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**WHAT IS THE OPTIMAL LEVEL
OF TARIFFS FOR AFRICAN
COUNTRIES?**

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What is the Optimal Level of Tariffs for African Countries?

Abstract:

Economic theory suggests that a small open economy cannot influence world prices and that the optimal tariff for such a country is zero. Michael Mussa (former IMF Research Director) argues that, "practical and political considerations make this impractical. We can therefore assume that tariffs rates will be positive for purposes of domestic protection and to generate fiscal revenues". According to the Sachs and Warner index of openness, the benchmark tariff considered 'distorting' is tariff rates above 40, while below 40 are considered 'less distorting'. But much of policy recommendations, including the UEMOA and Ghana rates for the ECOWAS common external tariffs (CET) range between zero and 25. For many countries, rates ranging between 20- 40; or 0 - 15; or 5 --20; etc are suggested. There is a key question as to what determines the 'optimal tariff rates for African countries. Given that the tide of global trade liberalization caught Africa looking for trade policy anchors on almost every side, answers to this question become highly important for structuring trade policies for maximum gains from trade liberalization. In answering the question, this work traces the economic underpinning to tariff formation and the implications of different tariff rates. The study was however unable to pin down any number as the optimal tariff rate. Rather, it posits that there is no magic formula to determine the appropriate level of tariff pertinent to the implementation of a medium- term growth strategy in sub-Saharan Africa, and that ultimately the particular circumstances of each country will determine the structure of tariff rates. It noted that the particular tariff rate that maximizes economic welfare for any developing country has to be one that takes into account the peculiar economic circumstances, the institutional structures available for trade liberalization and the complementary instruments for trade and growth facilitation. In the latter group, port reforms and domestic infrastructure for production are very important. The study therefore suggests a country by country approach to tariff prescription and due consideration to level of economic development and structure of production in the implementation of any given tariff rate.

1. Introduction:

For many countries of Africa, the issue is no longer whether or not to liberalize trade, or whether trade and outward orientation matter for growth. A number of African countries are already signatories to binding and enforceable liberalization protocols under the WTO and other international trade pacts. (Soludo, 1997; 1998: 279). Trade liberalization and regional integration agreements are now widely accepted in sub-Saharan Africa (SSA). Many have eliminated quantitative restrictions (QR's) and reduced tariffs from triple-digit levels to the range of 15% – 30%.

However, modern authors, eager to hasten the process of trade liberalization in developing countries recommend 'optimal tariff rates' to accelerate growth and reduce distortions in liberalizing economies. According to Rodrik (1998:184) "There is actually a fair bit of consensus on what constitutes a reasonable trade strategy for countries of Africa. The consensus can be crudely expressed in terms of a number of do's and don'ts: de-monopolize trade; streamline the import regime, reduce red tape and implement transparent customs procedures; replace quantitative restrictions with tariffs; avoid extreme variation in tariff rates and excessively high rates of effective protection; allow exporters duty-free access to imported inputs; refrain from large doses of anti-export bias; do not tax exports too highly. Not only is there wide agreement on these policies, there is also less dissent than might appear at first sight on what is to be considered "extreme" or "too high". While the dominant consensus is that ultimately a more liberal trade regime is beneficial to all countries, there are raging debates about the *process, speed, and sequencing* of liberalization in different countries with different initial conditions and varying external environment: what to liberalize, when and how? And what supplementary or complementary measures should precede or accompany liberalization?" The lack of consensus on the required level of protection and procedures for liberalization leads to dramatically different policy prescriptions and raises questions about the optimality of agreed tariff levels following trade liberalization agreements in a regional integration arrangement and whether these actually maximize welfare.

Indeed, the relationship between extent of liberalization and direction of imports and growth for many countries of SSA is not clearly defined. Mukhopadhyay (1998) argues that greater liberalization of imports in a Sub-Saharan African country could lead to more significant decline in its rate of growth due to the recession in high-income economies. This was the case in the early 1990's. Furthermore, a rise in real imports may be beneficial for the country if the composition of imports is aimed at raising domestic output, and is efficiency-improving. This case was made by Rodrik (2000:17) "In practice, the most compelling mechanism that links trade with growth in developing countries is that imported capital goods are likely to be significantly cheaper than those manufactured at home. Policies that restrict imports of capital equipment, raise the price of capital goods at home, and thereby reduce real investment levels have to be viewed as undesirable *prima facie*". On the other hand, many units of manufacturing sector were devastated by import competition owing to the fact that rapid liberalization could not stimulate them to reach the world levels within the time frame with relatively low investment. These industries came under considerable pressure from cheap imports. If as Mosely and Weeks (1993) pointed out, already many African countries were involved in bilateral and/or multilateral arrangements, the question rages as to the optimal level of tariffs that these regional integration arrangements should have in order to maximize the welfare of the member states. Answers to

these questions go to determine not just the economic attractiveness but also the sustainability of regional integration arrangements in the region.

2. Regionalism and Determination of level of Tariffs in Africa

In one respect, the structure of trade and regional alliance in Africa confirms the postulation of literature that countries tend to form trade agreements with other countries in the same region rather than with more distant nations. In figure 1 in the appendix, we present a summary view of the regional integration arrangements in Africa. Members are geographically closer to one another. Wider evidence that trade blocs are predominantly regional is provided by WTO (2000), in a report titled "Mapping of Regional Trade Agreements", in which each of the 150 agreements notified to the WTO is represented in map form. It shows that member countries tend to be geographically close in the majority of cases (Zissimos, 2001). It has been argued that it is natural for trade blocs to exist between countries that are close if distance makes inter-regional trade uneconomical. Using a gravity model, Frankel, Stein and Wei (1995) show empirically that countries behave preferentially towards trade with close countries. This new economic geography (NEG) model was developed by Krugman (1991) with the goal of explaining sustainable income differences between regions or countries (Puga and Ottaviano, 1998).

In other cases, however, African integration arrangements have not been known to follow theoretical postulations. In the literature for example, the forces driving regionalism include positive externalities, which emerge where industries and firms cluster together and the relative importance of externalities matters more than trade barriers. In such cases, falling trade costs make sustainable core-periphery equilibrium more likely. Part of the implication of the above is that regional integration arrangements are supposed to be demand-driven and the tariffs determined on the basis of the relative needs of industries and firms in the countries making up the region. This has not been known to be so in Africa. First, most of the regional integration arrangements are not demand driven. The consideration of proximity and relative bargaining power in the world trading system seems to crowd out domestic economic considerations especially in the setting of the tariff rates for the countries in the region (or in the integrating exercise).

