ARE CUSTOMS UNIONS ECONOMICALLY SENSIBLE IN THE COMMONWEALTH OF INDEPENDENT STATES

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ABSTRACT

The twelve members of the Commonwealth of Independent States established a Free Trade Area to help maintain trade among each other. More recently, Belarus, Kazakhstan, the Kyrgyz Republic and Russia agreed, in principle, to establish a Customs Union (CU). The paper concludes that the dynamic effects of the CU (and Free Trade Area) are likely to be negative because it would tend to lock the countries into the old technology of the Soviet Union. The static effects are mixed but are adverse for countries that have liberal trade regimes compared to the common external tariff contemplated for the proposed CU.

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I. Introduction

In the aftermath of the break-up of the Soviet Union, trade among the new independent states collapsed. While trade appears to have recovered slightly in 1995-96 and estimates vary, the drop in volume terms probably exceeded 50% between 1991 and 1996 (see table 1). We have discussed the reasons and the consequences of this drastic decline elsewhere (Michalopoulos and Tarr, 1994; 1996).

The three Baltic countries decided, early on, to reorient their trade toward Europe and the rest of the world; and all three have signed Association Agreements with the European Union. The other twelve countries, members of the Commonwealth of Independent States (CIS), attempted, mostly unsuccessfully, to maintain trade with each other through a variety of policy interventions, including the establishment of a Free Trade Agreement (FTA). In 1995 three countries, Belarus, Kazakstan and Russia established a Customs Union that the Kyrgyz Republic agreed to join in 1996.

The purpose of this paper is to analyze the economic implications of a Customs Union among transition economies, such as the one established by these four countries, for both existing and prospective members. The next section of the paper describes in broad terms the current trade regimes of the CIS, including the arrangements that govern trade with each other. The third section analyses the economic effects of the Customs Union, in part through the use of a partial-equilibrium model described in detail in the appendix. The focus is on the effects of joining the Customs Union for countries that have not done so. As most CIS members are applying for accession to the WTO, this section also draws some implications of the Customs Union for WTO accession. The last section summarizes the policy conclusions and implications of the analysis. While the analysis focuses on the CIS countries, some of the findings may be of relevance to other countries in transition, for example, among the countries of the former Yugoslavia, that are considering the establishment of similar arrangements.
This original version of this paper was originally in 1997. Since this paper was written, some things have changed in the sphere of preferential agreements among countries in the former Soviet Union. But much remains the same as do the paper’s conclusions, which indeed have been supported by recent quantitative analysis (Tumabrello, 2004). In section IV of this paper we provide and update on preferential arrangements in the CIS.

II. The Trade Regimes

While the trade policy framework continues to be evolving and varies considerably among countries, the following main features characterize the trade regimes of CIS members:

On the import side, most countries have so far avoided the establishment of quantitative restrictions or licensing, but protectionist pressures are rising and leading to the imposition of such controls in some countries, e.g., Uzbekistan, or sectors such as alcoholic beverages in Russia. The tariff regimes vary considerably, but, on the whole, countries have established few tariffs exceeding 30%. Some countries have low and uniform tariffs, e.g., Armenia’s maximum tariff is 10% and the Kyrgyz Republic has a 10% uniform tariff; while, in others, the range goes up to 100% for a few items. In Russia, the average is about 13-14%, with a range from 0 to 30% for most commodities, but with some selected items considerably higher (see table 2 for details at a somewhat aggregated level).

On the export side, there has been significant dismantling of export controls in most countries; but controls of exports through state trading continues in some key exportables such as cotton, oil and natural gas.

Trade with each other, is, in principle, free under the terms of the FTA. Imports are duty free, but it appears that export and foreign exchange controls in practice limit trade among some of the countries. Weaknesses in payments systems continue to hamper trade, leading to continuing use of barter although the previous state-to-state barter agreements have been by and large eliminated. Many countries have established a mixed VAT system: "origin" based for CIS trade and "destination" based with regard to the rest of the world. This means that, with respect to CIS
countries, imports are not taxed but domestic producers pay the VAT regardless of whether the good is exported or sold domestically. For the rest of the world, imports pay the VAT but exports are zero rated.

The Customs Union members negotiated a common external tariff based on the Russian tariff. In the course of 1996, the three original members unilaterally introduced modifications to the external tariffs they applied to some commodities (Rietzler and Usmanova, 1996); also, as of the time of this writing, the Kyrgyz Republic had not taken any steps to introduce the common external tariff but instead continued to apply a uniform 10% tariff to imports from the rest of the world. All four countries are applying to the WTO on the basis of individual tariff schedules rather than as a custom union. Thus, at present, strictly speaking, there is no common external tariff for the Customs Union, but the agreements are still in place, and the governments may pursue further steps towards their full implementation.

III. The Effects of Customs Union

Customs unions have two kinds of effects, static and dynamic. The static effects relate to the impact of the establishment of the Customs Union on welfare. The analysis in this instance focuses on a comparison of the welfare of a country or a group of countries before and after the establishment of the Customs Union; thus the analysis is one of comparative statics. The dynamic effects focus on the impact the Customs Union on the rate of output growth of a country or countries in the medium term? Many analysts (Winters 1996) have noted that supporters of Customs Unions and other regional preferential arrangements frequently find that the static welfare effects are typically small and possibly negative. They then focus on the potential dynamic benefits, which however, are difficult to define and even more difficult to measure.

In the case of the CIS countries, there is already a FTA among all members as well as a Customs Union (CU), however modified by specific exceptions for variation from a common external tariff, among some of them. Hence the analysis of both dynamic and static effects has to compare the advantages and disadvantages of joining this specific Customs Union not just any one,
and it assumes that, in principle, the alternative to joining is continuation of the FTA among the CIS. The implications of a different alternative, under which countries that do not join the CU are excluded from the FTA area, are also briefly examined.

Static Welfare Effects

The principal impact of joining the Customs Union would be to replace the external tariff of each of the countries with the common external tariff of the Customs Union. In general, under these circumstances, the benefits of joining the CU would depend to a considerable extent on the height and structure of each of the countries’ external tariff compared to that of the Customs Union external tariff. While, in practice, a Customs Union external tariff may not be in place at present, for purposes of analysis, the Russian tariff is a good proxy of the Customs Union external tariff that had been negotiated, and therefore, it will be used for the discussion in this paper. If a country such as Armenia or the Kyrgyz Republic, with lower external tariffs, were to substitute the Russian tariff for its own tariff structure, it would increase its unweighted average tariff to 13-14 percent (see table 2). More importantly, assuming that, following accession of new members, the common external tariff is not changed, the Russian tariff exhibits considerably more dispersion compared to the tariff for some of the other countries, whose tariffs are typically between 0 and 30 percent. Thus, for selected products highly protected in Russia, the tariff in some members of the CU would increase significantly. For other countries, adopting the common external tariff would mean actually reducing their average tariff.

