

Public Finance, Trade and Development: What Have We Learned?

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The world has seen a substantial slowdown of economic growth in recent years. Industrial economies grew at an average annual rate of about 4 percent during the 1960s and 1970s, and developing countries by about 5.5 percent. For the 1980s the growth rates for these two country groups are expected to average only about 2.5 percent and 4 percent, respectively. For Sub-Saharan Africa and the highly indebted countries, the 1980s have even brought a sizable decline in per capita incomes.

For the developing countries, changes in the international environment provide an explanation of this turn of events. The growth of international trade slowed in the 1980s. Oil prices gyrated widely. Non-oil commodity prices slumped. Real interest rates reached highs unprecedented in the postwar period. Access to international capital became severely constrained, and net resource transfers turned negative, dramatically so after 1983.

The impact of public finance and trade policies in industrial countries on developing country public finances, trade, and development is direct and immediate: growing industrial country protection re-

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duces developing country access to markets; rising agricultural production subsidies in the former depress commodity export prices in the latter; high real interest rates raise the current account and budget deficits in the developing world; slow industrial country growth limits trading opportunities for the developing world. These are just some of the most important linkages. The international development experience in recent years has reinforced the lesson that developing countries are substantially influenced by public finance and trade policies in the industrial world.

This dependence, however, can be overstated. Developing countries, to a significant degree, determine their own economic performance, as is demonstrated by the differences in trade and growth performance among different country groups. Since 1970, East Asia has fared best in performance of both purchasing power of exports and export volume, both for non-oil commodity exports and for manufactured exports. Latin America and South Asia were less successful, while Sub-Saharan Africa fared consistently worst (World Bank (1988b)). Much of this difference in trade and development performance must be attributed to the cumulative impact of different policies pursued over the last two to three decades in these country groups, including trade and public finance policies.

The linkages between trade policy and development performance have been much studied and documented (Bhattacharya and Linn (1988), Krueger (1978), World Bank (1987b)). Similarly, the links between public finance policies and development have been discussed in the literature (Goode (1984), World Bank (1988b)). What has not been explored systematically are the linkages and interdependence among public finance and trade policies as they *jointly* influence the development performance of developing countries. These interrelationships are of more than academic interest. Neglect of the public finance dimension in the design of trade policy reform, and vice versa, may well result in policies that are inconsistent with major policy goals or unsustainable over time. For example, in the Philippines a major trade policy reform was initiated in the early 1980s, but had to be halted and even partially reversed when the country was hit by economic crisis in the mid-1980s, largely as a result of unsound fiscal policies.

Using public finance policy as the point of departure, this paper will explore the interdependence between public finance and trade policies and its significance for development in three dimensions of policy design: macroeconomic policy, public revenue policy, and public expenditure policy. The paper does not address questions of political economy. In this area, past mistakes in policy design were due to lack of recognition of interactions among multiple policy objectives and interest as much as they were due to decisionmakers'

unwillingness to take appropriate action. The first step needed in policy analysis is therefore to assess the importance of interactions and their normative implications for policy design. That is the purpose of this paper.

Macroeconomic Dimension: Fiscal Policy and Trade

Countries have reacted differently to the external shocks of the past two decades. In those countries that have been successful in avoiding crisis, stable real exchange rates, sound fiscal management, and a movement toward trade liberalization have played a vital role.

Exchange Rate

The main link between fiscal policy and trade is the exchange rate. Generally, excessive fiscal deficits are at the root of overvalued exchange rates. As fiscal deficits increase, additional pressure on domestic demand drives wages and prices up. Overreliance on money creation for financing the deficit also results in inflation. Increased domestic prices relative to the prices in a country's trading partners lead to overvaluation in the real exchange rate. To the extent the excess demand spills over into an increased current account deficit, the higher capital flows that finance this deficit will underwrite the currency's overvaluation. Overvaluation favors the production of nontradables over that of tradables, whether exports or import substitutes, and is reflected in a loss of competitiveness in international markets. As a result, export performance deteriorates. In the long run, overvaluation also leads to a fall in investment in the tradable goods sector. This dampens even further the country's ability to export.

