

Information, Corruption, and Measures for the Promotion of Manufactured Exports

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Abstract

There has been a growing emphasis in many developing countries on export-led growth policies that attract both domestic and foreign investment into activities that will increase exports. Many countries, however, have not achieved the desired response. Among other problems, investors often face foreign exchange controls, tariffs on imported inputs, and a costly system for the exemption or refund of sales inflow of foreign investment and prevented the expansion of export production and sales. This paper addresses two issues related to the design and administration of the fiscal provisions that affect the competitiveness of country in the production of manufactured exports. The first issue is how to design a system that allows exporters to sell their output free of the burden of domestic sales taxes. The second issue is how to relieve exporters from the burden of import tariffs levied on inputs used in the production of exports.

In this study, we also provide a synthesis of how a number of developing countries have tried to address these issues. We identify the elements of the administrative system needed to deliver effectively the VAT input tax credit refunds and to eliminate the burden of import duties on inputs used in exports. Emphasis will be placed on the information needs for their effective administration. These findings might prove helpful to policymakers who are faced with the development of institution to administer such border tax adjustments.

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Chapter 7

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Introduction

There has been a growing emphasis in many developing countries on export-led growth policies that attract both domestic and foreign investment into activities that will increase exports. Many countries, however, have not achieved the desired response. Among other problems, investors often face foreign exchange controls, tariffs on imported inputs, and a costly system for the exemption or refund of sales taxes on inputs used to produce exports. These factors have frequently impeded the inflow of foreign investment and prevented the expansion of export production and sales.¹ This chapter addresses two issues related to the design and administration of the fiscal provisions that affect the competitiveness of a country in the production of manufactured exports.

The first issue is how to design a system that allows exporters to sell their output free of the burden of domestic sales taxes. The second issue is how to relieve exporters from the burden of import tariffs levied on inputs used in the production of exports.

The value-added tax (VAT) is the most common form of general sales tax, having been implemented in more than 120 countries.² Under this system, in order for exports to be sold free of tax, they are generally taxed at a zero rate and the exporters are allowed to claim a refund for the taxes paid on input purchases. The refund procedures of many VAT systems, however, do not function well. Refunds are either not paid in a timely fashion by the government or are overstated by exporters. In short, the procedure seldom works as it should.

1 The effectiveness of the institutional arrangements to promote exports is equally important for success in investment and economic growth. See Rodrick (1999).

2 The situation in India is worse. In India, with its central excise tax system and its state level sales taxes, a situation is created where it is virtually impossible to determine the amount of sales and excise taxes embodied in the cost of producing exports. See Maxwell (1999, 6).

Import duties on intermediate inputs can be prohibitive for manufactured exports, especially if the rates are high. The mechanisms to remove this export impediment include tax free zones, duty drawback systems, duty exemption systems, bonded warehouses, and duty free factory systems. All these systems have some limitations and are not equally effective in achieving their intended objectives.

In terms of their importance in the design of tax policies to promote exports, these two forms of border tax adjustments often turn out to be several times as important as income tax holidays and accelerated depreciation allowances (Jenkins and Kuo 1997; Le 2002).

In this chapter, we provide a synthesis of how a number of developing countries have tried to address these issues.³ We identify the elements of the administrative systems needed to deliver effectively the VAT input tax credit refunds and to eliminate the burden of import duties on inputs used in exports. Emphasis will be placed on the informational needs for their effective administration. These findings might prove helpful to policymakers who are faced with the development of institutions to administer such border tax adjustments.

Tax relief for exporters under VAT

Basic input tax credit system

Under the credit invoice method, all VAT registrants are obliged to collect and remit VAT on their taxable supplies. These registrants are allowed to recover the tax paid on their purchases. For each reporting period, registrants need to calculate the tax collected on sales and remit to the tax authority the amount that is in excess of the taxes they paid during that period on purchases. If the difference is negative, the registrants may be able to claim the difference as a tax refund.

In certain situations, a registered vendor may be involved in supplying both taxable and tax-exempt goods and services. In these cases, the input tax credits are allowed only to the extent that the business inputs are used in the taxable supply of the vendor. In other words, when a vendor is involved in both taxable and exempt supplies, the credit is only available for purchased inputs considered reasonable for use in the taxable supply. To deal with this situation, apportionment rules for the input tax credits are required to allocate the tax credits among the different supplies of a business operation. If the exporter is also engaged in exempt supplies, an apportionment in input tax credit must be applied to ensure that no excess input tax credits are granted for the exempt business.

In theory, a correctly designed and administered VAT system completely removes such taxes from the cost of exported goods, thereby making a country's exports more competitive.

³ These countries include Ghana, Kenya, Malawi, and South Africa in Africa; Indonesia, Korea, Malaysia, Sri Lanka, India, Pakistan, Taiwan and Thailand in Asia; and Argentina, Chile, Dominican Republic, Mexico and Uruguay in Latin America.

Tax refunds to exporters

A VAT system cannot operate effectively in the absence of a well-functioning input tax credit and refund system. To facilitate the administration of the VAT system and to protect the government revenue, registrants are required to maintain records to substantiate their entitlements for the taxes paid on the purchase of production inputs. In other words, registrants must be prepared to provide the tax authority a satisfactory invoice or other document reporting the amount of taxes paid on business inputs.

