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# Income Tax Incentives for Investment

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To lay, with one hand, the power of the government on the property of the citizen, and with the other to bestow it upon favored individuals to aid private enterprises and build up private fortunes, is none the less a robbery because it is done under the forms of law and is called taxation.

—Justice Samuel F. Miller

### I. Introduction

Many developing and transition countries offer income tax incentives for investment.<sup>2</sup> The incentives are most often for direct investors as opposed to portfolio investors, relate to real investment in productive activities rather than investment in financial assets, and are often directed to foreign investors on the grounds that there is insufficient domestic capital for the desired level of economic development and that international investment brings with it modern technology and management techniques.

Developing and transition countries have introduced investment incentives for varying reasons. In some cases, especially in transition countries that have not reformed the socialist tax system, the incentives may be seen as a counterweight to the investment disincentives inherent in the general tax system. In other countries, the incentives are intended to offset other disadvantages that investors may face, such as a lack of infrastructure, complicated and antiquated laws, and bureaucratic complexities and weak administration, in the tax area or elsewhere. If these are the reasons, the appropriate solution is to reform the existing laws that create the problems and to build the necessary administrative capacities and infrastructure. This solution is often easier said than done, and so tax incentives may provide temporary relief until the more fundamental reforms have been carried out. Countries sometimes introduce incentives

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<sup>1</sup>Note: This chapter draws heavily on OECD, *Taxation and Foreign Direct Investment: The Experiences of the Economies in Transition* (1995) to which the authors (especially David Holland), along with Alex Easson, contributed.

<sup>2</sup>Using the tax system to influence economic behavior by granting tax incentives for particular activities has developed an enormous literature following the lead of Professor Stanley Surrey, who noted the equivalence of such incentives to direct expenditure programs and coined the term “tax expenditures” to refer to them. *See* Stanley Surrey, *Pathways to Tax Reform* (1973); *International Aspects of Tax Expenditures* (Stanley Surrey & Paul McDaniel eds., 1985); OECD, *Tax Expenditures: A Review of the Issues and Country Practices* (1984); OECD, *Tax Expenditures: Recent Experiences* (forthcoming). This chapter will not review the many arguments against tax expenditures generally or the issues involved in costing the revenue forgone from such measures. For a critique of the tax expenditure concept, *see* Victor Thuronyi, *Tax Expenditures: A Reassessment*, 1988 Duke L. J. 1155.

to keep up with other countries in competing for international investment. More rarely, tax incentives are introduced after other deficiencies in law and administration are remedied and are directed to areas of economic activity that the country wishes to develop.

Although standard international tax policy advice cautions against the use of tax incentives for investment,<sup>3</sup> many developing and transition countries, as well as many industrial countries, continue to operate or introduce them. Accordingly, this chapter briefly outlines the reasons why such incentives are often found to be unsuccessful and what the more important issues may be for encouraging investment in developing and transition countries. It then considers in more detail the design, drafting, and international taxation issues that such incentives present. Although the discussion considers investment incentives in general, it emphasizes foreign direct investment (FDI). This chapter focuses on the income tax, while also discussing the more important incentives found under other taxes.

## **II. Relationship Between Taxation and Investment**

### **A. Tax and Nontax Factors Affecting Investment**

Investors often emphasize the relative unimportance of the tax system in investment decisions compared with other considerations.<sup>4</sup> Firms first examine a country's basic economic and institutional situation. While they are attracted to the potential markets in developing and transition countries and the relatively low-cost labor, other considerations inhibit large-scale investment, such as uncertainty in the policy stance of governments, political instability, and, in transition economies, the rudimentary state of the legal framework for a market economy. Tax incentives on their own cannot overcome these negative factors.

To prospective investors, the general features of the tax system (tax base, tax rates, etc.) are more important than tax incentives. In transition countries, many tax laws contain provisions that are held over from the regime that was used under the former socialist economy. These provisions served purposes different from those of a market economy tax regime, for example, controlling the enterprise's budget rather than determining an appropriate tax base. From the point of view of potential foreign investors, these provisions are unfamiliar and anomalous. They can cause the tax base to diverge from market economy norms (especially in relation to depreciation, business expenses, and loss carryovers) and impose taxation that is not consistent with reality from the point of view of business investors. Furthermore, taxpayers expect to be able to predict the tax consequences of their actions, which requires clear laws that are stable over time. In many developing and transition countries, the tax laws are not clearly written and may be subject to frequent revision, which makes long-term planning difficult for businesses and

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<sup>3</sup>See OECD, *Taxation and Foreign Direct Investment: The Experiences of the Economies in Transition* (1995); Chua, *Tax Incentives*, in *Tax Policy Handbook* 165–68 (Parthasarathi Shome ed., 1995) and references there cited.

<sup>4</sup>The statements in this section and the next about the views of investors stem from the consultations undertaken in preparing OECD, *supra* note 2. For a survey that gives a somewhat greater importance to taxation in relation to investment decisions, see Commission of the European Communities, *Report of the Committee of Independent Experts on Company Taxation* (1992) (commonly referred to as the Ruding Report after its chair), ch. 5.

adds to the perceived risk of undertaking major capital-intensive projects. The administration of the law is as important as the law itself, and it is clear that tax administrations in developing and transition countries often have difficulty coping with sophisticated investors, whether in providing timely and consistent interpretations of the law or in enforcing the law appropriately.

Investors may view both income and non-income taxes as potential problems. The latter are payable even if no profits are made and often raise the cost of basic inputs. In particular, social security taxes applied to the wages of expatriates in transition countries and border charges on the importation of capital equipment in developing and transition countries are seen as obstacles to investment.

## **B. Lack of Success of Investment Tax Incentives**

The experience for developing and transition countries with tax incentives has been consistent with that of the industrial countries.. Tax incentives have not by and large been successful in attracting investment, especially FDI.<sup>5</sup> This underlines the conclusion that tax incentives cannot overcome the other, more fundamental problems that inhibit investment.

At the same time, tax incentives have imposed serious costs on developing and transition countries that need to be considered relative to any modest benefits that they have conveyed. Tax incentives by their nature represent a revenue cost for the government. For the most part, this revenue cost is wasted because the incentives go to investments that would have been made in any event. It is argued that FDI in countries in transition to a market-oriented economy would not occur without the incentive, and so there is no real revenue cost. However, experience has shown that there is investment in short-term, high-profit projects. Because these projects would occur even if there were no tax incentives, the tax incentive is a pure windfall to them. Investment tax incentives have been subject to serious tax avoidance which has added greatly to their revenue cost. Tax avoidance results, in part, from the design of the incentives and also from the difficulties tax administrations face in auditing taxpayers. The revenue forgone in transition countries as a result of the use of tax incentives to shelter domestic income from taxation may well exceed the incentives earned through legitimate FDI.