Governments often put off devaluation, in many cases for political reasons. Instead they turn to "temporary measures" such as import duties and quantitative restrictions on imports as a means of stabilizing the current account. Politically such measures often satisfy increasing demands for protection, but, in fact, these measures merely reinforce the distorting effects of overvaluation. In addition, protection tends to lead to "rent seeking" where resources are spent capturing the rents that result from the restrictive measures, rather than pursuing productive activities (Bhagwati (1982), Krueger (1974), World Bank (1987b)). Such a diversion of resources has additional costs for the economy.

Eventually, overvaluation of the currency will become unsustainable and the government will be forced to devalue. However, devaluation of the currency without accompanying fiscal and monetary

restraint is usually fruitless. Continued excess demand and inflation erode the initial effect of devaluation on the real exchange rate. Only a devaluation combined with fiscal and monetary adjustment lends itself to a sustainable improvement in competitiveness.¹

Sound Fiscal Management

Fiscal restraint does not necessarily imply a balanced budget. Rather, it involves a deficit or surplus that is consistent with other macroeconomic objectives, such as controlling inflation, promoting private investment, and maintaining external creditworthiness. A country with a high level of savings and an efficient economy, such as the Republic of Korea, can support a higher deficit than a country with a lower savings level and a less efficient production process, such as the Philippines.

The effect of a fiscal deficit depends not only on its size, but also on how it is financed. Fiscal deficits may be financed either domestically or externally. Domestically, a deficit can be financed either by borrowing in the private sector or by creating money. A government's ability to borrow from the private sector depends upon both the sophistication of financial markets and upon the willingness of private investors to hold government bonds. Government borrowing from the private sector will tend to reduce the credit available to private borrowers and lead to a rise in interest rates and a decline in investment. An extended reduction in private investment reduces the growth and international competitiveness of the economy.

To a limited extent, a government in a growing economy can finance itself by expanding the money base without causing inflation, as long as the rate of growth of the money supply does not exceed the growth of the demand for money. However, when the rate of new money creation exceeds the growth in demand for money, inflation will occur. In most developing countries, inflation is a fiscal phenomenon, caused by a government financing a deficit by monetary creation at a higher rate than the growth in money demand. At the same time, inflation has a fiscal effect. As the real value of money holdings falls with inflation, individuals are subject to an implicit "inflation tax." Beyond a certain point, however, an increase in money creation and thus in the rate of inflation may actually

¹Devaluations in themselves will have a fiscal effect because they revalue foreign currency income and expenditure in domestic currency. The degree of fiscal adjustment needed to achieve a given reduction in the budget deficit will vary according to the extent to which the public sector is a net earner of foreign exchange (World Bank (1988)).

decrease the government's claim to resources if high inflation causes the demand for currency to drop sharply. Inflation also tends to increase government expenditures and reduce its real revenue growth (the *Tanzi effect*). This further increases the deficit, and has in some countries led to a vicious inflationary spiral (e.g., Argentina, Bolivia, and Brazil).

As mentioned above, inflation associated with fiscal imbalances and overreliance on money creation will—where exceeding that of major trading partners—lead to an overvaluation of the currency with all the negative effects that such an overvaluation has on trade. Inflation will also create uncertainty regarding input prices as well as increase product prices. All these factors lead to reduced creditworthiness and an uncertain policy environment, which in turn can lead to reduced investment and capital flight. Producers will back away from the production of tradable goods as the cost increases (owing to lower investment) and profits diminish (owing to the currency overvaluation).

Another possibility for financing a government deficit is to borrow externally. The dangers of excessive reliance on foreign borrowing are well demonstrated by the experience of the highly indebted countries. When creditworthiness is lost, access to foreign finance suddenly becomes extremely limited, requiring a substantial reduction in current account deficits. In the short term this can usually be achieved only by a drastic cut in imports. On average, import volumes declined 6.2 percent a year between 1980 and 1987 in the highly indebted countries (World Bank (1987a)). Combined with cutbacks in domestic investment, import compression limits a country's flexibility in responding to improved trading opportunities on the export side. In extreme cases, when creditors fail to reach agreement with debtors on repayment terms, an interruption or higher cost of commercial trade finance can result, seriously impeding trade for the country concerned.