Since the VAT on imported inputs is normally payable at the time of importation, it is included as part of the registrant's input tax credit entitlement. In most countries, the proportion of VAT collected at Customs is generally very high. For example, the ratio is about 50 percent in Mexico (Kuo 1996), 40 percent in Indonesia, 55 percent in North Cyprus (Jenkins 2001) and 75 percent in Canada. Since exports are generally zero-rated, exporters can claim the taxes paid on their inputs as a refund. Hence, most exporters are in a chronic position of waiting for tax refunds because of excess tax credits.

Most VAT jurisdictions allow taxpayers to file tax returns more frequently than the legal requirement. For example, a business can opt to file monthly, even if it is only required to file its tax returns quarterly. Because exporters are claiming refunds rather than paying tax, they have an incentive to file their tax returns more often in order to get their refunds earlier. This exacerbates the problem of administrative congestion because of the increase in the volume of refund requests.

To ensure that goods are exported to qualify as a zero-rated supply, exporters must have shipped the goods out of the country and obtained some proof of the validity of the export. If this information is not easily verifiable, the length of time the government takes to refund the excess tax credits to the legitimate exporters will increase. This is financially damaging to exporters, since they must tie up substantial amounts of cash by paying input taxes. Obviously, they would like to receive a refund as quickly as possible to restore their cash flow. In a number of countries it was common for exporters to wait for up to one year to obtain a refund for the VAT taxes paid on inputs. An extreme case is found in the development and exploration of mining activities. In this case large VAT input tax payments are incurred years before these mines become operational and their sales of production begin.⁴ In a number of countries no VAT refunds are actually paid to the "potential" exporter until the mine starts to make sales.

The difficulty of accurately making refunds of excess tax credits to exporters is an important weakness of the value added tax system. Countries, such as Canada, Bolivia, Korea and Thailand, experienced a heavy volume of fraudulent claims for refunds of input VAT payments in the years following the introduction of their VAT systems (Khadka 1999).

⁴ This issue was raised by tax practitioners for Canadian mining companies, which were involved in several mining projects in Latin America.

Issues and potential solutions

In the case of suppliers to the domestic market, most countries specify that the VAT input tax credits are to be used immediately to offset taxes due on sales; or if there is an excess of credits, they are to be carried forward to offset taxes due in the future. If the tax credits continue to be in excess of taxes owed for a specified period of time, then usually a provision is available to refund the excess tax credits in cash. For businesses selling to the domestic market, the need for cash refunds of excess credits is a relatively infrequent event. The situation is very different in the case of major exporters. For example, in Uruguay, which exports very few manufactured items, the refunds given to exporters accounted for over 0 percent of all refunds (Barreix 1999b). Here the excess credits will exist from before start-up and will accumulate. In order to avoid placing the exporters at a competitive disadvantage, they need a mechanism to turn quickly the tax credits from input purchases into cash.

Some people target the refund system to engage in fraud. For example, firms claiming to be exporters may apply for excessive refunds on the basis of fake invoices of input purchases, and fake documentation of export sales, including customs verification of exports. This has been a serious problem in the administration of the VAT system in Thailand. Cases of such fraud have been reported in Uruguay, Mexico, and Indonesia (Flatters 1996). The administrative issues become even more complicated and fraud is made easier in the regional duty-free trading zones, such as the Common Market for Eastern and Southern Africa (Glenday 1996), and Mercosur (Barreix 1999b).

Most of the exporters would like to get their refunds quickly from the government in order to reduce their net cash outflows and thereby lower their cost of doing business. The government may also have a policy to help businesses by speeding up the payment of refunds. In such a situation, the tax refund administrators find themselves facing a dilemma. Will they process the refunds quickly and face the risk of approving fraudulent claims? Or will they audit every claim and, as a result, delay the payment of refunds to everyone?

A computerized VAT administration information system with data on both the taxes paid on inputs and the volume of domestic and export sales is essential to give the tax refund administrators comfort that they are not sending a check to someone engaged in fraud. In many developing countries, such an information system does not exist or it focuses on the amounts of tax collected and not on the amounts of tax credits being claimed. The result is often the worst of all possible scenarios. Due to a lack of information the refund administrators hesitate to approve the payment of refunds. Delays result and the legitimate exporters start to bribe or 'tip' the tax officials to receive the refunds due to them. If they take bribes to speed up the administrative processing of refunds to true exporters, the tax administrator faces little risk of rebuke. However, if he processes a fraudulent claim there is a risk that eventually it will become known. For example, in the case of Thailand the amount of reported exports was not consistent with the foreign exchange position of the country.

However, the process of making bribes to speed up the administration process, attracts the dishonest bureaucrat who is more willing to accept bribes for processing fraudulent claims as well. Because of this lucrative administrative situation, a substantial number the tax auditors generally are assigned and/or are attracted to managing the export refund system. The end result is that the tax administrators receive substantial amounts of side payments, they pay more fraudulent refund claims, and the legitimate exporters get far less than they are entitled to. In this case the lack of information by the tax administration creates the conditions for the incubation of bribery and corruption. Both the legitimate exporter and the fraudulent claimant have an incentive to bribe both honest and dishonest tax administrators to get payments from the government. Our research examines current practice in a wide range of countries to see how they cope with this problem. Three 'innovations' are found that show considerable promise, and at least one that appears never to work.