Indeed, the challenge is to examine the extent to which regional integration arrangements have truly fostered economic transformation of developing nations in Africa. What are the mechanisms for setting tariff rates in African regional integration arrangements and what are the impacts of these on the economic welfare of participating countries? Is there truly a tariff level that can maximize welfare in Africa especially in the context of a regional agreement?

An examination of existing regional integration arrangements in Africa shows that little considerations have been given to domestic economic environments while determining regional tariff rates. For example, the UEMOA CET, which ECOWAS countries are considering to adopt for the region, consists of simplified tariff structure with four bands: 0 per cent for medicines, medical equipment, newspapers and books; 5 percent for capital goods and raw materials; 10 percent for intermediate goods and other inputs; and 20 percent for finished consumer goods. In addition, there is a Statistical levy of 1 percent on all goods including those exempt from duty and a Community Solidarity Tax of 0.5 percent for compensating for loss of customs revenue and for the financing of the operations of UEMOA. However, for a country like Nigeria whose

current tariff structure features a tariff range- 0-- 150%, an unweighted average of 27% (weighted average of about 20%), 19 tariff bands, a standard deviation of 19.8 and a coefficient of variation of 70.7, harmonization could be difficult. Besides, the country depends on tariff revenue for about 13%. This is besides the growing public leaning towards believing that the woes of the real sector is to be blamed on the indiscriminate dumping of cheap goods in the country. Besides, the compliance rate in the 8 UEMOA countries that are currently applying the rates is quite low. As such, both the desirability and relative effectiveness of the four bands compared to any other bands, in meeting the revenue and real sector needs of the economies under consideration are in question.

This could in part explain the slow pace of a number of the regional integration efforts in the region. The use of some magical numbers that hardly took into consideration the level of economic development of the countries involved, the loss in government revenue, and the balance of payments position of the countries is to be mild, not workable. On many occasions, the countries are simply bludgeoned into accepting the rates (alongside the possible consequences). Thus, while they sign on to the arrangements to take the rates, policymakers in the many of these developing countries do not implement them as the force of domestic political and economic expediency crowds out the regional goals.

The situation is much the same in the Central African Economic and Monetary Community. Much remained to be done to implement fully the goal of a single market in the region. The member countries recently took a decision to further liberalize trade through a simplification of the structure of the common external tariff and a reduction of average tariff rates. Meanwhile the extent of Implementation of the agreements already reached is still low and problematic and countries in the region are often blamed for putting sectoral and national goals above the regional integration goals. Slow trade and monetary reforms continue to make the implementation of common external tariffs cumbersome

What is more? There is currently a proliferation of regional integration arrangements with little effectiveness in any region. The diagram (Figure 1 in the appendix) shows that each regional integration arrangement enjoys multiple memberships by countries also belonging to other regional integration arrangements. This is often the case and countries join these arrangements without prejudice to their faithfulness to the protocols of other arrangements to which they also belong.

3. Theoretical Overview: The Economics of Optimal Tariffs

Discussions on the optimality or otherwise of any tariff structure necessarily have to deal with the reasons for the imposition of tariffs in the first place. From protection of infant industries to raising revenue for government, imposition of tariffs aims to increase domestic welfare and reduce distortions arising from differential production structure and costs between the imposing country and its trading partners. But often, the aims of maximizing revenue may conflict with the objectives of infant industry protection. Particularly in the age of global trade liberalization, most developing countries face the challenge of not only harmonizing their tariff structures but also bringing these to maximize domestic welfare – production, consumption and revenue objectives of both the government and entire economy. Thus, in the literature, much of the debate aims to resolve the question of the structure of such tariff. While there are arguments in favor of one

tariff structure, there are others insisting on differentiated tariff structure for the different industries?

Box 1: Theoretical Derivation of the Optimal Tariff

How is the optimal tariff derived? Figure 2 in the appendix is a presentation of the optimal tariff argument in terms of the simple textbook model of monopsony and illustrates the trade-off between gains and losses in arriving at the optimal tariff. Let us look at the tariff policy of a large country, which by virtue of its size can influence the world price of product. Following Serventer, 2001, a hypothetical example is the US's import demand and the rest of the world's export supply curve for cars. The US is a large purchaser of foreign cars (a monopsonistic buyer) that a reduction in US imports will cause a decline in international prices.

The DD curve is the country's demand curve for imports; the foreign supply curve is upward-sloping because the country is large (foreign producers export more only if higher price is offered), the SS curve represents the MC_M curve for foreign exporters and tells us what the home country must pay for each unit it imports; because the cost to the economy of an extra unit of import includes not only the price of the marginal unit but also the added cost of paying for the inframarginal units because their price rises with the price of the marginal unit). This marginal cost-of-import curve is shown as MC_M .

In a free-trade situation, world equilibrium is at the point E, where the domestic demand curve and the foreign supply curve intersect, giving price P_F and quantity imported M_F . However, point P_F , the value to the home country of an extra unit of imports is less than the marginal cost of that unit (by an amount EF). The home country can therefore increase its welfare by reducing imports to level M_T , determined by the point of intersection (A) of the demand curve and MC_M ; the resulting gain is equal to area FAE. This gain has come about because the home country's restriction of import demand has reduced the equilibrium relative price at which it buys imports – that is its terms of trade has improved, P_W denotes the new world relative price of imports. This is the so-called *terms of trade argument for protection*.

At the heart of the problem is the notion that a country with monopsony power in world trade can improve its welfare with trade restrictions. A country, which is a monopsonist gains by reducing its demand for a good, thereby forcing down its price. Import restriction is not realized without government intervention because the agents of the economy are too small to exercise any monopsony power. In the real world market forces are not the determining factor as there are varying doses of government interventions. Perhaps the most important form of government intervention in international trade is the growing phenomenon whereby governments double as salesmen for their firms. In the words of Markusen and Venables, (1995), "Trade policy involves countries acting as agents in support of national champions competing with the champions of foreign countries in the international market place". Governments of nations generally maintain distortions in the pattern of trade for reasons they consider more valid than the economists' criterion of efficiency. Trade among nations is fraught with differing shades of protectionism and there is not a single country that did not employ vigorous protection at some stage in its history. The government can move the economy from the sub-optimal free-trade point E to the optimal point A by imposing a trade-restricting policy such as a tariff. A tariff of AB per unit will shift the demand curve for imports down to TT, and equilibrium in the world market will be realized at B with world price P_W and domestic price P_T . The tariff of $P_W P_T$ per unit is termed the *optimal tariff*.

Although a large country can secure improved terms of trade by imposing a tariff, it does so at the cost of increased domestic deadweight losses. A tariff that raises the local price of an imported goods reduces its excess demand in the world market and thereby causes the intervening country's terms of trade to improve – of course, at the cost of a shrinkage in its import volume. Because of this trade-off, it does not pay a country to increase its tariff indefinitely (see Serventer, 2001:3-7). An optimal tariff balances these opposing effects and, as is well known, is inversely related to the rest of the rest of the world's price elasticity of import demand for the intervening country's exports (Syropoulos, 2002).