In countries that experience sudden increases in their government revenue, often owing to a boom in the price of a single export commodity, proper management of the surplus is as important as effective management of a deficit. Such commodity booms have occurred in all the oil exporting countries, in Colombia, Côte d'Ivoire, Kenya, and many others. In practice, governments have often made poor use of the increase in public funds by increasing recurrent spending or low-return investments. Real exchange rates then appreciate excessively and exports of goods other than the boom commodity decline. Import growth is accelerated owing to increased aggregate demand and the overvalued currency. During the boom, export revenues and capital inflows lead to a surge in central bank holdings of foreign exchange reserves. This in turn, when not

fully sterilized, leads to rapid monetary growth and higher inflation. Finally, many countries have used their enhanced creditworthiness to borrow heavily abroad during the boom, only to face an unsustainable external debt position when commodity revenue drops off. The lesson to draw is that it is often better to err on the side of caution by limiting domestic use of boom revenues. By using increased revenues to reduce external debt, it is possible to limit the appreciation of the exchange rate and thus to support a diversified export structure and greater resilience to external shocks in the longer term. Nigeria and Mexico did not manage their booms well; Botswana and Indonesia, on the other hand, have avoided economic crisis, demonstrating that sound fiscal management is indeed possible.

Trade Liberalization

The experience of a number of countries has highlighted the importance of sound fiscal policies to the success of trade liberalization (Krueger (1978), Michaely (1988), Papageorgiou and others (1986)). In the East Asian Newly Industrializing Economies, liberalization has been able to succeed partly because of stable fiscal policies. By contrast, poor management of the fiscal deficit has hindered liberalization attempts in many other countries. A general conclusion that one can draw is that the first response to an economic crisis should be a prompt and well-formulated stabilization program to ensure that macroeconomic imbalances are sufficiently reduced prior to undertaking trade liberalization. The key elements of such a stabilization program are devaluation of the currency and reduction in the fiscal deficit. A rapid response to macroeconomic imbalances is necessary to create an environment conducive to structural reforms that will promote economic growth and trade in the long run.

In the short term, measures to reduce the fiscal deficit will often involve reducing demand (particularly demand for imports) through public expenditure cuts. Later, as quotas and tariffs are lowered in the process of liberalization, policies to broaden the tax base and make up for lost revenues may have to be implemented to keep fiscal deficits manageable. For the countries where trade taxes are an important source of revenue, liberalization is particularly difficult precisely because the loss in revenue conflicts with the need for macroeconomic stability.

In sum, it is essential to recognize the interrelationships among fiscal policy, the exchange rate, and trade policy. Sound management of fiscal policy is a priority not only for maintaining internal balance but for promoting external balance, a stable exchange rate, and long-term trade performance. At the same time, trade policy and external

trade and exchange rate shocks have significant effects on fiscal balance and macroeconomic stability.

Public Revenue and Trade

Tax policy and trade policy are intimately interrelated. Import tariffs both raise revenue and protect domestic production of import substitutes. Taxes on exports are often used to tax agricultural and rural producers. Special fiscal incentives are employed to promote exports. Even user charges can have some bearing on trade. This section reviews the interaction between public revenue and trade policy in each of these areas.

Raising Revenue

Developing countries, and the low-income countries in particular, rely on trade tariffs to a much greater extent than do industrial countries. In 1985, as a percentage of total tax revenue, import and export taxes provided about 36 percent of total revenue in the low-income countries, 18 percent in the middle-income countries, and about 2 percent in the industrial countries. Import and export taxes represented roughly 7 percent of GDP in the low-income countries, 6 percent of GDP in the middle-income countries, and under 0.5 percent of GDP in the industrial countries (see Table 1).

Taxing imported and exported goods provides a straightforward means of raising revenue in economies where tax handles are limited. The administrative ease with which trade taxes can be collected makes them an attractive alternative when administrative capabilities are scarce. A recent study cites the administrative costs of trade and excise taxes as normally ranging from 1 to 3 percent of revenue collected compared with up to 5 percent for value-added taxes and up to 10 percent for personal income taxes (World Bank (1988b)). Trade taxes, particularly import duties, have the added advantage of being quickly activated. In countries where the urgency of cutting the deficit mounts, such taxes are often used as quick fixes to a rising budget deficit.