Starting with Jacob Viner (1950), international trade economists typically analyze preferential trade arrangements, whether a FTA or a CU, in terms of trade creation and trade diversion. Trade creation in a product occurs when additional imports come from partner countries and displace sales of inefficient domestic producers if these imports are at least as cheap as imports from non-partner countries. Trade creation results in improved welfare for the importing country for much the same reasons as increased trade improves a country's welfare. On the other hand, trade
diversion occurs when suppliers in the rest of the world, who continue to face tariff, are more efficient than partner suppliers, but additional partner country imports displace the more efficient suppliers. Trade diversion is typically, but not necessarily, welfare reducing since the home country must pay more to import the product from the less efficient partner country suppliers.

Although the general theory of regional trading arrangements is quite ambiguous in its conclusions, we believe some definitive conclusions are possible with respect to the specific Customs Union under consideration, at least for some of the CIS countries. Since the partner countries in the potential Customs Union already have tariff-free access to the other CIS markets under the Free Trade Agreement, prices in these countries' markets cannot fall as a result of the Customs Union, i.e., there will be little welfare gain from trade creation. Whatever trade creation would occur, would come from third country suppliers in those products where the current external tariff in the country is higher than that of the Customs Union external tariff. Since welfare costs from a tariff increase with the square of the tariff rate, net welfare effects are little impacted by reductions in tariffs by a few percentage points say, from ten to seven percent. Rather, what is crucial to the welfare effects are the changes that involve significant tariff increases.4

Countries with Lower Tariffs Than in the Customs Union. Prospective partner country suppliers will have the potential, under the higher tariffs of the Customs Union, to raise prices to consumers in other CIS countries by the amount of the tariff preference over rest-of-world imports. In the model we present in the appendix, we assume that they will do so. A principal reason we believe they will do so is our judgment that advocates of the Customs Union propose it as a means of expanding protection for inefficient domestic industries throughout the CIS. That is, the Customs Union is an import substitution strategy for inefficient industries, where the structure of the tariff is high in those industries that exist in the Customs Union, especially in Russia. In the appendix, we elaborate some additional reasons why we believe they will do so. Thus, a key assumption of our model is that prospective members of the Customs Union face upward sloping supply curves from partner country suppliers who will raise prices by the extent of the tariff.
Moreover, since these countries have tariff free access to markets of the members of the Customs Union and to Russia in particular, the exporters from a CIS country joining the CU will not obtain improved access to the Russian market, which is by far the dominant market in the Customs Union. Thus, for countries like the Kyrgyz Republic and Armenia with already liberal external tariffs or others like Georgia and Moldova, which are also pursuing generally liberal trade policies, and assuming the common external tariff is not changed following their accession, the usual tradeoffs that must be considered in the evaluation of a preferential trade arrangement, trade diversion versus improved access and trade creation, do not apply. Thus, the CU would virtually result in pure trade diversion (see the appendix for details).

High tariff protection for such small economies is generally very inefficient and costly. Protection prevents the transmission of world prices to the economy and thereby prevents market signals from inducing resource reallocation to areas of comparative advantage in the economy. Experience has shown that over time, countries with high protection generally grow more slowly than those with low protection (see, e.g., Thomas, Nash and others, 1991; and Sachs and Warner, 1995). Moreover, we show in the appendix that increasing an external tariff within the framework of a Customs Union with Russia and the other partners for a small CIS country, is much more costly than simply raising tariffs without preferential treatment to the Customs Union members. In fact, in this example, the Customs Union will be several times more inefficient and costly to the small country than simply raising tariffs to the rest of the world in a non-preferential manner.

Joining the Customs Union with a common external tariff such as that previously negotiated is so costly for several reasons. First, partner country suppliers can raise prices under the tariff protection they receive from preferential protection. Then, for the quantities previously purchased from partner country suppliers, consumers in member countries with a previously lower external tariff likely will pay higher prices, excluding the tariff, to partner country producers than they were paying prior to participation in the Customs Union, i.e., there is an adverse terms-of-trade effect on the initial quantities purchased from partner-country suppliers. Second, because rest-of- world imports are subject to a higher tariff, there will be a diversion of sales away from rest-of- world
suppliers toward partner-country suppliers. This trade diversion entails two costs: (a) since the importing country does not collect any tariff revenue on imports from partner countries, there is a loss of the tariff revenue on these trade-diverting imports;\(^5\) and (b) excluding the tariff, consumers will have to pay higher prices to partner-country suppliers than they were paying to rest-of-world suppliers prior to participation in the Customs Union.

In their comprehensive theoretical treatment, Bhagwati and Panagariya (1996) describe a model in which partner-country suppliers have perfectly elastic supply curves. This situation might be expected to apply if a country is forming a preferential trade area with a very large market, such as the European Union or NAFTA, because competition among many suppliers in the large market results in flat supply curves to the prospective new member country. In this case, there is a much larger likelihood of the preferential trade area being welfare increasing since the new member will not suffer a terms-of-trade loss on its purchases from the suppliers from the large market.

Countries with Higher Average Tariffs Than in the Customs Union. For countries with a higher average external tariff than that of the CU, the results are more ambiguous. On the one hand, in converting to the common external tariff, because the average tariff is lower than in the home country, there will be a number of products where the external tariff will be reduced. Then there will be a welfare gain on those products where the external tariff is lowered because there will be some trade creation from additional imports from rest of the world suppliers. Partner country suppliers already have tariff free access due to the FTA so no additional trade creation is possible from CIS partners. On the other hand, the negotiated tariff of the CU is not uniform; rather, it favors production of those products already produced in the CU. Even in countries with higher average tariffs than in the CU, their tariffs typically favor their home production. Substitution of the CU tariff will shift the tariff structure so that it favors the producers of the CU, i.e., tariffs will be high on the products produced in the CU and low on the products produced in the home country, and it is likely that even countries with higher average tariffs will have to raise their external tariffs on many products produced in their partner-countries. This will allow partner country producers to charge higher prices under the protection of higher tariffs on third-country producers, a significant welfare
loss that is likely to dominate. A choice available to a country in these circumstances is to lower its
tariff on third countries, without joining the CU. This option offers the gains from the trade creation
on the products where the external tariff is being lowered without the losses of the trade diversion
from having to pay higher prices to inefficient partner country suppliers.