Tax incentives introduce complexity into the tax system, because the rules themselves are complex and because tax authorities react to the tax planning that inevitably results from their introduction by putting into place antiavoidance measures. This complexity imposes costs on administrators and taxpayers and increases the uncertainty of tax results. Uncertainty can deter the investment the incentives are intended to attract. Moreover, the introduction of tax incentives creates a clientele for their continuation and spread. The fact that many industrial countries maintain some tax incentives after the tax reforms of the 1980s is less a statement that they are considered to be effective and more a testament to the political difficulty in removing them once

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<sup>5</sup>Some jurisdictions, such as Singapore, Taiwan Province of China, and more lately, Ireland, have used investment tax incentives and advanced economically, but whether the two matters are connected in these cases has been a matter of dispute. These countries did not suffer from the negative economic, political, and administrative situations that are the major deterrents to investment in many transition economies. Moreover, many more countries have adopted investment tax incentives without any noticeable improvement in investment performance, and a number of countries, such as Chile and Estonia, have advanced economically while eschewing tax incentives.

they have been introduced. It is because of this tendency that many “temporary” measures, designed to respond to particular perceived disincentives, remain in force long after the conditions that originally led to their introduction have changed.

These costs can be observed fairly directly. What may be the primary cost, however, is much more difficult to observe and measure. The classic argument against the use of incentives is that they distort economic activity, by causing the after-tax pattern of returns to diverge from the before-tax pattern and thereby leading to an allocation of resources that differs from the efficient equilibrium the market is assumed to generate. Whether arguments based on advanced markets apply to developing and transition countries may be debated, but there can be no doubt that the more observable costs of tax incentives referred to above do arise in these countries.

Why do countries enact tax incentives despite their drawbacks? There are many factors. Legislators may feel the need to do something to attract investment but may find it difficult to address the chief reasons that discourage investment; tax incentives are at least something over which they have control and which they can enact relatively easily and quickly. Alternatives to tax incentives may also involve the expenditure of funds, and tax incentives may be seen as a politically easier alternative, since subsidies involving expenditure may undergo closer scrutiny as compared with other public expenditure needs. Further, some countries may feel under pressure from multinational companies, which threaten to locate investment elsewhere if they are not given concessions. Finally, some politicians or their advisors may simply disagree with the analysis presented here. As can be seen, the topic is a complicated one and cannot be resolved here. Therefore we focus more on the technical tax issues raised by investment incentives and on ways that such incentives can be designed so as to minimize the damage that they can cause.

### **III. General Tax Incentives**

#### **A. Types of General Tax Incentives**

Tax incentives can be grouped into a number of categories: tax holidays, investment allowances and tax credits, timing differences, reduced tax rates, and free economic zones. Each type raises different design and drafting issues.

##### **1. Tax Holidays**

The tax holiday has been often used by developing and transition countries. It is directed to new firms and is not available to existing operations. With a tax holiday, new firms are allowed a period of time when they are exempt from the burden of income taxation. Sometimes, this grace period is extended to a subsequent period of taxation at a reduced rate.

For transition countries, one advantage of tax holidays is that they provide a simple regime for foreign investors because there is no need to calculate taxes in the early years of operation, at a time when the tax systems are not yet fully developed. This view is certainly not valid for long-term investors, for whom the tax treatment after the holiday has expired is as important as the treatment during the holiday in determining the after-tax profitability of the

investment. In addition, the tax treatment of the initial capital expenditures made before and during the holiday period must be determined so that appropriate records will be available for the calculation of depreciation when the holiday ends.

A number of technical issues are important in determining the impact of tax holidays on the return on investments. The first issue is determining when the holiday starts. It could be when production starts, the first year in which the firm makes a profit, or the first year that the firm achieves a positive cumulative profit on its operations. For large projects in particular, losses are usually generated in the early years of production, when the highest capital costs are incurred, including special costs that are linked to the start-up period, training the workforce, and developing the local market. For such projects, a tax holiday that starts when production occurs may actually increase the taxes paid over the life of the project and so act as a disincentive for investment. If losses are experienced during the holiday period they may not be allowed to be carried forward beyond the holiday period (it would be overly generous to allow losses to be carried forward from a year in which income would not have been subject to tax). Thus, the holiday may occur when no taxes would have been paid in any event and taxes may be increased following the holiday because no losses are available to offset the profits. A similar situation can occur if the holiday starts when profits are first generated. Income may be sheltered that would have been eliminated in any case by the use of the tax losses. This may result in an overall increase in taxation in circumstances when the loss-carryforward period is short or the use of losses is restricted in some way. Tax laws usually specify that the holiday commences when profits first occur. However, they are often ambiguous as to whether this means the first year that is in itself profitable or the first year that cumulative net profits are positive.<sup>6</sup>

A related question is the treatment of depreciation during the holiday period. Should it be deducted during the holiday period or can it be deferred until after the holiday has terminated? Depreciation represents a cost in the calculation of income, and so its deduction is necessary to accurately measure the amount of income that should be subject to the holiday. Allowing a deferral of the deduction effectively overestimates the costs associated with the postholiday period and so leads to a further reduction in tax, which can result in a very generous incentive. The issue is more complicated if some form of accelerated depreciation is also offered with respect to the investment. Forcing the use of the accelerated deductions during the holiday period at the least reduces their value and can actually increase the level of taxation relative to the situation where no incentives are provided. A complete deferral of the deduction, however, can again lead to a generous incentive and an effective tax holiday that is much longer than intended.

Another design question is the length of the holiday. Most of the holidays offered in transition countries have been of short duration, and, as discussed below, are of little benefit to long-term capital-intensive projects. Longer holidays would be of greater benefit; for example, there is some evidence in Asia and Hungary that the longer holidays succeeded in attracting some long-term investment.<sup>7</sup> However, the longer the holiday, the higher the revenue cost and

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<sup>6</sup>See the appendix for a detailed example of a number of these points.

<sup>7</sup>See OECD, *supra* note 2, at 89–101 (Hungary); Easson, *Tax Incentives for Foreign Direct Investment*, 9 Australian Tax Forum 387 (1992).

the greater the vulnerability to tax planning schemes.<sup>8</sup> The opposite problem arises when a tax holiday provision providing a lengthy tax-free period is repealed. Because an existing company can continue to take advantage of the holiday for which it qualified, new investment can be structured so as to use the corporate form of these existing companies, sometimes by bringing new investors in or even by selling the holiday company to new investors planning a substantial investment. It is therefore desirable, on repeal of a tax holiday, to stipulate that companies currently taking advantage of a tax holiday will cease to qualify if a substantial change in the ownership of the company takes place. Such a provision would prevent at least the most flagrant abuses.