The innovation that shows little or no promise is creating a new agency separate from the VAT and customs administrations, such as an export promotion agency, to administer refunds. Massive fraud is the usual result. The Philippines has recently experienced such fraud; and Indonesia with its B4KPM office experienced similar difficulties in the early 1990s. These agencies never had the necessary information or technical skills to determine whether a claim was legitimate or fraudulent. Furthermore, such agencies do not have the safeguarding of the integrity of the fiscal system as their mandate; they exist primarily to promote exports. Even fraudulent export documentation often improves the short run official statistics on export growth.

In contrast, our studies revealed that requiring fiscal bonds from those claiming export refunds has speeded up the payment of refunds. With this innovation, the government requires taxpayers who apply for tax refunds to obtain a customs bond, or deposit some percentage of the amount in a special bank account until the tax authority has decided if it is going to audit the claim. The claims, however, are paid immediately after the request is made. The tax authority is required to give final approval or conduct an audit within a prescribed time period.

This scheme can apply to exporters as well as local firms requesting tax refunds. Firms that have developed a proven track record of honesty might be allowed to maintain a bank guarantee for a smaller percentage of the outstanding claims. This innovation places a tighter degree of control on excess input tax credits under the VAT system. Such a system was implemented in Taiwan during the early years of export expansion with great success (Kuo 1998). The government of Mexico has been implementing a similar but not so tightly structured scheme since 1999 (Kuo 1999). While this system has resulted in a much faster refund of the input tax credits, it does cost the exporter an extra amount to obtain either a bond or a bank guarantee. These costs will offset some of the benefits of obtaining the tax refunds faster and with fewer administrative hassles.

Another innovation with demonstrated success in speeding up the payment of refunds is to have tax refunds claims certified by chartered accounting firms or certified public accountants. This allows taxpayers to use the recognized accountant

firms to verify the financial statement and a claim for input tax credits, thereby placing the responsibility of tax liability on both the taxpayers and accountants. This option should eliminate most of the fraudulent claims and, hence, reduce the government's administrative costs. After Kenya introduced this system, the number of export tax credit refunds for VAT dropped by over 40 percent (Terkper 1999b). Clearly, many firms had been submitting refund claims for VAT that did not stand up to the scrutiny of financial auditors. Such a system also frees foreign-owned firms from dealing with local tax officers,⁵ thereby reducing their compliance costs. Although the local accounting firms charge for their services, the service charge is well worth the cost, especially for large claims. In order not to place a financial burden on those requesting small refunds, a size threshold for the claims should be given to allow small claims to be made without the certification from an accounting firm.

The third innovation for speeding up payment of refunds is not to impose VAT on business purchases at the time of importation. Historically, Taiwan has implemented this practice.⁶ More recently a version of this approach also has been introduced in Singapore (Jenkins and Khadka 1998). The tax is automatically deferred until either the imported goods are resold or until the goods produced by using the imported inputs are sold. As no VAT is paid on imported inputs when they enter the country (Kuo 1998), the tax refunds for manufactured exports will be reduced. Hence, making imported inputs for export production VAT-exempt, or taxed at a lower rate at the time of importation, can substantially reduce the VAT input tax credits and claims for refunds by exporters. In Mexico, the government taxes import transactions at a lower rate when they are destined for the industrial zones along the Mexico-USA border. This has lowered the financial burden of the cumulated excess tax credits (Kuo 1999b).

This option, however, may also create other problems. If the importers cease operation or no longer file tax returns after bringing a consignment of goods into the country, then the government may never collect the taxes due on their domestic sale. This can be significant in less developed countries where the informal sectors are relatively large. It may also increase the administration costs for the government by breaking the invoice-tax-credit chain in the production and distribution process under the VAT. However, under a tightly administered VAT system, these untaxed imports should be subject to VAT on their first sale within the country.

To reduce the incentive for fraud and to increase the compliance in the tax withholding system for the income and social security tax systems, a country might wish to issue tax credit certificates to the exporting firms instead of cash payments to cover the VAT refunds. This system is being used in Uruguay with considerable

5 For example, some foreign firms in China have experienced a great deal of difficulties in getting input tax credits. These firms often have to deal with local authorities that have different interpretations of the tax laws.

6 In the case of goods imported by individuals or non-registrants, the VAT is collected at the Customs in Taiwan (Kuo 1998).

success, although some fraud still has taken place (Barreix 1999b). Virtually all firms will have withholding tax obligations that are substantial in the area of payroll and social security taxes. It is likely that the VAT tax credits that need to be refunded to exporters will be less than those withholding obligations that these same firms should be paying. Hence, by integrating the administration of the refund system for VAT with the withholding tax system for wages and salaries, both systems might be strengthened.

Nothing in tax administration is automatic. The government needs to audit the tax credit certificates to determine if they are legitimate. However, at least the completely fraudulent claimant is likely to be restrained, because the tax credit certificate has value only if the firm also has employees and wage withholding obligations. There may be cases where the firm's withholding obligations are less than its excess VAT input tax credits. Provisions are necessary to issue cash refunds in these cases; however, the number of such cases will be few as compared to the total that would exist if the tax credit certificate system were not employed.

