Exim Policy and Quantitative Restrictions: Assessing the Likely Impact on Agriculture

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Introduction

Recent developments in the trade policy have to be viewed as a response to the changing economic scenario. The policy of globalisation and liberalisation in response to the domestic economic crisis on the one hand and the participation in the General Agreement on Trade and Tariff (and WTO) on the other hand were simultaneously preferred engines of change in trade policy. As is well known, the final draft of the Agreement on Agriculture included the tripartite structure consisting of market access, export competition and domestic support as well as an agreement to establish the World Trade Organisation. As immediate fallout, conversion of all non-tariff barriers on imports of agricultural products to tariffs (tarrification) was taken up and agreed as one of the prominent recommendations.

The changes announced by India on 1st April 1999, 2000 and 2001 have been historical in this process. The commitment to the WTO was to abolish licensing of imports in three phases ending March 2004. Our proposal of a six-year phase out was agreed by the European Union and Australia but remained to be agreed by US. Later as per the agreement with the US the Government of India brought to the OGL list 894 items and partially liberalised imports of 414 items bringing them under the Special Import License (SIL) on 1 April 1999, and 714 items on 1st April 2000 and 715 items on 1st April 2001. The bold step seem to have been taken in response to the WTO requirement. Since the removal of QRs were to be done in phases most of the sensitive items including that of agriculture were kept for the final phase. The removal of QRs on 1st April 2000 and 2001 on those items raised apprehensions on the probable impact of such policy on the agricultural sector.

Theoretical Arguments on Tariffication

Theoretically it is argued that tariffication is a better alternative to quantitative restrictions. The comparison of relative merits of tariffication over the policy of restrictions on the quantum of trade have been discussed a good deal (Bhagwati 1969; Pecovits 1976; Dasgupta and Stiglitz 1977; Srinivasan and Bhagwati 1984; and Srinivasan 1998). For a long time, it was believed that tariffs and quotas are substitutable alternatives without any welfare loss due to change in policy. If tariffs were to be replaced by quota equal to the import level associated with them, the quotas would lead to a domestic price that

would exceed import price. The only difference recognised in the debate was the revenue accrued to the Government out of tariffication. Bhagwati (1965), Rodriguez (1974) and Pelcovits (1976) raised doubts about the equivalence of the two. It was argued that equivalence is in vogue, if and only if, it satisfies the assumptions of competitive foreign supply and perfect competition among domestic producers. Especially when all countries adopt similar policies, the market operations will be more effective.

In a General Equilibrium Analysis framework, Rodriguez (1974) compared the tariff retaliation process as against quota retaliation and reached a conclusion that the processes may lead to different equilibrium situations depending upon the levels. The process of equivalence would largely depend upon the supply and demand situations. The supply and demand schedules can shift endogeneously or exogeneously and thus will affect testing of the equivalence. This raised an interesting argument about the ordering of welfare ranking of the two policy measures. Pelcovits (1976) attempted the welfare ranking of tariffs and quotas in the presence of non-economic objectives, such as constraining the expected imports to a specified level. The use of these instruments is always under an uncertain situation regarding demand and supply schedules. Using the partial equilibrium analysis, he showed that when the foreign supply curve is stochastic and the import demand curve is given, tariff is not preferable to quota. Thus, in the presence of a stochastic foreign supply curve the welfare ordering will depend on the *ad valorem* rate of tariff. If it is below 100 per cent, it gives a higher ranking to tariff on welfare rank order scale and reverse, if it exceeds 100. Palcovits and Dasgupta-Stiglitz also considered the other objective of revenue earning through tariffs under uncertainty. Pelcovits' analysis again reiterates the above situation. He noted that tariffs will allow fluctuations in prices whereas, quota will imply stability and tariff may be inferior to quota under revenue constraint (Pelcovits 1976: 369). This conclusion is contrary to what was reached by Dasgupta and Stiglitz earlier. In a situation of an alternative policy mix of pure tariff vs. pure quota, Dasgupta and Stiglitz (1977) concluded unambiguously in favour of pure tariff generating an expected level of government revenue. But they also cautioned immediately that this would depend on the relative steepness of the demand and supply functions (Dasgupta and Stiglitz 1977: 979). Similarly, Anne Krueger argued that quantitative restriction regimes were often far more protective than the government's intentions. This comes out when quotas are replaced by tariffs, which in fact provided less protection (Krueger 1978). The tariff vis-à-vis quota policies react differently across sectors like agriculture or manufacturing.

It has been observed in the literature that when the domestic market is competitive the imposition of restrictions on the quota forces the market behave in Cournot-Nash fashion making the domestic market behave oligopolistically. Hence to be competitive (Hwang and Mai 1988) if the markets are

monopolistic the Quantitative Restrictions would again lead to competition. Hence the impact of removal of quota would depend on the type of market situation existing. It is essential to underscore here that, in the Indian context the market situations varying across the commodities are dis-similar. Therefore, probably we may have a differential impact scenario across the commodities.