## **2. *Investment Allowances and Tax Credits***

Investment allowances and tax credits are forms of tax relief that are based on the value of expenditures on qualifying investments. They provide tax benefits over and above the depreciation allowed for the asset. A tax allowance is used to reduce the taxable income of the firm. A tax credit is used to directly reduce the amount of taxes to be paid.

The major technical issues are the definition of the eligible expenditures, the choice of the rate of the allowance or credit, restrictions on the use of the credit or allowance, and the treatment of any amounts of incentive that cannot be used in the year that they are earned as a result of insufficient taxable income. The major problem with determining the eligible expenditures is achieving a precise definition that directs the incentive to the desired activity to minimize revenue “leakage” and, at the same time, provides the taxpayer with certainty as to the applicability of the incentive.

The rate of incentive is directly linked to the amount of incentive that it is intended to provide and the revenue cost to the government. One problem that arises as the rate of the incentive increases is that the benefit to firms of controlling costs is decreased, leading to a “gold plating” of investments, where the most cost-effective techniques are not used. A number of tax avoidance possibilities are encountered when the rate of credit and tax allowance is too high. If a generous investment allowance is provided, firms can flow services through a subsidiary and make money simply by increasing the amounts that the subsidiary charges its parent company for the services rendered. The basic problem is that, because the total amount of tax allowance and depreciation that can be deducted against taxable income exceeds the actual amount spent, the tax benefit to the parent company of spending one dollar exceeds the tax cost to the subsidiary of receiving a dollar of revenue.

The effects of an incentive scheme that is poorly structured and involves excessively high rates of incentive are demonstrated in the following example in which a service subsidiary is used to generate profits out of the tax system.

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<sup>8</sup>Because the holidays are limited in time, the typical avoidance scheme involves closing the business when the holiday expires and then forming a new company to carry on the business with the benefit of a new holiday period. The country authorities usually counter this maneuver by providing for recapture of the tax benefits if the business is closed. Such a rule can be avoided by keeping the business in operation, but at a lower level, and at the same time forming a new company. More sophisticated antiavoidance rules can be designed to attack this type of transaction, although enforcement is difficult.

The real cost to the company is \$100. However, it establishes a subsidiary to supply it with the service. The subsidiary pays out the cost of \$100 and adds a profit margin of \$50 to the amount it charges the parent company. It is assumed that the parent is eligible for a tax credit of 40 percent on its cost of \$150 and so earns a credit worth \$60. The \$150 is fully deductible against other income and this has a tax value of \$60, assuming a 40 percent tax rate. The subsidiary adds the \$150 to income and is allowed to deduct its costs of \$100, for a net tax on the subsidiary of \$20.

Tax Calculation in the Subsidiary		Tax Calculation in the Parent	
Income from parent	\$150	Payment to Subsidiary	\$150
Costs	<u>\$100</u>	Value of tax deduction	\$60
Taxable income	\$50	Value of credit	<u>\$60</u>
Tax payable	\$20	Total tax benefit	\$120

When the results for both companies are added together, washing out the intra-company transactions, the subsidiary has costs of \$100 plus the \$20 of tax. The parent has a tax deduction worth \$60 plus a tax credit of the same amount, for a total tax benefit of \$120, which just offsets the costs of the subsidiary. The tax system has therefore completely subsidized the company's expenditures.

The use of the incentives can also be constrained to ensure that they do not fully eliminate the tax the firm must pay in the year. For example, an allowance could be restricted to some percentage of taxable income, or a credit could be limited to some percentage of tax otherwise payable. The calculation of these limits can interact with other provisions in a complicated manner and cause firms to enter into arrangements of the type discussed below. They do, however, limit the revenue cost to the government and ensure that firms cannot use incentives to eliminate their tax payable entirely.

An important design issue is what to do if the firm does not have enough taxable income in a given year to take full advantage of an incentive. In some countries the incentive is simply lost. This restrictive access to the incentive operates against firms that do not have other income, which is typical of new foreign investors and can effectively eliminate the benefits of the incentive for such firms. Additionally, unproductive arrangements may be devised solely to make use of the incentive; for example, an investment allowance can be transferred from a firm benefiting from a tax holiday to a taxable firm through the use of a lease. In effect, the firm obtains both incentives, and government revenues fall by more than the tax that the firm would have paid during the holiday. The use of leasing to transfer incentives is demonstrated in the following example, in which the operator can borrow the funds and purchase the machine directly. Because it cannot benefit from the deductions, it enters into an arrangement where the taxpaying firm borrows the money and purchases the equipment. The equipment is then leased to the operator, who then uses it in his or her business. The difference is that the lessor gets the accelerated deductions.

Table 1 shows that if the lease payment is set as the sum of the interest on the loan plus the principal repayment, the lessor just breaks even before taxes (see section of Table 1 headed "Accounting income"). However, the lessor is better off after tax because it has losses in the early years to shelter other income from tax. In fact, the lease payments would be arranged so

that the tax benefits of the arrangement are shared between the private sector parties. The loser in the scheme is the government, which receives less income tax revenue than it otherwise would.

<b>Table 1. Equipment Lease</b>										
(In local currency)										
<b>Year</b>	1	2	3	4	5	6	7	8	9	10
Loan principal	100	90	80	70	60	50	40	30	20	10
Interest	10	9	8	7	6	5	4	3	2	1
Principal repayment	10	10	10	10	10	10	10	10	10	10
<b>Accounting income</b>										
Lease payment	20	19	18	17	16	15	14	13	12	11
Interest	10	9	8	7	6	5	4	3	2	1
Depreciation	<u>10</u>									
Accounting income	0	0	0	0	0	0	0	0	0	0
<b>Tax Position</b>										
Lease payment	20	19	18	17	16	15	14	13	12	11
Interest	10	9	8	7	6	5	4	3	2	1
Accelerated depreciation	<u>33</u>	<u>33</u>	<u>33</u>	<u>0</u>						
Taxable income	-23	-23	-23	10	10	10	10	10	10	10

### 3. *Timing Differences*

Timing differences can arise through either the acceleration of deductions or the deferral of the recognition of income. The most common form of accelerated deduction is accelerated depreciation, where the cost of an asset may be written off at a rate that is faster than the economic rate of depreciation.<sup>9</sup> It can take the form of either a shorter period of depreciation or a special deduction in the first year. The latter has a similar impact to an investment allowance in the first year, but differs in that the amount written off reduces the depreciation base for future years, and so the total amount written off does not exceed the actual cost of the investment. Rather, the deductions occur sooner than otherwise, providing a deferral of tax that is effectively an interest-free loan to the company from the government.