The tax credit certificates should not be tradable (at least initially) between enterprises in order to avoid the fraudulent duplication of certificates. If the trading of tax certificates is allowed then the purchaser of the tax credit must be made liable if the tax certificate is not legitimate. In this case it is likely that the major purchasers of the tax credit certificates will be major firms who have the technical capacity to determine at the lowest cost if the tax certificate is legitimate or not (Barreix 1999b). The cost of this audit by the purchaser of the tax certificate will be reflected in the amount that the certificates are discounted when traded.

Three of the four administrative innovations described above are using a market mechanism rather than the information maintained by the tax administration to separate the legitimate claimants for a VAT refunds from fraudulent ones. As compared to bona fide export firms, it is relatively costly for crooks to get a large accounting firm to certify the legitimacy of their claims, particularly if the auditing firm is going to be held liable when the fraud is discovered. It is also relatively costly for them to obtain a bank guarantee, if most of their transactions will be fraudulent. Similarly, tax credit certificates are not of much use to them as they are unlikely to be paying significant amounts of other taxes. If they try to sell tax certificates that were obtained fraudulently, it is less likely that they will get them past the scrutiny of the due diligence undertaken by the purchasers of the tax credit certificates.

These proposed institutional changes to the normal VAT administration can help to increase the effectiveness of the VAT systems, but they do not make a complete solution. Although the auditing requirements are greatly reduced, the auditing function of the tax administration needs to be built and maintained. When this component of the tax administration is weak, then it is unlikely to be able to police even its private agents. For example, Uruguay, which has a fairly good VAT tax administration, has approximately 50,000 VAT taxpayers and 70 full time auditors. By comparison, Sri Lanka, which has 15,000 VAT taxpayers, has only 12 auditors (Barreix 1999a). Sri Lanka is trying to operate with about 60 percent of the auditing

strength of Uruguay. Hence, we should not be surprised when we find that Sri Lanka has experienced both delays and fraud in its VAT refund system (Barreix 1999a).

Relief of trade taxes for exporters

Conceptual framework

Experience has taught us that the expansion of manufacturing exports is one of the most important vehicles for economic growth in developing countries. To be successful in international markets, exported goods must be competitive in terms of both quality and price. In order to achieve this objective, governments need to pursue a general public policy to ensure that their exported goods and services are free of indirect domestic and trade taxes. As discussed above, if exports are zero-rated under the consumption type VAT, all exported goods or services can, in theory, be sold free of domestic value added taxes.

To get the same result for trade taxes, the government should either exempt or refund the import duties imposed on business inputs. This would, in effect, remove the tax burden that is embodied in the cost of inputs used to produce exports. For this to happen, the government needs to remove import duties not only from goods directly imported and used in the production of exported goods, but also from the cost of local goods that, in turn, use imported inputs in their production (Maxwell 1998; Glenday and Ndi 1999). The government should credit or refund the import duties embodied in the cost of the domestic inputs in order not to penalize exports that use such goods.⁷ Unfortunately, in order to refund these hidden taxes, the administration must perform a series of calculations that involve tracing through the backward linkages of the production process, and are extremely difficult to estimate.

In theory, imported machinery and equipment, if they are to be used in the production of exports, should also enter the country duty free in the same manner as raw materials. Since capital goods are often used to produce both taxable (including exported and domestically taxable goods) and exempt products, the government may find it once again administratively cumbersome to separate the two uses in order to estimate the correct amount of rebate. In addition, manufacturers use capital goods over a long period of time and it is very difficult to forecast whether firms will continue using the capital items to produce for export into the future. Again it is often cumbersome to calculate the portion of import duties levied on capital goods used only in the production of exports.

The entire process of calculating and verifying the amounts of import duties that should be exempted or refunded is greatly facilitated by a simple set of tariff rates. The ideal for this purpose is single rate of tariff. Chile was the first country to implement such a single rate tariff system. It is the only country in our study where

⁷ As demonstrated by Maxwell, there always exists some kind of hidden tax on exports so long as there are duties imposed on imported goods for the purpose of protection. See Maxwell (1998).

we found a duty drawback system working reasonably well. In the case of Chile most of its exports are of an agricultural or agro-processed nature, so the problem of tariff refunds on imported inputs is much smaller for exporters as compared to the situation with export oriented manufactured products.

Alternative schemes and operations

If it is the government's objective to provide tariff relief for imported inputs used to produce exports, several alternative approaches are available to deal with this issue. They include systems for duty drawback and duty exemption (or suspension) of import duties, and export-processing zones.

Duty drawback system The duty drawback system is the classical and the most common method of providing relief from import duties imposed on goods used for the production of exports. Virtually all countries that provide incentives to export-oriented firms have a duty drawback system. Because the duties are paid upon importation, importers, exporters, or manufacturers of exported goods may claim refunds. In general, firms must meet several conditions before the government can refund duties. First, the firms must have paid the import duties. Second, the firms had to have exported the final products. Third, an estimate needs to be made of the amount of duty drawback paid on the imported inputs used in export production. The imported goods eligible for duty drawback are usually only raw materials. Sometimes the list of eligible inputs may be extended to include fuel, packaging materials, machinery and equipment.

