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VERs, VIEs, and Global Competition

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Abstract

The purpose of this paper is to analyze the effects on global competition of VERs (Voluntary Export Restraints) and of VIEs (Voluntary Import Expansions), and to examine the directions of policy reform for removing these barriers to global competition.

VERs are typically introduced to contain threats of alternative trade restrictions, some of which are GATT-consistent but the others are not. Consequently, the stronger such a threat, the more restrictive VER. VERs are anti-competitive in both static and dynamic contexts. DFIs and third-country exports can only imperfectly restore competition with substantial costs. VIEs are also anti-competitive, especially when targets are defined in terms of market shares.

Phasing-out of VERs according to the Uruguay Round Agreement, although a critical step for enhancing global competition, has to be complemented by strongly tightening multilateral disciplines on unilateral trade restrictions including anti-dumping measures. Global competition policy objectives provide hardly any justification for VIEs, asking of which should also be multilaterally banned.

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1. Introduction

Economic development across the world, especially the rapid industrialization of East Asian Economies, has made foreign competition a very important source of competition even in the largest economies in the world such as the U.S.A. and the E.U. Competition with foreign firms are now perceived by many industrial firms in these economies to be more important than competition with domestic competitors.

However strong import competition has often brought import-competing industry into economic difficulties and invited the introduction of trade restrictions. One of the most preferred forms of such restrictions have been VERs, which have not only significantly nullified the effects of the series of tariff cuts promoted by the successive GATT rounds, but also have undermined the basic principles of GATT (i.e. nondiscrimination and general prohibition of the use of quantitative restrictions). Consequently eliminating VERs has a very important policy issue both to restore credibility of the GATT and to enhance global competition, and it was agreed in December 1993 as a part of the Uruguay Round agreement on safeguard that existing VERs be phased out and its future uses be banned. The first objective of this paper is to evaluate the agreed safeguard rule and suggest complementary reforms, based on the examinations of causes and consequences of VERs.

Recently a new form of discriminatory and fix-quantity type trade intervention has emerged, i.e. VIEs. The U.S. government has strongly pressured Japan in the bilateral trade talks to commit herself to setting import targets in the sectors where the U.S. government thinks that market access has been unsatisfactory. The U.S. Japan semiconductor agreements (in 1986 and 1991) were the first consequence of such U.S. policy stance. Some U.S. scholars (e.g. Tyson (1992)) argue that, while VERs are trade and competition restricting, VIEs are trade and competition promoting. This paper examines economic validity of such arguments too.

This paper consists of the following five sections. Section two provides a basic analysis of the recent use of VERs ,their causes and economic effects. Section three discusses spill-over effects of VERs in both importing country's market and in exporting country's market. Section four analyzes VIEs in comparison with VERs. Section five discusses directions of policy reform, focusing upon the evaluation of the Uruguay Round agreement on safeguard, the necessity of complementary reform of anti-dumping and the other unilateral measures, and a possibility of substituting trade restrictions by competition policy. Section six concludes.

2. VERs and Their Effects - Basic Analysis -

(1) Use of VERs

Let us briefly review the incidence of VERs in recent years across countries and sectors involved. Among the exporting countries, Japan and South Korea have most frequently restrained their exports through VERs. As table I shows, each of these two countries accounts for a bit more than 10 % of the total VER cases. According to the GATT (1992), in 1989 12.5 % of the Japanese exports were subject to the VERs. As table II show, among the importing countries, the E.U. and the U.S.A. have most frequently restrained their imports through VERs. The E.U. and the U.S.A. account for 50 % and 27 % of all the cases, respectively. These incidence clearly suggest that the VERs have been typically used to protect the industries of the largest economies from serious competition of rapidly growing economies.

As for sectors, textile, steel and agricultural products have been most frequently restrained. Many exporting countries across the world have been subject to the restrains in these sectors. On the other hand in the more technology intensive sectors such as automobile, electronics and machine tool industries, the restraints have been concentrated to East-Asian economies i.e. Japan, South Korea and Taiwan.

There has been a very clear-cut tendency that, once a VER is introduced for a particular sector, that sector can continue to enjoy protection through VER or other measures for a long time. The first VER for the textile sector of the U.S.A. was introduced with respect to Japan in 1957, and it is still being protected from international competition through the MFA (see table III for major VERs by Japan). The MFA now covers most importing and exporting countries. The VER for the steel sector of the U.S.A. was introduced in 1969. After a series of revisions the VER agreement itself expired in March 1993, but the U.S. steel industry filed very extensive anti-dumping and countervailing duty petitions in 1992

before the expiration of the agreement, with the result that steel trade has not been fully liberalized.

(2) Why VERs Have Been used?

a. Voluntary and Involuntary Causes of VERs

VERs have been typically used to contain threats of alternative trade restrictions. VERs can be characterized as being voluntary or involuntary, depending on the GATT consistency of such threats. First, they have been used to substitute the trade restrictions which are consistent with GATT, such as safeguard and anti dumping measures. Such substitution is voluntary for the countries involved, given the GATT rights. Second, VERs have also been used to forestall the use of GATT-inconsistent restrictive measures, or as a compromise to phase out such measures. Such VERs are involuntary for the exporting country. Let us illustrate how these two motivations were involved in three major VER cases of Japan.

In the case of 1976 petition by the U.S. industry for restricting the color TV import based upon the safeguard clause, the ITC decided that there was serious injury caused by the import and recommended substantial tariff increase in order to provide import relief to the U.S. industry. The U.S. government, instead of levying tariff, asked for the VER (substantial reduction of export to the about 40 % of the unrestrained level) by Japan (later by South Korea and Taiwan). In this case the VER was a clear substitute for the safeguard action. Since the safeguard action requires the importing country to be nondiscriminatory in import restriction and provision of compensation can be required to avoid the exercise of the GATT rights of retaliation by the exporting countries, VER arrangement was often found more attractive for the importing country. The exporting country also finds VER to be preferable, since it is not a unilateral measure by the importing country and leaves quota rent to the exporting country.