Important timing differences can occur in other, more technical areas. For example, incomes may not be realized until there is a sale of an asset, whereas certain costs are recognized immediately. A typical example is the current deduction of interest on an asset that is held for a period of time. A significant net after-tax rate of return can be realized on an asset whose pretax return equals, but does not exceed, the rate of interest on the funds borrowed for its purchase, simply because of the mismatching of the deductions and the income. These technical timing differences can often be more important than any explicit investment incentives for certain activities (e.g., in the case of timber growing).

<sup>9</sup>See *supra* ch. 17.

The technical issues with accelerated depreciation are similar to the issues of targeting and of carryovers that face investment allowances. However, accelerated depreciation avoids the problem of deductions that exceed the cost of the investment that occurs with an investment allowance.

#### **4. Tax Rate Reductions**

General tax rate reductions can be provided for income from certain sources or to firms satisfying certain criteria, for example, to small firms in manufacturing or agriculture. These reductions differ from tax holidays because the tax liability of firms is not entirely eliminated, the benefit is extended beyond new enterprises to include income from existing operations, and the benefit is not time limited. Identifying the qualifying income is the major design issue, and may require rules to define eligible taxpayers if the benefit is to be limited to specific types of firms, such as small businesses. If only certain types of income are to qualify, then rules must be defined to measure the income. The rules can rely on separate accounting for different sources of income, but such rules are subject to manipulation and the timing of costs and income to maximize the benefit. The alternative is to use a formula approach, which will be less accurate in directing the benefit. With either approach, the rules tend to be complex and subject to manipulation.

#### **5. Administrative Discretion**

A major design issue relevant for different types of incentives is whether incentives should be discretionary and granted only with the preapproval of the authorities.<sup>10</sup> A discretionary approach has a number of potential advantages. As the policy priorities of the government change, it is possible to tailor the incentives to support them, because fewer firms are affected by the changes, and problems of transition can be more easily handled. If there appears to be a risk of tax avoidance under the scheme, then the authorities can deny access to the incentive. Where the extent and the availability of the incentive are determined administratively, it may be possible to provide only that degree of incentive that is required to make the investment economic. This would improve the cost-effectiveness of the program by improving its targeting toward incremental investment.

In practice, however, there is little evidence that these gains are realized. Approval processes can be time-consuming and cumbersome. The authorities can obtain the detailed information necessary for evaluation only from companies that have an incentive to portray it in an advantageous manner. In the real world of politics, it is difficult to deny the incentives to companies that are promising to create employment. Moreover, discretionary incentives are an invitation to corruption. Finally, an approval process undermines the tax system's transparency, which is probably the most important criterion of companies making the investments. For these reasons, the track record of discretionary incentives is not encouraging.

While administrative discretion may not be useful, there are advantages to having a process of vetting and approving investments that do meet the criteria in the relevant legislation

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<sup>10</sup>See vol. 1 at 62.

before the investor proceeds. Such a process is common in relation to tax holidays and allows governments to keep track of the extent to which the incentive is being used, assure taxpayers of their tax position, and amend the legislation where problems in the criteria for the incentive become evident.<sup>11</sup>

## **B. Comparison of Incentives**

General tax incentives can differ markedly in a number of important ways, in particular in terms of the types of companies and activities that are likely to benefit from them, the time profile of the revenue impact on the government for any given level of incentive, the difficulty of administration, and the possibility of tax avoidance.

### **1. Beneficiaries**

Tax holidays are of greatest value to firms and projects that make substantial profits in the early years of operation. Such enterprises are likely to be engaged in sectors such as trade, short-term construction, and services. Tax holidays are less likely to be of benefit to major capital-intensive projects, which do not normally make a profit in the early years. This has in fact been the experience of transition countries that have introduced tax holidays. Most of the beneficiaries of the tax holidays have been small firms, for example, real estate businesses, restaurants, and firms designed for short-term market exploitation, such as trade and woodcutting.<sup>12</sup> The tax holidays are open-ended in that their value depends upon the amount of profit earned. Arguably, the types of high-profit activities that benefit the most are the least in need of the incentive and would have occurred in the absence of the incentive. Thus, the bulk of the revenue forgone is likely to have had no beneficial impact on investment, and so the ratio of benefits to costs is likely to be low.

The experience of Asian countries with tax holidays directed toward export-oriented industries is also instructive. Low-cost assembly plants that are highly mobile can be the most affected by holidays. In a number of countries, plants were established to take advantage of a tax holiday; when the holiday expired, the plant was disassembled and moved to an adjacent jurisdiction to take advantage of the holiday offered there. The factor that made the project responsive to the incentive also limited the benefit to the country from the investment.<sup>13</sup>

Investment allowances, tax credits, and accelerated depreciation, in contrast, are specifically targeted at capital investment. Their revenue cost is constrained by the amount of capital that the firm is willing to put at risk. As such, they are of little benefit to the quick-profit types of firms that can take best advantage of tax holidays. Tax allowances are of greatest benefit to firms with income from existing operations. These firms can shelter a portion of such income from tax with the incentives earned on the new investment. Firms with low income or start-up

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<sup>11</sup>*E.g.*, Economic Expansion Incentives (Relief from Income Tax) Act 1985 (Singapore) § 5.

<sup>12</sup>Some countries have excluded services from qualifying for tax holidays.

<sup>13</sup>*See* Easson, *supra* note 6, at 414.

firms cannot begin to take advantage of the incentive until the investment begins to earn income. Provided that a carryforward of the incentive is allowed, an investment allowance can operate in a manner similar to a tax holiday in that it can eliminate the tax liability of the firm in the early years of operation. However, the effect of a tax holiday differs, because it is limited in time but normally involves no upper bound on the amount of tax benefit that can be obtained.

General tax rate reductions differ from the other incentives in that they are not specifically directed toward new activity. Income from both existing and new operations is eligible for the incentive. Thus, when rate reductions are viewed as an incentive, they are less likely to be cost-effective than incentives that are related to the amount of new investment.

## **2. Profile of Revenue Impact**

The revenue impact of tax holidays and investment allowances is, in theory, tied to the degree of new activity. Thus, the revenue impact is relatively small in the early years of the program and grows over time as more firms become eligible. A general tax rate reduction, in contrast, has significant up-front revenue costs because it applies to income from existing operations as well.

The pattern of revenue costs of accelerated depreciation is somewhat more complicated. Because accelerated deductions confer a timing benefit only, the government incurs a higher level of up-front cost to achieve the same incentive effect. The revenue cost actually falls over time, because in future years the tax benefits from further new investments are partly offset by the reduced deductions resulting from the acceleration of deductions on the old investments.