Similarly, domestic manufacturers who produce goods and services used by exporters should also be eligible for the duty drawback on the tariffs they pay for imported inputs. These producers are indirect exporters. A difficult question arises as to the number of prior stages of manufacture that should be allowed before the final export is made.⁸ Korea, Taiwan, Mexico and Kenya are all examples of countries which have allowed indirect exporters to claim duty-exempt imports (Kuo 1998; 1999a; 1999b). The most difficult issue becomes calculating the refund on import duties to indirect exporters. In the case of Taiwan, a sophisticated input-output coefficient was developed and calculated for each line of production. This ensured the precise amount of hidden tax in the exported goods but it was undoubtedly cumbersome and the government had to employ a great number of personnel to deal with this program.⁹ In the other extreme, Kenya adopted a single fixed coefficient for all goods for the sake of simplicity. But inequities among goods became obvious and it was eventually forced to change its system.

8 In the case of Kenya, the back linkage may go back two stages of production.

9 When the duty drawback system involves parties such as importers, exporters and manufacturers of exports, the applicant for tax refunds in Taiwan has to obtain a letter of consent from the other parties who are involved and do not file for refunds. This makes the system even more cumbersome administratively.

The system of duty drawbacks is the most information intensive system available to provide exporters relief from duties on imported inputs. The process is triggered by the act of exporting with the information being assembled by moving backward through the production and input purchasing stages of the activity. First, it requires knowledge of the input-output technical coefficients that are used in the production of the export to identify and quantify the types of inputs used. Second, it requires information on the sources, quantities, prices, and tariffs paid on the inputs used for each specific set of exported goods or services. Finally, it requires information on the financial transactions of the business in order for audits to be conducted of the payments made through this scheme.

Corruption is a universal theme surrounding the administration of a duty drawback system in almost every country. The nature of the problem that a duty drawback is supposed to address, and the administrative procedures it entails, incubates corruption. There are several reasons for this. First, when the goods are first imported, there is no information recorded by the Customs Administration that these items will be used to produce exports and that a duty drawback is expected in the future. Hence, in most countries it is difficult for Customs to trace the actual import entry of the items that are embodied in the items being exported. Generally, the duty drawback administration will have to rely on customs documents that the exporter provides at some later date. Hence, there is usually an ample opportunity for the exporter, perhaps with the collusion of some customs officers, to exaggerate the amount of duties actually paid at the time of importation.

Second, only the exporters know the quantities of materials used in the production processes. Due to differences in models, sizes, and quality of the items being produced, the duty drawback administration will have to either take the exporters' values for the inputs used, negotiate the quantities, or specify arbitrary (and usually inaccurate) input-output coefficients for each item produced. These input-output coefficients are derived on an ad hoc basis through a process of negotiations between the producers and customs officials in the presence of a few engineers.

In the industrialized countries, the solution to the above two problems is to have a system of professional audits of the books and records of the exporting firm, combined with sound technical information on the manufacturing processes. Unfortunately, the usual recommendation made by advisors from advanced industrialized countries for such a detailed auditing system for the duty drawback administration in developing countries is not implementable. Developing countries do not have the available professional auditors, nor is the government able to pay wages competitive with the private sector for such skills. Even if they could obtain professional auditors, they would most likely be needed in areas of greater priority. When one finds professional auditors working in the duty drawback area, it is often because they are attracted to the area by the amount of bribes they expect to receive.

The third reason for the failure in implementation of duty drawback systems is because there is a great reluctance on the part of Customs to return the duties paid.

The revenue administrators, and especially Customs, have no incentive to refund duties in a timely fashion, since refunding this money makes it harder for them

to meet their revenue targets. As a consequence, many governments do not treat duty drawbacks as a reduction in revenue, but as an explicit expenditure item in the budget. Unfortunately, this procedure puts the duty drawback refunds under the same constraints and uncertainties as all other discretionary budgetary expenditures.

Due to the likely disputes over the amounts of drawback refunds that are to be properly refunded, and the risk of error that might prove embarrassing to the administration, the usual reaction is to delay payments. In order to overcome the reluctance of the bureaucracy to actually make the refunds legitimate, exporters make side payments to the duty drawback administrators. Once the payment of bribes by legitimate exporters become a 'normal' operating procedure in order to obtain tax refunds, then the administration of the duty drawback system usually becomes an arbitrary process. All aspects of the duty drawback refund system, from the amount of inputs used, the amount of tariffs paid on the imported input, and the amount of goods actually exported, is subject to the influence of bribes and negotiation.¹⁰

Duty exemption system Sooner or later, as the compliance costs mount, it becomes obvious that the duty drawback system is not an effective way to relieve exports from the duties paid on their imported inputs. As a consequence, other ways of providing duty relief need to be substituted for a duty drawback system. A common characteristic of these alternative methods is that exporters make no payment to Customs at the time the imports initially enter the country and no refund is made later.

In the duty exemption schemes, the government sets up an account-offset system so that import duties can be held in suspense as a liability. The liability is then cancelled upon export. Because the specific importer accounts for the liability, the importer himself can only claim the account-offset. Usually, an importer applies for such an account to be set up for his firm with the Department of Customs even before the inputs are imported. Upon the exportation of the finished products, the refundable amount is credited to the payer's account. In order to make this offsetting entry with accuracy the relationship between the use of inputs and the amount of exports must be established.