Two effects are illustrated in the figure: Relative to free trade, domestic consumers lose the area $P_T A E P_F$ (this is net transfer to domestic producers because we are using the demand curve for imports, not importables). Against this, we must count the recycled tariff revenue $P_T A B P_W$. Of this, $P_T A C P_F$ is transferred from domestic consumers to domestic taxpayers and $P_F C B P_W$ is transferred from foreign producers to domestic taxpayers. The net gain (AFE) from the tariff is thus seen to equal the excess of area $P_F C P P_W$ (the terms of trade gain) over area AEC (the domestic deadweight loss). The optimal tariff is such that the marginal gain from the terms of trade improvement associated with a small tariff increase equals the marginal loss via domestic costs. In particular, the optimal tariff must be less than the prohibitive tariff (the tariff that eliminates imports) because a small reduction of the tariff below the prohibitive level involves no terms-of-trade loss (because imports are zero) but yields a gain by reducing the domestic distortion cost of the tariff; accordingly, the economy must gain by reducing the tariff below the prohibitive level (Vousden, 1990: 86).

Supply and Demand were assumed to effectively exclude the possibility that the export supply of the foreign country may be non-unique for some prices (note that negative optimal tariff implies import subsidy). As has been shown in the example above, much of the welfare gains or losses arising from the imposition of a tariff depend on the elasticity of export supply. The more inelastic the export supply is, the greater the potential gains. Unfortunately, for African countries with supply response problems, the gains do not accrue [see Soludo, 1997]. We have confined our attention to impact effects. A tariff imposed by the home country may have significant effects on income distribution in the foreign country. If such redistributions reduce the foreign supply of exports, shifting SS to the left, then the home country's marginal cost of imports will be increased. If such an effect outweighs the other gains from a positive tariff, then the home country would have done better by imposing an import subsidy.

Finally, we note that although an individual large country can make itself better off by imposing its optimal tariff, the welfare of the world as a whole will be reduced by such an action (Vousden, 1990: 86). A feature of world trade models with a limited number of 'countries' is that the terms of trade effects become significant and optimal tariffs are much higher than in national partial equilibrium models, where terms of trade effects are often assumed to be zero. Neither extreme is fully convincing, but it is difficult to make plausible estimates of world price changes (Pomfret, 1997: 288).

Source: Baldwin, 1992: 807 - 810

In particular, Panagariya (1996) argues that because import demand elasticities are usually different across commodities, optimal revenue raising tariffs will be non-uniform. The tariff structure that shall maximize welfare and minimize deadweight costs to the domestic economy must recommend higher taxes on low-elasticity goods than those on higher elasticity goods. The optimum revenue-tariff structure will now involve high tariffs on goods where the elasticity of import demand is low – so that little distortion is caused by a tariff- and low tariffs on goods where the elasticity of import demand is high. For each dollar raised in revenue, the movement away from the optimum is less for goods with low elasticity than those with high elasticity. Therefore, it makes sense to introduce a proportionately larger tariff distortion in the case of goods with lower import-demand elasticity than in the latter case where the elasticity of import demand is high. This is indeed the essence of the well-known Ramsey (1927) result, which states that when lump sum taxes are not available, revenue-raising taxes should be levied in inverse proportion to the elasticity of demand.

Proponents of uniform tariffs argue that a uniform tariff is the least distortionary instrument for achieving the protection objective. A uniform nominal tariff, applying equally to final goods and inputs, results in an equal ad valorem subsidy to value added in import-competing sectors.

Simply put, a uniform tariff leads to equal effective protection across all import-competing sectors.

Although a justification for a uniform tariff relies on practical difficulties in determining the true optimal structure of tariffs, opponents of uniform tariffs are quick to point out at least four major problems with these plausible-sounding conclusions. First, if some import-competing sectors use one or more exportables or nontradables as inputs, a uniform nominal tariff fails to equalize effective protection across sectors. "If exportables were never inputs in importable production, a uniform nominal tariff would automatically lead to a uniform effective tariff; otherwise precise uniformity in both could not be attained, and some distortion would be inevitable" (Corden, 1997:45). No tax is paid on exportables and nontradables used as inputs. Therefore, a uniform nominal tariff protects the value added in sectors using exportables or nontradables as inputs more than in other sectors. The marginal cost of protection is higher in the former than the latter sectors. The cost of providing the same overall protection to value added can be reduced by applying a lower nominal tariff on sectors using exportables and nontradables as inputs and higher nominal tariff on other sectors.

Second, if one or more imported inputs are used in some exportables or nontradables, a uniform effective rate of protection no longer minimizes the distortion cost of protecting value added in import-competing sectors. In addition to creating the desired distortion, i.e., a uniform effective protection in import-competing sectors, the uniform tariff now also distorts production in exportable and nontradable sectors using imported inputs. Lowering the tariffs on inputs used in exportables and nontradables and raising them on inputs used exclusively in import-competing sectors can reduce the distortion cost. This will shift the distortion away from where it is not desired (exportables and nontradables) towards where it is desired (import-competing goods). Where the possibility of duty drawback is allowed, a duty drawback is itself a violation of the uniform tariff rule.

Third, tariffs distort not merely production but also consumption. If we assume that no imported inputs are used in exportables or nontradables and no exportables and nontradables are used in the production of import-competing goods, a uniform nominal tariff will coincide with uniform effective protection and, moreover, minimize the distortion in production. Yet, it will not minimize the overall cost of the protection objective. Since the by-product distortion in consumption is not desired, overall protecting the goods with inelastic consumption demand more than others can lower distortion costs. This change will increase the distortion cost in production, lower it in consumption, and up to a point lower it overall. Uniform tariffs--whether nominal or effective--are non-optimal.

Finally, if tariff evasion is possible via smuggling, even if the conditions for a uniform nominal tariff to be optimal are satisfied, its adoption will fail to yield the optimum. Not all goods can be smuggled with equal ease: automobiles are far more difficult to hide in a suitcase than wristwatches. A uniform nominal tariff on the books will translate into a non-uniform nominal tariff in practice.

Indeed, trade taxes are not optimal instruments to achieve a revenue objective because they significantly distort production and consumption choices. The question most frequently asked is rather whether tariffs, rather than taxes, should be used to raise revenue. Preferred instruments to raise revenue are taxes such as income taxes or commodity taxes (excise, VAT, etc) (Panagariya,

1996). These are preferred taxes because, since they are applied neutrally to domestically produced and imported goods, they impose less distortion or inefficiency costs. The use of tariffs to raise revenue presupposes that other trade-neutral tax instruments are not available or cannot be used beyond existing levels; in other words, domestic taxes have to be taken as given either because the tax base cannot be enlarged rapidly enough or the marginal costs of increased domestic tax collection are very high (Mitra, 1992).