For investment allowances and accelerated deductions, the carryforward of deductions by firms that cannot fully use them can considerably raise the revenue cost over time. The experience of a number of industrial countries that provided broad-based investment incentives was that over one-half of incentives were earned by firms with no current taxable income. This reduced their cost in the early years of the program. However, there was a significant buildup over time of unused deductions from previous years. As the firms that had these accumulations began to earn income, they used the accumulations to offset income even though they were no longer making expenditures that were eligible for the incentives. The claiming of the deductions was merely delayed, and there was an increasing impact on tax revenues as the deductions from previous years were added to those being earned and used in the current year.<sup>14</sup>

The buildup of unused deductions and losses also reduced the predictability of the government's revenue stream. Firms that did not expect to be able to use their deductions in time sought ways of transferring them to firms with current taxable income, often in the form of transactions that traded a lower cost of financing for the tax deductions. Thus the deductions earned in one sector reduced the taxable income of another. Loss-trading mechanisms such as leasing were frequently used in this context.<sup>15</sup>

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<sup>14</sup>See Minister of Finance, Canada, *The Corporate Income Tax System: A Direction for Change* 17–18 (1985).

<sup>15</sup>See *id.* at 19–20.

A number of transition countries have experienced serious unexpected shortfalls in revenues during the transition period, in part because of reduced economic performance and problems of tax administration in the face of a changing economic structure. Tax incentives, particularly holidays, have contributed to this shortfall by providing opportunities for firms to arrange their affairs to avoid paying taxes on income ordinarily subject to taxation.

### **3. Administration and Tax Avoidance**

Auditing incentives provides an extra challenge to tax administrators, who must first verify that the incentive has been applied correctly. Verification can be difficult if complex calculations are involved. Second, administrators must ensure that the activity or firm actually qualifies for the incentive. This process can be complicated if concepts and definitions are vague or ambiguous or, as for foreign-owned firms, the records establishing the eligibility of the firm are in another country. (This problem is compounded by the limited range of tax treaties for many developing and transition countries, which means they do not have access to the exchange-of-information facilities usually contained in treaties.) Third, tax officials must ensure that the amounts eligible for the incentive are correctly reported, for example, that the value of a machine or service has been transferred at its fair market value. If the transaction occurs across borders, particularly among related parties, this task can be difficult. The need to carry out these audits and assessments essentially to verify that no tax, or a reduced amount, is payable diverts resources from other administrative tasks, which can be ill-afforded, given the shortages of trained staff that exist in most developing and transition countries.

Tax holidays have been particularly susceptible to tax planning, much of which is especially problematic for taxation authorities. Tax planning can lead to considerable revenue leakage, which can exceed the revenue forgone from incentives received by legitimate activities. This outcome further reduces the cost-effectiveness of tax incentives. The tax avoidance strategies, which are often used in combination, include fictive foreign investment. Tax holidays in a number of countries have been directed at firms with a high enough percentage of foreign ownership. Considerable tax revenue seems to have been lost from the creation of fictive foreign-owned companies that carry on what is in fact a domestically owned business. One way of doing this entails transferring funds from a domestic enterprise to a company incorporated offshore which in turn reinvests in the home country as if it were a foreign-owned company. The investment thus qualifies for the incentive. It depends upon how the law is written whether this type of transaction is tax avoidance or evasion.<sup>16</sup> In either event, it is difficult for tax authorities to detect such activity on audit, especially if the investment appears to originate in a tax haven with strict secrecy laws.

Furthermore, the existence of a tax holiday introduces the possibility of transferring profits from operations that do not qualify for the holiday to a firm that does. For example, a domestic firm can transfer a small part of its operation to a joint venture with a foreign-owned company; the joint venture qualifies for the incentive; the original domestic company transfers income to the joint venture by manipulating the allocation of costs and the charges made on transactions between the firms such as the domestically owned company selling intermediate

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<sup>16</sup>For a discussion of the meaning of these terms, see vol. 1 at 44–45.

products to the joint venture at a price that ensures that the entire profit from the transaction arises in the joint venture. Other costs, such as financing costs, can be borne on behalf of the joint venture by the domestically owned company. These types of transactions are difficult for tax authorities to detect, and even harder to successfully challenge.

Nor is it easy to establish what is a new operation for purposes of qualifying for the tax holiday. A new corporation can be established that then purchases the assets of an existing operation in order to qualify for the incentive, even though no new activity is occurring. This device has occurred in some countries in combination with the above types of tax avoidance. In other areas, such as the construction industry, new firms can be established for each new project, thus maintaining perpetual access to the holiday.

Tax holidays also put the revenues of adjacent jurisdictions at risk. Exporting firms would ordinarily pay tax on their profit from the sale in the country. However, if these firms establish transshipment companies in an adjoining state that provides a tax holiday so as to purchase the goods from the exporting company and then sell them to the actual purchaser in the destination country, they can avoid taxation through transfer pricing. To accomplish this, the goods are sold at cost to the transshipment company, so that all the profits on the sale are transferred to this company to be sheltered from tax by the tax holiday.

A number of developing and transition countries have attempted to curtail these abuses by stipulating that the foreign investment must exceed a specified value in order to qualify for the incentive. While such restrictions may deter some small operators, they are unlikely to prevent tax avoidance. Firms may contribute over-valued capital goods as part of their initial capital contribution to achieve the threshold. There are usually no restrictions on the use of the capital contributed under such a restriction and it would be hard to impose them effectively. Accordingly, firms can effectively repatriate the funds in a number of ways, such as through nonrecourse loans, offshore deposits, and returns of capital. Here the thresholds impose no effective constraint on tax avoidance.

The other forms of incentive apart from tax holidays are also subject to tax planning. The scope is somewhat more limited for investment-related incentives at moderate rates. The amount of the incentive that can be earned has an upper limit related to the amount of the expenditure and, unlike a tax holiday, is not as exposed to the shifting of large amounts of profits. Problems can occur, however, especially with assets transferred from related offshore companies. There is a motivation to overvalue the purchase price of the asset to maximize the incentive. Clearly, this motivation increases as the rate of the incentive rises. As noted above, at high rates of incentive, this problem can occur even within a country if the rate of incentive leads to a value of tax deductions that exceeds the value of the expenditure. It is possible to increase the benefits to the enterprise on a transfer of assets or services between related companies simply by increasing the price of the item transferred. The other issue that can arise in these circumstances is multiple access to the incentive through progressively moving the asset among a group of companies. Recapture rules and capital gains taxes can address this problem in the case of accelerated depreciation because the increased deductions of the purchaser are offset by the reduced write-offs of the seller. For investment allowances and tax credits, the problem can be dealt with

through fairly simple antiavoidance rules, such as providing the incentive only for first use of the asset in the country.<sup>17</sup>

Low tax rates for particular activities suffer from many of the transferring and targeting avoidance problems that arise with tax holidays. For significant rate reductions, taxpayers will make considerable efforts to shift income to the company with lower tax rates, for example, by shifting debt within a corporate group. In addition, firms will attempt to characterize their activity as qualifying for the incentive.