Both the duty drawback and the exemption systems operated concurrently in Taiwan, but the exemption scheme has been the instrument that has been more important since the 1970s. This is also the case in Malawi where the duty drawback program did not work well because the government delayed refunding the import duties and surtax imposed on imported and domestically purchased inputs, creating a cash flow problem (Gray 1999).

10 In Vietnam it has been calculated that the present value of the costs of the delays in the refund of taxes and tariffs on leather shoe exports was equal to 17 percent of the initial investment costs in setting up the facilities. For the apparel manufacturing sector it was equal to 77 percent of the initial investment costs. These values were significantly greater than any of the other hidden costs associated with operating in that country (I e, 2002, chapter IX).

With the duty exemption system, the administration's problem of determining what has been imported, and what duties have been suspended, is usually solved by the normal entry procedures of customs. The abuses of the system occur when exporters do not export the goods produced by the inputs and at the same time are not prepared to pay the duties that were suspended. Alternatively, they may resell the inputs in the domestic market without paying the tariffs. To prevent this form of fraud under the suspense system, the importer is normally required to supply the government with a guarantee. Common forms of such a guarantee are the purchase by the exporter of government bonds or negotiable securities approved by the Ministry of Finance, or bank drafts issued by a financial institution in the amount equal to the duty payable. In this way, the government is assured of receiving the revenues it is owed, while at the same time the firm will receive an interest rate on the amount of funds it invests in government bonds. Alternatively, if the firm purchases a bank guarantee usually, it will incur its cost which is a percentage of the amount of the bond. This was the system undertaken in Taiwan and became very popular especially for large businesses (Kuo 1998).¹¹ Taiwan has carried this system one step further and has accepted promissory notes from companies with a proven track record of compliance. As a result most of Taiwan's exports are produced under such duty suspense schemes.

In Mexico, the suspense or exemption system was adopted but it was widely abused initially because there was no requirement for customs bonds or bank guarantees. As a result, the government of Mexico introduced a system of Customs Bank Accounts in 1999. Under this new system, the direct and indirect exporters are required to deposit an amount of funds equal to the taxes under suspense in interest bearing accounts in banks. The Customs Authority will release the funds back to the firms upon approval of claim for duty remission on the inputs used to produce exports.

A duty exemption scheme was adopted in Korea in specific locations such as export processing zones and bonded warehouses or factories (Kuo 1999a).

Corruption has been much less prevalent in duty exemption systems. This is due to the fact that a record of the transaction is captured by customs for the purpose of the duty exemption system, right at the point when the imported inputs enter the country. At this point the information can be captured for future use in an almost costless fashion. When an accounting entry is made by both the firm as well as the customs system at the beginning of the process, without money having to change hands, the purpose of the importation becomes much more transparent. Often the duty exemption is given only if the firm already has an export order for the items being produced. The interest bearing bank deposits or guarantees reduce the incentive and scope for the private sector to pay bribes to the administration officials to condone fraud. At the same time, the involvement of the banks that are often

¹¹ In late 1970s, the amount of tax relief using the suspense scheme accounted for approximately 80% of all duties on imported inputs used to manufacture exports in Taiwan (Kuo 1998).

working with the businesses in much more important ways, such as the financing of a firm's investments, reduces the incentives for the firm and the government officials to engage in corrupt practices. Simply put, the duty exemption system drastically reduces the power of the government officials over the resources of the firm, and also reduces the financial stakes for the firm and its incentive to pay facilitation payments.

Export processing zones Use of export processing zones (EPZs) to promote export has been quite popular in many developing countries around the world. These include Taiwan, Dominican Republic (Campanella 1999) and Kenya (Glenday and Ndii 1999). Some countries have been successful, but not all.

EPZs are a type of free trade zones established to process goods for exports exclusively. The zones are usually located in the vicinity of harbours or other forms of international transportation. A physical wall to ensure that goods will be taxed when leaving the tax free zones areas for domestic markets surrounds them. The administrative operations in this bonded area are theoretically simple, straightforward and all trade-related activities can be handled in the zones. As such, foreign investors do not have to deal with the domestic bureaucracy's specific regulations, rules, foreign exchange transactions, etc. and thus business transaction costs are greatly reduced.

If Customs officials attempt to delay or slow up the importation of inputs or exportation of the final goods, it is the obligation of the EPZ operator to solve the problem. In this case the negotiations tend to be carried out with higher levels of customs where the problem tends to be solved more quickly, even if facilitation payments are made. As Customs is not holding any funds of the exporters, then they have much less leverage to extract facilitation payments for their services.

With the EPZ, no import duties are levied on materials and other intermediate inputs, nor are equipment parts and components used to produce exports within the EPZ. The EPZs in Taiwan and the Dominican Republic are regarded as being successful and important vehicles for promoting exports. It is important to note, however, that the share of total exports from Taiwan that originated from the EPZs, reached a peak of only nine percent in the 1970s. Thus other institutional arrangements to provide duty relief, such as its accounts based duty exemption system, has been much more important in the promotion of exports (see Table 7.1).

It is also interesting to observe what has been happening in Kenya with respect to EPZs. Although they have been built at great expense they have been characterized by excess capacity (Glenday and Ndii 1998). The fundamentals of international trade such as the small size of the regional Common Market for Eastern and Southern Africa, inadequate infrastructure in Kenya, and appreciation of the domestic currency and rising labor costs, have kept international trade flows much smaller than anticipated.