Quantitative restrictions on imports provide safeguards in transcending between domestic market and international market. This is ensured by restricting or increasing the import quota. Tariffication allows the reflection of world prices into domestic prices, but in the process relaxes the state control on guarded imports. Many times it is feared that large import influxes may result through tariffication and create disincentives to the domestic producers. Import quotas are often used as ways of conferring direct benefits to a particular exporting country and form a part of the external policy. Regulation of imports through quotas also provide stability in employment (as supply and production will be monitored) and a stronger policy tool to regulate domestic demand.

Tariffs have certain advantages over quota restrictions on imports to an exporting country. The tariff policy allows transparency, negotiability, stability, revenue generation and offers across board equity. Licences could be arbitrary and may not be equally revenue responsive. Tariffs can ensure that the importing regions share in terms of revenue and allow for adjustments to the market shares. However, theoretically it points out that in the context of liberalisation and growth orientation through exports, the quantitative restrictions on import may not be a conducive policy and tariffication is always preferred for better access.

Trade Policy Scenario in India

India's trade policy has evolved through its plan priorities, behaviour of domestic demand and supply and assumptions about the possibilities of import substitution and export promotion. The overall economic policy perception was inclined towards self-sufficiency and meeting the internal demand indigenously. Import substitution became a buzzword and imports were restricted through quantitative restrictions. By the mid-sixties, the sluggish growth in output of many industries was noted as a result of the modernisation policy of the mid-fifties. Trade balance remained consistently negative and more often under three digit limits (highest during 1964-68 period). By 1974-75 the trade balance was negative at Rs 1190 crores. The year 1979-80 saw the peak of the negative trade balance and the signs of change were visible in the policy initiatives drifting away from the closed import substitution to export promotion. Fiscal and other incentives including concessional measures relating to production and marketing of

exports were initiated by the State. The Export Policy Resolution of the cabinet committee during 1970 set a tone of possibility of increasing export growth and thereby reaching the efficiency in trade. Subsequently, three official committees were appointed to look into the various aspects of trade policy. The Alexander Committee (1978), Dagli Committee (1979) and Tandon Committee (1980) suggested various export promotion measures, which included budgetary concessions on import licences, input price concessions, freight credit for working capital, capital goods and raw material, direct cash incentives to exporters and duty drawback in terms of exemption from taxes (Sen and Das 1982).

The recommendations offered by these three official committees were incorporated in the subsequent long-term import and export policies of 1985-86 to 1990-91. During March 1990, there were some changes in this EXIM policy framework due to the changes in political regimes. But the general theme of liberalisation of imports, especially of capital goods and raw materials, continued to be one of the components. Among the policy measures, relaxation of licensing policy, foreign exchange availability, reduction in cash margins of imports, introduction of EXIM Scrips, the Special Import License Scheme, relaxation in export control marked the important steps. Export encouragement on one side and import relaxation on the other formed the main theme of the policy changes. Indications were clear that henceforth the Open General License (OGL) list of imports would expand and this will enhance exports through export-intensive imports. The move was clearly chalked out to confine the list of items under quantitative restrictions to a narrow range. Further, the trade policy that was earlier characterised only by short-term changes to combat exigencies was turned into a long-term consistent policy. But it also raised an important related issue regarding the probable impact on the trends in export and imports of such changes. Sen and Das (1992; 590) strongly argued the ineffectiveness of export-link to import liberalisation on the count that such a link lost its purpose, especially with premium-based incentives to exporters, which are open to sharp fluctuations.

The five year EXIM Policy undergoes modifications in the form of changes in the licensing policies, alterations in the list of items subjected to various trade restrictions, customs duty modifications, and procedural changes and list of QRs every year. The modifications to the Exim Policy declared by the Ministry of Commerce on 1 April 2000 and 1st April 2001 are very much in tune with the requirements of the WTO panel ruling about QRs. This also marks another of India's decisive steps towards liberalisation and export-induced growth. The decision was of setting up of Special Economic Zones (SEZs) like China. The existing Export Processing Zones (EPZs) are be converted into SEZs. The SEZs will be treated as being outside the customs territory of the country. In addition, these zones will have special tax breaks. In order to boost the exports, the policy called for the involvement of the State Governments in

the national efforts. A scheme is evolved for granting special assistance to the state governments on the basis of export performance and export related infrastructure. Various steps have been taken in rationalisation of export promotion schemes like: (i) Export Promotion of Capital Goods Scheme, (ii) Duty Exemption Scheme, (iii) Duty Entitlement Passbook Scheme, (iv) Rationalisation of Deemed Export Scheme and (v) Sector Specific rationalisation involving Gems and Jewellery, Silk, Leather Handicrafts and Garments, Drugs etc. On the import side, the QRs on 714 tariff lines have been removed. The Special Import License (SIL) list was proposed to be abolished by April 2001. The policy modifications thus promote exports as well as encourage imports. It will be necessary to look into the likely impact of the policy in the coming years.