While the administrative costs of implementing trade taxes are low, the economic cost of increasing trade taxes is generally higher than that of increasing domestic taxes. A study by Clarete and Whalley (1987) compares the economic cost of trade taxes to the economic cost of domestic taxes in the Philippines. The study concludes that the marginal economic cost of raising revenue using trade taxes substantially exceeds that of indirect (or commodity) taxes, especially for higher rates (see Table 2). Although costs of distortion vary from

Table 1. Trade Taxation as a Percentage of GDP and as a Percentage of Total Tax Revenue, 1975-85¹

	1975	1980	1985
Trade Taxes/GDP			
Import Taxes			
Low-income countries	4.46	3.68	5.72
Middle-income countries	3.36	3.99	5.90
Industrial countries	0.85	0.62	0.35
Export Taxes			
Low-income countries	1.49	1.16	1.12
Middle-income countries	0.66	0.57	0.36
Industrial countries	0.05	0.02	0.01
Trade Taxes/Total Tax Revenue			
Import Taxes			
Low-income countries	25.17	27.67	28.50
Middle-income countries	20.23	20.06	17.04
Industrial countries	3.71	2.61	1.58
Export Taxes			
Low-income countries	11.40	10.18	7.99
Middle-income countries	3.94	3.08	1.30
Industrial countries	0.24	0.13	0.04
Memorandum Items:			
Total Tax/GDP			
Low-income countries	14.40	14.90	14.60
Middle-income countries	17.80	19.00	20.00
Industrial countries	27.50	29.60	31.60
Domestic Income/Total Tax Revenue			
Low-income countries	28.34	26.70	25.69
Middle-income countries	30.43	30.31	32.30
Industrial countries	34.94	35.34	35.26
Other Direct/Total Tax Revenue ²			
Low-income countries	3.13	2.88	2.69
Middle-income countries	14.63	12.87	13.80
Industrial countries	31.50	31.67	32.41
Domestic Commodity/Total Tax Revenue			
Low-income countries	28.04	30.29	32.07
Middle-income countries	26.61	28.85	31.00
Industrial countries	28.53	29.00	29.41

Sources: International Monetary Fund, Government Finance Statistics (1987); and World Bank data.

¹Central government only, unweighted averages. Countries are grouped according to the classification in World Bank (1988b).

²Other direct includes property tax and social security.

country to country, other studies (on India, Kenya, and Pakistan) suggest similar results (Ahmad and Stern (1986 and 1987), World Bank (1988b)).

The streamlining of customs procedures can reduce the costs of raising revenue with tariffs and help improve trade. Indonesia brought in a Swiss firm to streamline the assessment and collection of its customs duties. While such measures make trade taxes less costly, they cannot compensate for the underlying difference between the cost of raising revenue through trade taxes and that of raising revenue through domestic commodity taxes.

Protecting Domestic Production Through Tariffs

In many countries trade taxes are deemed important for protecting and increasing domestic production in import-substituting industries. Import tariffs are also often imposed to reduce the amount of imports in response to a balance-of-payments crisis. However, import tariffs result in an implicit tax on exports. An increase in tariffs tends to result in an exchange rate appreciation or substitute for a needed depreciation. Since resources move into the production of nontradable goods at the expense of production of exports, higher tariffs on imports will tend to worsen a balance-of-payments crisis in the long term.

Import taxes are also seen as a way to reduce vulnerability to a harsh or risky external environment. While import tariffs may reduce a country's dependence on imports of final consumption goods, they frequently lead the country to be highly dependent on the remaining imports of intermediate goods. In the end, the country may be as vulnerable (if not more) to fluctuations in export earnings because the remaining imports may be essential to domestic production. If these imports cannot be financed, production must be curtailed. In

Table 2. Marginal Economic Costs of Raising Revenue from Trade Tariffs and Domestic Commodity Taxes in the Philippines

Tax or Tariff Rate (in percent)	Marginal Economic Cost (in pesos per peso of revenue raised)	
	Trade tariffs	Domestic commodity taxes
10	0.46	-0.04
15	0.74	0.00
20	1.22	0.03
25	2.25	0.07

Source: Clarete and Whalley (1987).

addition, the benefits of reduced volatility in the balance of payments resulting from the reduced dependence on trade will be countered by greater uncertainty in tax revenues as trade taxes will amount to a larger share of total revenues.