In a situation where a country has very high tariffs, inadequate infrastructure for modern industries to function, and a full blown rent seeking bureaucracy, the use of EPZs may be the only way that reform minded policy makers can get an

export oriented growth strategy started. However, the traditional concept of public sector EPZs with their high fences and customs officials riding trucks going in and out of the premises is an idea whose time has passed. EPZs are expensive to build and usually only match the needs of footloose industries, such as garment and shoe manufacturing, and some forms of electronics. They also make it expensive for local manufactures to get into the business of exporting if they have to relocate their export manufacturing activities to the EPZ in order to get themselves free of indirect taxes and a rent seeking bureaucracy. With the rapid fall in the cost of information technology to capture the information on imported inputs and exports on-line when the transactions occur at the border, the bonded factory or warehouse that is not tied to a specific location seems to combine the best features of the EPZ and the duty exemption schemes.

Bonded factory or warehouse Unlike the EPZs, the customs bonded factories or warehouses can be set up anywhere at the convenience of the producers. The functions are essentially similar to those of EPZs so that the bonded factory can reduce congestion in the EPZs and also offer some flexibility for firms to be close to resources used in their production. Like the EPZs, the bonded factory is usually allowed to get imported raw materials and intermediate inputs duty free. However, the government may levy tariffs on equipment or parts used for maintenance of the factories. This is due to the dual function of such production facilities.¹²

To reduce the level of fraud caused by the selling of duty free imported inputs out of the bonded warehouse, it is usually necessary for the firms to post some type of guarantee bond, or bank guarantee or government security. In some countries, such as Taiwan and Indonesia, the firms that have a clean compliance record are allowed to post only a promissory note using collateral from the firm.

Although the bonded factories were set up for exports, the products may also be sold to domestic customers. When this occurs, the factories in countries such as Taiwan are required to pay duty only on the imported materials used to make the goods sold domestically (Kuo 1998). This places the bonded factories on an equal footing with other domestic manufacturers. Because these firms are able to be competitive enough to export these items, the prices of these goods when sold on the domestic market will tend to get bid down to their world prices, plus the tariffs paid on imported inputs. Hence, the tariffs associated with this export commodity become pure revenue tariffs, without any direct production inefficiency.

Korea and Kenya's system for equalizing the playing field is very different. Instead of disallowing tax exemption for imported materials, they impose final goods tariff rates on any of the final products sold in their domestic market (Kuo 1999a; Terkper 1999b). This provides these firms with the same level of effective protection as a pure domestic supplier selling in the local market. As a consequence

12 In some countries such as Belize, many export promotion facilities are called export processing zones. However, they function and are administered in a manner very similar to the way other countries treat bonded factories.

the economic efficiency cost of domestic protection is much higher with the system used in Korea and Kenya as compared to the system used in Taiwan.

The bonded factory has proven in most countries to be a largely self-administered system. In order to function properly, each factory must account for imported materials, finished products and provide information on the amount of materials required to produce each unit of finished good. Imported materials taken out for the manufacturing process need be recorded. The system operates in such a way that detailed, but simple, records of the quantity of imported materials are kept. When the firms export finished products, they reduce in the account the corresponding amounts of imported materials used in the production.

In addition to the customs bonds and government guarantees, there is an informal automatic policing mechanism built into the bonded factory or warehousing system that reduces the incentive for firms to leak duty free imported inputs without paying duties. If such sales should occur, competing suppliers who have already paid import duties will complain immediately, since it places their livelihood in jeopardy. The most common form of sanction against the operator of the bonded warehouse or factory is to have the license to operate such a facility revoked. This is a severe economic punishment, and one that the operator of the bonded warehouse facility is usually very reluctant to risk. Furthermore, if they are in the business of manufacturing for export and domestic sales, a sideline of smuggling is not particularly appealing when the probability is high that competitors whose silence is difficult to purchase will catch them. The formal process of applying for bonded factory status with its bond or bank guarantee requirements discourages those planning to engage in fraud. This informal policing system no doubt goes a long way toward explaining why, in countries such as Indonesia, Malaysia, Malawi and Ghana, a very low incidence of the sale of duty free imports exists, despite the fact that in the case of some of these countries the level of surveillance or auditing done by Customs of these in-bond facilities is rather rudimentary.

The number of bonded factories is large in countries such as Malaysia, Taiwan, Mauritius (Radelet 1999), Korea, Kenya and Pakistan (Maxwell 1998). They have been quite successful in promoting exports.

The concept of the bonded factory was extended to the science-based industrial parks in countries such as Taiwan in order to promote the development of science and technology in the island. The tax incentives provided to the parks are in fact the same as those in the EPZs but focus on computer, automation, and scientific research (Kuo 1998). The firms in the parks appear to have made a significant contribution to the recent economic growth in Taiwan, especially in electronics and other high-technology goods.

Institutional arrangements

Removing duties on imported inputs for use in the production of exports is very important for developing countries to be able to compete in selling their products in international markets. In fact, the duty remission systems have been shown to be the

most important policy measure for the promotion of Taiwanese exports in the 1970s and 1980s (Jenkins and Kuo 1997). However, development of the mechanisms and institutional arrangements to implement this policy is equally essential for a successful export promotion and economic growth. Without an administrative system that minimizes the opportunities and incentives for corruption, positive results are unlikely to follow.