The amendments of the Exim policy made during April 2001 further gave importance to the boosting up of the exports. The highlights of the policy included creation of market Access initiative, introduction of the new chapter on Special Economic zones, extension of Annual Advance License facility for deemed exports and the intermediate supplies, extension of the validity of the duty free Replenishment Certificate Scheme and the procedural simplifications. It gave special importance to the agricultural sector through the creation of the Agricultural Export zones wherein the state governments may identify product specific agri export zone for end to end development for export of development products from geographically contiguous areas. Quantitative restrictions removed on 111 items at 8 digit level. Tariff policy revised, Within the bound rates, the customs duties have been enhanced on tea, coffee, copra, coconut and desiccated coconut from 35% to 70% and on crude and edible oils, the rates range from 45% to 75%-85%. The Exim Policy Schemes like Duty Exemption Scheme and the Export Promotion Capital Goods Scheme are being made applicable to the agricultural sector.

For agriculture, subsequent liberalisation attempts were made especially from 1994. Extension of the Exim Scrip facilities for a number of agricultural commodites, decanalisation, shifting of commodities from restricted, prohibited lists to free list, etc was carried out in different phases. The changes in the licensing structure for agricultural commodites from 1995 shows that there is enough liberalisation in the agricultural sector too. Good number of items are put under the free list. The percentage of free items had increased from 22% in 1995 -96 to 58% in 2000 and further extended in April 2001.

The Impact of Removal of QRs: A Review

The impact parameters of the removal of quantitative restrictions are weighted positively in favour of the policy statement and thus can be seen as overall beneficial to the sectoral growth. But this does not come as a panacea and care needs to be taken while monitoring the tariff policies and price signals. Recently the World Bank Development Brief commented that "The Uruguay agreement fell short of the intended liberalization in large part because of the way countries carried our tariffication" and further "But tariffication in the OECD countries resulted in little or no liberalisation for major agricultural commodities" (World Bank 1995). There is a strong feeling among the agriculturists and academicians that the number of commodities included in the list under OGL by the Ministry of Commerce is too large. India has leaped forward even well ahead of the WTO requirements. This was countered by the officials of the Ministry by assuring that the analysis of import elasticity of each of the commodity was carried out and there is no fear of surges in imports (based on the Economic Times, Business Standard Reports, April 1999 and 2000). However, this needs to be analysed further.

The impact of the policy of removal of Quantitative Restrictions (QRs) needs to be assessed more from a standpoint of the probable scenario rather than getting into any strong indicative models. This approach is resorted to, keeping in view the quick changes taking place in the economy. One way of looking at this is from the equilibrium framework. Here, initially a system of equations is set and by alternatively assuming various changes in the impact parameters, a set of the scenario is arrived. Ian Goldin and Daminique Van der Mensbrugghe (1995) used the Rural-Urban North-South Model to arrive at a different trade scenario for 22 regions and for three sectors (food, non-food and non-agricultural commodity groups as each of the sectors). Five different scenario were arrived at in this model with different assumptions regarding protection and trade behaviour. These simulations point both to the downside risk associated with the trade agreements, as well as the potential for significant gains for the participating countries (Goldin and Mensbrugghe, 1995: 41). In other words, a possibility somewhere between extreme welfare loss and a positive and significant welfare gain is indicated by the authors. The equilibrium framework allows flexibility to alternate the policy options and visualises the likely changes based on a number of sectors as well as impact parameters. The quick policy changes many a time fails the futuristic capacity of the models.

In the context of working on either a partial or general equilibrium model, a number of equations and variables have to be handled which is managed either in a sector focussed model or across sectors aggregated model. Apart from the inter-sectoral balancing mechanisms, the preferences and institutions

create sufficient barriers in using a Computable General Equilibrium Model (CGEM) for the purpose of understanding the impact of the removal of QRs. Modelling quotas, raises a number of issues which include the policy regulating quota, the relationship with other factors. Like in many of the bilateral agreements under the Multi-Fibre Arrangement (MFA) flexibility is allowed by swing, carry forward and carry over provisions. This makes the construction of the CGE model complex and less useful (Blonigen, Flynn and Reinert, 1997). Notwithstanding all these the major difficulties in using a CGEM or a Partial Equilibrium Model (PEM) includes the problems related to the market preferences, policy induced instability in the historical trade flows (as these are more often used as variables in the estimation process), domestic market imperfections and barriers to free access to trade for the producers.