In the case of the 1980 petition by the U.S. industry for restricting the automobile import based upon the safeguard clause, the ITC decided that no serious injury had been caused by the import. As a result there was no GATT-consistent measure available for the U.S. government to restrict import. However, with the background of increasing layoff of the workers in the U.S. automobile industry, the bill for restricting the import of the Japanese automobiles through quota was being prepared in the U.S. congress. Given the U.S. government's explanation of the clear risk that such bill might become a law, the Japanese government decided to impose the VER for three years from 1981, in order to forestall such protectionist move by the congress.

In the case of the 1983 petition for restricting the import of machine tools based upon national security reason, the U.S. government conducted the investigation but did not choose to restrict import based upon section 232 of the 1962 Trade Expansion Act. Rather it issued a presidential statement asking for the VERs by the four major exporting countries (Japan, West Germany, Taiwan and Switzerland) in 1986. In this case, it was not clear whether the U.S. government could legitimately restrict trade. Although Japan and Taiwan agreed to t-he restraints, West Germany and Switzerland declined.

b. Legal Status of VERs

Since VERs restrain international trade as well as competition in the import country's market, there have been the questions of their consistency with GATT obligations as well as anti-trust law of the importing country. VERs are not consistent with GATT, since GATT Article XI generally prohibits the use of trade restricting measures other than duties, taxes and other charges, whether by exporting countries or by importing countries, with exceptions limited only to those explicitly

sanctioned by the other GATT articles¹. GATT article XIX (safeguard) do allow importing countries to adopt import restricting measures under certain conditions, but such measures have to be administered in a non-discriminatory manner (GATT article XIII). VERs do not satisfy these conditions.

However VERs have not been challenged in the GATT and had remained as grey area measures until the Uruguay Round Agreement on December 1993 explicitly prohibited their future uses. This is because, first, VERs are not unilateral measures but are explicitly or implicitly agreed to both by the exporting and importing countries. Secondly, although VERs do affect third countries, it is not clear whether they lose. A third country which imports the good affected by the VER gains due to lower price. The import competing industry in such country may still complain and demand its government to control the trade diversion. However, when such political pressures for restriction rise, the standard response of the government of the third country has been to demand a similar VER from the exporting country rather than to demand the dismantling of the original VER, presumably because import restriction by the importing country through one measure or another is regarded as inevitable. A third country which exports the good affected by the VER gains since the VER expands its export opportunities to the importing country. On the other hand it would clearly lose, if the VER substituted by a non-discriminatory import restriction.

In many industrialized countries, including the U.S.A., the E.U. and Germany, antitrust law is regarded as applicable to the restraint on trade made by foreign exporting firms when such restraint negatively affects domestic competition in an significant manner. However when a VER

¹This applies not only to quantitative restrictions but also to such measures as the minimum import price system and the minimum export price system. This was demonstrated by the rule of the GATT panel in 1988 that the administrative guidance by MITI of Japan with respect to the monitoring of the semiconductor export prices were inconsistent with the GATT article XI obligation of Japan, even though such guidance was done with a view to preventing dumping in the third country as agreed in the U.S.-Japan semiconductor agreement.

is organized at the request or at least with the consent of the government of importing country, the competition policy authority of the importing country has refrained from bringing anti-trust suit. If such a suit were brought up, it would obviously lead to the self-contradictory situation within the government of -the importing country. Sovereign compulsion doctrine, which relieves the exporting firms of the legal responsibility of their joint actions for restraining exports, if such actions are forced by the exporting country's government, has been used in the U.S.A. in order to avoid such contradiction².

(3) Economic Effects of VERs

a. Anti-Competitive Effect of VERs : Static Effect

VERs constrain the competitive behaviors of exporting firms, thus reducing and distorting competition in importing country's markets. The exact manner in which competition and welfare is affected, however, depends upon strategic nature of competition, market structure as well as what dimensions of competitive behaviors are constrained by VERs. Here we focus on the case where VERs restrict quantities (the VERs restricting pricing decisions would have similar effects as antidumping measures).

First let us briefly discuss the case where firms compete in prices, being unconstrained by supply capacities unless VERs constrain export quantities. As demonstrated by Itoh and Ono (1984), Harris (1985) and Krishna (1989) in the context of duopoly competition, VER facilitates the domestic and foreign firms to jointly raise their prices, even if the export quota is set at the free trade level. This is because, on the one hand, the domestic firm can raise its price without the concern that the affected consumers will switch their purchases from the domestic goods to

²Foreign sovereign compulsion requires the government of the exporting country to establish the legal instrument to force the exporting firms to abide by the restraints (see Department of Justice, 1988 and 1994).

the imports. This effect would be stronger, the more concentrated the domestic industry is. On the other hand, the foreign firm can also profitably raise its price, since the VER has made it certain that the domestic firm will raise its price, causing excess demand for the products of the foreign firm at the free trade price. Thus the VER has the effect of constraining price competition, even if it does not directly constrain pricing behavior of the firms. This collusive effect would be stronger, the more concentrated the domestic industry is. This effect also arises in case of competition between constrained and non constrained exporters.

The increases of the prices of both domestic and imported goods imply reduced global welfare. The supply of the domestic firm can actually decline after the imposition of the VER due to its increased market power, when the VER is not too restrictive. The sharply increased profits of the U.S. automobile industry unaccompanied by significant output expansion just after the imposition of the VER (see Crandall (1987)) is consistent with this theoretical prediction. When the VER is not too restrictive, the export firm also gains thanks to its higher export price (see Collyns and Dunaway (1987) for the case of the Japanese automobile industry). In this case the welfare of the importing country declines more than the gain of the foreign firm.

The above sharply anti-competitive effect of the VER depends upon the specific assumption that only price matters in competition. When non-price dimensions of competition are important, the result has to be modified. Let us consider two non-price dimensions of competition: quality and supply capacity. Section 3 C analyzes the effect of VER upon dynamic competition (i.e. competition through cost reduction).

A number of empirical studies suggest that VERs cause significant quality upgrading by exporting firm (see Feenstra (1988), Boorstein and Feenstra (1991)). When the firm is restricted in its export by VER, it will try to circumvent this restriction by improving the quality of

exports, if a higher quality good can simply deliver more services per unit. In this case the domestic firm will find it difficult to raise its price in spite of the VER. The quality upgrading may also take place when the VER causes the marginal consumers, who values quality less than the average consumers, to drop out of the market for the export firm (Das and Donnenfeld (1989)). In either case price increase can be partially accounted for by quality improvement and should not be fully attributed to the anti-competitive effect of VER.