The protective effect of trade tariffs is not fully measured by nominal tariff rates applied at the border. Tariffs are protective only to the extent that they are higher than domestic indirect taxes on import substitutes. In fact, the combined protective effect of tariffs and domestic taxes on inputs and outputs is what matters for any particular activity; this effect can be measured by calculating the "effective rate of protection." While many problems exist in calculating and interpreting effective rates of protection, they provide at least a benchmark for assessing the level of protection of various sectors in an economy and for tracking changes in the joint protective effects of tariffs and domestic taxes, especially at times when trade liberalization policies are being pursued.

Trade liberalization generally involves, first, replacing quantitative restrictions by tariffs, which increases revenues and thus improves the overall fiscal balance; and, second, reducing tariffs, especially those at the higher end of the spectrum, which tends to lower revenues, although the reduction in smuggling and the increases in imports tend to reduce or even reverse this negative effect. A third step has often been recommended as a way to reduce the dispersion of effective rates of protection for different activities while ameliorating revenue losses: raising the tariff rates at the low end of the spectrum (generally tariffs on intermediate and primary inputs).

This third step has recently been questioned since it creates additional distortions (especially against exports), which may be difficult to reverse later, and gives rise to vested interests (Shalizi and Squire (1987)). As an alternative, it is recommended that tariff reform be integrated with the reform of domestic commodity taxes. Ideally, a domestic consumption tax (e.g., a value-added tax) should be increased at the same time as tariffs on final products are lowered with the eventual goal of eliminating the bias in favor of import substitution. There is considerable merit in this argument. It stresses the need for a comprehensive public finance perspective in designing a program of trade liberalization. This perspective is important not only because of the need to minimize distortions, but also in the interest of ensuring that the revenue effects of trade liberalization do not lead to a reversal of the liberalization effort, as was the case in Thailand in the mid-1980s. Of course, there are cases in which an introduction of, or increases in, domestic consumption taxes may not be readily feasible, or where raising some (if not all) low tariffs may appropriately support the development of infant industries, especially in the intermediate or capital goods sectors. Nonetheless, such a conclusion can, and should, be arrived at only after consider-

ing the broader fiscal reform options in connection with trade liberalization. What is more, protection—when it is granted—should strictly be limited in time and scope.

Export Taxes

The use of export taxes has declined over the past ten years. In 1985 about 8 percent of total tax revenue in the low-income countries came from export taxes (the figures for the middle-income and industrial countries are about 1 percent and less than .05 percent, respectively; see Table 1). Export taxes are a means of taxing agricultural and rural producers who are difficult to reach through income or land taxes. In addition to raising revenue, export taxes hold the domestic price of export commodities down and thus offer an advantage to local processing. Multiple exchange rates or the price-setting activities of marketing boards such as the Cocoa Board in Ghana can also act as implicit export taxes by setting domestic prices below border prices.

Evidence on the level of taxation suggests that in some countries producers of agricultural exports may be overtaxed. For example, a calculation for a typical cocoa farmer in Ghana in the early 1980s reveals that an export tax of 4 percent of the farmers' farmgate price would have yielded as much revenue as if farmers' profits had been subject to income tax at the prevailing rate. The actual export tax, however, was more than 100 percent. To the extent that export taxes are intended to substitute for income tax, rates could have been greatly reduced (World Bank (1988b)).

In an economy that can influence the international price of a commodity, export taxes lead to an increase in prices and to improved terms of trade. In practice, few countries have such pricing power, especially in the long run, and the export tax is shifted back onto the producers. As a result, export taxes discourage the production of export crops and may lead to a worsening of the current account. Finally, export taxes are a highly distortionary means of supporting domestic processing industries. To the extent such support is thought desirable, other instruments (e.g., direct subsidies) would be preferable on economic grounds. Export taxes should thus be used only very selectively and should be phased out as the domestic tax base broadens.

Export Incentives

In order to offset the anti-export bias inherent in their tax structures, many countries employ special export incentives. One of the most successful examples of export promotion policies is that of the

Republic of Korea. In many other developing countries, the success of these programs has been mixed.

Special export incentives are defended on the grounds that they play a transitional role in offsetting disincentives to export while distortions in the import regime are gradually reduced. It is also argued that promoting exports has important externalities in developing marketing skills, the transfer of information, and infrastructure. These externalities may justify government intervention in the promotion of exports (Bhattacharya and Linn (1988)). Nevertheless, as there are also costs to public intervention, one needs to be reasonably sure that these costs are outweighed by the benefits of export promotion.