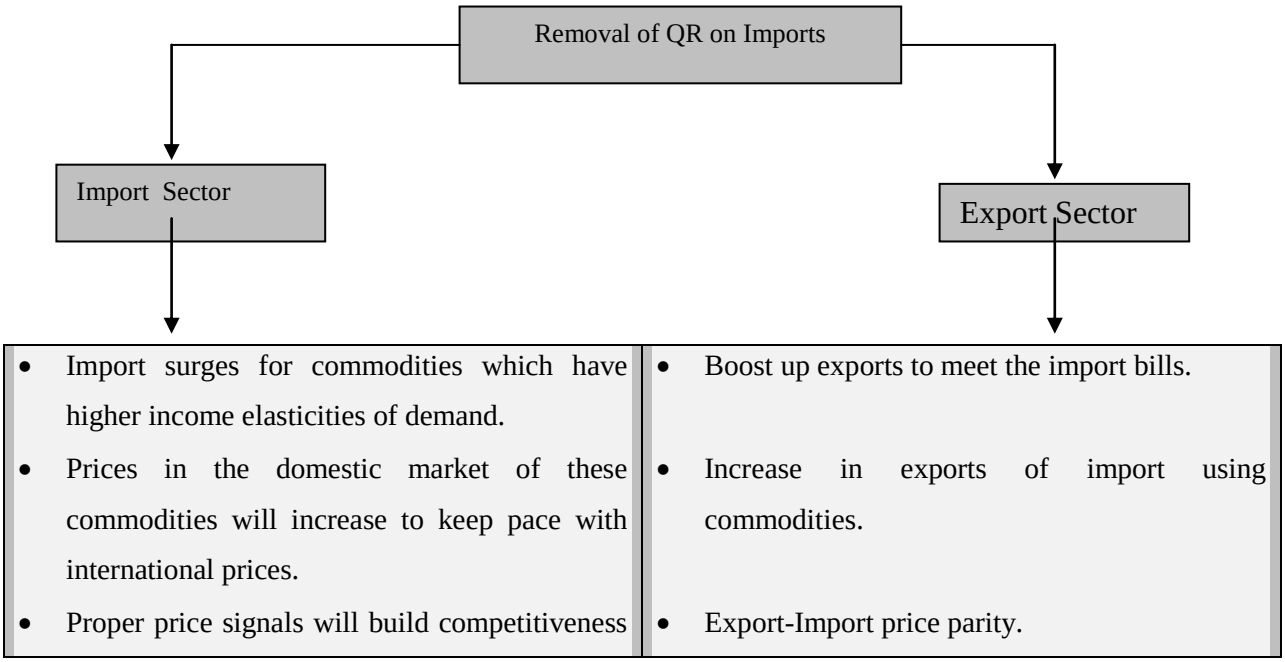
The Social Accounting Matrix (SAM) is another method of impact assessment due to policy variations in the trade sector. SAM requires a square matrix of transactions across the upstream suppliers and the domestic demand as against the alternative policy. Each cell of the SAM will have the price transactions but such records for individual commodities are difficult to gather and time consuming. Moreover even though the commodity specific individual demand functions are amenable for estimation, it is quite difficult to estimate the Impact Demand Functions. Because the base data for such functions are under the constraint regime, added to the producers not revealing their production decisions under such circumstances and the variables affecting such decisions. Therefore, despite the fact that CGE or sector focussed CGE or PEM or SAM offer rigorous opportunity to test the impact of removal of QRs, it will be better to attempt such an exercise after obtaining some experience about it for at least a few years. In any case, the welfare gain in shifting from an autarchy to a free trade regime has been well recognised and documented.

In a recent study, Rajesh Mehta (2000) looks into the impact of the removal of QRs on imports of India. The model used in isolating the impact of the removal of QRs assumes the response function of imports to the import price variable adjusted to the tariff rates, total import bill and an index of Qrs. The expected increase in the import due to the removal of QRs for restricted items is estimated to be around 6.8% of the present level of imports. The expected increase in the imports due to the removal of QRs for canalised items may lead to an increase of 1.7% and with the removal of SIL 0.2%. It is expected that India's aggregate import demand will increase by 8.7% of the present level of India's import. Under different commodity groups pertaining to agriculture imports are likely to shoot up in the case of cereal products, coffee, tea, spices, rubber and rubber products and chemical fertilisers.

The problems however, with these kinds of model are plenty. First, the equation can be estimated only with the data available for the period before the removal of QRs. Second, the change in QR regime marks a structural shift in the policy and hence the policy variables record an en-block shift in their behavioural pattern. Such changes cannot be captured in the variables like the price adjusted to tariff rates in the pre change situation. The price response in the pre-change and that in the post-change situation will not be the same. Third, the QR index for the pre-change position will not explain the quantum of the commodity imports, as this variable itself is a constraint on the variation in imports. Lastly, the model also uses the total quantum of imports as an explanatory variable but it is certain that this variable will also change in structure itself in the pre and post-change periods. Keeping this in view we used the import response function. Our assumption in this model is that the price response in the domestic market may remain broadly unaltered.

Probable Impact of the Removal of QRs: Some Workable Hypotheses

Theoretically, tariff policy is preferred to quantitative restrictions for various reasons. Prominent among these are: (I) openness of the economy, (ii) creating competition in the domestic market, (iii) increasing production efficiency, (iv) correcting relative price across markets, (v) meeting the domestic supply shortages with least time lag, (vi) higher revenue accrual. We tried to formulate below a systematic representation of the impact of removal of quantitative restrictions:



among domestic producers. • Sudden shortages (onion crisis type) could be tackled with ease. • Help in qualitative improvement in quality of production. • Hoarding of essential commodities will reduce substantially. • Increase in the production of processed agricultural products. • Will facilitate entry of private trade.	• Export competitiveness will increase. • Export will have stronger relationship with imports. • Import responsiveness of export will increase. • Long-term export oriented production strategy can be chalked out. • Import-intensity of exportable commodities will increase.