Next let us turn to supply capacity. When price competition is constrained by supply capacities, market equilibrium can be modelled as a Cournot-Nash equilibrium. In this case the VER will artificially reduce the level of supply capacity of the foreign firm in the import country's market, and will encourage the domestic firm to build up its capacity. Unlike the case of price competition (Bertrand-Nash equilibrium), the domestic firm always raises its supply capacity in response to the imposition of the VER, but still not to the extent that it can totally undo the reduced import supply. This is because the larger market share of the domestic firm makes it less aggressive to expand supply. Consequently the VER is anti-competitive in this context too, since it reduces the total supply and raises market price. The foreign firm subject to the restraint always loses. The domestic firm gains but by less than the combined losses of domestic consumers and the foreign firm. (see Smith and Venables (1991) for the empirical analysis of the VER by the Japanese car producers in the European car market).

Moreover when the VER sets import share rather than import quantity as the ceiling for import, its anticompetitive effect is magnified. As is the case in Bertrand-Nash competition, the supply of the domestic firm may also decline, when it is monopolistic. This is because the domestic firm can expect that if it can credibly reduce its supply, the export firm is going to be forced to reduce its supply too, in order to keep its market

share within the limit set by the VER. In this case both the domestic supply and import supply decline due to the VER.

b. How Is the Tightness of the Restraint Determined?

The tightness of the restraint is crucially important in determining the effects of the VER on competition and welfare. The tighter the restraint, the more restricted is competition in the import country's market and the less the global welfare.

How is the tightness of the restraint determined ? From the point of view of the bargaining theory, it depends on the outside opportunities of the exporting and importing countries negotiating the VERs. Let us assume that the governments (i.e. the trade policy authorities) of both the exporting and importing countries are mainly concerned with securing producers' interests (For the exporting country protecting export industry's interest is equivalent to maximizing national welfare, if it does not take into account the effect of possible compensations associated with safeguard measures by the importing country. In the importing country the government is under strong political pressures for import restriction from import-competing industry), and that firms compete in a Cournot-Nash manner³. In this case, when the importing country requests the VER based upon the more credible threat of alternative restriction which is the more damaging to the exporting firms, higher the tightness of the restraint agreed would be.

This prediction seems to be consistent with the tendency that the VER becomes more restrictive when the government of the importing country has established a clear legal right to restrict trade. Let us illustrate this point based upon the three Japanese VERs for the U.S.A mentioned earlier. In the case of the VER on color TV where ITC sanctioned the strong

³Collusion among domestic and foreign firms are assumed to be infeasible, due to antitrust and other constraints.

safeguard action, based upon section 201, the U.S. government initially requested the reduction of export by as much as 60 % (export to be reduced to 1.2 ~ 1.3 million sets per year from 3.0 million sets exported in 1976) and settled the negotiation by reaching the agreement of reducing the Japanese export by 40 %. In the case of the VER on machine tool where no clear international standard has yet been established on how extensively trade can be restricted based upon national security reason, the two governments agreed to the reduction of export by 20 %. In the case of the VER on automobile where ITC found no serious injury, the Japanese government decided around 8% reduction of export.

We can also predict that substituting the tariff based safeguard measure by the VER will result in more restriction of competition and output. In the case of Cournot-Nash equilibrium, the level of the profit of the export industry declines as the restraint becomes tighter. Moreover for the same level of export, the VER yields more profit for the export industry than tariff, since the VER leaves quota rent to the export firms. Consequently the export industry is willing to accept lower level of export when it is constrained by quota rather than tariff.

c. Anti-competitive effect of VERs : Dynamic effect

How do VERs affect competition in terms of cost reducing investment ? Let us consider this problem in the framework of a two-stage game: cost-reducing investment in the first stage and determination of supply capacity in the second stage. The incentive for cost-reducing investment rests on the three determinants: size of the market supplied by a firm, its competitor's response to cost reduction, and the policy response to cost reduction.

A VER negatively affects all of these three incentives for cost reduction. It reduces the global supply of the industry, even if it may increase the supply of the domestic firm. Therefore, even if the incentive

for cost reduction increases for the domestic firm due to the larger market secured for itself, it tends to decline more for the export firm. It also reduces the competitor's negative sales response to cost-reducing investment by each enterprise. In particular, if the VER specifies the import share as a ceiling, the cost-reducing investment by the domestic firm has the effect of enabling the export firm to expand its supply, since lower production cost of the domestic firm increases its incentive to expand its supply, which in turn allows the foreign firm to export more. Finally it makes the policy response to cost reduction perverse, unless the VER is credibly temporary. Therefore the VER is very likely to reduce cost-reducing efforts of the industry as a whole. It is anti-competitive in a dynamic context too.

d. VERs as a Safeguard and Adjustment-Assistance Mechanism

The preceding discussion has ignored the issue of adjustment difficulties of the import-competing industry. In reality, most VERs have been introduced to reduce unemployment in the industries affected by import surge and to assist the restructuring of these industries. This subsection discusses the effectiveness and limitations of VERs as a safeguard and adjustment-assistance mechanism.

If the VER can help in significantly reducing unemployment in import-competing industry, the VER may become welfare improving. When contraction of the output of the import-competing industry leads to more unemployment in that country, the social opportunity cost of production of the import competing firm can be significantly lower than that of the export firm. If such is the case, the VER-induced-shift of global demand toward the domestic firm may improve global welfare, with the positive effect of lower unemployment potentially dominating the anti competitive effect of the VER.

However there are three major limitations of VERs as a safeguard mechanism. First a VER may have to become very restrictive to save jobs. As demonstrated earlier, a weak VER may actually reduce the supply of the domestic firm and the number of domestic jobs, since the VER enhances the market power of the domestic firm. Weak substitutability between domestic and import goods and high production cost of the domestic firm also increases the cost of VERs. A number of empirical studies suggest that consumers' costs per job saved is very large (see OECD 1985, 1992 for a summary).

