat was restricted through licensing. During 1992-97, wheat was kept under the negative list but the export was

\[ \text{2 The full list of products is in the Foreign Trade Procedures, Appendix 37A. Viewed at: http://dgft.delhi.nic.in/} \]

\[ \text{3 Importation/exportation under the category is subject to restriction on total quantity or on price, such as Minimum Export Price (MEP) issued as public notice by the competent authority from time to time. It also includes the items kept under canalized list, where goods can be exported/imported only by Government-designated agency.} \]
allowed freely, as long as it did not exceed the ceiling limit stipulated from time to time, at a price above MEP. This policy was followed till 1997, except for the period between 1995 and 1996 when the government attempted to boost wheat exports. In 1995, government placed wheat export in the open category and released an export ceiling of 2.5 million tonnes for export of non-Durum wheat from the open market without any MEP during the year 1995-96. But as exports picked up, domestic prices of wheat rose and the government, fearing unrest, put a ban on wheat export. Therefore, till 1997, export of wheat from India was restricted and subjected to minimum export price. Since then, the export restrictions were removed in phased manner, first, by abolishing the condition of MEP in 1998 and second, by removing the ceiling limit on export of wheat and its products in April 2002, subject to the condition that stocks in the central pool are not lower than 14.3 million tonnes at any point of time. Government started providing budgetary subsidies since 2000 to support exports of surplus wheat when the combination of declining world prices and higher domestic prices made Indian wheat uncompetitive in world markets. Table 5.1 shows that during 2001 to 2005 substantial amount of export subsidies were paid to make it worthwhile for private traders to help dispose of large excess wheat stocks. In 2005, the Government halted export subsidies because of tightening domestic supplies and increased Indian competitiveness in international markets, although private traders remain free to export wheat. Following a sharp fall in government’s annual food grain procurement because of good open market prices and lower production, India banned exports of wheat and wheat products in 2007.

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity (lakh tonnes)</th>
<th>Rate of subsidy (Rs/qtl)</th>
<th>Amount of subsidy (Rs lakh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>21.53</td>
<td>468.40</td>
<td>100850.53</td>
</tr>
<tr>
<td>2001-02</td>
<td>37.95</td>
<td>430.15</td>
<td>163242.56</td>
</tr>
<tr>
<td>2002-03</td>
<td>73.91</td>
<td>445.27</td>
<td>329098.71</td>
</tr>
<tr>
<td>2003-04</td>
<td>71.75</td>
<td>379.15</td>
<td>272003.54</td>
</tr>
<tr>
<td>2004-05</td>
<td>8.45</td>
<td>353.19</td>
<td>29844.62</td>
</tr>
</tbody>
</table>

Source: Annual reports of Food Corporation of India, various issues

In the case of import, trade policies were changed when quantitative restrictions on imports were lifted and replaced by tariffs in the mid-1990s. There was zero customs

4 Please refer to section under trends in wheat price in chapter 4
duty on import of wheat until 1999 and a check on imports was kept through quantitative restrictions and canalisation. Removal of quantitative restrictions and freeing of imports in mid-1999 led to sudden importation of wheat. This forced the country to impose varying rate of tariff to regulate wheat importation. As a result, the wheat tariff which was initially set at zero was raised to 50 percent on December 1st, 1999 to curb imports into southern India at a time when surpluses were growing in the north\(^5\), which continued till January 2006. In view of inadequate stocks with public agencies it was decided in February 2006, that government run agencies can import wheat at zero duty. Later on during the year, the previous major role of STEs in import was eliminated in June 2006 by announcing that wheat imports would no longer be a monopoly of the Food Corporation of India (FCI). Reacting to the surge in wheat prices, initially, the government in June 28\(^{th}\), 2006 decided to reduce the customs duty from 50 percent to 5 percent for private agencies along with the standards of quality applicable only to the imports made by the public sector and after that in September, 2006 the government allowed private traders to import wheat at zero duty\(^6\). Therefore, there appears to be a tendency in food policy to use trade policy instruments more frequently since 2000 compared to earlier decades.

5.2.2 Rice

Before liberalization, a restrictive trade policy was followed in the case of rice. There was zero customs duty until 1999 and imports had been subject to quantitative restrictions (QRs) and canalization. Imports were restored only when domestic production dropped significantly. However, since 1998-99, trade policy witnessed a major shift when quantitative restrictions on imports were lifted and replaced by tariffs to meet WTO commitments. This resulted in import of 35 thousand tonnes of rice in 1999-2000 and 13 thousand tonnes during 2000-01. With the decline in international prices\(^7\) of rice during 1999-2000 and 2000-01 imports of low grade rice became attractive, mostly to some of the eastern states of the country. To keep a check on such undesirable imports, in 2002-03, India levied a 70 percent duty on milled rice import and 80 percent on paddy, brown rice and broken rice. This import tariff

\(^5\) Milling industries in south found landed cost of imported wheat lower than the transporting domestically from north say Punjab.

\(^6\) Information regarding chronology of wheat trade policy was collected from various media sources along with custom notification of DGFT.

\(^7\) Please refer to section under trends in rice price in chapter 4
structure was maintained till September 2009, except for the period between March 20th, 2008 and March 31st, 2009 when government allowed duty-free import in order to control inflation. In a subsequent move, as the twin-impact of drought and floods deepened fears of a dip in output, on October 26th, 2009 the government scrapped import duty on “semi-milled or wholly milled rice, whether or not polished or glazed” till September 2010 to augment domestic supply (The Hindu Business Line, October 27th, 2009).

Export restrictions on rice, historically imposed through State trading, quotas, and minimum export prices, have been progressively liberalized. A different policy has been followed for common rice and basmati rice. While, there was no restriction on export of basmati rice, export of common rice was restricted through canalization, minimum export prices and export quotas till 1991 (according to trade policy 1988 to 1991). There were restrictions on stocking rice beyond a limit unless there was an export order in hand (Datta, 1996). The devaluation of the Indian rupee in 1991 along with relaxation in export controls on common rice during 1992 changed the situation dramatically. As per the trade policy for 1992-97, though rice was kept in the negative list, its export was freely allowed subject to MEP and registration of contracts with APEDA. Export controls on all varieties of rice were abolished in October 1994, which further improved possibility of rice export (Bhasin 1996).

In order to liquidate excess stocks, a scheme for export of food grains from the central pool was adopted in the year 2000. As part of that, a decision was taken to offer food grain for export at a price “equal to the economic cost minus two year carrying cost but not lower than the central issue price for BPL”. The scheme which was extended to rice as well in the subsequent year led to a record growth in India’s rice export. The quantities of rice exported and subsidy provided by the government during the years 2000 to 2004 are presented in the table 5.2. On a review, it was decided to stop fresh allocation from 11th August 2003. After meeting the pending commitments of exports, sale of food grains for commercial exports have been totally stopped w.e.f. 1st

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8 The Cabinet has allowed Public Distribution Department to enter into counter trade/or extend commodity assistance in the form of food grains to the poor or needy countries on terms decided on a case to case basis. The humanitarian assistance in the form of food grains has been extended to Cambodia, Afghanistan, Zambia, Tajikistan, Myanmar, Tanzania, Lesotho, Chad, Iraq etc. on the recommendations of Ministry of External Affairs (Annual Report: Department of Food and Public Distribution, 2005-06)
In October 2007, government put a ban on non-basmati rice exports to manage rising inflation. However, the government allowed the shipping abroad of about two million tonnes only via diplomatic channels. The government’s decision to ban non-basmati exports has brought India down to fourth position, whereas Pakistan has moved up by one place to third rank in the list of top rice exporters in the world in 2008-09 (Commodity online, July 16th, 2009).

Table 5.2: Rice quantities exported and subsidy provided by Food Corporation of India; 2000-01 to 2004-05

<table>
<thead>
<tr>
<th>Financial years</th>
<th>Quantity (Lakh tonnes)</th>
<th>Rate of subsidy (Rs/qtl)</th>
<th>Amount of subsidy (Rs Lakh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-01</td>
<td>0.47</td>
<td>466.04</td>
<td>2202.40</td>
</tr>
<tr>
<td>2001-02</td>
<td>24.69</td>
<td>513.69</td>
<td>126820.19</td>
</tr>
<tr>
<td>2002-03</td>
<td>77.69</td>
<td>570.20</td>
<td>442989.43</td>
</tr>
<tr>
<td>2003-04</td>
<td>27.75</td>
<td>555.70</td>
<td>154188.72</td>
</tr>
<tr>
<td>2004-05</td>
<td>0.65</td>
<td>492.29</td>
<td>3199.92</td>
</tr>
</tbody>
</table>

Source: Annual report of Food Corporation of India, various issues

5.2.3 Oilseeds and edible oils

From the 1970s until 1994, India protected its oilseed sector with quantitative restrictions on both imports and exports and annual import and export quantities were determined by an inter-ministerial committee based on domestic demand and supply conditions. Imports were particularly restricted during 1989-94, a period corresponding with the Technology Mission on Oilseeds. In a situation of excess domestic demand for edible oils, non-tariff barriers played a crucial role in setting the domestic price level in the oilseed sector. Imports of oilseeds and its products were canalized through the State Trading Corporation (STC) and the Hindustan Vegetable Oils Corporation (HVOC), and were then channelled to state governments for sale through the Public Distribution System (PDS) at administered prices.

Since 1994, when India began conforming to WTO rules and replacing quantitative trade restrictions with tariffs, oil imports have been placed under open general license (OGL) allowing imports by private traders subject to applied tariffs. In March 1994, import of palmolein oil was permitted under OGL with a duty rate of 65 percent for private traders and at a concessional duty of 20 percent for the state agencies NDDB and STC. This was followed by a measure to enlarge the basket of oil under OGL imports on March 1st 1995, when all vegetable oils except coconut, RBD palm oil and
palm stearin\textsuperscript{9} were placed under OGL with an import tariff of 30 percent; STC and NDDB continued to benefit from the 20 percent concessional tariff rate. But oilseeds import remained under the government's domain. During 1995-98, India started moving towards a liberal and relatively simple tariff structure with a common applied \textit{ad valorem} (percentage) tariff for all oils progressively lowered to a uniform rate of 16.5 percent by the middle of 1998\textsuperscript{10}. In 1998, the government allowed imports of sunflower seed and soybean in cracked and split form at an import duty of 40 per cent. It was realized that cheap imports made production of oilseeds less competitive. A high import duty and a few restrictions were placed in order to prevent excessive imports. Futures trading in oilseeds got reintroduced from 1999. However, since 1998, the government began making frequent tariff adjustments to protect domestic oilseed producers and processors from imports and to smooth the effect of fluctuating world prices on domestic consumers (Figure 5.1 & 5.2). Though, applied tariff rates fell in 1999 after an initial hike in June 1998, the trend after April 2000 was to resort to incremental increases of applied rates for all oils, with adjustments being made to the relative rates on different types of oil.