Russia, Kazakstan and Belarus. Finally, briefly consider the welfare impact on Russia,
Kazakstan and Belarus, the members of the Customs Union who had adopted the common external
tariff. Because the tariff structure favors production in these countries, then, as more countries join
the Customs Union, in the short run producers in these countries will gain additional profits and
exports from the additional protection they receive against rest of world imports in the new partner-
country markets. Because the costs of protecting home producers will be borne in part by consumers
in partner countries, the strategy has an initial appeal in the countries whose producers receive the
high protection. But, because the benefits of a liberal trade regime to consumers are dispersed
widely, it is not typically worth it to individual consumers to lobby their governments for liberal
trade actions. So consumers hope that others will expend the resources to lobby their government
on behalf of consumers—this is known as the free-rider problem which typically results in consumer
interests being underrepresented regarding trade protection. The benefits of trade protection are
concentrated in the industry receiving protection, which provides an incentive for the industry to
lobby its government for protection, and therefore the kinds of preferential trade areas that typically
will arise are those that are trade diverting (see Grossman and Helpman (1995)). Thus, in order for
the existing members of the Customs Union to convince additional members to join, or at least to
remain members over time, it is likely that the tariff structure will have to change in a way that
offers protection to producers of other CIS countries, i.e., the existing members will have to offer
protection in their markets to high-priced products produced in non-member CIS states. A country
will not participate in a Customs Union if the Customs Union offers neither enhanced protection for
its producers nor widespread benefits for its consumers. 6

If the external tariff is adjusted to accommodate the inefficient producers of new members,
although some of the producers of the existing member countries may still gain from a wider
Customs Union, the benefits to the countries as a whole are going to be reduced and countries could become net losers. That is, the short-run gains to existing producers mask potential longer term costs of not opening up trade to the rest of the world. It is likely that the entire CIS is not collectively large enough to approximate world market efficiency in most products. Thus, a strategy of widening the protection of domestic producers through a Customs Union of a set of the CIS countries, is really an import substitution policy through protection on a slightly larger scale, a strategy that has retarded growth in many countries (see, e.g., Bhagwati and Krueger, 1973; Sachs and Warner, 1995; and Thomas, Nash and others, 1991).7

Revenue Effects

Due to the potential impact on the fiscal deficit, macro stabilization and inflation, governments must also be cognizant of the impact of preferential trade arrangements on their revenues. In this section, we examine various aspects of this question for the CIS countries.

Tariffs. Joining the Customs Union is likely to have negative revenue implications on new members. As there will continue to be no tariffs on trade within the Customs Union, to the extent that rest of world imports are displaced, tariff revenue will be lost to the Customs Union. In addition, despite the fact that the Customs Union agreements stipulate that the tariff revenue will go to the country to whom the imports are destined, one can not overlook the potential administrative problems associated with obtaining tariff revenues from the customs offices of other member countries, especially given the weakness in tax reserve collections in all these countries. There are other reasons to believe that net revenues from tariffs on imports from the rest of the world will be diminished because there are central administrative institutions of a Customs Union that will have to receive funding, which will likely come from tariff revenue collected by the Customs Union.

Excise Taxes. Accession to the Customs Union will increase pressure on members to harmonize excise tax rates. These rates are presently rather diverse both among the CU countries and potential members. The tax revenue implications of unified rates would have to be assessed in each case individually.
**Value Added Taxes.** The dominant practice among the CIS countries is to apply the value added tax (VAT) on a mixed basis. That is, for trade outside of the CIS, imports are taxed but exports are not, the “destination” system. For trade within the CIS, exports are taxed but imports are not, the “origin system.” Participation in the Customs Union will require a value added tax that is harmonized with the system applicable in the Customs Union, i.e., the current mixed system. Berglas (1981) has shown that, under certain assumptions, including flexible exchange rates, the origin or destination systems are equivalent and do not tax the trade regime if designed properly. Since the VAT rates of most CIS are approximately equalized, the allocation of real resources and trade flows among the other CIS countries is not seriously affected, but it is important to harmonize these taxes within a mixed system to avoid arbitrage and distortions.⁸

What is more likely to be a problem with a mixed VAT system is the allocation of tax revenues. Even if the VAT rates are harmonized, countries with a trade deficit within the Customs Union and a trade surplus outside the Customs Union will experience an adverse transfer of VAT tax revenues toward the partners in the Customs Union with the opposite trade pattern. To illustrate, suppose the trade of Azerbaijan is balanced overall, but it imports exclusively from, say Russia, and exports exclusively outside the Customs Union, and that Russia has the opposite trade balance.

Because the destination system applies on trade outside of the CIS, and the origin principle applies on trade within the CIS, Azerbaijan would collect no VAT tax revenues, either on its imports or its exports, and Russia would collect all the VAT revenue on trade because Russia collects VAT on both its exports to Azerbaijan and its imports from the rest of the world. Thus, even though the mixed VAT system would not change relative prices and is therefore non-distortionary because there is no impact on the allocation of resources, in this example it would represent a transfer of VAT revenues from Azerbaijan to Russia.

**Dynamic Effects**

In general, there are two basic ways in which the rate of output growth can increase. First, through a faster growth of factor inputs and, second, through increases in the growth of total factor
productivity. Assuming no changes in population growth and in labor force participation rates, the
growth of factor inputs essentially boils down to the rate of investment in human and physical
capital. Total factor productivity, on the other hand, is thought to be dependent in the medium and
long term on improvements in technology and knowhow. More generally, access to a diverse mix of
products including modern technology appears to be very important for the growth process (see e.g.,
Romer, 1994). New and diverse technologies are constantly appearing, and these new technologies
allow an increase in the productivity of both capital and labor.9

The question that needs to be addressed is how a Customs Union among the CIS countries
will affect output growth through its impact on access to technology that enhances productivity and
through its effects on the rate of investment in human and physical capital (see de Melo, Panagariya
and Rodrik, 1993). There is some evidence that developing countries total factor productivity is
positively related to the access of technology and knowledge embodied in imports from developed
countries (Coe and Helpman, 1995; Coe, Helpman and Hoffmaister, 1995). In the case of CIS and
other transition economies, access to diverse and modern intermediate products from world markets
appears especially crucial as these economies attempt to transform themselves from an industrial
structure that was inherited from the era of the former Soviet Union, i.e., that was outdated and
frequently not based on comparative advantage. It is very important that these countries move away
from reliance on technologies that are available only in the countries that were part of the former
Soviet Union, since the most dynamic and modern technologies are found elsewhere. Yet, tariff
protection for products that are produced in the Customs Union will discourage the introduction of
new products and technologies from outside the Customs Union and free trade area, technologies
that would boost the growth and development of the CIS members. Thus, on the question of
enhancing growth through improvements in total factor productivity, the effect of the Customs
Union and, for that matter, of the existing free trade area on all its members is likely to be very
negative.