Determinants of Imports

In order to locate the determinants of imports, we have taken four variables namely: (I) Unit price of imports (computed by dividing value of imports by the quantity of imports and converting by using the average exchange rate of that year (VP), (ii) Wholesale price of the commodity to represent the domestic prices (WSP), (iii) World total production of that commodity (WP), (iv) Indian total production of that commodity (IP). As the data used here are time series data, we have used an additional trend variable (t) to adjust for the trend effect. The equations are presented in Appendix Table 2. We have taken here only those commodities for which the consistent time series are available and which also share a significant share of the total imports. The commodities included in the analysis are: (I) Cheese and Curd, (ii) Cereals, (iii) Wheat, (iv) Pulses, (v) Rubber, (vi) Silk, (vii) Cotton Lint, (viii) Linseed, and (ix) Coconut Oil. We also tried to estimate the equations for a few more commodities but either there were breaks in the time series (leaving only a few degrees of freedom) or the fluctuations in the series were too high to warrant any time series behavior.

The imports before 1997, were mostly resorted to under a stress situation in the domestic market and the decision to import was not so much due to comparative advantage in the production of the commodity but more because of the shortages in the domestic market. This situation causes a kind of typical problem indicating that the imports do not respond to either the world prices or the domestic price. In fact, a clear indication can be had from the absence of trends indicated by the coefficients of time variable. This is true under a controlled regime where a large number of commodities had restrictions on imports. It may be noted from Table 2 that only equations for rubber, silk and cotton lint showed the time trend as a significant variable. Apart from this, in the case of silk and cotton lint, the price variables emerged with a statistically significant coefficient. Prices as expected have a negative impact on the import. In the case of rubber, the time trend emerges with a negative coefficient, indicating a decline in imports.

Growth Performance of Imports and the Relative Prices

In order to get a clear picture of the future import scenario, we looked into the share of the commodity in aggregate imports along with the growth performance during the last decade. We have presented the share of imports and the growth rates in total value of imports in Appendix Tables 3 and 4. Among the imports, linseed oil, jute fibers, silk and milk and cream (dry), wheat and meslin, cotton (lint) and coconut oil are the dominant import commodities with high rates of growth. But not all of them had high share in the total value of imports. In fact, jute and fibers, linseed oil and coconut oil showed high rates of growth but claim only a small share in aggregate imports. These commodities with a low share of import but high growth are likely to record a steep increase in the imports. In a liberalised trade scenario, prices have an important connotation than under the quantitative restrictions and tariff regimes, which insulates the fluctuations in prices as well as availability. It can be seen from the above table 5 that except in the case of Tobacco and Bananas, the world prices are lower than the India Wholesale prices. In that case, possibility of import surges in these commodities cannot be ruled out.

Conclusion

Theoretical arguments comparing tariffs with quotas indicate a favourable situation for tariffs. In a general equilibrium framework, Rodriguez (1974) compared the tariff retaliation process against quotas and reached a conclusion that the supply and demand schedules can affect endogenously or exogeneously and thus will affect equivalence. Similarly, Pelcovits (1976) noted that tariffs will allow free changes in prices whereas, the quota will imply stability. Under revenue constraints, the tariff is superior to quota for the importing economy. The other side of the argument comes from the theoretical view of Dasgupta and Stiglitz (1977) wherein they relate tariff to a revenue generating mechanism depending on the steepness of the demand and supply functions. It is however, difficult to compare the desirability of any instrument in the absence of information about the impact parameters.

Our analysis of the trade policy of India indicated three different phases. As a first phase the trade policy was more protective and BOP dictated the trade-related decisions. The overall economic policy perception was inclined towards self sufficiency and meeting the internal demand indigenously. Import substitution became a buzz word and imports were restricted through quantitative restrictions. Trade balance remained consistently negative and more often under three digit limits (highest during 1964-68 period). By 1974-75 the trade balance was negative at Rs 1190 crores. The year 1979-80, saw the peak of the negative trade balance and it never became positive thereafter. This was the point when significant changes were introduced in the trade policy following the recommendations of the Alexander Committee (1979), Dagli Committee (1980) and Tandon Committee (1980). The agricultural sector however, enjoyed a positive trade balance more often as a result of the protective policy. Beyond the mid-seventies imports were resorted to only in the context of stress in domestic demand. The possibility of revenue loss and price structure imbalances (between domestic price and world prices of agricultural commodities) can be attributed to the over protective trade policy especially in the case of the agricultural sector.

The EXIM policy of 1997-2002 opened up the sector significantly. The signs of revival of export trends could be marked from 1993-94 onwards. The modifications to the trade policy came significantly during 1999 followed by the recent changes announced on 1 April 2000. The changes are announced in the form of: (i) Introduction of Pre-export Duty Exemption Pass Book, (ii) Admissible limits on samples relaxed, (iii) Threshold of Export Promotion Capital Goods brought down, (iv)Services export promotion steps, (v) Green Card for exporters allowing them various facilities, (vi) Annual advance licence to the exporters, (vii) Export Processing Zones, (viii) Removal of QRs on 1,429 tariff lines and a promise to remove QRs on the rest of the items by April 2001.