\textbf{Figure 5.1: India's import tariff on crude oil: 1991 to 2005}

![Figure 5.1: India's import tariff on crude oil: 1991 to 2005](image)

Source: Government of India

\textsuperscript{9} Coconut oil, RBD palm oil and palm stearin were remain canalized

\textsuperscript{10} In 1997, a tariff surcharge and a special additional duty were added to the basic duty, but these were applied uniformly across all products and did not affect relative tariffs.
Table 5.3 gives the detailed chronology of trade policy changes in the Indian edible oil sector since 1994. As can be seen, in December 1999, government introduced higher tariffs for refined versus crude oils in order to shift imports from refined soft oils to crude oils and improve capacity utilization in the refining sector. Again in November 2000, tariffs on all oil imports were raised. The change in March 2001 was aimed at reducing the differentials between crude and refined oil tariffs, and providing limited concessions to vanaspati manufacturers. Because tariffs on soybean oil were bound at 45 percent, this round of tariff hikes led to large duty differentials between soybean oil and other major imported oils. The tariff adjustments, along with prevailing international prices, led to significant incentives to import soybean oil over other oils.

In August 2001, the government modified the oil tariff regime by setting minimum tariff values (reference prices) to compute import duties. The government established a tariff rate value (TRV) system for palm oil in August 2001 and for soybean oil in September 2002, to prevent under-invoicing, i.e. reporting low import prices to evade tariffs by importers, and establish a government reference price for tariff calculation. Although the tariff values were amended several times to reflect changing market conditions, the system created new potential distortions when actual market prices diverged from the tariff values used by the government (Dohlman et al, 2003).
Table 5.3: Summary of Import policy for edible oil: 1994-2007

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>April, 1994</td>
<td>Import of RBD Palmolein placed on OGL with 65% import duty.</td>
</tr>
<tr>
<td>March, 1995</td>
<td>Import of all edible oils (except coconut oil, palm kernel oil, RBD palm oil, RBD palm stearin) placed on OGL with 30% import duty.</td>
</tr>
<tr>
<td>1996-97</td>
<td>Further reduction in import duty to 20% + 2% (special duty of customs) bringing total import duty to 22%. Another special duty of customs @ 3% was later imposed bringing the total import duty to 25%.</td>
</tr>
<tr>
<td>July, 1998</td>
<td>Import duty further reduced to 15%.</td>
</tr>
<tr>
<td>1999-2000 (Budget)</td>
<td>Import duty raised to 15% (basic) + 10% (surcharge) =16.5%.</td>
</tr>
<tr>
<td>December, 1999</td>
<td>Import duty on refined oils raised to 25% (basic) + 10% (surcharge) = 27.5%. In addition, 4% SAD levied on refined oils.</td>
</tr>
</tbody>
</table>
| June, 2000    | Import duty on crude oils raised to 25% (basic) + 10% (surcharge) = 27.5%  
               | Import duty on refined oils raised to 35% (basic) + 10% (surcharge) + 4% (SAD) = 44.04%.                                                      |
               | Import duty on Crude Palm Oil (CPO) for manufacture of vanaspati retained at 15% (basic) + 10% (surcharge) =16.5%.                        |
| November, 2000| Import duty on CPO for manufacture of vanaspati raised to 25% and on crude vegetable oils raised to 35% . Import duty on CPO for other than vanaspati manufacture raised to 55%.  
               | Import duty on refined vegetable oils raised to 45% (basic) + 4% (SAD) = 50.8%.                                                            |
               | Import duty on refined palm oil and RBD Palmolein raised to 65% (basic) + 4% (SAD) = 71.6%.                                                   |
| March, 2001 (As amended on 26.4.2001) | Import duty on crude oils for manufacture of vanaspati/refined oils by the importers registered with Directorate of VVO&F raised to 75% (for others import duty levied at 85%) except soybean oil, rapeseed oil and CPO at 45%, 75% and 75% respectively.  
               | The duty on refined oils including RBD Palmolein raised to 85% (basic) except in the cases of Soybean Oil and Mustard oil where the duty is placed at 45% (basic) and 75% (basic) respectively due to WTO binding. In addition, 4% SAD levied on refined oils. |
| October, 2001 | Import duty on Crude Palm Oil and its fractions, of edible grade, in loose or bulk form reduced from 75% to 65%.                            |
| November, 2001| Import duty on crude sunflower oil or safflower oil reduced to 50% up to an aggregate of 1,50,000 MTs (Tariff Rate Quota) of total imports of such goods in a financial year subject to certain condition. |
Import duty on refined rape, colza or mustard oil reduced to 45% up to an aggregate of 1,50,000 MTs (Tariff Rate Quota) of total imports of such goods in a financial year subject to certain condition.

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>March, 2002</td>
<td>Status quo on import duty structure of vegetable oils/edible oils maintained. Import of vanaspati from Nepal be levied SAD @ 4%.</td>
</tr>
<tr>
<td>August, 2002</td>
<td>SAD is not applicable on vanaspati imported from Nepal under TRQ.</td>
</tr>
<tr>
<td>March, 2003</td>
<td>Status quo on import duty structure of vegetable oils/edible oils maintained.</td>
</tr>
<tr>
<td>April, 2003</td>
<td>Import duty on Refined Palm Oil and RBD Palmolein reduced from 85% to 70% and SAD not applicable on edible oils.</td>
</tr>
<tr>
<td>July, 2004</td>
<td>Import duty on Refined Palm Oil and RBD Palmolein raised from 70% to 75%</td>
</tr>
<tr>
<td>February, 2005</td>
<td>Import duty on Crude Palm Oil / Crude Palmolein raised from 65% to 80% and Import duty on Refined Palm Oil / RBD Palmolein raised from 75% to 90%</td>
</tr>
<tr>
<td>2006-2007 (Budget)</td>
<td>With effect from March 1st 2006, edible oils attract a special additional duty of Customs @ 4% and Import Duty on Vanaspati and similar products raised from 30% to 80%.</td>
</tr>
<tr>
<td>August, 2006</td>
<td>With effect from August 8th 2006, special additional duty of customs not applicable on vanaspati imported from Nepal w.e.f. August 11th 2006 Import duty on Crude Palm oil/Crude Palmolein reduced from 80% to 70% and Import duty on refined Palm Oil/RBD Palmolein reduced from 90% to 80%.</td>
</tr>
<tr>
<td>January, 2007</td>
<td>From January 24th 2007, import duty on Crude Palm Oil/Crude Palmolein reduced from 70% to 60%, Import duty on refined Palm Oil/RBD Palmolein reduced from 80% to 67.5%, import duty on Crude Sunflower oil reduced from 75% to 65% and Import duty on refined Sunflower oil reduced from 85% to 75%.</td>
</tr>
</tbody>
</table>
Until 1995, exports of all edible oilseeds and oils were banned except for hand-picked select (HPS) groundnut, which was placed under OGL. Oil meals were exported without any condition of licence\(^{11}\). But exporters were required to take/register export contracts. This registration rule was abolished in 1995. Also in that year, export controls/quantitative ceilings on sunflower seed and rapeseed mustard were removed. However, exports of other oilseeds continued to be controlled and permitted against licence and a registration-cum-allocation certificate issued by APEDA. Later on export of oilseeds for consumption purposes was made free except for niger-seed, which is canalized through state agencies. Rapeseed/mustard seed exports are also free but subject to quarantine restrictions. From April 2001, export restrictions have been removed on many edible oils such as groundnut oil. But they are permitted only against a licence.

### 5.2.4 Sugar

Sugar is included under the Essential Commodities Act (ECA) of 1965 and hence all the aspects of the industry including marketing and distribution are highly regulated. Until July 2000 ECA was applied to regulate the stocks and turnover of sugar traders, but these controls were lifted in July 2000 and August 2001. However in June 2003 ECA was invoked as a *de facto* import restriction by obliging importers to obtain permission to resell imported sugar, on the grounds that they compete with Indian mills and therefore should be subject to the same “release order” restrictions.

Until 1980s sugar imports were canalised and government was having monopoly in sugar import; but subsequently private firms were allowed subject to import licensing. In March 1994, when world sugar prices were high\(^{12}\), import licensing was dropped and tariffs were cut to zero. This policy remained in place for the next four years. Again in 1998 when world sugar prices started declining government reversed these policies and between April 1998 and February 2000 tariffs were increased in steps from zero to 40 percent. In January 1999, government again imposed the Essential Commodities Act on sugar imports along with making it mandatory to register all sugar import contracts with APEDA in September 1998, which monitors them to

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\(^{11}\) In fact, exports of oil meals, the production of which exceeded domestic demand, were promoted by a variety of export incentive schemes\(^{11}\) established by GOI throughout the 80s and early 90s in an effort to generate foreign exchange.

\(^{12}\) Please refer to section under trends in sugar price in chapter 4
evaluate their impact on the domestic industry. Along with import duties sugar imports are also subject to countervailing duty (CVD), as is the case with domestically produced sugar (Table 5.4).

Table 5.4: Indian sugar tariffs and QRs status; 1991-2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Tariffs (Raw Sugar) %</th>
<th>Tariffs (Refined) %</th>
<th>Domestic taxes Rs/Qtl</th>
<th>QR status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>40</td>
<td>60</td>
<td>64</td>
<td>Restricted</td>
</tr>
<tr>
<td>1992</td>
<td>40</td>
<td>60</td>
<td>85</td>
<td>Restricted</td>
</tr>
<tr>
<td>1993</td>
<td>40</td>
<td>60</td>
<td>85</td>
<td>Restricted</td>
</tr>
<tr>
<td>1994</td>
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<tr>
<td>1995</td>
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<td>Free</td>
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<td>0</td>
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<td>85</td>
<td>Free</td>
</tr>
<tr>
<td>1998</td>
<td>0</td>
<td>0</td>
<td>85</td>
<td>Free</td>
</tr>
<tr>
<td>Apl 98-Jan 99</td>
<td>5</td>
<td>5</td>
<td>85</td>
<td>Free</td>
</tr>
<tr>
<td>Jan 99-Apl 99</td>
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<td>2008</td>
<td>60</td>
<td>60</td>
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</table>

Source; Adopted from Pursell, 2007

Before 1991, sugar exports were canalized i.e. they were a legal monopoly of the government trading company, STC. During the period of state export monopoly, whenever government found excess supply in the market, sugar was exported if necessary at a loss in order to maintain a presence in quota markets and the sugar export quotas and losses were allocated between the sugar mills through the Sugar Export Promotion Act of 1958\textsuperscript{13}. The 1991/92 trade policy reform de-canalized sugar export by allowing sugar to be exported by Indian Sugar and General Export Import Corporation (ISGIEIC) now know as Indian Sugar Exim Corporation (ISEC), a private association of Indian sugar mills. But, as previously, the quantities exported were controlled by the Ministry of Food and Civil Supplies. Accordingly, export quotas were allocated to sugar mills. In January 1997 individual sugar mills and

\textsuperscript{13} Sugar Promotion Act 1958, gave the power to STC to administer the losses and were shared by the sugar mills in proportion to their production.
private traders were allowed to export sugar, but the overall level of export was still controlled by the government, and export quotas were allocated by APEDA. In 1999 and 2000, export policy was reversed to actively encourage sugar export as a way to reduce excess accumulated stock and assisting sugar mills facing severe financial difficulties. This was done in April 2001 by first removing the APEDA's control over export, and by introducing and gradually increasing export subsidies for sugar (Pursell, 2007).