The most common mechanism to eliminate duties from inputs is the duty drawback system. The administrative complexity of this mechanism is a major deterrent to its use. It can relieve import duties paid and embodied in the production of indirect exporters for small exporters or irregular exporters. It is a necessary, but far from sufficient, mechanism to provide relief to exporters from the burden of import duties on inputs.

In administering either the exemption or suspense system, it is important for the government to develop simple computerized systems for recording the importation of inputs where duties have been suspended and export sales. With this system, the proper accounts and records in terms of imports, duties payable and re-exports that have taken place must be maintained. In addition, the importer should be required to supply the government with government bonds or securities issued by a financial institution in the amount equal to the duty payable. The interest rate associated with these bonds or securities should be payable to importers. This would minimize the cash flow cost to importers as well as protect the tax revenues for the government. Customs should administer the duty exemption system as information from customs transactions can be captured at almost no cost at the time when the goods are imported. The system implemented in the Philippines whereby an independent One Stop Shop authorized and issued Tax Credit Certificates is not one to be emulated. It is extremely difficult to keep track of imported inputs and their re-exports and as a result the implementation of such systems often results in major fraud.

The EPZs may in theory appear to be conceptually good, but they have proven to be expensive and inappropriate for many industries, particularly for those that already have a domestic operation. The bonded factories or warehouses are much more efficient as they can be located individually anywhere in the country, so long as Customs carefully maintains records on import duties payable and credits claimed for inspection by Customs personnel. The system has a fair amount of self-policing built into it but randomly targeted inspections by government officials will always be required.

Conclusions

A clear conclusion of this analysis is that the administration of the indirect tax on the inputs used by exporters is a critical determinant of the ability of producers of a country to be internationally competitive. Examples of successful administrative systems for these types of border tax adjustments are not plentiful. More can be said with certainty about what will not work than about what will be successful.

We know that One Stop Shops for the refund of VAT credits that are divorced from the administration of the VAT and Customs are a prescription for massive fraud. The evidence is also overwhelming that traditional duty drawback systems are almost always the catalyst for corruption, and are costly and ineffective at relieving exporters from the duties they pay on imported inputs.

Creative administrative designs that rely on markets such as bonds, bank guarantees, or accountants' professional reputations to provide an incentive for compliance and honest tax administration have been used effectively in a number of countries. There is no single prescription for the efficient and accurate refunding of excess VAT tax credits, or a single way to bring about the exemption of trade taxes on imported inputs for exporters that fits the needs of all countries. However, we find that systems that reduce the need for such refunds, or rely on easily obtained information that can be used in audits are much more likely to be successful than procedures that rely on physical inspections and bureaucratic approvals.

None of these innovations will guarantee that a country will be a successful exporter of manufactured goods. The factors and policies that bring about this result go well beyond the focus of this chapter. The existence of an administrative system to insure that border tax adjustments are made in an efficient manner should be viewed as a necessary but not sufficient condition for the realization of this larger objective.

Table 7.1 The Relative Importance of Exports in Export Processing Zones in Taiwan (millions of US dollars)

Year	Kaohsiung	Nantze	Taichung	Total EPZs Exports	Total National Exports	Ratio (Percent EPZ)
1967		n/a	n/a	7	641	1.09
1968	27	n/a	n/a	27	789	3.42
1969	62	n/a	n/a	62	1,049	5.91
1970	109	n/a	n/a	109	1,481	7.36
1971	156	2	5	163	2,060	7.91
1972	196	16	16	228	2,988	7.63
1973	282	54	40	376	4,483	8.39
1974	348	92	69	509	5,639	9.03
1975	290	92	71	453	5,309	8.53
1976	393	146	137	676	8,166	8.28
1977	417	166	167	750	9,361	8.01
1978	473	227	206	906	12,687	7.14
1979	602	325	278	1,205	16,103	7.48
1980	685	402	337	1,424	19,811	7.19
1981	821	432	426	1,679	22,611	7.43
1982	724	493	408	1,625	22,204	7.32
1983	750	475	396	1,621	25,123	6.45
1984	938	629	470	2,037	30,456	6.69
1985	872	635	365	1,872	30,726	6.09
1986	949	1,010	444	2,403	39,862	6.03
1987	1,244	1,400	530	3,174	53,679	5.91
1988	1,356	1,773	637	3,766	60,667	6.21
1989	1,397	1,948	664	4,009	66,304	6.05
1990	1,026	1,921	578	3,525	67,214	5.24
1991	1,094	2,198	678	3,970	76,178	5.21
1992	1,217	2,279	674	4,170	81,470	5.12
1993	1,107	2,628	591	4,326	85,092	5.08
1994	1,156	2,956	668	4,780	93,049	5.14
1995	1,447	4,025	800	6,272	111,659	5.62
1996	1,484	4,579	834	6,897	115,942	5.95
1997	1,545	5,421	969	7,935	122,081	6.50
1998	1,280	4,122	692	6,094	110,582	5.51

Sources: Ministry of Economic Affairs, Export Processing Zones, *Monthly Statistical Reports*, (1998); Council for Economic Planning and Development, *Taiwan Statistical Data Book*, (1999).

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