Among the probable impact of the removal of QRs we noted four significant issues: (i) it is possible to experience import surges of the commodities which have higher demand elasticities. This is possible for the group of commodities with higher import growth and high demand elasticities. In the case of the commodities having lower share of imports, the impact may not be felt significantly but it is possible to expect an impact on the commodities with higher share in the total imports. (ii) the liberalisation of imports will increase competitiveness in the domestic market which can have positive impact on production as well as quality of products. (iii) sudden shortages in demand for commodities can be tackled effectively. In the absence of canalisation, the entry of domestic traders will be facilitated, increasing the possibility of competition. This will also reduce the tendency towards hoarding in order to create temporary shortages. (iv) the impact on prices is the most intriguing aspect of the analysis. It is expected that the price level in the domestic market will tend to get integrated with that of the world market prices. Such a phenomenon can have a multi-faceted impact. The price integration may increase/reduce the price fluctuations in the domestic market. Such an effect will depend on the quantum of import of that commodity. A normative ceiling on the domestic prices will be intuitively exercised by the world market prices. Price signals will further cause a change in the production structure across commodities pushing forth the growth in GDP.

The policy of removal of QRs emerged on the Indian scene precisely during the EXIM policy modifications of 1999. Therefore, analysing the impact would need some basic data in the demand and supply parameters under the liberalised regime. In the absence of this, either Social Accounting Model (SAM) or Computable General Equilibrium Model (CGEM) may not yield useful results. The best bet in situation would be to analyse the trends and make some informed guesses about the possible trends. India's trade in agricultural commodities has been quite fluctuating. When we look at the commodity composition of trade across commodities pulses, soyabean oil, silk, rice, natural rubber, vegetable oils, cotton lint, milk and cream (dry) and cereals summary, share more than 2 per cent of the total share. The share of groundnut oil, cheese and curd, soyabean cake and meal, sunflower seed, cereals NES, coffee, meat and onions form a negligible share of total imports. Checking this list of commodities across those on which quantitative restrictions are removed we get an interesting picture. It is likely that the import of the commodities namely silk, milk and milk products, rice, cotton lint and pulses is likely to increase. It is also likely that the import of wheat, jute, pulses, blast fibers and sugar may increase. There are some non-traditional commodities for which the rise in import cannot be ruled out. Linseed oil, coconut oil and resins form such a group of commodities. Our analysis of the import demand functions indicated an extremely low impact of unit price of imports on the quantity of imports. Except in the case of silk and

lint cotton, none of the commodities showed any significant impact of prices on quantum of imports. The index of total values of import also show probable divergence in the indices. It will therefore be difficult to conclude about the price impact of increased imports on the domestic prices.

From our analysis of removal of QRs on the imports, it comes out that the import trends will be upward in the case of crops like pules, wheat and processed agricultural produce. Among the basic commodities, cotton lint and vegetable oils are likely to have a higher import demand. A similar situation can be viewed in the case of milk and milk products. It comes out of the analysis that the domestic prices will stabilise under the pressure of international prices, price integration will become a faster process in the case of commodities having high demand. The price elasticity of the import demand function indicates only positive trends in cotton lint and silk.

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Appendix Tables

Table 1: Specific Liberalization Policies Pertaining to Agriculture Since 1991

Year	Changes in Policy
1991	❖ Removing a few items from negative list of imports and restricted list ❖ A system of advanced license was designed for providing agricultural exporters with duty free access to imports – Procedures simplified. ❖ EXIM scrips facilities for a number of agricultural commodities and allied products like fish products, cashew, fish, fresh fruits, vegetables, cut flowers, plants, plants material, spices, packed fruits, vegetable products, instant tea, instant coffee, etc. ❖ Decanalisation of jute pulp, Manila Grass, Raw fiber, Raw jute, in imports and decanalisation of castor oil, molasses, raw-jute and sugar in exports. ❖ STC's import monopoly on rubber was removed
1992-1997	❖ Duty Free Licensing Scheme for agricultural exporters provided ❖ Introduction of special import license ❖ Reduction in number of restricted items to 215 ❖ Agricultural imports other than cereals, oilseeds, edible oils were decanalised. ❖ Quantitative Restrictions removed on agricultural commodities. ❖ Export of agricultural items except onion, and oilseeds decanalised ❖ MEP restrictions on Basmati rice abolished in 1994 ❖ Export controls on all common varieties of rice abolished in 1994 ❖ Private export of durum wheat was allowed - QRs removed ❖ Import of Palm oil was put on OGL ❖ Exports of edible oils except coconut oil, palm oil were put on OGL ❖ Export control on sunflower seeds, rapeseeds and mustard were removed ❖ Sugar imports were delicensed
1997-2002	❖ Import restrictions on cloves, cinnamon and cassava were Converted to canalised list ❖ Export of sterilised milk, vegetable oil except groundnut oil delicensed.
1st April 2000	❖ 80 items broadly coming under the agricultural and allied sectors were removed from the list of items having quantitative restrictions. ❖ Tariff Policy on agricultural commodities revised.
1st April 2001	❖ Creation of Agricultural Export Zones wherein the state Governments may identify product specific agri export zone