Second, the VER may worsen the labor market distortion which contributes significantly to unemployment problem. It is widely recognized that in the auto and steel industries of the U.S.A. the high wages obtained by strong industry unions have exacerbated the unemployment problem in these industries. The VER enhances the monopoly power of such unions and thus allows more aggressive wage demands, since the elasticity of demand for labor declines (Lawrence and Lawrence (1985)).

Third, the VER is not the least cost method of restricting import, since it is bilateral and discriminatory in nature.

Does VER help the adjustment efforts of the import competing industry ? Let us assume that there exists significant room for cost reduction by the industry. As pointed out earlier in the section (3).C, the incentive for cost reduction by the import-competing industry may or may not increase as a result of the VER. First, output of the domestic industry may decline due to the VER. Second, even if the output by the domestic industry expands, the weaker supply response of the foreign competing industry and the perverse policy response of the government to cost reduction by the domestic industry may still reduce the cost reduction incentive of the domestic industry. It is important to note that the net effect on cost reduction incentive is more likely to become negative for more monopolistic domestic industry.

VER under certain circumstances may improve the capacity of the domestic industry for cost reduction. First, if the domestic industry is in a state of financial distress under unrestricted competition, the VER-induced financial improvement may help the domestic industry to pursue long-term efforts to improve efficiency, although such bailout creates moral hazard problems. Second, the VER may improve the incentive for technology transfer by the foreign export industry when direct foreign investment by the export industry in green fields is costly. An extensive investment by the Japanese steel industry in the U.S. steel industry may reflect such an incentive.

However, the productivity performance of the industries protected by the VERs have not been encouraging. As Crandall (1987) points out, the productivity performance of the U.S. automobile and steel industry did not improve after the introduction of the VERs. A comparison with the performance of the other manufacturing sectors of the economy also suggests that the productivity performance of these two sectors are not particularly high relative to the performance of the others.

3. Spill-over effects of VERs

3-1. Competition in Importing country's market

As we discussed in the previous section, VERs have a strong anti-anticompetitive effect. However, the analysis of the previous section was based on the framework of a two-country model, where third countries are neglected and firms do not have wider options, such as direct investment and local production. Once we introduce these elements, the story will become more complicated. However, consideration of these complications is necessary since, as we will discuss below, spill-over to other market and to other instruments such as direct investment can be observed in various industries.

3-1-a. Direct foreign investment

When the amount of exports is regulated by VERs, the firms can increase their shares in foreign market only by producing in the market. Increase in direct investment after the introduction of VERs is quite common phenomena in various industries.

For example, after VERs were introduced in 1977 for color TV exports from Japan to the United States, the Japanese companies started increasing direct investment to the United States, and the local production in the United States by the subsidiaries of the Japanese manufacturers was replacing the exports from Japan. In 1978, only one year after the start of VER, the amount of local production exceeded the amount of exports, and in the 1980s, the share of exports in the total sales by Japanese firms in the United States have been less than one third.

Similar phenomena is observed in automobiles. After the start of VERs to the United States, most of the Japanese manufacturers built subsidiaries in the United States for local production. At the point of

1993, the total amount of local production exceeded the amount of exports from Japan⁴.

What is the rationale for the Japanese firms to invest abroad when they face VERs ? The most important reason seems to be competition among Japanese firms. The export cartelization through VERs does not allow each firm to expand its share in exports. Here exists for each firm a choice whether it sticks to the existing voluntary export restraints and obtain a fixed share of cartel profits or to expand its share by making direct foreign investment. Competition pushed the Japanese firms to have chosen the latter's option in color TV and automobile industries.

Theoretically, both cases are possible and the choice between the two depend on various factors. We can point out several factors which promote foreign direct investments. One is a number of competing firms, and another is asymmetry in costs among the firms, under which firms with more efficient technology will have stronger incentive to expand their market shares. The factor which might be important for understanding the behavior of automobile firms is possibility of growth of profit opportunity. When the firms expect that the market is expanding for them, they often take aggressive share taking and growth maximizing behavior. This is not inconsistent with long run profit maximization.

The question then arises as to whether direct investment will distort the allocation of resources further from the situation constrained by VERs. Again the answer to this question depends on many elements. It is true that anti-competitive effect of VERs is weakened by expansion of local production. However, even if foreign direct investment restores some of the competitiveness, it is at the cost of substantial investment costs.

⁴The amount of automobile exports in 1993 was 1.45 million units, while that of local production was 1.52 million units. Note that, in 1986 the amount of automobile exports was 2.42 million units and the amount of local production was only 0.51 million units.

3-1-b. Spill-over effects on third countries

VERs are usually arranged on a bilateral basis. However, this arrangement may have spill-over effects on other countries. When exports are restricted to one country, what effects does this restriction have on the third country?

In an oligopolistic setting the answer to this question depends on cost structure of the firm as well as many other factors. When a large portion of production cost is already incurred and in that sense sunk, the firms under the restriction by VERs to some country will try to recover their production level by expanding export to third countries. This case can arise when there is substantial amount of capital investment before the realization of VERs and/or when it is difficult to cut the number of workers in the face of VERs. It is interesting to note that the Japanese firms rely less on layoff and therefore are under stronger pressure to maintain their employment level.

Even in a simple static cost function model, if marginal cost is increasing, then restriction of export to one country will decrease marginal cost level of the firm and therefore induce it to take more aggressive export position to the third country. The situation is opposite when marginal cost curve is decreasing.

All the cases discussed above are only theoretical possibilities. However, in the real world, when VER arrangement is made between two countries, it is quite often the case that the third country raises the voice of concern about possible spill-over effect of more aggressive export behavior.

Of course, more aggressive export behavior to the third country is typically welfare enhancing for the importing country, since consumers or firms purchasing the products can enjoy lower prices. However, politically, firms in the importing countries competing with the imported goods often raise strong voice against possible spill-over effects. Thus, it is

possible that bilateral VER arrangement itself spills over to third countries and there being another VER arrangement with the third country. The VERs between Japan and the United States triggered similar arrangements between Japan and European countries in such industries as automobiles.

3-2. Competition in Exporting Countries

The effect of VERs on competition in exporting countries is similar to the effect on third countries. Similar to the case of effect on third countries, the cost structure will be important to see how the behavior of firms in their domestic market will change under VERs.