There are several ways through which a Customs Union could affect the rate of investment in
member countries: (a) through a change in tariffs and hence in the cost of imported capital
equipment that changes the rate of return on investment and the rate of capital accumulation; (b) through affecting the financial system and the overall stability and effectiveness of economic policies that improve the climate of investment; (c) by providing an incentive to foreign direct investment to locate and produce in the countries of the Union as opposed to exporting goods and services (Winters 1996).

Unfortunately, it is difficult to make a credible case that these effects would be positive in the case of a Customs Union in the CIS. First, it is likely that the cost of imported capital would actually increase especially for some of the smaller members, because they can now obtain capital goods more cheaply from third countries. Second, while there are plans for greater integration of the financial systems and economic policies of members, which may have a positive impact on the climate of investment in the future, there is very little chance that any of this will happen in the immediate future. In fact, premature integration without adequate multilateral institutions may resurrect some of the problems of the recent past, which contributed to instability. For example, the common ruble area of 1992-1993, without monetary coordination of the multiple central banks, was a root cause of inflation and the problems in trade (see Michalopoulos and Tarr, 1992; 1993). The key challenge in all countries is how to improve the national environment for private sector development through the establishment of policies and institutions, for example, better enforcement of contractual obligations, that improve the investment climate; policies that may best be pursued unilaterally in the near term. Third, it is possible that, as result of the establishment of the Customs Union, there may be a positive effect on foreign investment that comes in to "jump" the common external tariff. How big this effect will be is hard to predict simply because there are so many other factors constraining the inflow of foreign direct investment. Countries need to address these other constraints first because they are likely to have a far greater impact on foreign direct investment than is the stimulus provided by the establishment of a Customs Union. More importantly, foreign direct investment in response to tariff jumping can cause the welfare and growth rate of the capital importing country to decline (see Brecher and Diaz-Alejandro, 1977). The reason is that foreign investment responds to the private return to capital, and the foreigners will repatriate profits based
on their private returns; but when the sector is highly protected, the social return to investment in the sector is much lower than the private return.

In sum, while the dynamic effects of establishing or joining a Customs Union and of the existing Free Trade Area in the CIS are difficult to demonstrate, they are likely to be negative, especially because of the adverse effect of the preferential arrangements on technology and productivity improvements.

The Threat of the Loss of the Free Trade Agreement

In the event that a CIS country fails to join the Customs Union, there is some possibility that the members of the Customs Union would apply the common external tariff to the exports of that CIS country; that is, they may revoke their Free Trade Agreements. Although we must be cautious because the effects will vary from country to country, and we do not have precise estimates, the net welfare impact of participation in the Free Trade Agreement is likely to be negative for most CIS countries. Consequently, the threat of exposure to the common external tariff of the Customs Union should not be feared for most CIS countries.

The reasons are as follows. If Russia, Kazakstan and Belarus withdraw from the Free Trade Agreements and apply the negotiated common external tariff of the Customs Union to exports from the other CIS countries, there would be economic impacts on both the imports and the exports of these CIS countries. Regarding imports, as explained in detail in the appendix, applying tariffs on imports from former partner countries in the CIS results in displacement of partner country imports by rest of world supply. This results in a gain in tariff revenue on these sales. Moreover, since partner country suppliers are likely, in many products, to lower their prices to the extent of reduction of the tariff on rest of world products because marginally inefficient partner country suppliers will be forced out of the market as competition from rest of world producers becomes more intense, CIS consumers will be able to pay less to partner suppliers by the amount of the tariff, and this is a gain to their economic welfare. Moreover, permitting efficient imports from the rest of the world as opposed to preserving inefficient imports from partners in the former Soviet Union is very
productive in terms of breaking away from the outdated and inefficient technology of the Soviet past.

Weighed against this potential gain in welfare from application of tariffs on imports in the CIS is the loss in welfare from lost preferential access to the markets of countries in the Customs Union. Exporters from the CIS countries outside the Customs Union would no longer be able to obtain higher prices than producers from the rest of the world on exports to the countries in the Customs Union, since like exporters from the rest of the world, their exports would also be subject to the tariff. Because the negotiated tariff of the Customs Union is based on the Russian external tariff, it tends to be high in those items important to Russian producers. That is, products important to the exports of the CIS tend to be inputs into production in Russia and therefore have relatively low tariffs in the Customs Union. Although we must again be cautious since this effect will vary from country to country and we do not have precise estimates, this implies that most CIS countries outside Russia, Belarus and Kazakhstan likely derive little terms of trade gain on their exports to the Customs Union because they are in the Free Trade Agreement. That is, most CIS countries, perhaps with the exception of Ukraine, would likely be able to sell the vast majority on their products in the same markets with small losses losses that are considerably smaller than the losses suffered by their consumers from having to pay higher prices to the exporters from the Customs Union. Moreover, the dynamic effects of the free trade area could also be negative, for all its members.

Unemployment

This analysis has implicitly assumed that the level of unemployment-- and hence the rate of capacity utilization which also affects the level of output and income -- is not affected by the choice of regional trade arrangements. That is, whatever level of aggregate unemployment is present in the economy will remain unchanged as a result of the choice of participating in a CU or FTA. In the long run, this clearly appears to be the correct assumption, because long run problems of unemployment are structural, i.e., they are caused by such factors such as skill mismatches or distorted incentives -- e.g operating through the social security system-- that increase the natural rate
of unemployment in an economy. For the countries of the CIS in the short to medium run, however, unemployment has been more a problem of transition, and the question is how would the choice of regional trading arrangements affect transitional unemployment.