	for end to end development for export of development products from Geographically contiguous area. ❖ Quantitative Restrictions removed on 111 items at 8 digit level ❖ Tariff Policy revised. Within the bound rates, the customs duties have been enhanced on tea, coffee, copra, coconut and dessicated coconut from 35% to 70% and on crude and refined edible oils, the rates range from 45% to 75% / 85%. ❖ Imports of all food products, meat and poultry products and tea wastes will be subject to domestic regulation. The import of agricultural products like wheat, rice, maize, other coarse cereals, copra and coconut oil have been placed in the category of state trading. ❖ To ensure that import of agricultural products does not lead to Unwanted infiltration of diseases and pests in the country, import of primary products of plant and animal origin will be subject to ' Bio Security and Sanitary and Phyto-Sanitary Permit'. ❖ The EXIM Policy schemes like Duty Exemption Scheme and the Export Promotion Capital Goods Scheme are being made applicable to the agro sector as well with effect from 1st April, 2001.

Source: EXIM Policies of India, Ministry of Commerce, Various issues.

Table :2

Commodity wise Determinants of Import Trends: 1986 – 1996.

					R^2	F	Dw	Presence of A C
Cheese and Curd								
1.	104.36**	- 0.37 **VP**			0.05	0.50	2.02	No
	(2.57)	(0.71)						
2.	169.47**	- 0.39 **VP**	-10.62 **t**		0.18	0.87	2.36	No
	(2.38)	(0.77)	(1.11)					
Cereals : Summary								
1.	17845.01	- 524.87 **VP**			0.12	1.20	2.46	No
	(1.63)	(1.09)						
2.	2206.00	+36.19 **WSP**			0.07	0.63	1.78	No
	(0.20)	(0.80)						
3.	20034.32	- 500.06 **WSP**	- 488.09 **t**		0.15	0.70	2.53	No
	(1.66)	(0.55)	(0.97)					
4.	115292.20	- 0.06 **WP**	+435.79 **t**		0.18	0.90	2.41	No
	(1.25)	(1.14)	(0.34)					
5.	- 7499.31	+0.11 **IP**	- 1221.40 **t**		0.06	0.26	2.18	No
	(0.13)	(0.30)	(0.54)					
6.	- 34476.50	+0.37 **IP**	- 759.45 **VP**	- 2520.02 **t**	0.24	0.74	2.81	Ind
	(0.57)	(0.92)	(1.29)	(1.05)				

Wheat

					R^2	F	Dw	Presence of AC
1.	5595.52 (1.07)	- 77.57 **VP** (0.27)			0.01	0.07	2.50	No
2.	5714.355 (1.03)	- 15.011 **VP** (0.03)	- 194.25 **t** (0.17)		0.01	0.05	2.50	No
3.	27934.23 (0.55)	- 0.04 **WP** (0.44)	- 64.82 **t** (0.08)		0.04	0.15	2.60	Ind
4.	72785.72 (1.85)	- 1.579 **IP** (1.72)	+2741.00 **t** (1.50)		0.28	1.54	2.46	No
5.	72766.56 (1.73)	- 1.58 **IP** (1.61)	+21.51 **VP** (0.05)	2709.49 **t** (1.33)	0.28	0.90	2.45	No
6.	- 8042.16 (0.40)	+85.21 **WSP** (0.71)	- 2611.12 **t** (0.75)		0.07	0.30	2.24	No

Pulses

1.	613594.00 (1.28)	- 5620.05 **VP** (0.04)			0.00	0.00	2.19	No
2.	509487.30 (1.06)	+59831.91 **VP** (0.41)	- 20125.10 **t** (1.17)		0.15	0.69	2.72	Ind
3.	-1333816.00 (0.73)	+37.51 **WP** (1.12)	- 30034.20 **t** (1.61)		0.25	1.31	2.59	No
4.	1517818.00 (1.95)	- 69.661 **IP** (1.06)	+2177.00 **t** (0.09)		0.24	1.24	2.39	No
5.	1327253.00 (1.54)	- 79.19 **IP** (1.13)	+95439.04 **VP** (0.64)	+660.93 **t** (0.27)	0.28	0.90	2.73	Ind
6.	701985.80* (3.72)	- 7.52 **WSP** (0.02)	- 17480.60 **t** (1.09)		0.13	0.59	2.53	No

Rubber

1.	35415.90* (5.19)	- 205.66 **VP** (1.39)			0.18	1.92	0.88	Ind
2.	62637.61* (8.76)	- 31.41 **VP** (0.34)	- 5213.42 **t*** (4.52)		0.77	13.22	2.15	No
3.	59414.79* (7.87)	+4.97 **WSP** (1.02)	- 6979.50 **t*** (3.76)		0.79	15.18	2.59	No