In summary, it is evident from the discussion that external trade in agricultural commodities has been liberalized and most of the alterations took place only from 1991 when India opened her markets to world trade. On the whole, the tariffication of farm commodities during the post-liberalization period resulted in a significant decrease in the level of protection and hence a move towards a greater openness. However, despite a decline in the rate of import tariffs, some of the commodities continue to enjoy protection through canalization and licencing as explained in the preceding sections. The main factors behind these non-tariff barriers were to protect domestic agriculture from world price volatility and import surges and ensure food self-sufficiency.

5.3 Agricultural trade flow and commodity composition

India initiated liberalisation of its economy and trade with economic reforms in June 1991. As a part of these reforms India shifted to a market-determined exchange rate and relaxed restrictions on agricultural exports. This created a favourable environment for agricultural exports. Since 1993-94, agricultural exports started increasing in leaps and bounds. Export earnings doubled in three years between 1992-93 and 1995-96. Imports also increased at almost the same pace and net surplus generated by agriculture trade increased from Rs. 6 thousand crores during 1992-93 to Rs. 14.5 thousand crores during 1995-96.

The increase in agricultural exports that resulted from domestic liberalization during 1992-93 to 1994-95, was strengthened during the initial years of the WTO regime and exports touched Rs. 24 thousand crores in 1996-97. However, after 1996-97 the growth in agricultural exports slowed down (Table 5.5) and the value increased only marginally to Rs. 25 thousand crores by the year 1999-2000. This happened despite
further liberalization in agricultural exports announced in the Export-Import policy for 1997-2002. Once again agricultural exports started rising from the year 2000-01 and reached Rs. 50 thousand crores in 2005-06 which was more than 70 percent higher than exports during 2000-01. The decline in exports growth during the late 1990s was caused by the sharp fall in global prices (see chapter 4 for details) and is in keeping with the global trend. However this dip in prices did not cause a decline in the growth of India’s imports during the late 1990s.

Table 5.5: Agricultural trade and its share in GDP agriculture and total trade

<table>
<thead>
<tr>
<th>Year</th>
<th>Agricultural trade in Rs. Crore</th>
<th>Share in GDP Agri. %</th>
<th>Share in total trade %</th>
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<tr>
<td></td>
<td>Import</td>
<td>Export</td>
<td>Import</td>
</tr>
<tr>
<td>1990-91</td>
<td>1205.86</td>
<td>6012.76</td>
<td>0.75</td>
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<tr>
<td>1991-92</td>
<td>1478.27</td>
<td>7838.04</td>
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<tr>
<td>1992-93</td>
<td>2876.25</td>
<td>9040.3</td>
<td>1.38</td>
</tr>
<tr>
<td>1993-94</td>
<td>2327.33</td>
<td>12586.55</td>
<td>0.96</td>
</tr>
<tr>
<td>1994-95</td>
<td>5937.21</td>
<td>13222.76</td>
<td>2.13</td>
</tr>
<tr>
<td>1995-96</td>
<td>5890.10</td>
<td>20397.74</td>
<td>1.94</td>
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<tr>
<td>1996-97</td>
<td>6612.60</td>
<td>24161.29</td>
<td>1.82</td>
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<td>1997-98</td>
<td>8784.19</td>
<td>24832.45</td>
<td>2.27</td>
</tr>
<tr>
<td>1998-99</td>
<td>14566.48</td>
<td>25510.64</td>
<td>3.29</td>
</tr>
<tr>
<td>1999-00</td>
<td>16066.73</td>
<td>25313.66</td>
<td>3.48</td>
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<tr>
<td>2000-01</td>
<td>12086.23</td>
<td>28657.37</td>
<td>2.58</td>
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<tr>
<td>2001-02</td>
<td>16256.61</td>
<td>29728.61</td>
<td>3.11</td>
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<tr>
<td>2002-03</td>
<td>17608.83</td>
<td>34653.94</td>
<td>3.94</td>
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<td>2003-04</td>
<td>21972.68</td>
<td>36415.48</td>
<td>4.13</td>
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<td>2004-05</td>
<td>22811.84</td>
<td>41602.65</td>
<td>4.13</td>
</tr>
<tr>
<td>2005-06</td>
<td>21499.22</td>
<td>49216.96</td>
<td>3.44</td>
</tr>
</tbody>
</table>

Source: Computed based on data drawn from agriculture statistics at a glance, Ministry of Agriculture, various issues

The growth in imports and exports after 1990-91 was much higher than the growth in GDP. As a result the share of imports and exports in GDP increased. Imports which accounted for less than 1 percent of India’s agricultural GDP during the early 1990s, increased to the level of more than 3 percent by 2005-06. Similarly, the share of exports in GDP from agriculture increased from around 4 percent in early 1990s to more than 7.5 percent in 2005-06. These changes indicate that import-affected
agriculture (agricultural imports as share of agricultural GDP) has been making a greater impact on domestic agriculture than before. The agricultural trade intensity ratio (agri-trade/agri-GDP*100) shows that there has been a significant increase in the trade orientation of Indian agriculture after 1990-91, with the ratio increasing from around 5 percent in the early 1990s to more than 11 percent by 2005-06. Despite this increase in agricultural trade, import of agricultural products is relatively small compared to the total import of the country. In most of the recent years agricultural imports comprised around 6 percent of India's total imports. While in the earlier periods, agricultural exports were more than four times of agricultural imports, more recently agricultural exports were higher by one-and-a-half times only. Therefore, after 1990-91 there was a decline in the share of agricultural export and an increase in the share of agriculture imports in total exports and imports of the country.

The trends in import and export show that the integration of Indian agriculture with the global economy has increased considerably after 1990-91, though the ratio of trade to GDP is still very low compared to most of the developing Southeast Asian countries. Liberalization was initially highly favourable for growth of exports and imports, but post WTO the situation has turned out to be highly adverse for India's agriculture exports. The section below examines the trade flow of different commodities with a view to identify the items and products where India has lost ground to others, where it has gained and where it has maintained ground.

During the early-90s marine products topped the list of agricultural exports closely followed by export of oilmeal. Other important items of export were tea, cashew nut, basmati rice, coffee, spices and tobacco. Liberalization of non-basmati rice in mid-90s provided impetus to its export. As a result, rice export figured at the top of the list of exports during 1995-96 and during 1998-99. Out of two grades of rice, basmati rice showed a steady upward trend in its export but non-basmati rice showed violent year to year fluctuations (Table 5.1).

From table 5.6 we can identify the commodities which explain the fall in agricultural export from 1996-97. The worst affected exports are of oilmeal. Exports of oilmeal have declined from Rs. 3495 crores in 1996-97 to the level of Rs. 1638 crores in 1999-2000. Similarly, the export value of cotton has declined from Rs. 1575 crores in 1996-97 to a meager Rs. 77 crores in 1999-2000.
Table 5.6: India's export of selected agricultural commodities (value in Rs. Crores): 1991-2006

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<td>132</td>
<td>361</td>
<td>223</td>
<td>420</td>
<td>537</td>
<td>369</td>
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<td>329</td>
<td>603</td>
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<td>Rice Basmati</td>
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<td>499</td>
<td>801</td>
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<td>851</td>
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<td>1843</td>
<td>2058</td>
<td>1993</td>
<td>2824</td>
<td>3043</td>
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<td>Rice (other than Basmati)</td>
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<td>175</td>
<td>225</td>
<td>340</td>
<td>3717</td>
<td>1925</td>
<td>1685</td>
<td>4404</td>
<td>1346</td>
<td>777</td>
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<td>3773</td>
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<td>3945</td>
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<td>42</td>
<td>367</td>
<td>698</td>
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<td>1330</td>
<td>1760</td>
<td>2391</td>
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<td>558</td>
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<td>1037</td>
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<td>376</td>
<td>546</td>
<td>1053</td>
<td>1503</td>
<td>1427</td>
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<td>994</td>
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<td>Tobacco mfd. &amp; unmfd.</td>
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<td>377</td>
<td>474</td>
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<td>255</td>
<td>447</td>
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<td>118</td>
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<td>59</td>
<td>108</td>
<td>208</td>
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<td>19</td>
<td>31</td>
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<td>87</td>
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<td>250</td>
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<td>393</td>
<td>569</td>
<td>612</td>
<td>794</td>
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<td>2349</td>
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<td>354</td>
<td>178</td>
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<td>506</td>
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<td>386</td>
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<td>347</td>
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<td>627</td>
<td>709</td>
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<td>3381</td>
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<td>4369</td>
<td>5125</td>
<td>6367</td>
<td>5898</td>
<td>6928</td>
<td>6106</td>
<td>6469</td>
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<td>Cotton Raw including Waste</td>
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<td>654</td>
<td>140</td>
<td>204</td>
<td>1575</td>
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<td>43</td>
<td>50</td>
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<td>Total agriculture export</td>
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<td>36415</td>
<td>41603</td>
<td>49262</td>
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Note: Calendar year 1991 corresponds to agricultural marketing year 1990-91 and so on
Source: Same as in table 5.5
Almost similar has been the case with exports of sugar. Decline in export has also been witnessed in the case of tobacco and pulses till 2001-02. Though, the export of traditional items like tea, cashew, spices and coffee maintained their status till early years of post-WTO period, but started falling since 1998-99/1999-2000. Once these commodities picked up, the aggregate agricultural exports also picked up.

The experience of the last ten years shows that export of horticultural products, dairy and meat products have not been adversely affected by post-WTO trade developments and hold growing prospects for exports.

Changes in India’s imports of selected agricultural commodities can be seen from the data presented in Table 5.7. The table shows that India is no more dependent on rice imports. Despite very high growth in production and claim of self-sufficiency in foodgains, India occasionally imports large quantity of wheat (please refer to section 5.4 of the chapter for detailed discussion). Like wheat, India sometimes went for large import of sugar also. Import of pulses was increasing till 1997-98 and started fluctuating thereafter. The other items whose imports were significant are fruits and nuts, cashew nut and cotton. In the case of cashew nut, import is mainly for re-export of processed cashew nuts because India has a labour cost advantage in this commodity. The composition of imports further reveals that most of the increase in agricultural imports was on account of increases in imports of edible oil. Vegetable oils accounted for more than 45 percent of total agricultural imports in the post WTO period. The changes in composition of imports that have occurred in the last 15 years is the continuation of the trends originating in the mid-1970s i.e., decline in the imports of cereals especially wheat and increase in the imports of other food items like oil and pulses. The share of edible oil imports has increased massively, while the share of pulses has declined. The imports of these commodities are a matter of concern and have been raised earlier in debates (Chand et al 2004; Sathe 2004).

To sum up, the discussion on India’s agricultural trade flow and commodity composition highlights the fact that trade in agricultural commodities is having a greater impact on domestic agriculture since 1991. However, the initial years of liberalization were highly favourable for growth of exports and imports but post WTO years the situation turned out to be highly adverse for India’s agricultural exports.
Table 5.7: India’s import of selected agricultural commodities (value in Rs. Crores): 1991-2006

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<td>567</td>
<td>593</td>
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Note: Calendar year 1991 corresponds to agricultural marketing year 1990-91 and so on
Source: Same as in table 5.5
The situation has started improving since 2001 with recovery in world prices; as a result, agricultural exports started growing. The worst affected export items were oilmeal, cotton and sugar whereas, export of marine products, and groups of livestock and horticultural products maintained the tempo of growth, continuing from early-90s. The trend in agricultural imports on the other hand, shows that most of the increase in agriculture imports took place due to increases in import of edible oil followed by pulses.