In the use of tax policy for export promotion, one common approach is to provide duty exemptions and indirect tax rebates. This ensures that exporters can gain access to inputs and trade their outputs at world market prices. Other instruments of export promotion include income tax rebates, preferential access to export finance for exporters, access to primary and nontraded inputs at undistorted prices, development of institutional infrastructure for trade, and in some cases the use of Free Trade Zones (Rhee (1985)). Efforts have been made in a number of developing countries in recent years to improve the coverage and administration of export incentives (Bhattacharya and Linn (1988)).

The danger inherent in export promotion policies is that they turn attention away from general trade policy reforms. Special export incentives may also be problematic in countries with large budget deficits and low administrative capacity—since effective export promotion requires some spending and some revenue loss, and a strong and speedy administrative organization. In Thailand, for example, it has been estimated that an effective rebate scheme for taxes on export production would imply a revenue loss of between 0.3 and 0.6 percent of GDP (Bhattacharya and Linn (1988)). An additional problem with export promotion policies is that they are increasingly being circumscribed by international and bilateral rules that limit the accepted forms of intervention. Finally, export incentives may also complicate the tax structure and lead to the buildup of another group of special interests that may consequently discourage further trade reforms. Ultimately, therefore, it would be preferable to aim for tariff reduction, accompanied by the introduction of a value-added tax. Value-added tax (when based on the destination principle) automatically does what export tax rebate schemes try to do: ensures that exports are not burdened by domestic indirect taxes.

Despite their limitations, export incentives, when properly structured and set up to complement rather than replace overall reform of the trade regime, can play an important role in the early stages of

trade liberalization, when much depends on ensuring that biases against production of exportables are quickly and substantially reduced.

User Charges

Besides taxes, user charges for publicly provided goods and services (such as water, power, and telecommunications) are a promising source of public revenue. In fact, if they are set to equal marginal costs, they are preferable to taxes since they raise revenues but do not interfere with the efficiency of resource allocation. How do user charges affect trade?

First, consider the *level* of user charges. Where, as is commonly the case, user charges do not cover financial cost, public services tend to deteriorate and the rate of improvement in service coverage and quality will be limited for lack of financial resources. Because trade and tradable goods production depend on ready access to infrastructure (see below), this effect of low user charges will have a direct bearing on trade. Moreover, when financed from taxes, infrastructure subsidies imply additional distortions in the economy. To the extent that higher user charges imply a reduction in subsidies, they lower the amount of taxes that must be raised. In countries where trade taxes are an important share of the tax structure, reducing the revenue burden by increasing the role of user charges may also allow a reduction in trade taxes. This will lessen the anti-export bias that trade taxes imply and will assist trade liberalization.

Second, there is the question of the *structure* of user charges. In many countries, industrial users of infrastructure tend to be taxed while residential users are subsidized. Table 3 provides some data on power tariffs in a number of developing countries. Industrial tariffs exceeded residential tariffs by roughly 4 to 145 percent, even though differences in the underlying marginal costs of production would, if anything, go in the opposite direction. More research needs to be carried out to establish the precise level of taxation implicit in these figures, but they do provide prima facie evidence of a bias against industrial producers in the structure of user charges, a bias which reduces the competitiveness of domestic producers in international markets.

Summing up this brief review of public revenue and trade policies, one can conclude:

- I. Many developing countries rely on trade taxes as an important source of revenue, largely because of their administrative advantages. Trade tariffs, however, have important economic costs, particularly with respect to the production of tradable goods. While in the short

Table 3. Developing Country Power Tariffs, 1982

(In percent)

Country	Industrial Tariffs ¹ over Residential Tariffs ²
Barbados	60
Colombia	132
Ghana	104
Hungary	6
Malaysia	4
Nicaragua	12
Nigeria	21
Peru	146
Philippines	55
Seychelles	10
Sierra Leone	7
Solomon Islands	14
Sri Lanka	81
St. Lucia	14
Thailand	20
Tunisia	20
Yemen, P.D.R.	98

Source: World Bank data.

¹Unweighted average of commercial, small industry, and large industry when all data available.²Unweighted average of low and high domestic tariffs.

run some countries may have no alternative to trade taxes, as economic and administrative conditions change, it is important to reassess the necessity of trade taxes.

