Chapter5 Partial Equilibrium Analysis of Import Quota Liberalization : The Case of Textile Industry

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Introduction

World trade in the textile industry is in the process of liberalization. Developing economies including Asian nations as major exporters of textile-related products, seem to possess mixed sentiments towards the completion of liberalization in 2005. From a general equilibrium perspective, the removal of quota and/or tariff barriers is supposed to increase trade interaction, both within and across industries. The first step towards analyzing these interactions as a whole would be to primarily focus on the initial impact of trade liberalization. This paper addresses the impact of quota removal of textile products. The structure of the paper is as follows. Section 1 reviews the institutional setting of the world textile industry and studies the partial equilibrium (direct) impact of quota removal. Section 2 observes the trade statistics with the case of the US market. Section 3 estimates the potential impact of quota removal in the US market, from the partial comparative-static standpoint introduced in section 1. The final section concludes.

1. A Partial Equilibrium Model of Import Quota Removal

The share of textile products in total exports has more or less remained stable since 1980. In terms of the share of total manufacturing exports, the textile industry is on a slightly declining trend. This seems to reflect the "standardized" or "static" nature of the textile industry, relative to other manufacturing sectors such as electronics.

As part of its discussion around trade issues in developing countries, the World Trade Organization (WTO) has focused on the textile industry, as was the case in the former GATT system. The industry is currently going through fundamental change under a ten-year schedule agreed in the Uruguay Round. The system of import quotas that has dominated the trade since the early 1960s is being phased out. Since 1 January 1995, when the 10-year transitional program of the WTO's Agreement on Textiles and Clothing (ATC) was agreed, trade in international textiles and clothing has been going through fundamental change. Before the Agreement took effect, a large portion of textiles and clothing exports from developing countries to the industrial countries was subject to quotas under a special regime outside normal GATT rules.

Under the Agreement, WTO Members committed themselves to remove the quotas by 1 January 2005 by integrating the sector fully into GATT rules. As relevant statistics reveals, China has been the largest single exporter of textile products in

Asia, distantly followed by Korea, India and Japan. In terms of the share of total country exports, Bangladesh stands out, with textile products constituting over 80 percent of total country exports in 1998. Textiles account for around 20 to 25 percent share in exports in India and China. The other listed Asian economies, i.e., the ASEAN economies, Korea and Japan, have an export share of around 10 percent or less for textile products.

Trade liberalization in general consists of two primary parts: tariff reduction and quota removal. These two policy options are mutually substitutable since both anti-trade policies have an import restriction effect. A difference between liberalization of these policies is that while tariff reduction directly lowers the price of the import products, quota removal does so in an indirect way.

The use of a comparative-static, partial-equilibrium model below, drawn from existing literature, allows forecasting the impacts of tariff reduction and quota removal. Suppose, for simplicity, that the world economy is composed of three "countries" (or three groups composed of several countries, depending on the context): a textile-producing country, a consumer country with import restrictions, and a consumer country without import restrictions. When both a quota and a tariff are levied on the import of a good in general, and the import quota is binding, the quota level determines the volume of imports of the good. The domestic price of the good is in turn determined solely by domestic demand and the volume of the import quota. At a given world price, the difference between the domestic price in the restricted market and the world price consists of the tariff and the quota rents. The tariff rate is an exogenous policy variable, whereas the tariff equivalent of the quota is endogenously determined by the level of the quota and the strength of domestic demand.

Whether the exporting country will gain or lose from quota liberalization depends on the magnitude of the price changes (or price elasticity) in the restricted and unrestricted markets, and also on the share of each market for the exporting country. If the exporter faces a high elasticity of demand in the restricted market, it will gain from the import quota removal through an increase in the quantity of exports. If the exporter has a small quota relative to its supply potential, and hence currently sells a low proportion of its exports in the restricted markets, it will also gain from the quota removal, through an increased market price relative to the previous average market price. In other words, the share of exports to the restricted market is pertinent when assessing the impact of liberalization on the exporting country.