The section below analyzes the trade flow for selected commodities in the light of domestic demand and supply situation, trade policy environment and international prices.

5.4 Trade flows for selected commodities

5.4.1 Wheat

India was often an importer of wheat prior to the 1990s. During the 1990s, however, India has been a marginal exporter on occasion as well as an importer (Figure 5.3). However, since India is a large market, these marginal quantities can be often significant for the world market. India’s wheat trade shows violent year to year fluctuation and presents a very interesting pattern. One or two years of good harvest resulted in the pilling up of wheat stock, which encouraged the country to opt for large exports. This was immediately followed by huge imports. For instance, India exported 2.75 lakh tonnes of wheat during 1987/88, and in the following year imported as much as 18 lakh tonnes. Again India exported 6.60 lakh tonnes of wheat during 1991/92 which was followed by import of 13.64 lakh tonnes in 1992/93. Wheat export which was restricted until 1995 was placed in the open category afterwards. Consequently, exports started picking up and for two consecutive years India exported 6.32 lakh tonnes of wheat during 1995/96 and 11.46 lakh tonnes of wheat during 1996/97, at a time when world prices were at a peak. As exports started to pick up there was upward pressure on domestic wheat prices; due to short fall in supply and depletion of wheat stock with public agencies14 government hastily banned exports of wheat in 1996/97. Simultaneously, it opened up imports of wheat at zero import duty. This was mainly in response to the demand by roller flourmills in the

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14 Only about 3.24 million tonnes of wheat was added to the stock in April 1, 1997
southern part of the country (Hoda and Gulati, 2004). Initially very low levels of import followed but from 1997/98 the world prices of wheat started coming down (see chapter 4 for details), encouraging the country to go in for large imports and India imported 15, 18 and 14 lakh tonnes of wheat during 1997/98, 1998/99 and 1999/2000 respectively. A very low level of world prices in 1999/2000, forced the country to impose a varying rate of tariff to regulate wheat importation. The major imports to India were from the countries like Australia, France, Belgium, Turkey, Ukraine, etc.

Figure 5.3: India’s export and import volume of wheat (000' tonnes): 1980/81 to 2007/08

There was huge build up of wheat stock with public agencies after 1997/98, and stocks reached a peak of 26 million tonnes in 2002/03. This level of stock was equal to 36 percent of total wheat produced in the country in 2002/03 (Appendix table 5.1). Government faced serious difficulty in disposing of these large stocks as domestic demand fell short of supply at ruling prices, which were largely governed by government actions related to the minimum support price (MSP), open market sales, and public distribution system (PDS) prices (Chand, 2007). Consequently, India used the export option to liquidate these stocks at a highly subsidized price through

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15 Indian food grain sector was faced with conflicting pressures: procurement prices had been raised substantially between 1996-99, world prices, which were at peak in 1996 had dropped to the lowest levels by 1999-2000, and domestic production had improved. In 1997, the GOI also reoriented the program of public distribution system (PDS) from being untargeted to one targeted specifically for the poor. This targeting exercise curtailed the PDS demand for foodgrains substantially. As result of this constellation of forces, food grain stocks (including both rice and wheat) with the Government accumulated to an unprecedented level, forcing the Government to raise import duty to stem the inflow.

16 Because of the decline in international prices and rise in domestic prices it became difficult to dispose of the large stock of wheat at a price matching the cost of these food grains to the Government. Thus the Government was forced to release wheat for export at a price much lower than acquisition cost.
its agencies such as STC, MMTC and PEC. India exported 2.65 million tonnes during 2001/02 and 3.67 million tonnes during 2002/03. Despite a fall in production to the tune of 7 million tonnes in 2003/04 relative to the previous year, India exported more than 4 million tonnes of wheat during 2003/04. Large scale export continued during 2004/05 and India continued to export wheat till 2005/06. During the period between 2001/02 and 2005/06, India’s total wheat export was 13.17 million tonnes constituting around two and half percent of world’s total wheat export during the period. India’s contribution to the world’s total wheat export was highest (around 4 percent) during 2003/04 (Figure 5.4). Because of the decline in public procurement due to good open market prices and lower production there was a decline in wheat stocks with govt. agencies, which forced the government to ban wheat export in April 2007.

![Figure 5.4: India's wheat export volume and percent share in World's total export of wheat: 1980/81 to 2007/08](image)

Sources: DGCI&S, Calcutta, Ministry of Commerce and FAO STAT

### 5.4.2 Rice

India had never been among the major rice exporting countries until it attained self sufficiency in rice production in the early 1980s. The growing demand for basmati rice in the international market enabled India to increase its export gradually to a level of over four lakh tonnes by 1989-90, constituting around 2.8 percent of world’s total rice export. In the early 1990s, total rice export trade increased somewhat to reach more than 7 lakh tonnes in 1993-94. Until 1994, India had been exporting comparatively small quantities of fine (basmati) rice, as export only of this variety was permitted, subject to a minimum export price stipulation.
Successive good harvests and increase in rice procurement by public agencies coupled with reduction in off-take due to increase in sales prices resulted in rise in rice stock from the level of 5.07 million tonnes on October 1st, 1992 to 10.87 million tonnes on October 1st, 1994 (Appendix table 5.3). As discussed earlier in the chapter, in order to dispose rice stocks, export of basmati rice was further liberalized in January 1994, by the elimination of minimum export price and a little later the ban on exports of common rice was removed. These steps led to a dramatic increase in export volumes. In the following year, 1995/96, India’s exports of rice went up from less than 1 million to about 5 million MT, making India the second largest exporter of rice in that year. India continued to be a major exporter in the next four years, averaging 3.69 million tonnes per year from 1995-96 to 1998-99 (Figure 5.5).

![Figure 5.5: India’s rice export volume and its share in World’s total rice export: 1980-81 to 2006-07](image)

Source: Appendix table 5.2

Rice exports experienced a big setback during 1999-2000 and 2000-01 because of two reasons. One, international prices of rice dropped sharply after 1998-99 (see chapter 4 for details). Two, domestic prices had been moving up mainly under the pressure of increasing support prices. This reduced the competitiveness and profitability of rice exporters. The net result was the piling up of rice stocks with the government agencies. India’s exports picked up again after November 2000 when it began to subsidize internal and international freight and other costs of marketing exports (Table 5.2) in an attempt to neutralize the high subsidization by OECD countries like the US and FCI started selling rice to traders for export at much lower prices compared to
open market prices since 2001/02. This attracted a positive response as private traders found it more profitable and resulted in an increase in India’s rice exports. Between 2002/03 and 2006/07, India exported on an average around 4.3 million tonnes of rice every year.

The rice trade during the period also witnessed tremendous changes in its composition, particularly after the year 1994-95. Until 1989-90, 90-95 percent of the rice exported from India was of the basmati variety. But its share and volume started dwindling after that due to a spurt in the export of non-basmati rice (Figure 5.6). The share of basmati exports in total rice exports from India decreased from 94 percent in 1989-90 to 46 percent in 1990-91 and further to 39 percent and 8 percent in 1991-92 and 1995-96 respectively. After 1995-96, exports of non-basmati rice have dominated India’s rice trade, constituting around 75 percent of the total quantity of rice exports during T.E.2006-07 (Appendix table 5.2). This sharp decline in basmati rice could be attributed to two factors. First, availability of sufficient stocks with the major buying countries and also to large shipments of superior variety long grain non-basmati rice, and second, stiff competition from cheaper basmati rice produced in Pakistan. In terms of the major markets for India, Saudi Arabia accounted for 39% of the total export value in 2001-02, followed by Nigeria at 8.7%, South Africa at 7.5% and Kuwait at 6.8%. In terms of quantity also, Saudi Arabia was the largest importing country with 26.4% in 2001-02, followed by South Africa at 14.4%, Nigeria at 13.7%, and then Indonesia at 6.4%.

Figure 5.6: India’s total rice export and share of Basmati rice in total rice export: 1980-81 to 2006-07

![Figure 5.6: India's total rice export and share of Basmati rice in total rice export: 1980-81 to 2006-07](image)

Source: Appendix table 5.2
India was a marginal importer of rice on occasion, particularly when world prices were on their downward trend. A big drop in world rice prices during the 1980s resulted in import of rice in small quantities in four years, 1983-84, 1984-85, 1988-89 and 1989-90. Again during the 1990s with a decline in international prices of rice during 1999-2000 and 2000-01, India imported 35 thousand tonnes and 13 thousand tonnes of rice respectively in those two years (Figure 5.7).

5.4.3 Trade in oilseed and products

Trade policy has played an important role in determining the trade volume in India’s oilseed economy. India’s recent large imports of edible oils have been the result of reduced border protection beginning in 1994. The government made frequent adjustments in its trade policy, depending on the domestic demand and supply situation, to protect the interest of oilseed producers and processors, and also to smooth the effect of fluctuating world prices on domestic consumers. The section below discusses the trade pattern in oilseeds and their products.

5.4.3.1 Trade in Edible oils

A careful look at the production and consumption levels of vegetable oils shows that beginning with a level of 4.7 kg/capita/annum in 1977-78, consumption of vegetable oils started rising and reached the level of 7 kg/capita/annum by 1987-88. The slow growth in vegetable oil production compared to growing demand for oils has created a
gap between domestic supply and demand and necessitated massive imports. As a result, India imported an average of 1.4 million tonnes of vegetable oil every year, constituting around 10 percent of the world’s total vegetable oil import and about 36 percent of the total supply by 1987-88 (Appendix table 5.4). The gap between domestic consumption and production has narrowed considerably in the early 1990s, and self-sufficiency has been virtually achieved. The achievement in self-sufficiency in edible oils can be attributed to two main factors; a large increase in production, and a virtual stop in the growth of per-capita consumption. The per capita consumption varied slightly between 6.4 kg/annum to 7.3 kg/annum during the period between 1988/89 and 1994/95. However, domestic production of edible oil started falling from 1997-98 due to a steep decline in domestic prices with the liberalization of edible oil imports. And at the same time consumption started rising due to a consistent increase in per capita income along with low prices of vegetable oils (Figure 5.8). This demand-supply gap has necessitated import of edible oil. Imports of vegetable oils increased rapidly and reached 5 million tonnes, or about 44 percent of domestic supply during 2003-05. In 2006/07, India was the third-largest importer of vegetable oil (5.4 million tonnes) after the European Union (10 million tonnes) and China (8.6 million tonnes), according to Oil World. Import growth was most rapid during 1996-2000, when tariffs were relatively low (varied between 25 to 27.5 percent), and were slowed down by higher tariffs, ranging from 45 percent to 80 percent for different oils, during 2001-05 (as discussed earlier).

Figure 5.8: Production, consumption and imports of edible oil in India, thousand ton

Source: Appendix table 5.4
The sensitivity of Indian importers to price was also reflected in the composition of imported oils. Palm oil, generally the lowest priced oil, has dominated Indian imports since the mid-1990s, accounting for about 65 percent of oil imports during 2000-06. Soybean oil, generally the second cheapest oil in the market, accounted for about 28 percent of imports during 2000-06. Higher priced oils like sunflower oil and oils traditional to the Indian diet, such as peanut and rapeseed oil were imported in only small amounts (Figure 5.9).