### **C. Minimizing Problems of Incentives**

The overwhelming experience of transition countries and, to a lesser extent, of developing countries with tax holidays has been that they are particularly susceptible to tax avoidance and have been ineffective in attracting FDI. Part of the problem with attracting foreign direct *investment* is that a holiday is only indirectly linked to investment. It is tied to the establishment of a new enterprise and the amount of the incentive depends not on the size of the investment, but on the profits that are made during the initial years of the enterprise. This is at the heart of both the tendency for holidays to be used by firms making short-term investments and the various tax avoidance schemes that have been described. These problems are significantly reduced with investment allowances and credits, and so these types of incentives are likely to perform better if the goal is to promote productive investment.

#### **1. Investment Allowances and Credits**

Nonetheless, experience has shown that investment-related incentives have their own set of problems. A number of guidelines should be followed if the incentives are to be as free from abuse as possible. As the examples of tax avoidance activities demonstrate, the problems associated with investment allowances and credits are most evident at higher rates of allowance or credit. Therefore, the rates of benefit offered should be moderate. Moreover, attempts to target the incentives either too finely or at vague objectives are counterproductive because they introduce complexity and uncertainty for both the taxpayer and the tax administrator. If the taxpayer cannot be certain of the eligibility of an expenditure for the incentive, its effect on behavior is reduced significantly or even eliminated. Therefore, the investments eligible for the incentive should be clearly defined and the rules kept as simple as possible.

In many countries, the principal justification for an incentive will be to help create a basic amount of market-oriented activity. As the market develops and foreign firms become familiar with a country, the rationale for an incentive will be reduced. This suggests that incentives should be made valid for a set time with a preannounced expiration date. This automatic expiration is known as “sunsetting” and ensures that the government must review the incentive and take steps to continue to make it available.

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<sup>17</sup>See CYP IT §12(2)(b) (investment credit for new equipment made in Cyprus or new or secondhand equipment imported from abroad); HUN CIT § 13(4) (incentive allowed only for first use of asset in country).

With upfront incentives, the same asset is often sold and resold to produce multiple access to the incentive. Appropriate recapture and capital gains rules reduce the problem and should be in place.<sup>18</sup> However, for an incentive such as an investment tax credit, other rules are needed to ensure that an asset receives the incentive only once. One approach is to “clawback” the incentive if the asset is resold, perhaps within a time limit.<sup>19</sup> This approach requires a complex tracking of assets. A simpler approach is to allow the incentive only for the purchase of assets that have not been previously used.<sup>20</sup> To allow for the use of secondhand assets from abroad that might embody technology that is unavailable in the country, the rule could be extended to allow the incentive only for the first use of the asset in the country.<sup>21</sup>

The price of assets purchased from abroad from a related person may be inflated to maximize the write-offs for depreciation purposes. Adding an investment incentive on top of depreciation increases the attraction of such tax avoidance. Overcoming this problem is not simple, but there are some guidelines that will help. The law should stipulate that transactions between related parties be conducted at fair market value.<sup>22</sup> Such a provision at least establishes a legal basis for attacking the transaction and will curb somewhat the aggressiveness of major companies. Targeting the incentive to assets, such as machinery and equipment, that have some external secondhand market transaction for comparison also assists. Intangible expenditures like know-how and business services are typically hard to value.

The key to auditing any transaction is information. Typically, the taxpayer has it and the tax administrator does not. This problem is compounded in the case of foreign taxpayers because it is typically more difficult for tax authorities to obtain information from a taxpayer with offices located abroad. This problem is addressed internationally through the exchange-of-information provisions in tax treaties.

## **2. Tax Holidays**

If tax holidays are used, the potential for their abuse can be curtailed in a number of ways. As noted above, holidays are linked more to the establishment of enterprises than to the level of investment. The problems described suggest a number of restrictions that eliminate some of the most obvious abuses and direct the holiday incentives toward the creation of new businesses rather than indirectly attempting to attract new investment. A government may pursue this objective both in attracting foreign firms and in promoting the establishment of new private sector activity domestically.

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<sup>18</sup>*E.g.*, USA IRC § 1245.

<sup>19</sup>Clawback (known as recapture in the U.S.) means that the taxpayer must repay the incentive in the form of an increase in tax. *E.g.*, USA IRC §§ 47, 50; HUN CIT § 13(3) (investment credit clawed back if asset transferred or leased within three years).

<sup>20</sup>*E.g.*, USA IRC § 48 (1986).

<sup>21</sup>*See supra* note 16.

<sup>22</sup>*E.g.*, USA IRC § 482.

A frequently encountered problem is the transfer of existing business assets to a new firm that qualifies for the holiday. Firms whose holidays are expiring may transfer assets to refresh the holiday. This practice suggests that the holiday should be restricted to firms the bulk of whose assets has not previously been employed in the country. This ratio of new-to-the-country assets should be quite high, say, 90 percent. The assets so restricted would not include buildings, given that existing buildings may be renovated for a new use. This restriction would also deny the holiday to firms that simply change their form, such as through privatization.

The second restriction would address the problem of transfer pricing and focus the incentive on the objective of creating new enterprises. It would deny the incentive to any company related to a company operating in the country that did not itself qualify for the holiday. Holidays are frequently targeted to industries that are internationally mobile, such as manufacturing, and denied to firms that are engaged in activities that are more tied to the country, such as distribution and wholesale trade. The question arises as to what happens if a firm is established for manufacturing but carries on ancillary activities that do not qualify for the incentive. A strict targeting to manufacturing could operate in conjunction with the previous restriction to deny the holiday in this situation. Another approach is to allow the holiday provided that over one-half of the assets or revenues of the company are used in the desired activity. If this is done, the holiday benefits should be restricted to income from the targeted activity. Profits for each activity could be separately accounted for. Alternatively, because separate accounting is complex and subject to manipulation, a simple formula approach can be used to determine the proportion of profits to qualify for the holiday. This proportion can be based on some overall figure, such as wages and salaries employed, total revenues, or assets.