2. In addition to raising revenue, tax policy is also an instrument of protection. The joint effect of domestic taxes and trade taxes determines the level of protection as well as revenues. Liberalization will generally require reform of domestic taxes alongside the reform of trade taxes.

3. By discouraging exports, export taxes are likely to do more harm than good. They should be used only selectively and phased out completely as the tax base broadens.

4. Special export incentives can be helpful in promoting exports, especially during the early stages of trade policy reform, as long as they do not divert attention from other elements of trade liberalization and do not draw retaliatory measures from trading partners. Export incentives need speedy and effective administration to be successful.

5. Increasing the role of user charges, while ensuring that industrial users are not inappropriately taxed, can help improve the international competitiveness of domestic industries.

Public Expenditure Policy

Public finance and trade economists have traditionally focused most of their attention on the revenue side of the government budget, especially on tax and tariff policy, respectively. They have given much less consideration to the level and composition of public spending as a determinant of development and trade. At the aggregate level, some analysis has been carried out on the patterns and trends in government spending (Heller and Tait (1982)). The relationship between level and composition of public spending and the rate of economic growth has also been investigated recently (Balassa (1988), Landau (1986), Ram (1986), (1987)), but this research has on balance remained inconclusive in determining whether larger or more rapidly growing government spending will be beneficial or harmful to economic growth. The World Bank carries out public expenditure reviews as part of its mandate to assist developing country governments. These reviews have generally involved an assessment of the level and pattern of government spending in a particular country in view of macroeconomic and revenue constraints, as well as of sectoral conditions and priorities.² Finally, public project analysis has made allowance for distortions caused by trade policies through the use of shadow prices. However, none of these studies or approaches appears to have addressed specifically the relationships between public spending, trade, and development. The following paragraphs therefore endeavor only to make some exploratory observations.

The relationships between public expenditures, trade, and development are complex for two reasons. First, public spending, even where notionally in support of tradables production, may be misdirected or counter-productive if it provides the wrong incentives to producers or traders (e.g., inefficient food subsidies), if it displaces more efficient private activities, or if it is poorly planned and implemented. Second, public spending is often directed primarily at the production of nontradables, such as power, irrigation, transport, telecommunication, education, and health. However, these serve as essential inputs to the production of tradables. Bottlenecks in infrastructure can act as a serious brake on the growth of trade and on development of a country. For these reasons, caution is in order

²See World Bank (1988), Box 5.10 for a description of the World Bank approach to public expenditure reviews. Recent *World Development Reports* have drawn on these reviews for assessing the appropriate role of public spending in selected sectors such as agriculture (World Bank (1982)), industry (World Bank (1987b)), and education, health, and infrastructure. (World Bank (1988b)). World Bank (1984) provides a country example of a public expenditure review for the case of Thailand.

when assessing the relationships between public spending, trade, and development.

The appropriate role of government is the first issue that needs to be addressed. Direct involvement by governments or state-owned enterprises in the production and marketing of agricultural and industrial commodities has generally not been successful (World Bank (1986), (1987b)). Instead, governments in developing countries are better equipped to devote their limited fiscal and administrative resources to ensure that the legal and incentive environment is supportive of private or market-based production and trade in agriculture and industry, and that the necessary infrastructure is available for tradables production.

In the agricultural sector, irrigation, road, and power infrastructure, as well as research and extension services, provide particular examples of where public spending can be effectively directed in support of greater production of tradables. The main issues relate to (a) the appropriate rate of expansion of these systems, (b) the balance between investments in production and distribution, (c) the balance between new investments and more spending for operations and maintenance, (d) the operational efficiency of the systems, and (e) the balance between public and private responsibility for these functions. With the benefit of hindsight, it appears that public spending on rural infrastructure in developing countries has often been misdirected or has unnecessarily displaced private initiative, has inappropriately favored primary production over distribution or secondary access systems, and has tended to neglect operations and maintenance in favor of new investments.³ As a result, the infrastructure necessary for expanding agricultural exports or efficient import substitution has often suffered.

In the industrial sector, infrastructure plays a similarly important role in support of tradables. The availability of uninterrupted water and power supplies, access to efficient transport, telecommunications, and port services, and of a well-trained labor force all determine the productivity and competitiveness of domestic industry. As in the case of agricultural infrastructure, issues arise as regards the balance among different types of investment, operations, and maintenance. Because rapid urbanization requires infrastructure, special problems arise, such as congestion, pollution, and lack of financial and administrative resources to provide the needed industrial and residential facilities.