Figure 5.9: Composition of India’s vegetable oil imports: 1979-2006

Source: FAO STAT

The Indian import of palm and soybean oil accounted for 15 percent and 13 percent of the world’s total import of palm and soybean oil. With the shift of U.S. exports from concessional shipments to commercial sales after the mid-1990s, the U.S. share in the Indian soybean oil market declined sharply. The Indian soybean oil market is dominated by Argentina and Brazil, who offer consistently lower prices than U.S. suppliers (Dohlman et al., 2003).

5.4.3.2 Trade in oilseed cake meal

Oilcake meal exports from India (Figure 5.10) have increased significantly from 1 million tonnes in 1987 to around 5 million tonnes in 1996, accounting for 10.6 percent of the world’s total oil meal export. The rapid diversification of oil meal exports away from groundnut meals, and towards soybean and rapeseed-mustard seed, has played a critical role in this export performance (World Bank, 1997). Most of the growth during the period has been driven by soybean and rapeseed oil cake exports and to a

151
smaller extent by sunflower exports (Figure 5.11), commodities where there is less of a quality problem. India’s oil meal export started declining from 1997 and reached 1.8 million tonnes in 2002. The decline was more in the case of rapeseed as compared to soybean during the period. Rapeseed oil meal export declined by 80 percent between 1997 and 2002 as against a 52 percent decline in the case of soybean between 1996 and 2002.

**Figure 5.10:** India’s export of oilseed cake meal and its percentage share in World’s total export of oil meal: 1979 to 2006

India’s export of oil meal has slowed due to expanding domestic feed use and slower growth in production. Rapid growth in demand from domestic poultry meat and egg producers along with a decline in production has increased domestic soybean meal
prices relative to world prices, reducing their competitiveness in world markets. Oil meal export again started rising since 2003 and reached the highest ever level of 6 million tonnes in 2006, accounting for 8 percent of the world’s total oil meal export. An increase in domestic production along with a decline in domestic meal prices relative to world prices has played a critical role in this export performance.

5.4.3.3 Trade in oilseeds

India is not a significant importer of oilseeds for processing. Though the government has allowed imports of oilseeds, there has been virtually no import of oilseeds largely because of the safety measures imposed by the government. India’s share in world’s total import of oilseeds varied from 0.01 percent to 0.05 percent during 2000 to 2005 (FAO STAT). Oilseed imports are restricted by both a 30 percent tariff and by nontariff barriers. Imports of genetically modified oilseeds are not permitted unless approved by the government’s Genetic Engineering Approvals Committee (GEAC). In addition, the Plant Quarantine Order of 2002 requires that shipments be certified free of certain pests or that seeds be "devitalized". At present, the only permissible means of "de-vitalization" is to mechanically split the seed, a process that adds not only considerable cost but also leads to unacceptable deterioration in quality during transit, if done at the point of origin.

Figure 5.12: India’s export volume of oilseeds and its percentage share in World’s total export of oilseeds: 1979 to 2006

![Graph showing India's export volume of oilseeds and its percentage share in World's total export of oilseeds from 1979 to 2006.]

Source: FAO STAT
In the case of oilseeds export, though India is not a major exporter in the world market, and contributed merely 0.60 percent to the world’s total oilseed export during 2000 to 2005, its share has increased since early-90s (Figure 5.12). The composition of oilseeds export basket reveals the fact that, growth in India’s oilseeds export comes from groundnut and sesame seed which contribute more than 80 percent of India’s total oilseed export (Figure 5.13). In terms of world’s total export in groundnut and sesame seeds, India’s share was 11 percent and 23 percent respectively during 2000-2005. India is also the world’s second largest exporter of groundnut (in shell) and sesame seed followed by China.

**Figure 5.13: Composition of India’s oilseeds exports: 1979-2006**

![Composition of India's Oilseeds Exports: 1979-2006](image)

Source: FAO STAT

### 5.4.4 Sugar

India’s share in the world’s sugar trade has always been very small and has been perceived as residual whether we consider imports or exports. When sugar production exceeds demand, stocks build up, and the government has typically removed controls preventing exports, and if needed has provided export subsidies to boost exports and help diminish excess sugar stocks. On the other hand, at some point during the downturns in the production cycle when consumption is running ahead of production, it has typically relaxed import controls or reduced tariffs in order to facilitate sugar imports and in this way take some of the pressure off domestic sugar prices. In the case of imports (Figure 5.14), except for few years, there have been no imports of raw sugar till 1996. And since then India started importing raw sugar every year in very small quantities for processing into white refined sugar. But there have been sporadic...
small imports of refined sugar mostly in very small quantities, with the exception of a period of very low world prices during the mid-1980s when large quantities were imported. In 1985 India imported 1.6 million tonnes of refined sugar which was equivalent to 27 percent of domestic white sugar production and 19 percent of world’s trade in refined sugar. Similarly in 1994, India again imported 1.7 million tonnes of refined sugar to meet the domestic demand because of shortfall in sugar production (Appendix table 5.5). As the world prices were at a peak during this time, government typically reduced the applied tariff rate to zero along with withdrawal of import licensing (as discussed earlier in this chapter).

Figure 5.14: India’s import volume of raw and refined sugar; 1980-2006

Source: FAO STAT

More recently, in response to a large fall in sugar production during 2004 and 2005 (mainly because of a decline in sugarcane production due to bad weather) the government (in September 2004) imported Brazilian raw sugar at zero (instead of the normal 60 percent) import duty (under the “advance licensing” scheme, which permits duty free imports of inputs used to produce exported products), and allocated it to mills for processing into white refined sugar (Pursell, 2007).

However, starting in 1999 sugar production consistently exceeded consumption for five years in a row, leading with a lag to substantial exports beginning in 2001, the cumulative amount of which reached 4.4 million tons by 2004 (Figure 5.15). As already discussed, exports during this episode were stimulated by export subsidies that were increased to keep exports profitable as world prices declined. But unlike few other countries, which produce sugar for exports on a regular basis, Indian exports
were mainly to liquidate a part of its surplus stocks. This is because India has a large and growing domestic market. As a result its export's share in total production varied between 6 and 9 percent during 2001 to 2003.

![Figure 5.15: India’s export volume of raw and refined sugar and its share in World’s total sugar export; 1980-2006](image)

Source; FAO STAT

In summary, the analysis of trade patterns in the light of the trade policy environment and other factors affecting trade shows that trade flow in the case of the studied commodities were residual whether we consider imports or exports and reflected the difference between domestic production and domestic consumption. Trade policy instruments were used to manage the trade flow. During the post-WTO period when international prices faced severe downward pressure and stocks at home rose in the case of rice, wheat and sugar, the government typically removed controls preventing exports, and begun to provide export subsidies to boost exports and liquidate excess stocks. Among imports, edible oils have shown very high growth in the post-WTO period. With the introduction of liberal policies for edible oil imports, low world prices resulted in a steep decline in domestic prices. As a result, domestic production of edible oil started falling. Therefore, in order to meet growing domestic demand imports of vegetable oils increased rapidly, constituting about 44 percent of domestic supply during 2003-05. Growth in edible oil imports which was most rapid during 1996-2000 has been slowed down by imposing higher tariffs, during 2001-05. Whereas, in the case of sugar, when consumption exceeded domestic production at the time when world sugar prices were high (say during 1994 to 1997), government has typically relaxed import controls and reduced tariffs in order to facilitate sugar
imports. Again when world sugar prices started declining (say after 1998) government has increased tariffs in order to check sugar imports.

5.5 Conclusion

The analysis in the chapter dealt with the role played by trade policy during the post-reform period in terms of imparting stability to domestic prices and influencing the average level of prices. Its conclusions can be summed up as follows:

First, though during post-reform period a trade policy regime which is more open was being put in place, the approach with respect to agriculture has remained gradual and cautious. While trade restrictions on agricultural products were left mostly untouched in the 1991 reforms, subsequent trade policy changes gradually lifted most of the restrictions on both exports and imports of agricultural products. With the removal of restrictions on imports and exports, trade policy instruments were adjusted from time to time which helped in ensuring sufficient domestic supply of key products and kept the volatility in domestic prices at relatively low levels compared to earlier decades. An example is the exemption (zero duty) granted for imports of wheat in 2006 to replenish local grain stocks mainly for the public distribution system; the standard tariff rate is currently 50%. Import licences were also issued to support this policy; for example, in 2006, imports of wheat, normally restricted to state trading, were also permitted by private importers. Similarly, in the case of exports, as the vast majority of agricultural exports are unrestricted, government made notifications from time to time to restrict exports or lift export restrictions in order to maintain domestic supplies and stability in domestic prices. For example, in 2006, export of sugar was prohibited, to maintain domestic supplies in order to keep the price at a “reasonable level”. Whereas in the case of wheat, following a sharp fall in government’s annual food grain procurement because of good open market prices and lower production, India banned exports of wheat and wheat products in April 2007.

Second, however, the trade in agricultural products is having a greater impact on the domestic agricultural situation, and contributes more than 11 percent to agricultural GDP. Nonetheless, the post WTO years turned out to be highly adverse for India’s agriculture exports. There were considerable variations in export performance of various commodities. With the liberalization of export of non basmati rice, its export
picked up during the post-WTO period with a lot of stock being released for export. The commodities which explain the fall in agricultural exports during the post-WTO period include oilmeal, cotton, sugar, tobacco and pulses. Poor export performance during the period was the upshot of a sharp fall in international prices. In case of India’s traditional export items, though the initial years of the post-WTO period were quite favourable, their export growth slowed down afterward. The situation started improving since 2001 with recovery in world prices; as a result, agricultural exports started growing. Among imports, edible oils have shown very high growth in the post-WTO period followed by pulses. Thus agricultural imports are concentrated in these two commodities, where domestic production has not kept pace with the demand.

Third, commodity specific analysis shows that, during the post-WTO period, when international prices faced severe downward pressure and stocks at home rose in the case of rice, wheat and sugar, government has typically removed controls preventing exports, and also started providing export subsidies to boost exports and liquidate excess stocks. Among imports, edible oils have shown very high growth in the post-WTO period. With the introduction of liberal policies for edible oil imports, imports of vegetable oils increased rapidly, constituting about 44 percent of domestic supply during 2003-05. Growth in edible oil imports which was most rapid during 1996-2000 has been slowed down by higher tariffs, during 2001/05. Whereas, in the case of sugar, when consumption exceeded domestic production at the time when world sugar prices were high (say during 1994 to 1997), government has typically relaxed import controls and reduced tariffs in order to facilitate sugar imports. Again when world sugar prices started declining (say after 1998) government has increased tariffs in order to check sugar imports and keep the domestic price at a reasonable level.