### **3. *Low Tax Rates***

Regimes applying reduced tax rates to certain activities or enterprises require a number of rules to minimize tax avoidance. A typical example can be given of low tax rates applied to income earned by small businesses.

The first problem is to define small businesses in relation to a given threshold. The threshold can be measured in terms of assets, capital, number of employees, or total sales. The choice among these criteria, which can be used in combination, will depend in part on the type of business being targeted and on the compliance and administrative costs that are entailed. Seemingly simple concepts such as number of employees can be avoided through the use of employee leasing arrangements, where staff are employed not directly by the company, but rather by a special purpose employment firm that “leases” the employees to the company. Similarly, businesses can avoid asset restrictions by leasing rather than purchasing assets.

Whatever criteria are chosen, it is crucial to introduce a test that applies to all the companies in a related group. Otherwise, it is a simple matter to break up an operation so that the constituent parts meet the criteria. Unfortunately, applying rules to determine whether companies are related can be very complicated and a constant source of avoidance activity.

Another approach is to simply provide a threshold amount of income that is subject to the lower tax rate, effectively a progressive rate schedule for corporations.<sup>23</sup> A certain amount of the incentive will accordingly be earned by larger corporations. One possibility is to claw back this incentive for income over another threshold.<sup>24</sup> This effectively implies that middle levels of income face a special higher marginal rate of tax. As with size tests, rules are needed to allocate the thresholds among related groups of companies.<sup>25</sup>

Care must be taken to target the low tax rate to appropriate types of activity and to prevent it from being used to avoid taxes that should be paid at the personal level. A low tax rate that applies to all small business income opens an opportunity for individuals to place their investment holdings in a corporation to obtain the benefits of the lower tax rate. Accordingly, rules are required to restrict the incentive to active business income.<sup>26</sup> The distinction between active and passive business is notoriously difficult to maintain, and so arbitrary rules, such as requiring a minimum number of employees to qualify as an active business, may be needed.

#### **IV. Special Purpose Tax Incentives**

A serious disadvantage of offering tax incentives to attract investment is that, to the extent that enterprises that would have invested in any event claim them, tax revenue is lost without any corresponding benefit to the host country. These costs can, in theory, be reduced if means can be found to target the incentives to particular desirable activities or to projects that would not have occurred without the incentive. Countries have employed a number of techniques to achieve this better targeting. These include linking the incentive to specific low-growth regions, tying the incentive to particular objectives—such as employment creation, technology transfer, or export promotion—the use of free trade or export promotion zones, and providing for administrative discretion. All these approaches have potential advantages, but are likely to give rise to substantial problems in implementation.

One general problem with special incentives is that they inevitably lead to pressure for similar treatment from other deserving sectors. This pressure is much more difficult to withstand once some targeted incentives have been given. In a number of countries, both developing and industrial, the incentives have spread over time to other activities, and removing the incentives once the reason for them has gone has been difficult politically. While any one targeted incentive may not involve a significant revenue cost, the total for all the resulting incentives can sharply erode government revenues from the business sector.

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<sup>23</sup>While progressive as far as corporations are concerned, the scheme is likely to be quite the opposite as far as the owners of capital go, favoring wealthy individuals who invest in small businesses. Very small businesses owned and operated by low-income individuals are not likely to take corporate form.

<sup>24</sup>*E.g.*, USA IRC § 11(b).

<sup>25</sup>*E.g.*, USA IRC § 1551.

<sup>26</sup>*E.g.*, USA IRC §§ 541–547.

The following discussion focuses on issues peculiar to special purpose incentives. It should be noted that many of the comments made on general incentives in the preceding section apply here also.

### **A. Regional Development**

Regional development is a common objective of tax incentives in industrial countries and elsewhere. Typically, investors in designated regions—usually the more remote, economically less-developed regions of a country or regions with high levels of unemployment—receive tax holidays, investment allowances, or accelerated depreciation.<sup>27</sup> Experience demonstrates that relatively little new activity is generated in the targeted region relative to the revenue cost. Insofar as the incentives have any effect at all, the chief effect is to divert investment away from its optimum location.<sup>28</sup> The same types of transfer pricing and other avoidance transactions discussed above also typically arise, particularly with firms whose operations are based both in the targeted regions and elsewhere in the country.

### **B. Employment Creation**

Incentives may be directed to promote the establishment of labor-intensive industries or the employment of particular categories of workers, such as young persons, the disabled, or the long-term unemployed.<sup>29</sup> Many of the issues that arise with investment incentives, such as incentives going to employment that would have occurred in any event, are also associated with employment incentives. Moreover, incentives targeted to particular types of employment or increases in the level of employment are subject to manipulation and administrative complexity.

### **C. Technology Transfer**

Many countries have sought to attract investment that would bring in advanced technology, or research and development activities, by granting tax incentives, usually with little success. It is frequently difficult for tax authorities to determine when a particular technology qualifies as “advanced” or “appropriate,” and difficult to define precisely what constitutes “research.” In most cases, the investor is likely to be receiving a tax break for doing what it would have done in any event, and it is the experience of many developing countries that technology that is introduced is rarely “transferred” to the host country. Because of the generally unsatisfactory experience with tax incentives in this area, a number of countries are turning to nonfiscal inducements, such as the establishment of Science Parks.

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<sup>27</sup>*E.g.*, HUN CIT § 13(2); DEU DDR-IG, DEU FGG, DEU InvZulG.

<sup>28</sup>Minister of Finance, Canada, Economic Effects of the Cape Breton Tax Credit (1990).

<sup>29</sup>*E.g.*, USA IRC § 51 (work opportunity credit); RUS PT § 7(2) (tax rate reduction for enterprises where 70 percent of workers are disabled); HUN PIT § 21 (tax deduction for agricultural enterprises employing handicapped persons).

#### D. Export Promotion

There is evidence, especially from developing countries in Asia, to suggest that incentives to attract export-oriented investment tend to be more effective than most other forms of investment incentives.<sup>30</sup> Certain types of export-oriented enterprises, notably those in the textile and electronics sectors and other labor-intensive assembly industries, are especially sensitive to taxation. Such industries do not rely much on local sources of material supply and do not gear sales to the domestic market. Rather, they are attracted to low-cost environments. While the most important local cost for such industries is labor, taxes may also be a significant component, and so tax reliefs may be especially attractive to such firms. Investment incentives are commonly provided in the form of tax holidays or special investment allowances for firms designated as “export oriented.” They may be exempted from tax on a proportion of their profits corresponding to the proportion that export sales bear to total sales, or they may be allowed a generous deduction for expenditures aimed at export promotion. Some of these policies have been successful in attracting foreign investment and have, at least in the short term, had relatively little cost in terms of tax forgone, since much of the investment would not have been attracted without tax exemptions.