Assuming total revenue is to be raised from tariffs alone, what tariff structure will minimize the distortion costs of raising this revenue? Panagariya (1996) opines; “clearly, the tariffs that move the economy the least from the free trade equilibrium while raising the required revenue will do the trick”. Where we take a decision to raise tariffs as given and make the small country assumptions that there are many importable goods, many tariff rates, no domestic divergences and collection costs per dollar of revenue raised are same for all tariffs, what would the optimum tariff be? Corden (1997:54) argues that if (a) the elasticity of supply of exportables and of domestic demand for exportables are zero and if (b) taxation had no disincentive effects, with the elasticity of supply of effort zero, tariffs would not distort the production or consumption pattern relative to exportables or leisure, and the only distortion possible would be in the pattern of production and consumption of importables. In that instance, the optimum tariff structure would be a uniform tariff.

4. Is there an optimal tariff for African countries?

Given the premises outlined in previous sections, we intend to examine the question of optimal tariff formulation for African countries in the light of existing socio-economic situations in the region. We consider propositions for tariff rates in regional integration arrangements (and indeed for individual countries with respect to estimated impacts of different tariff rates on economic welfare, political economy considerations, export supply response and increased protectionism among industrial countries.

a. Location of the optimal tariff: allocative and distributional considerations

One of the most structural arguments against the prescription of optimal tariff for African countries is the ambiguity surrounding the location of such tariff rate. In identifying the puzzles in trade policy reforms, Soludo and Ogbu (2002:22-24) noted that the first ambiguity about tariff reforms is the location of the optimal level. In their view, tariff levels “should be a function of the level of development and should also be sensitive to government fiscal position, balance of payments, infant industry consideration. Thus, the key empirical question pertains to the level of tariffs and trade restrictions that are consistent with given country specific conditions”. The yardstick that matters is the degree to which trade reform contributes to the construction of a high-quality institutional environment at home (Rodrik, 2000). In a classic and most lucid presentation of the problem, Rodrik (1998:191) used a computable general equilibrium (CGE) model and simulated the potential aggregate and distributional consequences of trade policy reforms in an archetypical African economy using different tariff rates. It was observed that a reduction from 40% to 20% yields an income gain of about 2.0%, but reducing further from 20% to zero yields only an additional gain of 0.8% (see Table 1 below). He showed that tariff reform entails a redistribution of income among various sectors of the economy. Using a hypothetical reduction of tariff from 40% to 30%, 20%, 10%, and 0%, he showed the distributional impact of trade liberalization on farmers, informal-sector workers, urban workers, urban employers, and recipients of revenues that derive from trade restrictions. Following the simulations he conducted,

he discovered that tariff reductions from 40% to 10% may increase real incomes by 2.5% and further reductions to 0% causes aggregate real income to increase by 2.8%. The distributional consequences of the reforms are even more dramatic as “the magnitudes of the distributional impacts are very large.” As shown in the table below, there are clear losers and gainers from reforms. A scenario as reduction from 40% ($t=0.4$) to 10% ($t=0.1$) has farmers and informal sector workers as gainers. For the farmers, they have a real income gain of 19.95% and informal sector workers have 19.78%. In this scenario, urban employers incur a real income loss of 34.59%, while recipients of quota rents suffer a loss of 40.74%. Unfortunately, the net gain to the economy is 2.54% which is far less in order of magnitude than the negative distributional impacts and thus confirms that “efficiency consequences of trade reform pale in comparison to its redistributive effects ... most significant is that they entail so much redistribution relative to their efficiency benefits - a point that is surely not lost on those whose incomes are at stake”, and explains why trade and price reforms in Africa “tend to have high political cost-benefit ratios” (Rodrik, 1998:191).

Table 1: Distributional Implications of Trade Reform in an Archetypal African Economy

Measure	Baseline Solution T=40 Percent	Percentage of Income	Percentage change from Baseline solution			
			t=30 Percent	t=20 Percent	t=10 Percent	t=0 Percent
Real National income	1.574	100	1.08	1.97	2.54	2.80
Real income by group						
Farmers	0.431	27	6.26	12.76	19.95	27.61
Urban employers	0.133	8	-12.03	-23.31	-34.59	-45.11
Informal sector workers	0.647	41	6.18	12.67	19.78	27.51
Urban Workers	0.309	20	-11.65	-23.30	-34.30	-44.98
Quota rents/government revenue	0.054	3	5.56	-5.56	-40.74	-100.00
Informal wages	1.043		-1.92	-3.84	-5.47	-6.90
Urban Wages	1.217		-1.97	-3.78	-5.51	-6.98
Output of Rural Sector	1.233		3.08	6.08	8.84	11.52
Output of Urban sector	0.361		-7.76	-15.79	-24.10	-32.69
Employment in rural sector	0.709		5.22	10.30	15.23	19.89
Employment in Urban sector	0.291		-12.71	-25.09	-37.11	-48.45
Consumption of urban goods	0.514		5.84	12.06	18.68	25.88
Volume of Imports	0.153		37.91	77.78	119.61	164.05

Source: Rodrik, 1998:190

The puzzle is that after these kinds of recognitions accorded to ‘particular circumstances’ in determining the level of tariffs, analysts mechanically jump to prescribing ‘magical numbers’ which have typically ranged from 15% to 40% as the ‘desired’ level of tariffs for Africa. Much of

the empirical literature seems to be settling with a suggestion of tariff bands in multiples of 5 such as: 5, 10, 15, and 20. How these magic numbers are derived remains an open empirical question¹. How they arrived at such numbers is any one's guess. The bold question is how an African policy maker knows when tariff reduction has gone below the revenue maximizing level. In fact, in the face of their consternation and dismay, they wondered loudly, "Could it not, in fact, be that several African countries have liberalized beyond the level that is optimal given their objective conditions? Liberalization beyond the optimal level could be a major source of instability such as persistent balance of payments and fiscal crisis. Even some neoclassical trade theorists recognize that the optimality of zero tariffs as prescribed by theory may not always hold.

b. Export Supply Response and Optimal Tariff in Africa

While part of the theoretical conditions for optimal tariff setting and operationalization is that the setting countries have monopsonistic powers in import demand or monopolistic powers in export supply, price responsiveness in the manufacturing sector of many African countries is weak. Available statistics show that the average annual growth rate of imports, 1991-2001 for SSA countries was 4.8%. Eastern Europe and central Asia was 2.5%; industrial countries in general were 6.9% disaggregated data shows that imports from SSA countries are particularly insignificant. The poorest countries in Africa have manufacturing sectors whose price responsiveness is close to zero, which explains why manufactured exports to the European Union under the Lome convention have not been dynamic (Pomfret, 1997:305).