To sum up, it follows from our analysis that post-reform period witnessed a frequent use of trade policy instruments in order to impart stability to domestic prices compared to the earlier decade by managing trade flow. This not only helped in keeping the volatility in domestic prices at a low level but also ensured sufficient domestic supply. However, the sharp decline in international prices during post-WTO period adversely affected the India’s trade competitiveness and resulted in poor export performance.
Chapter 6

Trade Competitiveness of Indian agriculture: A Comparison of Domestic and World Prices

6.0 Introduction

The process of macro-economic stabilisation under the economic reform undertaken since 1991 has opened up the Indian economy to outside competition and accelerated its integration with the global economy. This has serious implications for agriculture, in the sense that the supportive system to agriculture has been put under strain. And further, with India joining the World Trade Organisation (WTO) as a founder member in 1994, Indian agriculture has been put into a framework of global competition and subjected to the rules of the global market. Taken together, these developments have significant effects on India’s agricultural trade balance, cropping patterns, and the overall welfare of consumers and producers, and these effects would vary widely across commodities, depending upon the international competitiveness of Indian agriculture.

As we have seen in chapter 4 and 5, during the post-WTO period the international prices started declining and reached almost 25-year low levels around year 2000. Though there has been some recovery in the price cycle in the recent past, yet the level of prices in 2009 were 15 to 44 percent lower than the prices prevailing in the beginning of the WTO period. The period also witnessed a decline in Indian export and import of commodities in which India did not have a strong competitive edge or in which international prices registered a sharp decline during the period. Therefore, the behaviour of international prices has a potential consequence that can damage domestic agriculture by price-induced decline in the profitability/competitiveness of production. In this context, trade policy instruments also acquire greater connotation and certain crucial questions regarding the role played by them arise. However, as discussed in the previous chapter, government has made frequent changes in trade policy instruments during the post-WTO period in order to keep the domestic prices at "reasonable level". But the question that remains unanswered is whether these changes in trade policy instruments (tariff rates/subsidy level) were sufficient enough to maintain the profitability/competitiveness of domestic producers. Towards
answering these questions, this chapter makes an attempt to compare the movement of world and domestic agriculture commodity prices. To compare the world prices with domestic prices we should know the price at which our domestic produce competes with the foreign produce. To this end, the types of adjustments made in the world prices to determine the reference price (parity price) are discussed in section 6.1. After discussing the methodology for calculating the reference prices, domestic and world prices are compared in section 6.2. With increasing agriculture trade liberalization and commitments under WTO for replacing all non-tariff barriers with their tariff-equivalents, it becomes imperative to look at the degree of divergence between domestic and world prices; an attempt is made in section 6.3 to examine the degree of divergence between these sets of prices. As a part of this, the calculated price wedge was then compared with the applied tariff duty/export subsidy rate in order to assess the adequacy of the same. Section 6.4 draws together some conclusions that emerge from the analysis.

6.1 Methodology

Trade competitiveness is a dynamic phenomenon, which depends upon the level of domestic prices relative to international prices. In its simplest form trade competitiveness, say in export, assuming the quality of the domestic and foreign product as the same, is a situation when the difference between the domestic supply price and the foreign (market) price is enough to cover a large number of charges. In other words, a commodity is said to be export competitive if a unit of a commodity fetches a price which is considerably higher than for what it is sold for in the domestic market. Similarly, in the case of importables, if the domestic price is lower than the international price plus transportation, freight, insurance and other costs involved in bringing produce from the foreign market to the domestic market then the domestic product is import competitive, otherwise it is not import competitive. The degree of competitiveness (export/import) depends on the extent of divergence between these two prices. However, the comparison of Indian agricultural prices with international prices is difficult because we must be sure that the commodities being compared are of similar quality. And also the prices of similar goods vary considerably across space and over time due to large transportation costs. Therefore, in order to assess the trade competitiveness, the domestic prices is compared to an adjusted reference price and, while doing so we have followed the methodology developed by Goldar and Gulati.
(1991); Gulati, Hanson and Pursell (1990); Gulati, Sharma and Kohli (1996) and; Pursell and Gupta (1998) in their background study papers on effective incentives to Indian agriculture. The types of adjustments made in order to determine the reference price are shown below, both for importables and exportables.

**Importable hypothesis**

Assuming the imported commodity would compete with domestic produce in the principal port cities, the reference price under importable hypothesis was calculated both for net surplus as well net deficit states and were aggregated in order to get the reference price at India level.

**For Surplus State**

\[ P_{Rs} = P^B + \text{Port charges} - TC_s - \text{Marketing Cost} - \text{Traders' margin} - PC_s \]

\[ P^B = (\text{International price, i.e. f.o.b price + Freight + Insurance}) \times \text{Exchange rate} \]

Where,

\[ P_{Rs} = \text{Reference Price of the crop for surplus states} \]

\[ P^B = \text{Border Price in rupees} \]

\[ TC_s = \text{Transport cost from surplus states to port city} \]

\[ PC_s = \text{Processing cost in surplus state} \]

**For Deficit State**

\[ P_{Rd} = P^B_s + TC_D + \text{Marketing Cost} + \text{Traders' margin} \]

Where,

\[ P^B_s = \text{Reference price in nearby surplus area} \]

\[ TC_D = \text{Transport cost from surplus area to deficit area} \]

**Exportable hypothesis**

Under the exportables scenario only surplus states were included in the analysis. When the commodity was exportable, it was assumed that, the point of competition between country's export price and the international price in the world markets would take place at the border of a third country (i.e. the c.i.f. price in the third country). Therefore, the reference price under exportable hypothesis was calculated as:

\[ P_{Rs} = P^B - \text{Port charges} - TC_s - \text{Marketing Cost} - \text{Traders' margin} - PC_s \]

\[ P^B = (\text{International price, i.e. c.i.f. price - Freight-Insurance}) \times \text{Exchange rate} \]
Where,

\[ P^R_s = \text{Reference Price of the crop for surplus states} \]
\[ P^B = \text{Border Price in rupees} \]
\[ TC_s = \text{Transport cost from surplus states to port city} \]
\[ PC_s = \text{Processing cost in surplus state} \]

Reference price at the border for export commodities are taken as the export prices of major competitors for an equivalent quality level. This simply assumes that the international freight from the competing export country to a third-country importer and from India to a third-country importer is equal. For example in case of wheat, it was assumed that the point of competition between Indian wheat and US wheat is Tunis in Tunisia, which is roughly equidistant from India and US, thus allows comparison between fob price US and fob price say at Bombay.

**Data sources and cost adjustments**

Sources for international prices vary by commodity and include sources like USDA, UNCTAD commodity price data set and IMF International Financial Statistics (IFS). Exchange rates were taken from the IFS’ market rates. International freight and port charges were taken from the Pursell, Gulati and Gupta (2007) data set.

Data on domestic prices were collected from Agricultural Prices in India (various years) up to year 2001 and for the later period it was collected from CACP reports and also from the official web-site of the ministry of agriculture. Regarding the timeframe for domestic prices, we have used average harvest season prices where available, because a majority of the farmers sell their produce during the harvest season. In cases where domestic harvest season prices were used, international prices and exchange rates pertaining to the same timeframe were utilized.

Domestic transportation cost from production site to port city was based on an earlier study by Sharma (1991) and were projected forward and backward by constructing the rail and road transport index (with base 2000=100) using the methodology developed in Pursell and Gupta (1998). Marketing costs and traders’ margin were taken as certain fixed percentage of domestic price and varied between 5 to 10.
percent. For commodities that require substantial processing, the prices were taken at wholesale (processed) level, not at farmgate level.

6.2 Comparison of domestic and world reference price

6.2.1 Wheat

In order to analyze the pattern of trade competitiveness of Indian wheat producers, a comparison of the domestic producer’s price and world reference price was made under the importable and exportable hypotheses. Competitiveness of domestic cultivators under importable hypothesis was studied for two net surplus states namely, Haryana and Punjab and one deficit state (Uttar Pradesh). Reference price for all India is the weighted average of reference prices of these states (Appendix table 6.1 & 6.2). Under exportable scenario, the competitiveness of wheat was studied only for Punjab. The domestic producer price is approximated by procurement price rather than farm harvest price, because procurement price takes care of quality aspects. The international price refers to US Hard Red Winter No. 2 with ordinary protein.

![Figure 6.1: Domestic and world reference price for wheat under Importable hypothesis: 1981-2005](image)

Source: Appendix table 6.1, column (8) & (11)

Figure 6.1 plot the movements of domestic producer’s price and world reference price under importable scenario. These comparisons show that, beginning with early-80s, the wheat prices in domestic markets ruled below the world reference price throughout the period under study, indicating that, the domestic produce competed well with imports. Two types of trend can be seen in the ratio of domestic to
international price viz., increasing trend from 1981 to 1988 and decreasing trend from 1989 to 1997 (Figure 6.2). During 1981 to 1988 these domestic and international prices were close to each other. Or in other words, the domestic and border prices were growing at the same rate until the late-1980s (around 1988) and thereafter the growth of the latter prices was faster than that of the former and resulted in an increasing gap between these two. The gap between these reached the maximum in 1997 when world reference prices were at their peak. The situation started changing afterwards, when because of a decline in world prices along with an increase in domestic prices the level of import competitiveness started reducing. And slowly India started becoming attractive for wheat import. As the international prices started improving slowly after 2000, consequently the level of import competitiveness of domestic produce has also started improving.

**Figure 6.2: Trend in ratio of domestic price to world reference price for wheat under Importable scenario: 1981-2005**

![Graph showing trend in ratio of domestic price to world reference price for wheat under Importable scenario: 1981-2005.](image)

Source: Computed from appendix table 6.1

In sharp contrast to importable scenario, when wheat was viewed as an exportable, it was found internationally uncompetitive. The Punjab wheat, under the exportable hypothesis, is not internationally competitive implying that Punjab wheat has been costlier than US HRW wheat all through except for few years (Figure 6.3). A comparison of domestic and world prices shows that in most of the years domestic prices are higher than the world reference price. The ratio of domestic to international prices was found below one only in few years when international prices were very high. As seen in chapter 5, India occasionally exported large quantities of wheat up to 2000; because of the unfavourable price environment many times wheat available in
government stocks had to be exported at a lower price than domestic price (Chand, 2001). As discussed latter in this chapter, when the combination of declining world prices and higher domestic prices made Indian wheat uncompetitive in world markets, the government decided to provide a subsidy for wheat exports to liquidate the excess stocks with the public agencies.

Figure 6.3: Domestic and world reference price for wheat under Exportable hypothesis: 1981-2005

Source: Appendix table 6.2, column (7) & (8)

6.2.2 Rice

Since India was a net exporter of rice for many of the years covered under the study, therefore, a comparison of domestic producers’ price with world reference price was made under the exportable hypothesis to analyze the pattern of competitiveness of Indian producers. Export competitiveness of rice was studied for two major producing states namely Andhra Pradesh and Punjab. The domestic producer price was approximated by a levy/procurement price of rice of the respective state, whereas, the international price refers to 15% broken Thai Rice for the months of the Indian harvest season (i.e. Oct. to Jan.).