³For examples and further documentation see (World Bank (1984), (1985)). A particularly dramatic case is that of the road sector, where lack of an appropriate balance between new investments and maintenance has led to a serious misallocation of public resources and impediments to agricultural production and trade (World Bank (1988a)).

The implications of these shortcomings for the competitiveness of developing countries in the trade of manufactures are not easily quantified, but some examples can be given. In Nigeria, industrial firms are forced to devote as much as 20 percent of their initial capital outlays for electric generators and water boreholes, since public utilities are inaccessible or unreliable (World Bank (1988b)). For the ASEAN countries, it has been estimated that an annual savings of some \$1.2 billion in shipping costs would be possible if container berth productivity in ASEAN ports could be raised to a level equivalent to that in Singapore (Peters (1986)). Improvements in port handling and shipping in Indonesia are estimated to have reduced costs for these services by as much as 30 to 40 percent in recent years (Bhattacharya and Linn (1988)).

A particular example of public investment in support of export activities involves the case of export development zones or Free Trade Zones—special zones where export producers are supplied with the necessary infrastructure and with unencumbered access to international markets. These have been particularly popular in some developing countries in East and South East Asia, as a shortcut to stimulate exports in an environment where the physical, financial, and institutional infrastructure in support of exports is weak. A recent evaluation of the East and South-East Asian experience (Bhattacharya and Linn (1988)) concludes that such zones are most successful, where, as in the case of Korea, they are only one part of a broader set of export development policies, rather than the main export development instrument, as was the case in Malaysia, the Philippines, and Thailand. Cost-benefit analysis of public spending on Free Trade Zones in Malaysia reinforces the scepticism with which such programs should be viewed as a mainstay of an export development strategy.

In many developing countries expenditures have had to be cut back in recent years in response to severe fiscal crises. Data indicate that these cutbacks tended to fall most heavily on capital spending, especially in the infrastructure sectors, while interest payments rapidly increased and defense spending declined only modestly. Spending cutbacks in other areas, such as productive and social services, tended to fall between these extremes (Hicks (1988)). While such cutbacks have often been a necessary and appropriate response to fiscal crisis and to earlier overexpansion, in many cases these reductions have probably also hindered the flexibility of developing countries in responding to improved international trading opportunities. In the case of the Philippines, for example, the deterioration of the country's infrastructure, owing to cutbacks in essential maintenance and rehabilitation during the mid-1980s, is likely to have posed an obstacle to a revival of exports (Bhattacharya and Linn (1988)).

Sound public expenditure management can only complement, not substitute for, efficient incentives to private producers and consumers. At the same time, inappropriate tax and regulatory policies can make public expenditure programs ineffective or even counter-productive. For example, where the needs of protected and inefficient import substitution industries drive complementary public investment decisions, the resulting infrastructure investments are also inefficient and may well be wasted after liberalization of the tariff structure is carried out.

Three main conclusions can be drawn from this brief review of public spending experience in developing countries. First, while state participation in industrial and agricultural production is not generally desirable, effective public spending allocation in the areas of physical infrastructure and human resources clearly has an important role to play. It will help ensure that tradables production in developing countries can grow, that developing countries can respond flexibly to changing international trading opportunities, and that they can deal with major fiscal crises without endangering their long term trade and development opportunities. Second, there exists no substitute for careful and effective implementation of public spending programs. Third, public spending can only complement, not substitute for, effective incentives to private producers and traders.

Conclusion

In discussing trade and public finance policies, the many intricate relations between the two policy areas need to be explicitly considered. Failure to do so will likely lead to inconsistent and unsustainable policies, thus hindering a country's trade and development prospects. The following specific conclusions are of particular importance.

- A competitive real exchange rate, improved trade performance, and trade liberalization are all built on the base of sound fiscal management. Trade policies and trade liberalization, however, may have a negative impact on fiscal balances, which must be considered and compensated for.
- Improving competitiveness and reducing protection is likely to involve reforms of *both* trade tariffs and domestic taxation. Greater reliance on efficiently designed user charges will also help strengthen a country's international competitiveness.
- Correct priorities should be set for public expenditures (whether they are rising or falling) to ensure that they are supportive of trade and of tradable goods production.

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