Undeniably, there are a number of internal and external constraints to export growth and diversification in Africa. According to Laird (1997), these include Competitiveness of production (including labor and other production costs, domestic price controls), Capacity constraints especially the availability and cost of finance for investment in plant and machinery, State-trading companies, including marketing board, and other state-owned enterprises that may have monopoly rights or have access to financial and other resources, crowding out private sector initiatives, and effectiveness of competition policy. Others include price controls and price support systems, which constrain the transmission of world prices into the domestic market, infrastructural bottlenecks, and the outward orientation of entrepreneurship, lack of labor with specific skills needed in export industries; inadequate health, safety or standards regulations and testing affecting production or sale of goods produced; and finally institutional constraints on the development and application of good trade policy and practices. Evidently, the major problems to African export performance are principally domestic. Only 23 percent of Africa's low-income population lives in countries with a minimally adequate environment for growth, while more than 85 percent of the countries have rudimentary industrial infrastructure. (Soludo, 1998: 297).

¹ The origin of these magical numbers may be traced to the unequal treaties of the 19th and the early 20th centuries. These treaties (in which the weaker countries had little tariff autonomy) almost always imposed 5% uniform tariff rates on the weaker countries. Once 5% became the focal point, people began to think in multiples of that. As yet, no one has been able to demonstrate the theoretical or empirical basis for such numbers. Furthermore, Sachs-Warner index of openness had the benchmark of 40%--- above which is distorting and below which is relatively non-distorting. By that logic, it is not clear what the net benefits of further lowering of tariffs below the 40% would be vis-à-vis the possible costs. In other words, there is no basis yet to propound an iron law of tariffs that everywhere and always an average tariff of 5% should be preferred to 6%.

c. Government Revenue and Balance of Payments Considerations in Tariff Setting

A sore point in the determination of tariff rates and meeting commitments to regional common external tariff arrangements is the expected impact of tariff changes (in particular tariff reduction) on government revenue and balance of payments. Government revenue and balance of payments effects work in two offsetting channels. First, given the low productive base in most developing countries, lower tariffs imply higher imports, which have to be paid for. On the other hand, while government loses revenue on account of lower tariff rates, higher import volumes may offset this loss.

Whether it be revenue loss or balance of payments problems, these introduce distortions into any liberalizing economy. The capacity to minimize these distortions depends, for most developing countries, on their ability to attract offsetting foreign capital that could pay for either the lost revenue or offset the balance of payments disequilibrium. Given the currently high tariff rates in most developing countries, optimal tariff recommendations often equates to tariff reduction. Such reductions are often not very appealing given the high level of dependence of many developing countries on tariff as a major source of public revenue.

Conceptualization of optimality does not explicitly account for the expected shocks arising from major changes in the government revenue of developing nations (under the prevalent conditions of undiversified revenue base). Is 0.15 tax rate more optimal for a country than 0.20 in terms of revenue yield? One fact that is likely to emerge in the discussion of tariff optimality in many developing countries is that for a region, there is not likely to be any rate that maximizes revenue for all nations at the same time. The adoption of any rate therefore will necessitate the design of compensation mechanism that would offset or at least reduce the losses by states that lose revenue. From a practical standpoint, this is very difficult, if not impossible.² Besides, there is no one tariff rate that is revenue maximizing. In the views of Panagariya (1996), import demand elasticity differs across commodities; therefore optimal revenue raising tariffs will be non-uniform.

The same discussion applies to balance of payments consideration. The likelihood of even obtaining imports elasticities coefficients of about the same rates in any two industries in developing countries is slim and unlikely. Much less is it likely to obtain uniform elasticity for any two countries in any industry. As such, considerations of optimality in the design of tariff schemes (for regional integration arrangements) will have to consider the likely import surge that these countries are going to face and the implications of such surge for balance of payments. Already, many developing countries are under huge debt burden and struggling to balance their books annually. In the face of shrinking export opportunities, dwindling world output growth rate and rigidities in the production of exportables, the prescription of 'optimal tariff rates' would only be mechanical if it were not able to incorporate (on a country by country basis) the likely shocks that would arise from the application of such tariff rates on imports structure and consequently the balance of payments.

² Rodrik (1998: 186) argues that 'in a typical African country, compensating the losers from trade liberalization is impossible for all practical purposes—the amount of redistribution required will more than eat up the efficiency gains generated by the reform'.

d. Increased Protectionism, Domestic Price Supports and Tariff escalation among Industrial Countries

While negotiations proceed under the WTO, a worrisome tendency among industrial countries in recent years is the increasing protection for many primary sectors like agriculture in the form of increased tariffs and subsidies. This is relevant for developing countries' trade policies for two reasons. First, most of the products in which these protections are highest also 'coincide' with the major export products of a number of developing countries thus reducing competitiveness of these weaker countries in the same products and raises the stakes of their exports. Japan recently placed a tariff of 490% on agricultural products while cotton subsidies to farmers in developed countries amount to \$3.9 billion. These subsidies are three times U.S. foreign aid to Africa. Liberalization of the groundnut market would increase profits in the five major African producers by \$124 million annually. On per capita basis, a Japanese cow is subsidized by \$7.90 a day while its European counterpart receives \$2.90 per day. At the same time, over 75% of SSA citizens live on less than \$1 a day. Generally, the over \$1 billion a day in subsidy to farmers by industrial countries continues to be a pain in the neck for many developing countries that produce and export agricultural products. These situations are worsened by the increasing tariff escalation. While raw cocoa faces virtually a zero tariff in the European Union and Japan, final products made of cocoa face tariffs of 30.6 percent and 21.7 percent respectively, making diversification up the product chain difficult. Tariff escalation often works against efforts to increase domestic processing in developing countries. It reduces the incentive for adding value in developing countries. While tariff escalation is a feature of almost all economies and tariff structures (see Table 2 in the Appendix), high tariffs are particularly frequent for agricultural imports in OECD countries (Hoekman and Kostecki, 2001:153)

The most restrictive industrial country trade barriers are imposed on developing country products (Ray and Marvel, 1984). Evidence has shown, that the manufactured goods, which face the highest (peak) tariffs in industrial countries are exactly those goods in which developing countries have a comparative advantage. Tariffs on many consumer, agricultural, and labor-intensive products are 10-20 times higher than the overall average tariff. For example, U.S. import tariffs on clothes and shoes average 11 percent and go as high as 48 percent. Other industrial economies are no different. The European Union (EU) applies tariffs of up to 236 percent on meat, 180 percent on cereals, and 17 percent on sneakers. In contrast, its tariffs on raw materials and electronics rarely exceed 5 percent (Gresser, 2002).