Figure 6.4 plots the movement of these two prices. This comparison shows that with the exception of three years viz., 1985, 1986 and 1987, domestic prices were lower than the world reference prices up to year 1999, implying that, India had a comparative advantage in exporting rice during the period. Except for the years 1985 to 1987, the ratio of domestic to international price was also found to be below one till the year 1999. Subsequently, the gap between domestic and international prices
reduced, and the ratio of domestic to international price increased to one in 2000. As the international prices fell sharply, the price advantage of rice for exports got completely eroded by 2000, when world prices started ruling below the domestic prices. Therefore, the competitiveness of rice production has witnessed tremendous changes during the post-WTO period. As mentioned in chapter 5, the government started providing export subsidies to boost rice export during the period when international prices became adverse for rice export. In the case of Andhra Pradesh and Punjab also the pattern of protection and competitiveness is more or less same (Appendix table 6.3).

**Figure 6.4: Domestic and world reference price for rice under Exportable hypothesis: 1981-2005**

![Graph showing domestic and world reference price for rice from 1981 to 2005. The graph indicates a clear trend of increasing domestic prices relative to the world reference price.](#)

Source: Appendix table 6.3, column (7) & (8)

**Figure 6.5: Trend in ratio of domestic price to world reference price for rice under Exportable scenario**

![Graph showing the ratio of domestic price to world reference price from 1981 to 2005. The ratio fluctuates significantly, indicating changes in competitiveness.](#)

Source: Computed from appendix table 6.3
6.2.3 Groundnut seed and oil

Trade competitiveness of Indian groundnut producers’ has been assessed by making a comparison of domestic producers’ price with world reference price under the importable hypothesis. Import competitiveness of groundnut (with shell) was studied for three major producing states, namely Andhra Pradesh, Gujarat and Tamil Nadu. The world price refers to CIF price of groundnut (kernels) at Rotterdam. The domestic prices were approximated by the averages of month-end wholesale prices during the harvest season of relevant states (Appendix table 6.4).

Figure 6.6 enables a visual grasp of movement of world reference prices and domestic harvest season prices of groundnut (pod or with shell) under the importable hypothesis. These comparisons show that domestic prices were higher than the international prices during the 1980s and early-90s, making it a fit case for imports. In other words, Indian producers had competitive disadvantage during the period. However, the level of competitiveness as indicated by the ratio of domestic to world prices started improving after 1988 mainly on account of an increase in world prices but remained more than one (Figure 6.7). Since the early-90s, with increased domestic production driving domestic prices down and with rupee devaluation, the competitiveness of groundnut has improved substantially with domestic prices ruling below the world prices.

**Figure 6.6: Domestic and world reference price for groundnut (pod) under Importable hypothesis: 1981-2004**

Source: Appendix table 6.4, column (22) & (23)
Even during the post-WTO period when world prices for groundnut dropped to the level of the late-80s, domestic production is found to be less costly compared to imports of groundnut. Therefore, the competitiveness of groundnut improved significantly during the 1990s compared to the 1980s, as supported by the ratio of domestic to world price, which turned out to be less than one.

**Figure 6.7: Trend in ratio of domestic to world reference price for groundnut under Importable scenario: 1981-2004**

Source: Computed from appendix table 6.4

In the case of oil, trade competitiveness of Indian producers was evaluated under the importable scenario. Import competitiveness of groundnut oil has been assessed by comparing the wholesale market price\(^1\) at Bombay with international prices at Rotterdam (Appendix table 6.5).

Figure 6.8 shows the movement of these two prices. These comparisons show that, compared to the 1980s and early 90s, the domestic and international prices were close to each other since mid-1990s and onwards. It has been observed that groundnut oil had competitive disadvantages during 1980s and early 90s because domestic prices were higher than the international prices. During the post-WTO period, the gap between domestic and world reference prices almost evaporated, as both the prices started moving jointly and competitiveness of groundnut oil improved significantly as indicated by the ratio of domestic to international prices, which turned out to be close to one or less than one (in some years) during the period (Figure 6.9).

\(^1\) Averages of month-end wholesale market prices during the period November to October
6.2.4 Rapeseed/Mustard and oil

Trade competitiveness of Indian Rapeseed/Mustard was analyzed under the importable scenario. The comparison between domestic and international prices was made for the largest wholesale domestic market i.e. Hapur in Uttar Pradesh (deficit state). Domestic price at Hapur was approximated by averages of month end wholesale market prices during the harvest season i.e. January to June, whereas, international price refers to the CIF Rotterdam price for the same period (Appendix table 6.6).
A comparison between domestic and the world reference prices shows that, domestic prices ruled above the international prices during most of the 1980s and early-90s, implying a competitive disadvantage (Figure 6.10). However, with increased domestic production driving domestic prices down and rupee devaluation, the competitiveness of domestic production started improving after 1988 but the ratio of domestic to international prices remained more than one (Figure 6.11). The situation started reversing itself from 1993 with domestic prices ruling below the international prices, mainly on account of upward movement in international prices. Consequently, the ratio of domestic to international prices also turned out to be less than one. Therefore, since 1993, the competitiveness of Indian rapeseed improved significantly.

Figure 6.10: Domestic and world reference price for rapeseed/mustard under Importable hypothesis: 1980-2005

Source: Appendix table 6.6, column (11) & (13)

Figure 6.11: Trend in ratio of domestic to world reference price for rapeseed under Importable scenario: 1981-2005

Source: Computed from appendix table 6.6
In the case of Rapeseed oil, trade competitiveness was evaluated with Kanpur (Uttar Pradesh) as the reference point under the importable scenario. Import competitiveness was assessed by comparing the wholesale market price\(^2\) at Kanpur with international prices at Rotterdam (Appendix table 6.7). These comparisons show that domestic prices were higher than the international prices throughout the period under study, implying that India had competitive disadvantage in the international market (Figure 6.12). Though, the ratio of domestic to international prices remained more than one throughout the period covered under the study, it points to an improvement in competitiveness after 1992 with the level reaching one by 1998 (Figure 6.13). With a

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\(^2\) Averages of month-end wholesale market prices during the period April to March
sharp decline in international prices during the post-WTO period (1998 onwards), the ratio of domestic to international prices started rising.

6.2.5 Soybean seed and oil

Price comparisons for soybean are made under the importable scenario. The international prices are taken in dollars as the CIF price of US No. 2 yellow at Rotterdam, averaged over the Indian harvest season (i.e. October to March). Domestic prices were approximated by month end wholesale prices of yellow soybean at Indore, Madhya Pradesh (a net deficit state) for the month of October to March (Appendix table 6.8).

The comparison between domestic and international prices shows that with the exception of two years viz., 1987 and 1988, domestic prices were lower than international prices throughout the period covered under the study, indicating the competitive advantage of Indian producers (Figure 6.14). In other words, Indian produce competed well with imported soybean throughout the period covered under the study. The period after 1992, witnessed a further improvement in soybean competitiveness. During the post-WTO period when international prices dropped to very low levels, domestic production is found to be less costly compared to imports of soybean. The ratio of domestic to international prices reached its lowest level in 2004 with domestic prices ruling more than 40 percent below the international price (Figure 6.15).

Figure 6.14: Domestic and world reference price for soybean under Importable hypothesis, 1981-2005

Source: Appendix table 6.8, column (10) & (13)
In sharp contrast to the soybean seed prices, domestic prices of soybean oil ruled at higher levels than the international prices. Due to this, import of soybean oil remained an attractive proposition (Figure 6.16). A comparison of month end domestic wholesale market prices at Madhya Pradesh with international prices at the Dutch port (Appendix table 6.9) shows that, with the removal of restriction on imports, domestic prices of soybean oil have moved closer to international prices but their ratio to international prices continue to remain above one (Figure 6.17).
When edible oil imports into the country were not freely allowed, during the late 1980s and early 1990s for example, the ratio of domestic to international prices for soybean oil was more than three (Chand, 2002). The situation started improving since the early 1990s with an increase in import competitiveness of Indian soybean oil.

### Figure 6.17: Trend in ratio of domestic to world reference price for soybean oil under Importable scenario

![Graph showing trend in ratio of domestic to world reference price for soybean oil under Importable scenario](image)

Source: Computed from appendix table 6.9

#### 6.2.6 Price ratio for oilseeds v/s edible oils

It would be interesting to compare the ratios of domestic to international prices of oilseeds with that of edible oil. This would indicate difference in efficiency of oilseeds and edible oil production. Figures 6.18, 6.19 and 6.20 show the comparison of price ratios of oilseeds with that of edible oils for the above mentioned crops under the importable hypothesis. As one can see from these figures, the ratio of domestic to international prices in case of edible oils remained higher than the corresponding ratios for the seed prices throughout the period under the study. Therefore, oilseeds producers were more efficient than edible oil producers. Though the level of import competitiveness started improving since the late 1980s, both in the case of oilseeds and edible oils, the ratio of domestic to international prices in the case of edible oils continued to remain above the ratio of oilseeds prices. Thus, these comparisons highlight the fact that since the early-90s India is an efficient producer of oilseeds though domestic prices of edible oil are highly attractive for import, as the ratio of domestic to international prices remained more than one. One plausible explanation of this result seems to be high domestic processing and marketing costs which make domestic oil prices higher than the international prices.
6.2.7 Sugar

Trade competitiveness of Indian plantation white sugar was analyzed under both the importable and exportable scenarios. The price comparisons are averages for the Indian “sugar year” covering the period from October to September. Competitiveness was estimated for three major producing states namely, Uttar Pradesh, Maharashtra, and Tamil Nadu. Under the importable scenario the domestic price was approximated by the ex-factory realization price of sugar mills, whereas the international price refers to the FOB Europe price of plantation white sugar\(^3\) (Appendix table 6.1).

Figure 6.21: Domestic and world reference price for plantation white sugar under Importable hypothesis, 1981-2005

Figure 6.21 illustrates the movement of these two prices. These comparisons show that, during most of 1980s domestic prices were higher than the world price. This competitive disadvantage has disappeared from the late-1980s when international prices started moving in the upward direction (see chapter 4), and India became import competitive. As a result, the ratio of domestic to international prices declined

\(^3\) Since the world trade is mainly in raw and fully refined white sugar, and international price data for plantation white sugar is not consistently reported, therefore, based on some limited comparisons of international prices, Goldar and Gulati (1991) and Pursell and Gupta (1998) has assumed that the premium paid for India’s plantation sugar over the price of raw sugar is 90 percent of the premium of international prices of fully refined sugar over the international prices of raw sugar. Therefore, in order to derive the fob Europe price of plantation white sugar we followed the same approach. Or in other words, the fob Europe price of plantation white sugar price has been estimated to equal the as raw sugar price (c.i.f. Europe) plus 90% of the excess of the price of fully refined sugar (fob Europe) over the raw sugar price.
to less than one (Figure 6.22). This situation reverses itself with the sharp decline in international prices during the post-WTO period. The period post-WTO witnessed a decline in import competitiveness of Indian sugar as the gap between domestic and world reference prices started reducing and also the ratio of domestic to world reference prices increased. Therefore, in 1998, the government reversed its import policy by increasing tariff rates and again applying the Essential Commodities Act to sugar imports (see chapter 5).