When the firms made commitment to maintaining production level, domestic competition will be intensified. This seems to have actually happened in the Japanese market when the Japanese automobile producers faced VERs to the United States. Furthermore, when allocation of export quota among firms depend on their shares in the domestic market, competition in the domestic market may be intensified for getting higher shares.

In general, we cannot make any definite statement about the effects of VERs on the competitiveness in the domestic market. However, it is not easy to think of a case where cartelization through VERs in their export markets actually induce similar cartel behavior in domestic market.

4. Voluntary Import Expansions

So called "voluntary import expansions" (shortened as VIE) have had more attention in recent years. Semiconductor trade agreement between Japan and the United States in 1986 was the first case where VIE arrangement attracted attention. Although there is a dispute between the two governments about what kind of commitment was implied by the agreement, namely, whether achieving import expansion of certain amount was an obligation of the Japanese government or just an expectation of the U.S. industry, we understand that certain target (in this case 20 % share of the Japanese market) was set so that imports will exceed this target by voluntary action of Japanese firms. The success of expanding the share in the Japanese market of semiconductors through VIE arrangement encouraged the US industry and the government to utilize VIE for other industries such as automobile parts and automobiles, based on the view that low shares of the U.S. industry in the Japanese market in these sectors were due to their import or entry barriers.⁵

The implication of VIE for competition is similar in some respect to VER. It is obvious that VIE distorts the allocation of resources. By forcing either buying or selling firms in importing countries to expand the sales of the products of exporting countries which are not competitive otherwise there arises anti-competitive reallocation of resources in the market. This is easy to understand if we imagine a closed economy where several firms are competing. If the government forces some buying or selling firms to expand the sales of a particular group of suppliers, the resulting allocation of the market will be distorted considerably. What the U.S. government asked the Japanese government and the industry is similar to this case: to force the Japanese firms to expand the sales of American products in Japan.

⁵See Appendix I for how market share comparison can be misleading in evaluating trade barriers.

However they also have different aspects. While VER does restrict the supply, VIE may not. Then, there does exist the possibility, as the US government often claims, that such arrangement actually enhances competition in importing market if there are substantial import barriers and if import goods are highly substitutable for domestic goods. However, from the theory of the second best, it is quite possible that global welfare declines by VIE even if such barriers exist ,although the exporting country can always gain from terms of trade improvement and rent shifting. In order to improve global welfare, it is essential to correct such barriers themselves, if they exist.

It must also be emphasized that seemingly competition enhancing VIE through forced import expansion may actually have anticompetitive effects just like VERs⁶. This is particularly so if the shares of imports are fixed. When the share of the US exports to Japan is fixed, and when the Japanese industry/government make commitments to that share, the incentives for US firms for setting lower prices will be weakened. They may even raise prices. Facing this less competitive behavior of exporters protected by VIEs and also facing the obligation of supporting exporters to fulfill the target share , the domestic firms will have less incentives to behave competitively or will be constrained to do so. The situation is quite similar to the anti-competitive effects of VER, since such behaviors are nurtured by setting the share of exporters.

More important is the fact that the process of import expansion itself is anti-competitive. Voluntary import expansion is not actually "voluntary" action. The government does play an important role in VIE actions. In fact, it is a form of intervention by the government in sales activity. It is also true that coordinated action by the firms is necessary to be successful for expanding imports; in other words, there exist some kind of concerted behavior among firms. This kind of concerted behavior

⁶See Appendix II for analytical details.

does not imply cartel behavior immediately, but it certainly has the risk of inducing concerted behavior among firms in other activities, some of which are quite anti competitive.

Anyway, under normal competitive condition, it is difficult to effectuate voluntary import expansion only by voluntary behavior of the firms. Thus, some kind of government intervention, such as allocation of imports among importing firms, is necessary. This kind of government intervention is certainly against the basic idea of free trade.

5. Directions of Policy Reform

(1) Uruguay Round Agreement on the Safeguard Agreement

a. Elimination of VERs

The Uruguay Round Agreement on the safeguard agreement aims at re-establishing multilateral control over safeguards and eliminating measures that escape such control, in particular, VERs. For this objective the agreed text specifies the prohibition and elimination of the VERs and sets the rules for the application of safeguard measures, which can be characterized as being more lenient than the exact interpretation of the GATT Articles XIX might imply.

The implementation of the Agreement will cause the following three changes, the relative significance of which is hard to judge at this stage. First, in those cases where serious injury is caused by imports, the GATT-consistent safeguard measures will be more actively used. Unlike VERs, such safeguard measures have to follow the explicit rules set out in the Agreement and will be monitored by the multilateral committee on the safeguard. On the other hand there exists a danger that GATT-consistent safeguards replicate the problems of VERs substantially. The following subsection (b) evaluates such consequence.

Second, anti-dumping and other unilateral measures will be more extensively used, since VERs will not be able to forestall activation of such measures. The more active use of these unilateral measures can reduce and distort global competition more than the VERs. The following subsection (c) evaluates such consequences.

Third, free trade may be maintained in the future even in those cases where GATT-consistent protective measures are unavailable but VERs might have been used in the past. Since the safeguard clause explicitly prohibits both seeking and taking VERs, free trade may be maintained, even if political pressures mount for protection in importing countries.

This of course is the most desirable outcome.

b. Evaluating Agreed Safeguard Rules

The Agreement on safeguards reflects the three basic principles of the GATT Article XIX : serious injury is a necessary condition for import relief, import restriction for such relief has to be nondiscriminatory, and exporting countries affected by the measure can suspend equivalent concessions for the importing country. However it reduces the cost of the use of safeguards for the importing country in the following three ways.

1. When imports from certain countries increase disproportionately, the allocation of quotas can be departed from the past proportions of supplies.

2. A provisional safeguard measure may be taken, based upon a preliminary determination of serious injury.

3. Suspension of concession cannot be taken for the first three years.

The above provisions clearly make a safeguard measure easier to use. In particular, the permission of the departure from the factio selective as well as the past proportions of supplies may lead to de safeguard. Non - selectivity of the safeguard as well as the necessity of compensation have been criticized very strongly by the E.U. as being rigid. These constrains also caused the U.S. government to substitute safeguards by VERs in the past. However, the selective safeguard based upon quota has exactly the same problems as VERs have : it distorts and reduces global competition by penalizing most competitive firms, and therefore it is not efficient. Moreover, the restriction on retaliation will increase the use of trade restrictions as a whole.