The import of the above situation is highly distorted incentive system against exportation of processed products and highly reduced market access for exports of developing countries. But more important in the context of this discussion is the political economy implication of such actions as further liberalization is being foisted on developing countries. There is a perception problem here as the countries worry about reducing their tariffs when protection in industrialized countries is getting stiffer.

Besides, excessive protection in industrial countries reduces market access and tends to inhibit growth in developing country industries, and works against the maximization of the dynamic gains of trade openness. Apparel is a particularly critical example, where the combination of non-tariff and tariff barriers tends to raise the average US price of a garment by about 34% (USITC, 2001). While the non-tariff barriers on industrial country apparel imports are supposed to be removed by 2005, there is grave concern that industrial countries may back away from this commitment, leaving market access extremely limited and distorted. With respect to

non-agricultural products, the WTO Declaration commits "... to negotiations which shall aim...to reduce or as appropriate eliminate tariffs, including the reduction or elimination of tariff peaks, high tariffs, and tariff escalation, as well as non-tariff barriers, in particular on products of export interest to developing countries." (WTO, 2001, par. 16). Recommendations of optimal tariffs for developing countries (on the premise of liberalized trade regimes in these countries or regions) presume that these barriers are corrected and the market access is first assured for their limited products in the industrial markets. In addition, these trade policies damage developing country agricultural exports. EU trade barriers and internal price supports have generated excess production for many goods, which are major exports of poor countries. In many cases, excess output has been dumped on global markets, significantly reducing the prices poor countries receive for these products. It is precisely these sorts of policies that prevent the benefits of freer trade from accruing to the poorer nations and as a number of African countries are net suppliers of agricultural products, the effect of these barriers is a reduction in their real incomes.

e. Complementary Measures

In addition to the facts of the previous subsections, a number of other complementary policies that strengthen tariff policies have to be in place if low tariffs in developing countries are to have any impact. These include the usual complements to effective trade liberalization like secure and enforceable property rights and regulatory institutions. Recommendations of optimal tariffs are based on the assumption that trade liberalization will lead to greater growth. However, these factors have the tendency of structurally inhibiting the transmission of trade policy benefits into real growth. It has been severally argued that the establishment of secure and stable property rights has been a key element in the rise of the West and the onset of modern economic growth (Rodrik, 2000). On the other hand, regulatory institutions are necessary to hedge against pervasive market failures in many developing countries. Discussions about tariff rates that promote growth become sterile in the absence of effective regulatory institutions. Thus, whether in the context of regional integration arrangements or individual country bases, priority items in institutional and trade policy promotion involves regulatory institutions and effective property rights.

At the practical level, the arguments for a diverse tariff structure rest on the ability of governments to: (i) "pick the winners," that is to identify the candidates that are most likely meet the conditions justifying intervention, and choose and maintain the appropriate level for the policy variable (tariff, subsidy); (ii) be immune to the pressures from vested groups that inevitably arise once the willingness to grant special status is established; and (iii) prevent any protection granted from becoming permanent. The empirical evidence in developing countries during the past three decades casts doubt on most governments' ability to meet these conditions. While this theoretical argument is valid, in practice one can think of no product where African nations possess sufficient monopsony power for this to be relevant. Such products must be such that the share of world imports must be large. Then, the actual tariffs in Africa are typically larger than the values optimal tariffs could reasonably be expected to take. For all practical purposes, tariff policy in Africa can be established without reference to this basically theoretical issue.

5. Policy Implications and the Road Ahead

There is also a broad consensus that for policy purposes, the broad generalizations about the benefits or otherwise of ‘openness’ are unhelpful. There is a need to unpack the openness principle into the component elements. The same argument goes for optimal tariff. Broad based prescriptions of optimal tariff are unlikely to be ‘optimal’ for any two countries operating under different economic conditions. All the analyses in the preceding sections aim to make the point that optimal tariff structures for developing countries are unlikely to work. This is so on the two broad levels of analyses – the conceptual and practical.

On the conceptual level, while there is agreement on the need for lowering of tariffs and the impact of trade liberalization on growth, there is little agreement on even whether this tariff structure should be uniform or differentiated. Arguments for uniform tariff based on the simplicity of application and the problems associated with collection overlook the revenue and balance of payments implications of such uniform tariff structure given varying imports elasticities. On the other hand, arguments regarding differentiated tariff structure have not dealt with the problems of collection and administration of the tariff. Besides, whether differentiated or uniform, optimal tariff arguments are yet to address the issue of the location of such optimal rate. From Rodrik’s calculations, ‘low’ is helpful, but ‘too low’ could be harmful. In the literature, the optimal tariff for a developing country is zero. But this is impracticable given revenue and other macroeconomic implications of such a rate.

Particularly for African countries, there are further questions regarding export supply response. Is it really possible to speak of an African uniform tariff where the elasticity of supply of exportable is zero? Is there a uniform nominal tariff that would avoid distortion of the consumption pattern, a uniform effective tariff that would avoid distortion of the production pattern, etc? Policy economists, frustrated by the complexities of trade policy regimes in most developing countries, find the replacement of all trade restrictions by a single uniform tariff as the most effective instrument of minimizing trade policy distortions. To them, optimal structures are too complex to be of practical value. Optimal trade policy for a small open economy is complete free trade. Another justification for a uniform tariff given by policy economists is transparency and administrative simplicity. A complex tariff structure may rise with the complexity of the tariff code. A uniform tariff leaves no room for misclassification of goods for evasion of tariffs. Customs officials can concentrate on ensuring that the value of the good is not understated; there can be no dispute concerning the rate of tariff to be paid. These factors can help reduce delays in clearing goods for delivery and generate gains especially when goods are to be used in the production of exports.

But the fact remains that there is no simple structure. While trade liberalization must not be discouraged, a blanket prescription could be unhelpful in resolving the myriad of structural problems that face trade openness and the use of trade instruments to improve economic welfare in developing countries. As such, the recommendation is that the recommendation of tariff rates will depend on the peculiarities of the country involved. Country macroeconomic frameworks differ to a large extent. This is so even in a regional integration setting. Prescriptions of tariff rates for regional integration arrangements have to consider the individual country circumstances. In particular, there should be at least a study in each case to determine the tariff level/levels compatible with the particular macroeconomic specificities of the liberalizing developing country.