Silk

1.	10770.25** (4.74)	- 31.76 **VP**** (3.29)			0.55	10.83	1.24	Ind
2.	6066.52** (2.58)	- 25.96 **VP**** (3.48)	+571.50 **t**** (2.88)		0.78	13.94	2.74	Ind

Cotton lint

1.	58826.77* (4.02)	- 2010.13 **VP*** (2.43)			0.40	5.89	2.14	No
2.	47201.21* (2.92)	- 2377.81 **VP*** (2.86)	+2906.05 **t*** (1.40)		0.52	4.26	2.68	Ind

Linseed							
1.	1544.36	- 15.84 **VP**		0.00	0.01	1.34	Ind
	(1.25)	(0.09)					
2.	1458.18	- 31.97 **VP**	+31.84 **t**	0.01	0.06	1.36	Ind
	(1.10)	(0.16)	(0.33)				
Coconut oil							
1.	8159.62*	- 570.47 **VP**		0.15	1.58	2.29	No
	(2.80)	(1.25)					
2.	6660.66	- 528.58 **VP**	+207.14 **t**	0.21	1.03	2.39	No
	(1.85)	(1.13)	(0.74)				

Note : 1. **VP** – Value / Quantity; **WSP** – Whole sale price; **WP** – World Production;
IP – Indian Production, **DW** – Durbin Watson's 'dw' Statistics.

2. **A C –** Auto-Correlation, **No** – Auto correlation not Present, **Ind –** Test inconclusive.

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3. * : Significant at 1 % Probability level,
**: Significant at 5 % Probability level.

Table 3: Commodity Composition of Agricultural Imports
(% share is based on Averages of 1986-96)

Commodity	%share
Pulses	35.92
Soybean oil	13.17
Silk	10.70
Rice	7.25
Natural rubber and gums	6.85
Rapseed,Mustard oil	6.07
Cotton lint	5.33
Milk and cream,dry	3.72
Cereals:summary	2.14
Raisins	1.61
Jute and bast fibers	1.61
Wheat and mesilin	1.19
Sugar,refined	1.08
Sugar,total, raw	1.05
Coconut oil	0.47
Pepper(Black,white long,)	0.31
Milk and Cream, evaporated	0.27
Tobbaco,unmanufactured	0.25
Tea	0.19
Linseed oil	0.17

Grapes	0.14
Copra	0.13
Oil cake and meal other veg	0.13
Groundnut oil	0.06
Cheese and curd	0.05
Soyabean cake and meal	0.05
Sunflower seed	0.03
Cereals, NES	0.03
Coffee	0.02
Canned meat and meet prep.	0.02

Table 4: Growth Rates of Imports of Agricultural Products (Value) in India: 1986-96

Commodites	Average	C V	Growth rate	" t " Value
Pulses	204089.20	29.33	-1.52	-0.55
Soybean oil	74826.36	89.25	-10.00	-1.29
Silk	60767.91	44.16	12.42	5.48*
Rice	41168.45	171.03	-43.96	-2.09*
Natural rubber and gums	38918.36	61.84	-9.28	-1.40
Rapsed,Musterd oil	34465.00	151.92	-56.99	-5.82*
Cotton lint	30304.91	112.88	10.66	0.56
Milk and cream,dry	21125.00	92.60	15.80	1.52
Cereals:summary	12141.73	132.86	-8.06	0.50
Raisins	9154.82	45.88	1.52	-0.55
Jute and bast fibers	9143.64	87.78	36.21	4.99*
Wheat and mesilin	6777.73	157.12	8.02	0.44
Sugar,refined	6158.18	121.89	-28.39	-2.02*
Sugar,total, raw	5961.45	128.49	-39.30	-1.76
Coconut oil	2654.45	58.41	8.55	1.47
Linseed oil	941.27	67.51	42.76	0.57
Copra	750.09	74.68	-1.57	-0.21
Oilseed cake and meal	742.00	145.89	-2.79	-0.19
Groundnut oil	355.64	99.87	-19.19	-2.15**
Chees and curd	309.45	93.15	-5.34	0.46

Note : Levels of significance of ' t ' test are : ***** at 1 percent probability level,
****** at 5 percent probability level,

C V - Coefficiant of Variation.

Table 5: Average Prices of Major Traded Agricultural Commodities: 1980-94

Commodity	Average Prices	
	World Price (Rs/Qntl)	Indian Wholesale Prices (Rs/Qntl)
Tobacco	3845.82	2150.85
Coffee	2453.66	4409.83
Cotton	2093.85	2210.56
Tea	2056.24	3096.17
Groundnut Oil	782.61	2202.97
Coconut Oil	560.55	2755.31
Bananas	437.43	119.83
Copra	373.31	1812.85
Jute	340.09	407.81
Rice	302.19	316.17
Sugar	233.94	633.57
Wheat	147.99	251.59
Maize	128.41	235.29

Note: World prices are converted from US $ per tonne to Rs Per quintal by using the average exchange rates of the respective years.

Source: Agricultural Prices in India Ministry of Commerce and UNCTAD Price Bulletins.

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