The output decline and unemployment costs in these countries during the first few years of transition were severe. In earlier papers (Michalopoulos and Tarr, 1992; 1993) we supported the establishment of temporary Free Trade Agreements with moderate tariff preferences among the countries of the CIS, essentially in order to cushion the initial impact of transition on employment and incomes. The argument was based on the fact that the production structures in the countries of the CIS were heavily interlinked. We feared that too sharp a break in the traditional CIS trade patterns would cause significant unemployment and aggravate the output decline. We argued that the preferential trade areas should be eliminated over time, since the justification for the continuation of the Free Trade Agreements on the basis of easing the adjustment costs becomes progressively weaker over time. Given that five to six years have passed since the breakup of the Soviet Union, however, the costs of protecting the inherited inefficiencies of the Soviet past through regional trading arrangements appear excessive at this time.

Experience has also shown, that in Central and Eastern Europe and in the CIS, those countries that have liberalized the fastest (including trade, macro and systemic reforms), are the ones that have arrested their output decline the fastest (World Bank, 1996). The sooner the economies adjust to the new price signals of international markets, the sooner they are able to establish production on a competitive basis and provide for stable employment. Permanent regional preferential arrangements would then not act as a temporary cushion to the adjustment shock but a means of prolonging the period of transitional unemployment.

It would be desirable for CIS countries to develop strategies focused on markets outside of the CIS. This would reduce dependence on a limited number of countries for markets and transportation facilities. Without a customs union or even a free trade arrangement whose impact on export demand for many countries may be quite small it will become even more imperative for exporters from the CIS to find alternate markets and marketing channels. While finding new
markets outside of the CIS will not be easy, the experience of the Baltic countries between 1992 and 1994 demonstrates that it is possible and would yield significant future benefits.

**Accession to the World Trade Organization**

Most CIS members have begun the process of accession to the World Trade Organization (WTO). The WTO permits custom unions as long as they meet two basic requirements: (a) they cover substantially all trade among the partners; and (b) do not result in an increase in the level of protection to the outside world relative to before the establishment of the CU. In the past, these WTO provisions have been applied quite flexibly, and it is quite possible that the CU negotiated among the four CIS members would meet the WTO standards. Thus, participation in this customs union would not, by itself, prevent an individual country from joining the WTO. The question is whether it would be useful for individual countries to enter the CU and join the WTO as part of the CU or individually. Judging from recent experience, it will complicate the accession process to the WTO of individual CIS members because joining the CU would make it difficult for a CU member to present an accurate picture of its trade regime to the members of the WTO "working party" who will be charged with the negotiation of the accession. If they were to move to make commitments to joining the CU before they become members of the WTO, the WTO working party would perceive that the present trade regime of the CIS country will be changed significantly in the future if it joins the Customs Union. Perhaps it is for this reason that Belarus, Kazakhstan, the Kyrgyz Republic and Russia are applying to accede to the WTO on an individual basis, not as members of a CU.

**V. Update on Preferential Trade Arrangements in the CIS**

Since this paper was written, some things have changed in the sphere of preferential agreements among countries in the former Soviet Union. But much remains the same as do the paper’s conclusions, which indeed have been supported by recent quantitative analysis (Tumbarello, 2004).
The three Baltic countries, never a part of the CIS, have since become members of the EU. The CIS wide agreement to establish a Free Trade Area was signed by all CIS members except Turkmenistan in 1994. However, this original agreement was never ratified by the Russian parliament and therefore remains inoperative. Over the last decade, a patchwork of bilateral free trade agreements have been signed linking most CIS members. As noted in the paper, in 1995-6, Russia, Belarus, Kazakhstan and the Kyrgyz Republic agreed to establish a customs union eventually called the Eurasian Economic Community (EEC). Tajikistan joined the agreement in 1999, and Moldova became an observer in 2002. Most recently these countries (excluding Moldova) agreed with Ukraine to establish an Economic Union. In all cases reality on the ground falls far short of the official pronouncements.

The bilateral FTAs stipulate free trade in all goods between participating countries, but each have different product coverage and exemptions as well as rules of implementation, such as the use of safeguards and quantitative restraints. As a consequence, at present there is a complex network of bilateral agreements among various countries whose coverage and rules change frequently and whose impact is very difficult to evaluate. A few products (e.g. alcohol and tobacco) are excluded from all agreements. But efforts to establish a standardized list of exemptions have so far failed. Exemptions can be imposed unilaterally and are supposed to be accompanied by a schedule for their termination. However, these schedules are often not followed and there appear to be no penalties for slippages. While the exemptions are concentrated on a few products, their trade restrictiveness appears to be high.

The Eurasian Economic Community is supposed to become a customs union with a common external tariff by 2005. Its main driving force has been the traditional exporters in Russia, who have wanted to maintain their preferences and links to the traditional industrial structures in the other countries. Russia dominates the the EEC Council, which provides operational direction to the agreement: it has four votes, compared to two each for Kazakhstan and Belarus and one each for the Kyrgyz Republic and Tajikistan. And Russia expects the other countries to move to the Russian tariff. At present, there is free trade among the participating countries, but their external tariffs
diverge substantially, which means they have in place a free trade area, not a customs union. It is reported that progress on ‘harmonization’ of the external tariff (which means convergence to the Russian tariff) is as follows. Between Russia and Belarus approximately 95 percent of tariff lines have been harmonized; between Russia and Kazakhstan, approximately 85 percent; Russia and the Kyrgyz Republic, 14 percent; and Russia and Tajikistan approximately 60 percent. (Michalopoulos, 2004) Reflecting the dominance of Russia in this grouping, there is no information on the degree of divergence among the tariffs of the other countries.

Armenia, Georgia, the Kyrgyz Republic and Moldova have become WTO members, and all the other CIS countries except Turkmenistan have applied to accede. The Kyrgyz Republic has notified the WTO of its intention to participate in a customs union with the other EEC countries. These countries are applying to accede to the WTO separately, although they are all trying to coordinate their accession to that of Russia. There is also some discussion of whether it is preferable to establish the customs union before WTO entry, but it is hard to see how that can be achieved in practice.

V. Conclusions and Recommendations

For small CIS countries, with relatively open trade regimes, joining the Customs Union that has been established by several CIS members could be economically quite costly. These costs could be mitigated, but probably not fully offset, if, as a consequence of the entry of new members, both the average level and the dispersion of the previously negotiated external tariff of the Customs Union were reduced. For these countries, maintaining an open trade regime without preferences is the best policy that maximizes welfare and growth prospects. It will also facilitate entry into the WTO, a key objective for these countries' trade policies.