But also important, probably even more important is the place of complementary measures to be put in place in the adoption and administration of any tariff. Optimality of a tariff rate at any point in time could in fact be determined by the existence or otherwise of these complementary measures. In the context of a regional integration, such complementary measures will of course include the structure of compensation available for countries that are likely to lose from the implementation of a (possibly low) optimal tariff. If optimality is defined in terms of reducing distortions to domestic production and consumption while leading to greater trade, then for many African countries, with weak revenue base, the size and structure of compensation could be decisive in determining the optimal tariff rate.

At the country level, some of the complementary measures include the usual menu – ports reforms, institutional base for implementing trade and related policies, productive infrastructure, human capital development etc. For a number of African countries, functionality of the ports could be more important than deciding on tariff rates. Improvement in the efficiency of collection of tariff revenue could indeed dwarf the problems associated with revenue loss owing to reductions in the tariff rates. While this may not solve all the problems, especially those associated with high import elasticities and which could impinge on the balance of payments, at least reforming the ports would have solved some part of both the revenue and balance of payments problems.

Infant industry protection remains a major problem in trade policy design in many developing countries. Mandani and Ollareaga (2002) provide a political economy analysis of the difficulties of liberalizing tariffs in Egypt. Using the political economy methodology, they identified products and sectors where tariff cuts will be politically costly and areas where it will improve resource allocation and efficiency. The weight of the problem may vary from country to country, but it is present in every developing economy – and indeed in many industrial countries as demonstrated by the recent rise in tariff war in industrial countries. Whether the optimal tariff will be uniform or differentiated, it has to take into account the development of industries that are being nurtured by the state. Compensation is hardly very effective in this regard; years of grace for growing such industries may be better options for effective harmonization in a regional integration arrangement.

To end this treatise, we reiterate the point made severally that the use of magical numbers and the blanket prescriptions of such numbers for developing countries' tariffs (especially in the context of regional integration) do not help much. There is little alternative to country case studies and regional assessments of the losses that could accrue to integrating countries in the event of the application of such tariff rates. Particularly, it is important to note that optimal tariff rates will differ from region to region. While a regional integration could get participating countries to fall in line with a particular rate on the basis of known impacts, it is more difficult to implement such uniform rates across regions.

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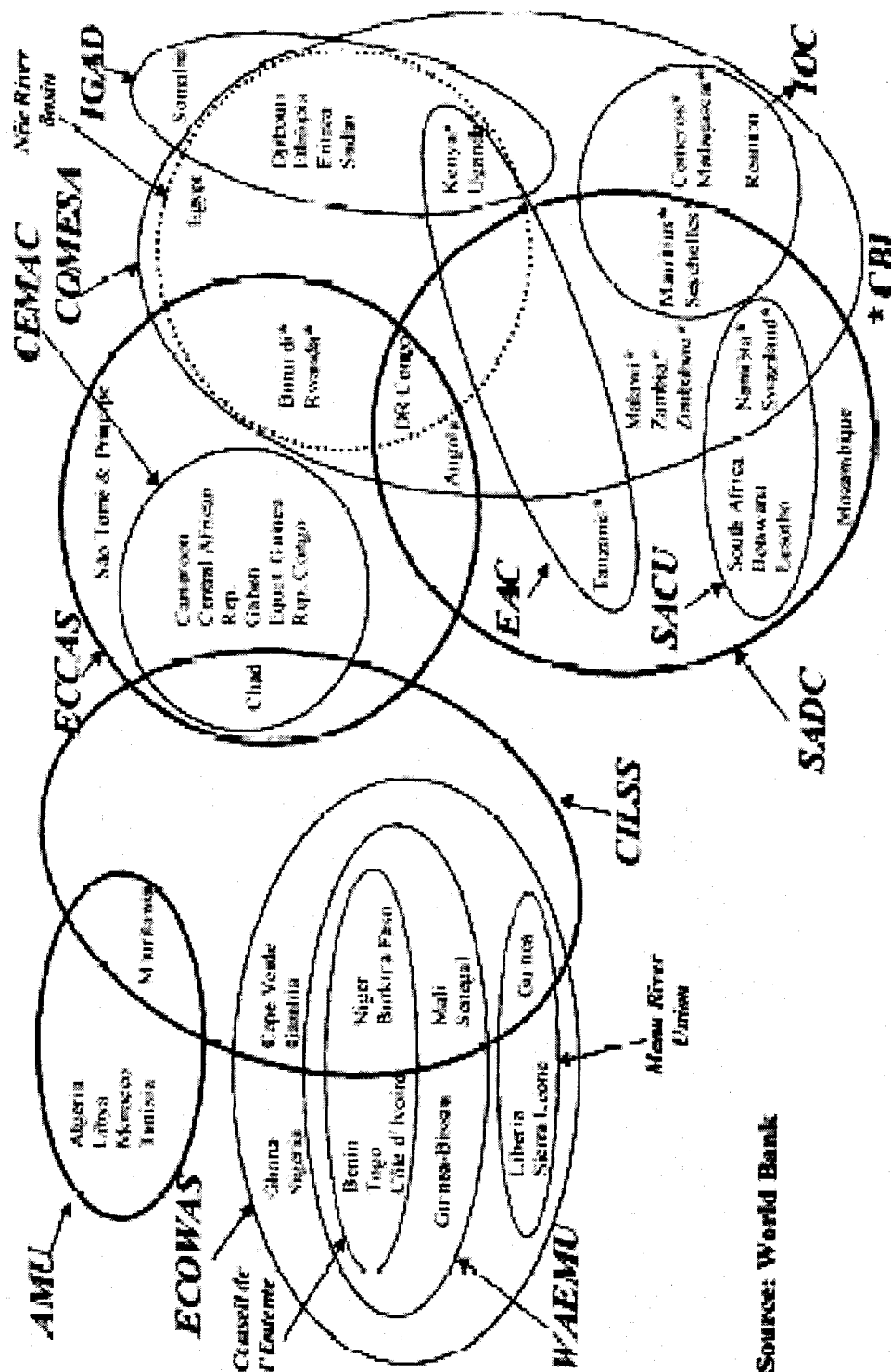
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Appendix