However there is one significant advantage of the safeguard regime over VERs. It is rule-based and transparent. The proposed code sets out the following conditions for the safeguard measure:

1. The period of a safeguard measure cannot exceed four years. Although extension is feasible upon satisfying certain conditions, the total period cannot exceed eight years.

2. The safeguard measure has to be progressively liberalized.

3. The quantitative restriction cannot be so restrictive as to reduce imports below the average level of imports in the last three years.

These disciplines, if properly applied, will help in correcting the past situation where VERs drag on almost indefinitely.

There still exist three major problems with the safeguard code. First, eight years of import protection can significantly retard adjustment of the domestic industry. Conditions for the extension for the safeguard measure can be further tightened, so that the measure can be applied in a disciplined manner. Second, the use of quota as a safeguard measure, besides being more likely to become discriminatory, has a strong anti-competitive effect, especially when the market structure of the importing country is concentrated. As pointed out earlier, it also has a bias for stronger compression of import than tariff, although the proposed agreement sets the floor for the level of quota restraint. The most important constraint for switching quota to tariff would be compensation for the exporting country. One solution might be to restrict the use of quota as a safeguard measure in exchange for tight disciplines on the level and period of the tariff protection. Third, phasing out of existing VERs is allowed to take place slowly until 1999.

c. Necessity of Tighter Disciplines on Anti-dumping and the Other Unilateral Measures

There exists serious danger that prohibition of VERs leads simply to more active use of anti-dumping and the other unilateral protectionist measures. Anti-dumping can be worse than VERs in reducing and distorting

global competition. In particular anti-dumping measures often result in a complete ban of exports, since they force exporters to price their exports above both artificially calculated production cost and home market sales price. On the other hand VERs secure some level of export for the exporters. Moreover anti-dumping measures, once decided, can last for a long time, especially in the United States. It is reported that more than one third of the current anti-dumping measures on the Japanese exports by the U.S. have lasted for more than 10 years (more than 22 years for color TV) (MITI (1993)). In spite of these problems, the Uruguay Round has made only a small progress in tightening the discipline on the anti-dumping measures.

A similar danger of increased abuse exists for countervailing duty and for import restriction based upon national security reason. In addition to the abuse of these GATT consistent unilateral measures, there also exists a danger that GATT inconsistent unilateral measure, like the one proposed in the import quota bill for the Japanese automobile export in 1981, may be used to restrict import. Consequently it is important to make further multilateral efforts to significantly tighten the discipline on anti-dumping and the other unilateral measures, as complements to the prohibition of VERs.

(2) Can Competition policy Substitute For Trade Restrictions ?

This subsection analyzes whether competition policy intervention can properly substitute for trade restrictions in providing safeguard and adjustment assistance. Competition policy interventions may include more lenient attitudes toward mergers and cartels among domestic firms. The substitution, if successful, may help the domestic industry restructure more quickly under the pressure of unrestricted international competition.

However, there is a major limitation on the effect of competition policy interventions as a safeguard measure. It is very unlikely that

relaxation of competition policy, unlike trade restriction, is effective in reducing unemployment. It is more likely to have a perverse effect, since larger market power of the domestic firms results in the contraction of its output and therefore in smaller demand for workers. Relaxation of competition policy provides financial relief for the industry but not in terms of jobs, unlike trade restriction.

Flexible response of competition policy toward restructuring, based upon adequate assessment of the strength of import competition, could promote industrial adjustment. Mergers and increased specialization through acquisition and sales of divisions of firms may help the domestic industry to enhance its productivity and efficiency, as long as overall competitive pressures remain strong. Such restructuring will help achieve economy of scale and scope and will increase appropriability of cost-reducing investment.

The challenge for competition policy is that the standard market share criteria such as those based upon HHI can be biased against such restructuring, when the competitive position of the domestic industry is declining rapidly. This is because, while market shares are calculated based upon historical data, such shares can change dramatically over a short period, when import competition becomes strong. Therefore the results of standard market share analysis should be applied cautiously in the case of the industries subject to intensifying import competition, provided that international trade remains unrestricted, so that industrial restructuring to improve efficiency can take place smoothly.

On the other hand, production and sales cartels do not strengthen incentives for cost reduction. On the contrary, they reduce competitive discipline, while they do not increase the appropriability of cost reducing investment. Cartels may further lead to the creation of import barriers, when domestic firms as a whole have large market power even if imports remains unrestricted by trade policy. Therefore it is not clear whether for

the purpose of providing financial relief to industry competition policy based relief such as production and sales cartels is less costly in terms of competition and long run effects than trade policy based relief. This is especially the case when trade relief is provided by non-discriminatory and credibly temporary tariff. On the other hand R & D cooperation-and the other cooperative efforts to improve technology and efficiency can play a positive role, as long as competitive discipline from import remains strong.

In sum, it is unlikely that competition policy can substitute for trade policy in providing safeguard. However, it can correct potential biases against industrial restructuring and against cooperative efforts to improve technology under the situation where competitive position of domestic industry is declining rapidly.

6. Conclusion

VERs are typically introduced to contain threats of alternative trade restrictions by large economies, some of which are GATT consistent but the others are not. The stronger is such a threat, the more restrictive becomes the VER. VERs are anti-competitive in both static and dynamic contexts. They tend to reduce global output as well as global efforts for higher efficiency. Anti-competitive effects are stronger, the more monopolistic the import-competing industry is.

VERs have spill-over effects both in importing country's market as well as in exporting country's market. Both DFIs and growth of third-country exports in the importing country's market tend to undo anti-competitive effects of VERs, but only imperfectly and with substantial costs. VERs may actually enhance domestic competition in the exporting country's market, since capacity constraints become less restrictive and punishment against deviation from implicit cartels become less effective. Nevertheless, a possible negative anti-competitive spill over has to be prevented by vigorous antitrust policy.

VIEs are also anti-competitive. When the target is defined in terms of market share and the export industry is monopolistic, the VIE reduces global output as well as global efforts for higher efficiency, just as VERs.