Under the exportable hypothesis, Indian plantation white sugar is assumed to compete with sugar from other major exporters in Egypt. This was further simplified by assuming that freight from Europe to Egypt is the same as the freight from India to Egypt. Therefore, the fob prices in India are taken to be the same as fob prices in Europe (Pursell and Gupta, 1998) (Appendix table 6.11). A comparison of domestic (ex-factory realization price) price and world reference price under exportable hypothesis is shown in figure 6.23. It can be observed from the figure that, Indian sugar had competitive disadvantages in exporting sugar during the 1980s as domestic prices were higher than the export parity prices. This disadvantage started disappearing since late 1980s with an increase in world prices. During the period between 1989 and 1997, these domestic and world reference prices were close to each other. As a result, the ratio of domestic to world reference price was close to one.
during the period (Figure 6.24). After 1997, as world prices fell sharply the price advantage of sugar for export got completely eroded. Therefore, in most of the years covered under the study, sugar was not found to be export competitive as indicated by the ratio of domestic to world reference prices, which turned out to be less than one. Because of competitive disadvantages in exporting sugar, the government of India started export promotional measures by introducing and gradually increasing export subsidies for sugar (see chapter 5) in order to increase sugar export.

**Figure 6.23: Domestic and world reference price for plantation white sugar under exportable hypothesis, 1981-2005**

![Graph of Domestic and World Reference Price](image)

*Source: Appendix table 6.11, column (30) & (31)*

**Figure 6.24: Trend in ratio of domestic to world reference price for plantation white sugar under Exportable scenario, 1981-2005**

![Graph of Ratio of Domestic to World Reference Price](image)

*Source: Computed from appendix table 6.11*
In summary, the analysis of trade competitiveness of major agricultural commodities highlights the fact that, competitiveness of commodities has undergone significant changes during last 25 years. This shows that trade competitiveness is a dynamic phenomenon which depends upon changes in international and domestic prices. Under the exportable hypothesis, India has been export competitive in rice since 1981, except during the period when international prices have experienced unusual declines (1985-87 and 2000-2004). Whereas, there seems not much advantage in exporting wheat, as India was export competitive only for short spells (1990 and 1996-97); when world prices were at their peak. In the case of sugar, India was probably export competitive during the period 1989 to 1997 (as the ratio of domestic to world price was close to one). After 1997, given the significant levels of distortions in the international market due to domestic and export subsidization by the EC and high protection and support in the US market, Indian sugar exports became uncompetitive in the international market. However, commodities belonging to the group of oilseeds namely groundnut and rapeseed/mustard appear to be efficient import substitutes since the early-90s, whereas, soybean seed has been found to be import substitutable throughout the period under the study (except for a short spell during 1987 and 1988). Compared to oilseeds, edible oils producers were uncompetitive as producers of import substitutes. In the case of cereals, under the importable hypothesis, wheat has been largely competitive, with ratios of domestic to international prices below unity throughout the period under study.

6.3 Divergence between domestic and world reference price

The divergence between the above compared domestic and world reference prices i.e., the price wedge, ideally captures the space for policy interventions. For instance, in the case of importables/exportables, the level to which domestic prices are higher than the world reference prices gives the indicative level for applied tariff duties/export subsidies on imports/exports. Therefore, in order to understand the implication of trade liberalization, it is essential to assess the divergence between domestic and adjusted international prices (i.e. world reference price). The price wedge was calculated by taking the difference between domestic and adjusted world prices, expressed as percent of world reference price. The calculated price wedge for each agricultural commodity was then compared with the existing applied tariff duty or export subsidy rate in order to assess the adequacy of the same.
In the case of wheat, the divergence between domestic and world reference price was analyzed under the exportable scenario. Figure 6.25 depicts the trend in divergence between these two prices. As discussed earlier, except for the years of unusual increases in international prices, domestic prices ruled above the world reference price throughout the period under study. As a result the divergence between these two was positive during most of the years.

Figure 6.25: Divergence between domestic and world reference price for Wheat under exportable hypothesis: 1981-2005

Source: Computed from appendix table 6.2

Figure 6.26: A comparison between price wedge and wheat export subsidy rate (%); 1991 to 2005

Source: computed
After 1998, when world prices experienced sharp decline, the divergence between domestic and world reference prices started increasing and touched a peak in 2001 when domestic prices were 75 percent higher than the level of world reference prices and the price advantages of Indian wheat for exports was completely eroded. Therefore, government decided to provide an export subsidy since 2001 to support export of surplus wheat in order to liquidate the excess stocks with the public agencies, when a combination of low world prices and higher domestic prices made Indian wheat uncompetitive in the world markets. As a result, substantial amount of export subsidies were paid to make it worthwhile for private traders to help dispose of large excess wheat stocks (see chapter 5). Figure 6.26 illustrates how the price wedge and the export subsidy rate compare. The wheat export subsidy rate which varied from 86 percent to 93 percent between 2001 and 2003, witnessed a gradual decline afterwards with the recovery in world prices. Since 2005, government halted export subsidies because of tightening domestic supply and increased Indian competitiveness in the international market.

In the case of rice, India had competitive advantages in exporting rice throughout the study period, with the exception of a period of unusual decline of international prices; therefore, the divergence between these two was negative during most of the years (Figure 6.27). As can be seen from the figure, during the last 25 years, it was only during 1985-87 and 2000-04 when the price wedge between the domestic and world reference price became positive due to sharp declines in international prices. In the recent past, the divergence between these two prices ranged between 37 to 43 percent during the years 2001-04.

Since 2000, when the price advantage of rice for exports got completely eroded, the government decided to provide export subsidies to maintain the price advantage of Indian rice for exports and also to liquidate the excess stocks with the public agencies (see chapter 5). The export subsidy rate varied from 24 percent to 49 percent during the years 2000 to 2002 (Figure 6.28). As the world prices started recovering since 2003, government started reducing the export subsidy rate and stopped it completely by the year 2005 when the gap between domestic and world reference prices almost became zero.
In case of edible oils, the divergence between domestic and world reference prices was measured under the importable scenario. Figures 6.29, 6.30 and 6.31 enable a visual grasp of the divergence between these two prices in the case of groundnut oil, rapeseed/mustard oil and soybean oil, respectively. As can be seen from the figures, during the 1980s and early-1990s, the divergence between these two prices remained positive, indicating higher value of domestic prices compared to world reference prices. Since mid-1990s, the price wedge was almost negligible or even negative in the case of groundnut oil, whereas, in the case of rapeseed/mustard and soybean oil it remained positive throughout the study period.
As discussed in chapter 5, in the case of edible oils, since 1994, government has made frequent adjustments in applied tariff duty rates in the wake of low world prices to protect the interests of various stakeholders. A comparison of these applied tariff duties with the price wedge gives an idea regarding their adequacy. As shown in Figures 6.32, 6.33 and 6.34, except for groundnut oil, in all other cases, the applied tariff duty rate was close to the required level till 2000. After 2000, the applied tariff duty rates were slightly higher than the required level. In the case of groundnut oil, the applied tariff duty rates were higher than the required level throughout the period.

**Figure 6.29: Divergence between domestic and world reference price for Groundnut oil under importable hypothesis: 1981-2005**

![Graph showing divergence between domestic and world reference price for Groundnut oil](image)

Source: computed from appendix table 6.5

**Figure 6.30: Divergence between domestic and world reference price for Rapeseed/mustard oil under importable hypothesis: 1981-2005**

![Graph showing divergence between domestic and world reference price for Rapeseed/mustard oil](image)

Source: computed from appendix table 6.7
Figure 6.31: Divergence between domestic and world reference price for Soybean oil under importable hypothesis: 1992-2005

![Graph showing percentage of world reference price over time from 1992 to 2005 for Soybean oil.](image)

Source: computed from appendix table 6.9

Figure 6.32: A comparison between price wedge and applied tariff rate for Groundnut oil; 1991-2005

![Graph showing price wedge and applied tariff rate for Groundnut oil from 1991 to 2005.](image)

Source: computed

Figure 6.33: A comparison between price wedge and applied tariff rate for Rapeseed/mustard oil; 1992-2005

![Graph showing price wedge and applied tariff rate for Rapeseed/mustard oil from 1992 to 2005.](image)

Source: computed
In the case of sugar, domestic prices were consistently higher than international prices during the 1980s under the importable scenario. The highest peak achieved by the domestic prices is about 80% above the international prices in 1985 (Figure 6.35), after which there was a reduction in the price differential. Since the early-90s the divergence between domestic and world reference prices turned negative as world reference prices were higher than domestic prices. The sharp decline in world prices during the post-WTO period (after 1996) resulted in a widening of the gap between domestic and world reference prices. The maximum peak achieved during the post-WTO period is about 20% above the international price.
Figure 6.36 gives a comparative picture of applied tariff duty rates and the price wedge observed. As can be seen from figure, applied tariff duty rates were much higher than the required level, throughout the period under study. Three types of trends can be seen in the applied tariff duty rates viz., decreasing trend from 1992 to 1995, constant trend from 1995 to 1998 and increasing trend from 1998 to 2005. Beginning with 1992, when world prices were on an increasing trend, government decided to reduce the applied tariff duty rates on imported sugar and by March 1994 applied tariffs were cut to zero; which remained in place for next four years. Again in 1998 when world sugar prices started declining government reversed the policy by increasing the tariff duty rates. Increase in tariff rates after 1999, was much higher than the divergence level between domestic and world reference price. Given the significant levels of distortions in the international market due to domestic and export subsidization by the EC and USA coupled with fluctuations in domestic production, which resulted in sizeable imports during some years in the recent past, the present higher tariff bindings may be negotiated till the distortions in international markets are corrected.

![Figure 6.36: A comparison between price wedge and applied tariff rate for Indian plantation white sugar; 1992-2005](image)

Source: computed

To sum up, comparisons between the price wedge i.e. divergence between domestic and world reference price and applied tariff duty rates show that applied tariff rates were adequate in the case of edible oils but were higher in case of sugar. Under the exportables scenario, the export subsidy rates were enough to maintain the
competitiveness of Indian produce in international markets in the wake of any unusual decline in world prices, as for example in the case of rice and wheat.

6.4 Conclusion

This chapter sought to analyze the role of international prices in determining the trajectory of agricultural growth since 1991 by price-induced decline in profitability/competitiveness. From the analysis of competitiveness of domestic agriculture we do not see much ground for granting international prices a significant role in determining the trajectory of agricultural growth during post-reform period. Analysis of the chapter clearly shows that competitiveness of all the crops covered under the study has improved significantly during the 1990s compared to the 1980s. Since early-1990s, India is import competitive in most of the crops covered under the study barring some important edible oils. Nonetheless, during the post-WTO period, when international prices of agricultural commodities have witnessed sharp decline, the competitiveness of all the crops studied has declined. For instance, India has been export competitive throughout the period under study in the case of rice, except during the period when international prices have experienced unusual declines during the post-WTO period. Whereas, in the case of sugar, with decline in international prices after 1997 due to distortions caused by the policies of support and protection pursued by the major industrial economies, competitiveness was badly affected. If there is substantial reduction in international market distortions, India could emerge as a competitive supplier of sugar as well.

Regarding the role played by trade policy instruments - import tariffs/export subsidies - during the post-WTO period, applied tariff rates were adequate to bridge the price wedge observed between domestic and world reference prices. On the other hand, export subsidy rates were enough to maintain the competitiveness of Indian producers' in international markets at the time of unusual decline in world prices; say for example rice and wheat. Therefore, government intervention has been quite effective in insulating domestic producers from low world prices during the post-WTO period.