Even for the existing Customs Union members, and for others with more restrictive trade regimes than those of existing members, preferential arrangements that provide strong incentives to orient trade towards partners in the former Soviet Union contain significant long-term risks. The main risks are that the preferences, through Customs Union or free trade arrangements, lock in
traditional technologies and production structures, reduce innovation and competition, and hence result in inefficient industries that absorb scarce resources that could be better used elsewhere.

The discussion has focused on preferences and a specific Customs Union arrangement among CIS countries. But it has relevance for preferential arrangements, including Customs Unions, that might be considered in the context of other country groupings in the CIS as well as in transition economies in Eastern Europe, e.g. former Yugoslavia. In this case as well, the main problems would arise from lack of competition and the absence of dynamic technology. The discussion is not intended to apply to countries in transition joining the EU, where different circumstances prevail which improve the prospects for economic benefits.

The key difference between preferential arrangements among CIS members and other preferential arrangements such as NAFTA and the EU is that in the latter the markets are large enough to promote competition and encourage the flow of new technology, which increase the probability that distortions introduced through preferences are more than offset by new trade creation and the dynamic effects of investment embodying new technology.

We had advocated preferential arrangements for CIS members as useful transitional devices to mitigate the severe disruption of trade among the new independent states in the aftermath of the breakup of the Soviet Union (Michalopoulos and Tarr, 1992; 1994). Although based on duration of unemployment measures, two years appears to be a sufficient period of adjustment in market economies, there is no standard period for adjustment or transition; and the breakup of the Soviet Union clearly created unprecedented disruption which may have warranted a greater adjustment period. The new independent states have had five years to adjust to international competition. Given the inherited burden of inefficiencies that plagues a sizable portion of CIS industry, there are serious costs of continuing preferential arrangements indefinitely, and integrating more closely through a Customs Union at this time appears ill-advised.
Appendix

Model to Evaluate the Consequences of Joining the Customs Union

In this appendix, we develop a simple partial equilibrium model to assess the consequences of adopting the common external tariff, where the common external tariff is higher than the initial tariff. The model would apply rather broadly to countries with low tariffs, such as the Kyrgyz Republic and Armenia. The model would also be relevant for many products in countries with higher tariffs on average than the Customs Union tariff. Since the Customs Union tariff is not uniform, there are many products where the tariff in the Customs Union exceeds the home country tariff. The model is an extension of the model of Bhagwati and Panagariya (1996) and is shown in figure 1. A basic description of these techniques may be found in Morkre and Tarr (1980).

**Demand.** We refer to the home country as country A. The figure shows the demand for imports in country A for a representative product group, assuming for simplicity that imports from various sources are homogeneous. Demand for the domestic good, assuming there is domestic production, would be depicted on a separate diagram but, assuming otherwise-undistorted domestic markets, we may calculate welfare effects from the demand for imports diagram.

**Rest of World Supply.** The rest of the world, denoted R, (outside the Customs Union) is assumed to be large in relation to country A considering membership and hence the supply curve from the rest of the world for any product is depicted as a perfectly elastic flat supply curve at the world price of the product $P_R$. In the initial equilibrium, the supply curve from the rest of the world is represented by $P_R(1+t)$, reflecting the fact that since rest of world suppliers must receive $P_R$ to be induced to supply the product, consumers in country A must pay $P_R$ to foreign suppliers plus $tP_R$ to the government in tariffs. Converting to a higher tariff of the Customs Union (weighted average of 13-14 percent) implies that the supply curve of the rest of the world increases to $P_R(1+t')$.

**Partner Country Supply.** The group of countries who are in the Customs Union are denoted country P, for potential partner countries. For this representative product, the aggregate supply curve to country A from all countries that are potential partners with A in the Customs Union (such as
Russia and Kazakhstan) is depicted as \( S(P) \). Imports from these countries are not subject to a tariff. If tariffs were imposed on imports from these countries, it would be necessary to pay a tariff inclusive price to attract the supply. That is, the appropriate supply curve would be a function of the tariff inclusive price. Then the tariff supply curve to country A including the tariff would shift up and to the left. In figure 1, we write this as \( S[P/(1+t)] \).

In figure 1, we have depicted partner country supply as upward sloping. One reason why this could occur is that partner suppliers have a factor of production in limited supply that implies that it produces at increasing costs within the range of outputs under consideration. This might be because of continuing bottlenecks for selected inputs. Even though the market in country A may be small, the partner country who has firms producing the product will have to allocate supply throughout all the preferential trade area, and may more experience capacity constraints when supply to the whole region is taken into account. Another reason we could have an upward sloping supply curve is that the tariff protection of the Free Trade Area induces new firms and industries within the Free Trade Area to develop under the preferential tariff protection. These industries may not have been profitable without the preferential protection. We have drawn the supply curve such that within the range of tariff changes contemplated, there is not a full displacement of rest of world supply. In the case of upward sloping supply curve of the partner country, without full displacement of rest of world supply, the price in country A will increase by the full amount of the tariff.\(^\text{12}\)

In the event that partner country supply is not upward sloping for some products (that is, partner country supply is flat due to constant costs within the range of relevant outputs) the welfare economics of participating in customs unions and free trade agreements will be less disadvantageous.\(^\text{13}\) It is likely that for some products imported within the potential Customs Union, there are constant costs for partner country suppliers, and for others products there are increasing costs as depicted in figure 1. Thus, the welfare costs of participating in the Customs Union are likely to be somewhat less than would be indicated from reliance solely on the analysis of figure 1.

**Initial Equilibrium: A Non-Preferential Ad-Valorem Tariff**
We begin with the situation that prevailed prior to the Free Trade Agreement: a tariff rate at rate t is applied on all imports. That is, there are no Free Trade Agreements with any countries, i.e., no tariff preferences for Customs Union members or others. In the initial equilibrium, the external tariff is t, the price of imports from the rest of the world to consumers in country A is \( P_R(1+t) \). Thus, the quantity demanded of imports is \( M_O \). Country A consumers must pay the same tariff inclusive price to future partner country suppliers, so the price paid for their products may be read off their tariff ridden supply curve \( S_P/(1+t) \), i.e., \( Q_O \). Rest of world suppliers supply the quantity \( M_O - Q_O \). Tariff revenue is obtained on all imports, so initial tariff revenue equals the area MIAD. The tariff revenue is decomposed into SRAD obtained on imports from rest of world suppliers and SRIM on imports from future partner country suppliers.