Elimination of VERs, as agreed in the Uruguay Round, is a critical step for enhancing global competition. However, if such step is to become truly competition enhancing and welfare improving, multilateral disciplines over unilateral trade restrictions including anti-dumping measures have to be strongly tightened. Moreover the agreed safeguard rule has to be employed in a disciplined manner. There exists a danger that GATT consistent safeguards replicate the problems of VERs substantially, since the major constraints on the safeguard actions (i.e. nondiscrimination and retaliation) seem to have been relaxed by the new rules and protection is

allowed to persist for eight years. It is unlikely that competition policy can substitute for trade policy in providing safeguard, but it can correct potential biases against industrial restructuring and against cooperative efforts to improve technology in order to promote adjustment.

Global competition policy objectives provide hardly any justification for VIEs. International dialogue and negotiations over the improvement of market access should focus upon import and entry barriers in a truly economic sense but not upon the results of commercial transactions. VIEs should also be banned multilaterally.

Appendix I (Do low market shares of domestic industry in the foreign market signify its closedness?)

The fact that an industry of a country A has a lower market share in a particular country B than in the rest of the world has been sometimes claimed to indicate the closedness of the country B` market. For an example, Bergsten and Noland (1993) argues that "the 20 percent market (which has been a target set by the Semiconductor Agreement) appears to have been a lower-bound estimate of what the foreign market share would have been if the Japanese market were like markets elsewhere in the world" by pointing out that "in 1986, the U.S. firms had a 40 percent share of the European market and a 66 percent share of the world market excluding Japan." They ,then, take a favorable view to the VIE approach.

However, such argument based upon a simple market share comparison is not well-grounded and can be highly misleading, since it ignores a number of critical factors influencing international differences of market shares of a particular industry. In the case of semiconductor market the neglect of the following factors looks to make the Bergsten and Noland` verdict a dubious one.

(1)International differences in demand structure. Semiconductor market covers a number of highly heterogeneous products, the structure of demand for which varies significantly across countries. For an example final use of the semiconductors for consumer products accounts for 40 percent of the Japanese market, but only 5 percent of the U.S. market and 16 percent of the West-European market in 1992. Moreover, industry of a particular country looks to have comparative advantages in those products for which its home market is important(i.e. there is home market bias in comparative advantages, presumably because home market influences product development efforts of a firm more than foreign market does). Thus the Japanese industry has more market shares in the Japanese market, just as the U.S. industry in the U.S. market.

(2)Trade barriers in comparator countries. The issue can be too high market shares of the U.S. industry in the U.S. market rather than too low shares of the U.S. industry in the Japanese market. In the U.S. and the E.U. markets the antidumping regulations have been powerful deterrents to the rapid expansion of exports by foreign firms. While the practice of "forward pricing" is regarded to be a normal business practice if exercised by domestic firms, it is regarded as dumping, if exercised by foreign firms ,and can be subject to high duties. The antidumping duties determined by the U.S. Commerce for 256K DRAM exports by the Japanese firms in 1985 amounted up to 109 percent. Tariff rates for semiconductors are higher in the E.U. and the U.S. (generally 14 percent and 4.2 percent respectively) than in Japan (0 percent).

(3)Direct foreign investment. Trade barriers in the E.U. market have favored the U.S. industry than the Japanese industry, since the U.S. industry made direct investments in the E.U. market much earlier and much more significantly than the Japanese industry.

(4)Transportation and communication costs. Local firms have competitive advantages over foreign firms in supplying local markets, due to transportation and communication costs.

Appendix II (A simple economics of VIE)

Let us analyze the effect of VIE in the framework of duopoly competition. The foreign and domestic firms are assumed to compete in supply capacities (i.e. Cournot competition). If unconstrained, neither firm has the first mover advantage so that the equilibrium is Nash (point F in the Figure A-1). However, if VIE is imposed on the domestic firm, the foreign firm gains the first mover advantage, since the domestic firm now cannot unilaterally decide its capacity.

First let us assume that the target of the VIE is given in terms of the market share. It is clear that the foreign firm now can have the strategic incentive to reduce its export supply. This is because if it reduces supply capacity, the domestic firm is also forced to reduce its supply capacity. In the Figure A-1 the equilibrium is now the point R instead of the point F. q^R , which is located on the iso-profit line just tangent to the VIE constraint forced on the domestic firm, becomes the choice for the foreign firm ,if it gives more profit for the foreign firm than the strategy of preemptive capacity expansion (the point P) (See Nagaoka (1994) for further details).

When the point R is realized as the equilibrium, it is clear that ,while the foreign firm`s market share increases, its supply as well as the total supply in the domestic market declines. Thus VIE can reduce trade and competition just as VER, contrary to the analysis by Tyson (1992).

The foreign firm gains on the following two accounts. First, it can have more market shares for each level of the total supply, i.e. rent shifting effect. Secondly, it can reduce the total supply and increase the price level, i.e. market power effect. The domestic firm may or may not gain, depending the dominance of the market power effect over the rent shifting effect. The welfare of the foreign country always increases , while the welfare of the importing country always declines since the

consumer welfare loss dominates the gain of the domestic firm even if it exists. Thus VIE is a beggar-your-neighbor policy.

Next let us consider the case where the target of VIE is given in terms of import quantity. In this case the equilibrium is now given by the point E in the Figure A-1. The domestic firm's supply declines compared with the Nash equilibrium F, but the total supply increases, since the smaller market share of the domestic firm makes it more willing to accept the lower profit margin due to its supply expansion. Thus VIE is output and trade expansionary in this case.

However efficiency (the sum of the producers' surplus and the consumers' surplus) can still decline since the VIE shifts production from the low-cost firm to the high-cost firm, assuming that the foreign firm asking the VIE has higher supply cost to the domestic market than the domestic firm. Since the foreign firm and the foreign country always gain from VIE, the domestic country necessarily loses when the efficiency declines (the loss of the domestic firm dominates the consumer welfare gain).