The partial equilibrium model reveals that in the previously restricted market, the price falls when the import quota is removed. The theoretical prediction though points to the fact that that the overall impact of quota removal on the *value* (defined as quantity times price) of exports to both the previously restricted and unrestricted markets is ambiguous, depending on how large the price decrease or increase is relative to quantity increase or decrease, respectively. If the direction of import value is identified, then the proportion of the textile-producing country's export to the restricted and unrestricted countries becomes of fundamental concern when considering the overall change in exports from the producing country. For instance, if the value of exports to the trade-restricted country is to increase and the value of export to trade-unrestricted country is to decrease, then the overall change obviously depends on how much, in

relative terms, the producer country has been exporting to each of the markets.

2. A Case Study: the US Market

As seen in the trade statistics provided, NAFTA members (Mexico and Canada) and Asian economies (China, Korea, India, Indonesia, Taiwan and Thailand) are both large exporters to the US throughout the observed period. Graphical presentations of the import value, import quantity and unit price of the ATC products by major exporters to the US overall underpin the theoretical prediction, first and foremost, of falling import unit prices in the US market after 1995 when the quota liberalization gradually started. That is, these empirical observations confirm the theoretical prediction that an increase in import quantity due to quota removal, albeit in a gradual manner, is correlated with a fall in unit price of those imported textile products. As for individual economies:

(1) China has been increasing its value and quantity of exports to the US, especially with a surge in quantity and a resultant decrease in unit price in 2002, corresponding to the starting year of ATC's stage 3;

(2) Forerunner ASEAN economies have also been increasing its export value and quantity as a region, resulting in a decreasing unit price

(3) Latecomer ASEAN economies have registered a trend similar to that of the forerunner ASEAN members, yet the unit price decrease for the latecomer ASEAN has been steeper than for frontrunner ASEAN;

(4) Japan has a trend of a declining value and quantity of exports, with a quite steep unit price decline;

(5) Korea has a relatively static export value, with increasing export quantity, and declining unit price;

(6) Taiwan's export value has been declining, while its quantity has remained relatively stable, and the unit price is declining;

(7) Hong Kong has been increasing its export value, with relatively stable export quantity and unit price;

(8) India and Bangladesh have been rapidly raising their export values and export quantities, and their unit prices have been stable;

(9) Mexico's trend has been similar to the pattern of India and Bangladesh, i.e., increasing value and quantity, with stable unit price;

(10) Canada and Honduras have been increasing their value and quantity of exports in the US, yet their unit prices have been on a declining trend;

3. Impact of Quota Removal on Trade

A simulation analysis has been made which estimates the export to the U.S. market, on the basis of base line figures for 2002. Although the results are unstable, on the whole a larger price elasticity is associated with a larger total increase in trade value, upon elimination of import quotas. In the cases of price elasticity of both 10 and 6, most of the ASEAN Plus Three economies, with the exceptions of Japan and Vietnam, increase in total exports from quota elimination.

Another salient feature of the result is the possibility of decreasing values of exports to market in which trade was always unrestricted, due to an increased level of product scarcity in the face of quota elimination in the previously restricted market. Only countries with a relatively large share of exports to the US, therefore, would increase their total export value, which is consistent with the existing literature from a general-equilibrium framework. Since there exists no justifiable specification of a function between

quota fill rate and price elasticity, this result should of course be taken with care.

Final Remarks

The simulation exercise above only captures the static impact of quota elimination: including a demand-saturation effect, or competition among exporters would drastically change the prediction result. Tariff reductions could also be incorporated in the analysis. A more pressing issue here would be the fact that the numerical prediction in this section is based only on the "static" trade diversion away from, e.g., latecomer ASEAN economies due to quota removal, which is also as a static phenomenon.

Taking into account dynamic impacts, such as investment concentrations in forerunner ASEAN economies and/or China, smaller economies like Laos and Brunei may be viewed as in an even more disadvantaged position. This is because their decrease in export share due to other Asian economies' quota removal to a larger extent leads to textile-producing firms' dynamic capital disinvestment away from those smaller economies.

In spite of its limitations, the partial equilibrium simulation analysis points to the importance of policy impact on the unit import price of textile products. Viewed from this perspective, due consideration should be given to the role which trade-related institutional arrangements play in analyzing trade indices. Future research along the line of this paper should therefore focus more on incorporating dynamic aspects of manufacturing firms' investment behavior in response to changes in international trade regime.