The short-run static welfare losses of the tariff are equal to the triangle ADL. Consumers in country A must pay the higher price \( P_R(1+t) \), rather than \( P_R \), and thus there is a loss of consumers' surplus equal to the trapezoid MIAL. But, since the government recovers the area MIAD in tariff revenue, this area is not a loss to the economy. On the other hand, he area ADL is a loss to the economy: it represents consumption inefficiency loss as consumers in country A shift purchases from imports of this good to goods that they preferred less before the tariff.

**The Impact of the Free Trade Agreement**

Now consider the impact of participating in a Free Trade Agreement, given a tariff rate of t on imports from the rest of the world. Since the external tariff is unchanged at rate t, the price of imports from the rest of the world to consumers into country A remains unchanged at \( P_R(1+t) \). Thus, the quantity demanded of imports remains \( M_O \). Since imports from partner countries are not subject to the tariff, supply from partner countries shifts out and to the right to the supply curve \( S_P \). Consumers in country A must pay the same price to partner countries suppliers, so the price paid for their products may be read off their supply curve \( S_P \), i.e., \( Q_O^* \). Rest of world suppliers supply the quantity \( M_O - Q_O^* \). The government obtains tariff revenue on the imports from the rest of the world, equal to the rectangle GHAD, but imports from partner countries enter without paying tariffs.
What is the welfare economics of the Free Trade Agreement, compared to the initial equilibrium with non-preferential tariffs at rate \( t \) on all imports? A tariff at the rate \( t \) still induces a loss of consumer surplus equal to the trapezoid MIAL, but again not all of this is a loss to the economy. The area ADL remains as a loss to the economy, representing consumption inefficiency loss. The area of tariff revenue GHAD, however, is recaptured by the government, so does not represent a loss to the economy. On the other hand, the shaded area MIHG is a loss to country A due to the Free Trade Agreement. This area is a loss to country A because it is paying higher prices to partner suppliers on the quantity \( Q_0 \) compared to what country A would have to pay from rest of the world suppliers. Part of this higher payment for partner country imports (the trapezoid MNHI) is captured by partner country suppliers as producers' surplus. But part of the higher prices paid by country A consumers is pure inefficiency loss, i.e., producers' deadweight loss equal to NGH, because the preferential tariff induces additional supply from partner country suppliers who are marginally inefficient compared to world suppliers. The net change in welfare to the government of the Free Trade Agreement, given no change in tariffs to the rest of the world, is a loss equal to the rectangle MIHG. The combined loss of the tariff and the Free Trade Agreement is the sum of the areas ADL and MIHG.

In summary, a tariff will induce inefficiency losses, but the Free Trade Area with partners with upsloping supply curves greatly magnifies the losses. With a non-preferential tariff of \( t \), the economy loses only the triangle of consumption inefficiency loss, ADL. The Free Trade Area increases the losses due to the tariff in the amount of MIHG. This explains why preferential trade arrangements with small partner countries or with countries that may be expected to increase supply at higher protected prices can be expected to be very inefficient, more inefficient than non-preferential tariff protection.

Weighed against these costs are the benefits obtained from increased access to partner country markets. There will likely be a terms of trade gain on these exports, since exports have preferential tariff protection against rest of world supply. Producers' surplus to the exporters from country A within the Free Trade Area (not depicted) would reduce the losses from the Free Trade
Area. We have argued above, however, that the gain on exports is likely to be less than the losses on imports.

Converting the Free Trade Area to a Customs Union

Now consider the impact of imposing the common external tariff at the rate \( t' \), starting from the Free Trade Agreement in place. The supply curve including the tariff of the rest of the world and the new equilibrium price increases to \( P_R(1+t') \), where the quantity demanded for imports declines to \( M_1 \). Partner country suppliers also receive this higher price and then the quantity they supply increases to \( Q_1 \). The quantity supplied from the rest of the world declines to \( M_1 - Q_1 \).

The welfare costs to country A are strongly negative, and may be decomposed into three parts. First, there are consumer deadweight losses because country A consumers are induced to reduce their consumption of total imports from \( M_0 \) to \( M_1 \) in favor of alternate goods available that were previously less preferred (this could include domestic substitutes in this product category or goods in other product categories). These were equal to the triangle ADL in the initial equilibrium, but they increase to BCL. The difference is the shaded area ABCD, representing the increase in consumers' deadweight loss due to the common external tariff. Second, there is an increase in the triangle of producers' deadweight losses, from NGH to NFE. The difference is the shaded area FEHG, representing the increase in producers' deadweight loss due to the imposition of the common external tariff. Partner country producers are able to obtain higher prices in country A, which attracts less efficient higher cost supply. Absent a tariff, supplies from the rest of the world would have been available at the price \( P_R \). Third, part of the higher prices received by partner country suppliers results in an increase in their profits or producers' surplus. The increase in partner country profits or producers surplus is HIJE; this is a transfer from country A consumers to producers in partner countries.

Overall the loss of moving to the Customs Union, given that a Free Trade Agreement is already in place, is the sum of the three shaded areas in figure 1: \( ABCD + FEHG + HIJE \). The losses to the economy of increasing tariffs through the common external tariff of the Customs
Union, given a Free Trade Agreement, are considerably greater than non-preferential tariff increases from an average rate of t to t'. That is, if tariffs were applied in a non-preferential manner and were increased from t to t', the costs to the economy of the increase in the tariff would be the shaded area ABCD. The Customs Union imposes the additional costs equal to the areas FEHG and HIJE, representing inefficiency losses and transfers to partner country suppliers, respectively.

**Combined Loss of the Customs Union and the Free Trade Agreement**

The combined loss of the Free Trade Agreement and the Customs Union is larger than the loss of the Customs Union or the Free Trade Agreement alone and equals the triangle BCL plus the rectangle MFEJ. A non-preferential tariff of rate t' would produce a welfare loss equal to the triangle BCL. The difference is equal to the area MFEJ which derives from the fact that consumers in country A pay higher prices to partner country producers than they would have to pay to rest of the world producers. The area MFEJ would be captured for country A as tariff revenue and not lost to the economy if the tariff were not preferential. Instead with a the combination Free Trade Agreement and Customs Union the area MFEJ is added to the losses of country A, thereby greatly magnifying the losses. The area MFEJ represents a combination of transfers to partner country suppliers (the area MNEJ) plus inefficiency (deadweight) losses of using marginally inefficient partner country suppliers (the triangle NFE). It is necessary to reduce this estimate of the losses by the increase in the terms of trade earned by exporters from country A on their sales within the PTA. Since the tariff primarily benefits existing Customs Union members, these gains may be expected to be small.