Table I. Summary of Export-Restraint Arrangements by Product and Exporting Country

INDUSTRY	EFTA	CANADA	EC	JAPAN	SOUTH KOREA	CHINA	TAIWAN	USA	Other	Total
Steel	7	3	6	4	7	-	2	-	34	63
Machine tools	-	1	-	4	-	-	2	-	1	8
Electronics	-	-	-	8	5	-	1	-	3	17
Footwear	-	-	1	1	5	1	4	-	3	15
Textiles	-	-	-	-	6	6	1	-	72	85
Agriculture	4	2	3	-	3	1	-	4	42	59
Automobiles	-	-	-	16	2	-	-	-	-	18
Other	3	3	-	4	6	1	-	-	7	24
Total	14	9	9	37	34	9	10	4	162	289

Table II. Summary of Export-Restraint Arrangements by Product and Importing Country

INDUSTRY	EFTA	CANADA	EC	JAPAN	AUSTRIA	AUSTRALIA	SWITZ.	Ex- USSR	USA	Total
Steel	1	-	21	-	-	1	-	-	40	63
Machine tools	-	-	3	-	-	-	-	-	5	8
Electronics	-	-	14	-	-	-	-	-	3	17
Footwear	1	3	10	-	-	-	-	-	1	15
Textiles	18	7	21	11	2	-	7	-	19	85
Agriculture	3	1	45	4	1	-	2	1	2	59
Automobiles	1	2	13	-	-	-	-	-	2	18
Other	1	-	18	-	-	1	-	-	4	24
Total	25	13	144	15	3	2	9	1	79	289

OECD (1992)

Table III Major Restrainers by JAPAN

Sector/ Importing Country	Duration	Affected Export (\$ billion (1991)	Cause	Initial Tightness of the Restriction (% reduction from the level of the Year Before)	Development since the Initial Restriction
Automobile (1)USA	May '81- March '94 (originally) (3 years)	21	Section 201 petition failed but imminent threat of quota	-7.7% (from 1.82 Million to 1.68 Million)	The level of quota was increased to 2.3 Million in 1985 but then reduced to 1.65 Million in 1992. Quota unfill ed since 1987. Significant local prod uction (1.2 Million in 1992)
(2)EC	July '91 - Dec. '99	10	To eliminate 5 national restriction	No export growth is forecasted until '99.	Binding. Reduction of the restraint from 1.26 Million in 1991 to less than 1 Million in 1993.
Machine tool (1)USA	Jan '87- Dec. '93 (5 years)	0.54	Section 232 investig ation conducted	- 20%	Withdrawn
(2)EC	Jan. '81-	0.54	To avoid trade frictions, includin dumping disputes	a floor pricing system for export and an import monit oring system	
Color TV USA	July '77- June '80	--	Section 201 (serious injury found)	- 41% (from 2.96 Million to 1.75 Million)	a large-scale switch to local production, while the U. S. industry shifted overseas
Steel (1)USA	July '69-March '92 (a series of agreements, the most recent one from May '85)	3.23	Section 201 (serious injury found in 1984 and legislative prop osal for quota)	multilateral restraints	Currently not under the restraint but Anti-dumping petition in August 1992. MSA under negotiation
(2)EU	1972-74, 1976-90	--	To avoid trade friction		Withdrawn

(CONTINUED)

Sector/ Importing Country	Duration	Affected Export (billion \$, 1991)	Cause	Initial Tightness of the restriction	Development since the initial restriction
Textile (1) USA	'57- (VER, STA, LTA, VER, and VER)	0.60	To avoid trade frictions	multilateral restraints	end of the bilateral agreements based upon MFA in 1991 for USA and in 1977 for EC
(2) EC	'55- (GATT membership of Japan) - initially restricted by non-application provisions of GA TT	0.45	To avoid trade frictions	multilateral restraints	
Semicondu- ctor (1) USA	1986-1996 (originally 5 years)		To prevent dumping export	Collection of price and cost data	
(2) EU	1990-		To prevent dumping export	Price surveillance under- taking on DRAM under EU anti-dumping procedures	

(Source) Constructed by the authors. Main information is from Trade Policy Reviews (Japan, the U.S.A, the E.U.), 1992, GATT

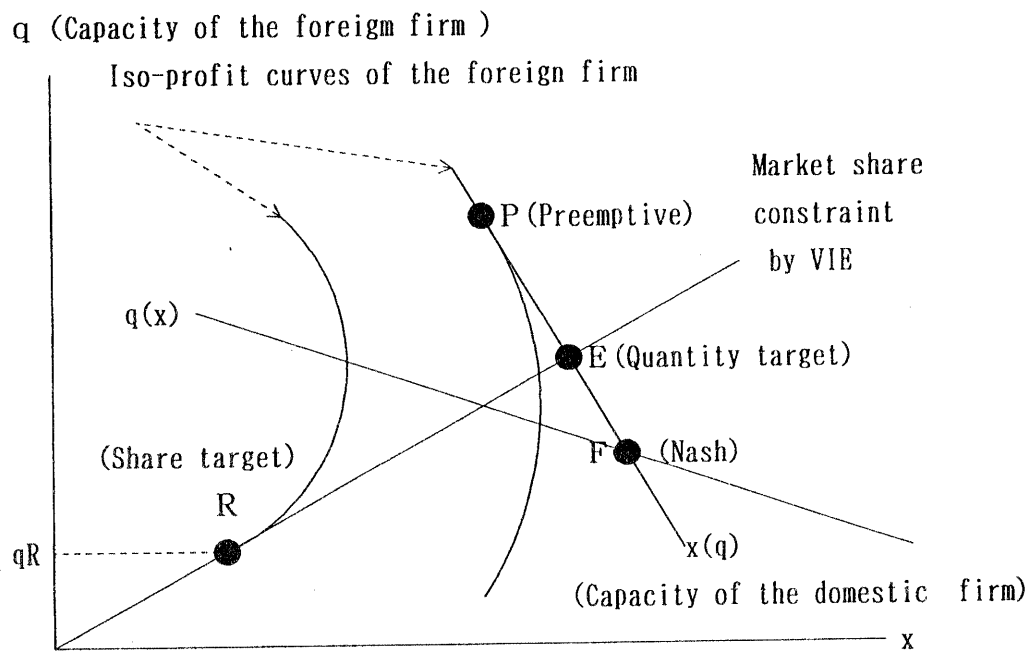


Figure A-1 Effects of Voluntary Import Expansion

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