I Introduction

In recent decades many countries have dismantled trade barriers and opened their economies to international competition. Trade liberalization is seen to promote economic efficiency, international competitiveness, and an expansion of trade, perhaps especially in imperfectly competitive markets.[1] Yet despite this progress in trade liberalization, as evidenced by the conclusion of the Uruguay Round in 1994 and the establishment of the World Trade Organization (WTO) in 1995,[2] trade barriers are still widespread. Some economies and some sectors (e.g., agriculture in many industrial countries) remain relatively insulated from the global economy by a variety of nontariff and tariff barriers, even as import substitution continues to lose ground as a strategy for economic development.

The argument that trade liberalization enhances economic efficiency and accelerates growth is now nearly universally accepted. However, because freer trade may lead to a loss of tax revenue as tariffs and other trade taxes are cut, it is important to evaluate the revenue implications of trade liberalization, focusing on what has actually happened to revenue during liberalization, with a view to drawing policy implications. Clearly, for countries with significant fiscal imbalances, any loss of revenue would be an important consideration.[3] Moreover, for many developing countries, taxes on international trade are a large source of revenue. Indeed, an impetus for this paper was the observation, in a recent evaluation of IMF-approved Structural Adjustment Facility (SAF) and Extended Structural Adjustment Facility (ESAF) programs, that some countries had targeted an increased reliance on revenue from international trade taxes or, in any event, had attained higher ratios of international trade tax revenue to GDP at the end of the SAF/ESAF-supported adjustment period. This had occurred despite an apparent commitment to trade liberalization (Abed and others, 1998). Many of these countries are in Africa, where despite a declining, if uneven, trend, trade taxes accounted for about 5½ percent of GDP on average in 1995 (Figure 1).[4]

The revenue implications of trade liberalization are, in general, uncertain. Blejer and Cheasty (1990) and Tanzi (1989) conclude that ultimately the net impact of trade reform on revenue is an empirical matter.[5] Similarly, in a case study analysis of the revenue implications of World Bank–supported Structural Adjustment Loans, Greenaway and Milner (1991) conclude that a range of outcomes is possible, depending on the country's initial conditions and the components of the reform package. In related work, the World Bank has considered the interaction between the reform of trade taxes and that of domestic taxes in World Bank programs. Rajaram (1994) examines whether the revenue effects of tariff reform proposals were anticipated and complemented by other tax measures. He finds that in some but not all cases the revenue implications of trade reform and complementary reforms of the domestic tax system were considered. He suggests that a more systematic integration of revenue and trade protection objectives in World Bank programs is needed. Mitra (1992) and Datta-Mitra (1997) also conclude that, in some countries with World Bank reform programs, greater emphasis on revenue issues is called for.[6] Finally, in an

[1]See Escolano (1995), Farhadian-Lorie and Katz (1988), Helpman and Krugman (1989), Krueger (1995), and Subramanian, Ibrahim, and Torres-Castro (1993).

[2]In addition to progress on the multilateral front, trade liberalization has also resulted in an increased reliance on regional trade arrangements. See Harmsen and Leidy (1994).

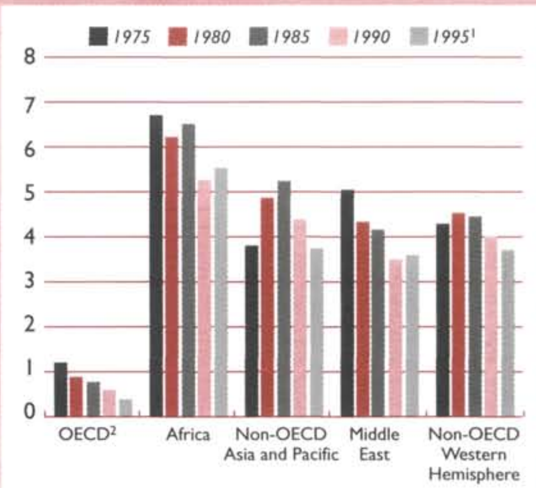
[3]For example, the group of African countries that entered into Structural Adjustment Facility or Extended Structural Adjustment Facility arrangements with the IMF during the 1980s and 1990s had overall fiscal deficits averaging more than 9 percent of GDP in the year immediately preceding the program. See Abed and others (1998).

[4]Because of data limitations, tariffs cannot always be separated from other taxes, such as excise and sales taxes, that are also collected at customs (e.g., in Burkina Faso, Mali, and Tanzania). In addition, some countries in the CFA franc zone of West and Central Africa levy charges on reexports (primarily to Nigeria), which cannot be distinguished from export taxes.

[5]In related analyses, Bevan (1995), Feltenstein (1992), and Tokarick (1995) use applied general equilibrium analysis to evaluate the effect of trade liberalization on fiscal variables.

[6]See also Thomas and others (1991) and Papageorgiou, Choksi, and Michaely (1990).

Figure 1. Taxes on International Trade by World Region
(In percent of GDP)



Sources: IMF, *Government Financial Statistics*, various issues, and *International Financial Statistics*, various issues; and OECD, *Revenue Statistics*, various issues.

[1]The last year for which data are available is 1995 for most countries and an earlier year or 1996 for some countries. See Appendix II, Table 16 for the countries in each of the regional groupings.

[2]Excluding the Czech Republic, Hungary, Luxembourg, and Poland.

assessment of trade liberalization and tax reform in the southern Mediterranean, Abed (1998) stresses the links between trade liberalization and domestic tax reform and details the types of tax reforms that would support trade reform.

A recent IMF study of trade liberalization in general in countries undergoing IMF-supported programs (IMF, 1998) also finds a range of fiscal outcomes from liberalization. The study concludes that some programs could have targeted more extensive trade reform if greater attention had been given to supporting fiscal policies and to revenue-neutral trade measures.

Changes in a country's trade policy can be difficult to summarize, because they may entail modifications in complex tariff structures and quantitative restrictions and have complex interactions with domestic taxes. Some researchers have tried to develop a trade restrictiveness index that attempts to transform a given pattern of trade protection into an equivalent uniform tariff (Anderson and Neary, 1994). In a similar vein, IMF (1997) develops a 10-point scale that combines measurements of the restrictiveness of tariffs and nontariff barriers. Here the approach is to view trade liberalization as a broad set of movements (i.e., considerably more complex than simple tariff reductions) toward a less distorting environment. Given the extensive range of countries considered, however, the analysis of necessity relies on aggregate data rather than on calculated indices.

Against this background, the present paper begins by reviewing the ways in which the revenue implications of trade liberalization tend to depend on the country's initial conditions and reform strategy, especially in cases where tariff structures may be complex and highly restrictive.[7] Of course, in the later stages of reform, tariff reductions are bound to be associated with revenue losses. Accordingly, this paper suggests a set of best practices for domestic tax reform, which would over time offset revenue losses from reductions in trade taxes. Finally, the paper attempts, through an analysis of policy in six selected countries, a review of revenue trends in a larger sample of countries, and econometric analysis, to determine how countries have balanced these various constraints in practice.

[7]This discussion draws on Ebrill and Stotsky (1998).