Figure 1. Regional Integration Arrangements in Africa



Source: World Bank

Figure 2: What is an Optimal Tariff

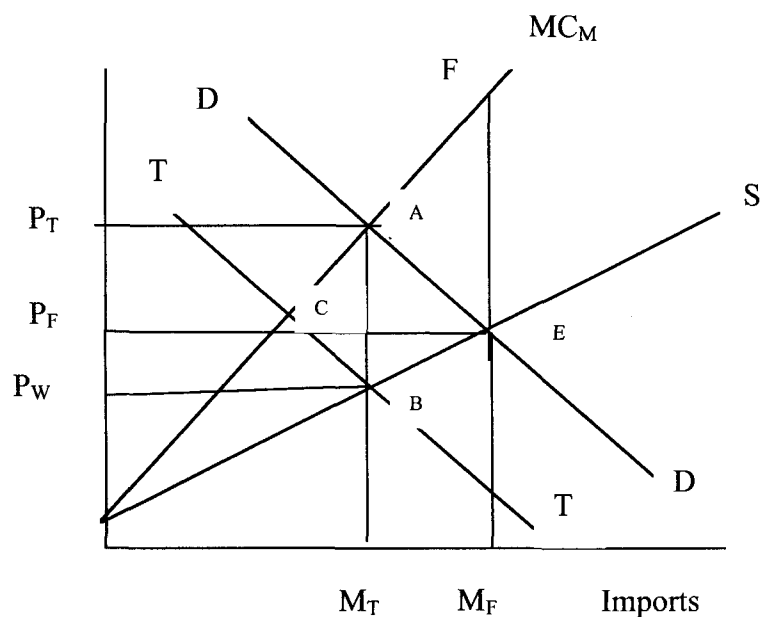


Table 2: Tariff Escalation in Developing and Industrial Countries, 1994-2000 (unweighted average in %)

Region	Country	Year	Agricultural Product			Industrial Product		
			1st Stage	Semi-Proc	Fully Proc	1st Stage	Semi-Proc	Fully Proc
1	China	1997	19.3	34.3	29.2	7.4	13.3	19.3
1	Fiji	1996	..	..	..	5.0	10.0	22.5
1	Indonesia	1998	4.7	4.4	13.9	3.8	7.9	11.6
1	Korea	1999	49.9	93.2	31.8	3.4	7.8	8.0
1	Malaysia /b	1997	..	..	..	1.0	7.0	11.9
1	Philippines	1998	14.3	20.3	23.2	3.5	7.1	11.1
1	Solomon Islands /b	1998	..	..	..	29.0	15.4	25.6
1	Thailand /a	1999	43.5	48.0	38.0	..	..	..
2	Bangladesh /a	1999	16.1	23.0	29.2	17.6	20.7	24.1
2	India	1997	25.4	29.9	42.8	23.6	35.4	36.4
2	Sri Lanka /b	1994	30.0	..	40.0	20.0	15.6	22.5
3	Burkina Faso /a /b	1997	31.8	32.6	33.4	28.5	35.7	29.0
3	Cameroon /a /b	1994	23.9	23.0	25.0	20.0	15.0	21.0
3	Cote d'Ivoire	1994	..	..	..	18.1	21.6	26.2
3	Guinea /a	1998	17.4	18.5	18.1	16.8	16.6	16.1
3	Kenya /a	1999	16.4	24.7	24.7	15.2	17.9	18.6
3	Madagascar	1998	4.9	8.3	7.6	1.1	6.7	7.7
3	Mali	1999	14.5	15.2	18.0	4.7	7.4	12.8
3	Nigeria /b	1999	..	..	..	25.0	24.0	31.0

3	South Africa /a /b	1997	12.4	10.9	15.6	4.9	18.6	13.8
3	Tanzania /a /b	1999	18.5	25.0	23.0	13.3	13.3	18.3
3	Zambia /a /b	1997	18.3	18.2	21.0	14.4	9.5	16.5
4	Bahrain /a /b	2000	4.8	2.8	11.2	5.0	6.2	9.0
4	Cyprus	1998	24.3	32.3	26.8	0.8	5.6	4.6
4	Egypt	1997	33.0	36.9	44.5	24.2	29.5	39.5
4	Israel /a /b	1999	12.0	7.0	24.5	12.8	4.1	8.4
4	Malta	1999	2.5	6.4	9.3	5.4	7.3	8.5
4	Morocco	1997	48.0	51.6	83.0	22.0	35.6	30.3
4	Tunisia /a /b	1994	35.4	33.7	43.0	32.0	31.3	34.6
4	Turkey	1997	35.1	43.7	64.7	0.5	6.7	5.8
5	Bulgaria	1998	20.1	26.3	32.3	8.4	12.8	17.3
5	Czech Rep.	1998	4.9	16.4	18.6	0.6	4.6	5.6
5	Hungary	1999	20.8	39.4	39.1	2.6	5.8	8.8
5	Latvia	1999	8.0	18.9	17.5	1.1	1.3	3.4
5	Poland /a	1999	16.5	22.5	44.9	5.6	9.8	11.2
5	Romania	1999	57.9	110.0	158.4	25.9	16.9	17.1
5	Slovakia Rep.	1999	4.6	15.4	17.3	0.6	4.3	5.1
6	Argentina	1998	10.0	13.9	16.0	7.7	12.0	15.3
6	Barbados	1999	22.7	16.9	18.4	11.0	6.9	13.8
6	Brazil	2000	9.5	13.2	15.6	8.9	11.9	15.8
6	Colombia	1998	12.8	17.7	18.6	6.9	9.6	12.2
6	Costa Rica	1999	10.4	13.0	23.8	2.7	3.7	6.6
6	Ecuador	1999	12.5	16.8	18.5	6.7	9.4	12.5
6	Mexico	1998	15.1	14.9	30.5	8.2	10.2	14.2
6	Nicaragua	1998	9.6	13.3	12.4	2.7	3.6	5.9
6	Paraguay	1998	9.9	13.4	15.5	7.8	11.0	11.4
6	Peru	1998	13.9	14.6	15.6	12.1	13.1	13.0
6	Trinidad & Tobago /b	1997	..	..	..	15.0	2.2	11.1
6	Uruguay	1998	10.1	14.0	15.9	8.2	11.6	12.8
7	Australia	1998	0.3	0.7	2.3	0.7	5.6	6.5
7	Canada	1999	1.7	3.6	7.0	0.7	4.2	5.1
7	European Union	1999	7.3	12.0	13.1	0.6	4.9	4.0
7	Iceland /a /b	1999	2.0	9.0	11.5	4.0	0.9	5.7
7	Japan	1999	4.5	14.3	15.5	0.6	4.5	3.5
7	New Zealand	1999	0.5	2.7	2.8	0.3	2.1	5.4
7	Norway	1999	14.8	0.0	3.5	0.0	1.6	3.4
7	Switzerland /a /b	2000	4.6	30.5	41.8	21.6	4.0	8.5
7	United States	1999	7.1	4.5	10.3	0.6	5.0	4.1
1-6	LDCs (60) average	1994-00	17.9	23.2	27.7	10.7	11.9	15.5
7	INDs (23) average	1998-00	4.8	8.6	12.0	3.2	3.6	5.1

Notes: /a Tariff escalation of agricultural products is based on food processing only.

/b Tariff escalation of industrial products is based on all goods.

Sources: WTO CD ROM 2000 and WTO Trade Policy Review, various issues, 1995-2000.

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