**Conclusion**

A tariff will induce inefficiency losses, but preferential trading areas with partners with upsloping supply curves greatly magnify the losses. This explains why preferential trade arrangements with small partner countries or with countries that may be expected to increase supply
at higher protected prices can be expected to be very inefficient, more inefficient than non-preferential tariff protection at the same rate.
Endnotes:

1 The authors are, respectively: Senior Advisor in the Russia and Central Asia Department, the World Bank; and Lead Economist, International Economics Department, The World Bank. An earlier version of this paper appeared in Post-Soviet Geography and Economics. Helpful comments on an the earlier draft were received from Peter Hansen and Maurice Schiff of the World Bank, Svyatoslav Perfilov of the CIS Interstate Economic Committee and international trade representatives of the 17 transition economies who participated at the EDI seminar on ‘Trade Policy in Transition and WTO Accession, January 31-February 6, 1997, Vienna, Austria. We thank Minerva Patena and Maria Luisa de la Puente for logistical support. The views expressed are those of the authors and not necessarily those of the World Bank or those acknowledged.

2 It is important to note that output growth can not be equated to welfare growth, as some of the mechanisms that may result in increasing the rate of growth of output in a future period may involve reduced consumption and welfare in the present.

3 See table 2 for a listing of the Russian tariff by sector. Since an aggregation was performed in table 2, the Russian tariff is higher for some tariff lines within the aggregates shown than for the sector as a whole.

4 See Morkre and Tarr (1980, chapter 2) for details.

5 The loss of tariff revenue due to the diversion of imports away from the rest of the world is a loss of welfare to the home country, since it will have raise tax revenue from other sources to offset the loss of government revenue. This is in contrast to a reduction of tariffs multilaterally, where consumers benefit from a reduction in the price they pay, and the increase in consumers’ surplus offsets the loss of tariff revenue.

6 We have already observed the manifestation of these problems, as Kazakstan and Belarus have selectively suspended application of the common external tariff, i.e., the trade diversion costs were evident to the parties (see Rietzler and Usmanova, 1996, p. 30)

7 If the common external tariff is renegotiated to reflect the interests of the non-member countries, then the static welfare economics for non-member countries will not be as adverse as depicted in the sections above treating the welfare economics of the non-member countries. Nonetheless, liberalization toward the world as a whole would remain the preferred strategy to joining the Customs Union, since, as just discussed, even the CIS as a whole must be wary of an import-substitution strategy.
The apparent (rather than real) incentives of the mixed system may present difficulties politically since it appears to provide an incentive to import from the CIS (thus avoiding VAT on imports) and export to non-CIS countries (where no VAT is paid).

See Rutherford and Tarr (forthcoming) for a model quantifying this effect.

These concerns were reflected in our weakened endorsement of the Free Trade Agreements in Michalopoulos and Tarr (1994), and our considerable reservations toward them in Michalopoulos and Tarr (1996).

See chapter 3 “Adjusting to Trade Liberalization” in World Bank (forthcoming) for a survey.

Effective cartel pricing among producers within the Customs Union would also imply that they will raise prices in response to the increase in the tariff, but in that case we could not depict a supply curve and the price increase would not necessarily equal the increase in the tariff. Partner producers could price as a dominant cartel subject to a competitive fringe, where rest of world supply is the competitive fringe.

The original analysis of Viner (1950) considered constant costs for partner countries. Both trade creation and trade diversion are possible in the constant cost case. See Bhagwati and Panagariya (1996) for a general treatment of the various cases.
References


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TABLE 1. Foreign Trade of the New Independent States with Each Other 1991-96

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Volume of Trade (1991= 100)

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</tr>
</tbody>
</table>

* Estimates based on data for the first three quarters.

### Table 2: Tariff Rates of the Russian Federation

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Unweighted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food manufacturing</td>
<td>14.7</td>
</tr>
<tr>
<td>Beverages</td>
<td>23.1</td>
</tr>
<tr>
<td>Tobacco</td>
<td>7.5</td>
</tr>
<tr>
<td>Textiles</td>
<td>16.4</td>
</tr>
<tr>
<td>Wearing apparel</td>
<td>24.1</td>
</tr>
<tr>
<td>Leather products</td>
<td>9.7</td>
</tr>
<tr>
<td>Footwear</td>
<td>20.0</td>
</tr>
<tr>
<td>Wood, cork, and products</td>
<td>17.5</td>
</tr>
<tr>
<td>Wooden furniture &amp; fixtures</td>
<td>24.7</td>
</tr>
<tr>
<td>Paper products</td>
<td>14.2</td>
</tr>
<tr>
<td>Printing &amp; publishing</td>
<td>12.5</td>
</tr>
<tr>
<td>Industrial chemicals</td>
<td>5.7</td>
</tr>
<tr>
<td>Other chemical products</td>
<td>7.4</td>
</tr>
<tr>
<td>Petroleum refineries</td>
<td>5.0</td>
</tr>
<tr>
<td>Petroleum &amp; coal products</td>
<td>9.0</td>
</tr>
<tr>
<td>Rubber products</td>
<td>6.0</td>
</tr>
<tr>
<td>Plastic products nec.</td>
<td>13.8</td>
</tr>
<tr>
<td>Ceramic products</td>
<td>22.9</td>
</tr>
<tr>
<td>Glass &amp; glass products</td>
<td>14.5</td>
</tr>
<tr>
<td>Other nonmetal min prods</td>
<td>15.8</td>
</tr>
<tr>
<td>Iron &amp; steel B-met ind</td>
<td>5.6</td>
</tr>
<tr>
<td>Nonferrous B-met ind</td>
<td>13.1</td>
</tr>
<tr>
<td>Metal products nec</td>
<td>18.8</td>
</tr>
<tr>
<td>Nonelectric machinery</td>
<td>12.4</td>
</tr>
<tr>
<td>Electrical machinery</td>
<td>10.1</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>16.6</td>
</tr>
<tr>
<td>Scientific equipment</td>
<td>15.7</td>
</tr>
<tr>
<td>Other manufacturing</td>
<td>20.5</td>
</tr>
</tbody>
</table>

Converting a Free Trade Area to a Customs Union with a High Common External Tariff

(a)

Figure is not drawn to scale.