The benefits of such investment, however, are questionable. As noted above, many of the enterprises attracted are footloose, and tend to move on as soon as tax holidays expire. There tends to be little in the way of creation of linkages to domestic firms, little transfer of technology, and little sourcing of local raw materials. Moreover, the success of such operations depends to a large extent on the reaction of the countries that provide the sources of capital and the markets for the exports. Many of the incentives that could be offered to attract export-oriented investment may be contrary to WTO subsidy rules;<sup>31</sup> for other operations to succeed, home countries must be prepared to grant “tax-sparing” treatment in their double taxation treaties (see below). With the heightened competition in world markets, these issues are likely to be more important in the future.

#### E. Free Trade or Export Processing Zones

Export processing zones (EPZs) are closely related to promoting export-oriented investment. These zones, also called customs-free zones, duty-free zones, free trade zones, or special economic zones, have over the past thirty years or so been established in more than fifty countries in all parts of the globe, especially in developing and transition countries.

The distinguishing feature of these zones is that they provide a discrete environment in which enterprises (usually both foreign and domestically owned) can import machinery, components, and raw materials free of customs duties and other taxes for assembly, processing,

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<sup>30</sup>See Easson, *supra* note 6, at 395, 429.

<sup>31</sup>See on this problem especially for the strengthened subsidy rules flowing from the Uruguay Round of GATT negotiations, Buchs, *Selected WTO Rules and Some Implications for Fund Policy Advice*, IMF Working Paper WP/96/23; Pearson, *Business Incentives and the GATT Subsidies Agreement*, 23 *Australian Business Law Review* 368 (1995); Perry, *Taxes, Tax Subsidies and the Impact of Trade Agreements*, 63 *Review of Marketing and Agricultural Economics* 155 (1995).

or manufacture, with a view to exporting the finished product. Normally, products from an EPZ sold on the domestic market are treated as imports and are subject to import duties and taxes.

The country establishing an export processing zone is primarily interested in earning foreign exchange from export sales, although it frequently has additional objectives, such as creating employment, attracting technology, or promoting regional policy. Incentives to attract foreign investors to the EPZs commonly take a variety of forms.

Exemption from customs duties and other taxes on importation is the essential feature of EPZs. Such exemptions apply to materials and components that are imported and reexported and are often expanded to capital goods that firms use in the production process. Exemption from such taxes is often one of the more important tax incentives offered to foreign investors because of the immediate impact upon costs. To the extent that zone products are reexported, exemptions appear to be entirely consistent with the provisions of the GATT and, as far as product taxes are concerned, produce essentially the same result as the zero rating of exports under a value-added tax. The chief advantage of the zonal exemptions is in terms of administration and cash flow. Such measures can be seen as removing impediments rather than providing a special incentive to encourage exports.

Much of the investment attracted to EPZs is highly mobile, cost conscious, and tax sensitive, and additional tax incentives for investment are frequently offered in the zones. In some cases, special incentives such as tax holidays apply for investment in the zone; in others, zone enterprises qualify for the same incentives that are provided—notably for export-oriented investment—elsewhere in the country. The concerns raised above in relation to incentives for export-oriented investment apply equally to zonal incentives of this nature.

It is difficult to evaluate the success or failure of EPZs.<sup>32</sup> In a few countries, they have generated substantial foreign currency earnings, but in other countries they have proved a dismal failure. Between success and failure are instances where it is difficult to say whether the enhanced foreign exchange earnings have been worth the costs of establishing the zones. Real (net) foreign exchange earnings are often but a small proportion of total export sales because most components and raw materials are imported; textile manufacturers in some zones have even imported such items as thread and buttons. Employment creation has been impressive, but has often had little impact on local unemployment because the great majority of jobs have been filled by young women who had not previously been part of the workforce. Technology transfer has usually been negligible and only a few countries have established substantial backward linkages with domestic producers. Attempts to use EPZs as an instrument of regional development policy have mostly failed. Because tax incentives have been the rule in most EPZs, very little tax revenue has been generated directly, although EPZ investors have undoubtedly contributed to revenues through employment creation, in the form of payroll taxes, income tax on salaries, and sales taxes on spending by employees.

It is instructive to note that the countries in which EPZs have tended to be most successful have been those that have concentrated on generating foreign exchange earnings

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<sup>32</sup>United Nations, *The Challenge of Free Economic Zones in Central and Eastern Europe* (1991).

without attempting to pursue ancillary objectives such as regional development and that have emphasized removing obstacles to export processing rather than providing investment incentives as such. They have also tended to be countries in which the general domestic tax climate has been relatively hospitable to investment.

To the extent that tax incentives, other than exemption from taxes and duties on imports, are employed, a potential advantage of EPZs is that they generally localize access to the incentives<sup>33</sup> and so, in theory, allow a closer monitoring of the operation of firms. However, they do not eliminate the problems already referred to. There are various ways to shift profits from operations outside the zone to firms that are based in the zone through intragroup transactions, leading to the effective leakage of zone benefits to ordinary domestic activity.

Finally, the caution recorded in relation to tax incentives for export promotion bears repeating in the context of EPZs. While there would seem to be nothing objectionable in principle in providing exemption from customs duties and taxes on importation,<sup>34</sup> other tax incentives directed specifically at export promotion may run contrary to the GATT and may invite countervailing measures that could negate any advantages obtained from the establishment of the zones.

## **V. International Aspects of Tax Incentives**

Some international issues have already been noted in the previous discussion, for example, transfer pricing and fictive foreign investment. Where FDI is involved, however, international tax issues are pervasive.<sup>35</sup> Accordingly, this section first looks at some additional tax incentives that are internationally focused, such as special relief from international withholding taxes. It then discusses the interaction of the tax systems of the investor and the place of investment and concludes with the issue of tax competition.

### **A. Incentives with an International Focus**

#### **1. Incentives for Foreign Investors**

Incentives offered in many developing and transition countries are often tied to foreign investment. These can take the form of special tax holidays under the income tax or special relief from customs duties or turnover taxes. The incentives are sometimes directed at firms that are 100 percent owned by foreigners and at other times offered to joint ventures, often with as little as 30 percent foreign ownership.

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<sup>33</sup>They do not always do so—in Cameroon, EPZ benefits are offered to saw mills scattered around the country.—L.M.

<sup>34</sup>There is, however, the problem of smuggling to the domestic market.—L.M.

<sup>35</sup>A detailed description of the rules necessary for the international operation of the income tax is provided in ch. 18 *supra*. The discussion here assumes some familiarity with the international chapter.

The attraction for policymakers is that the targeting dramatically reduces the revenue costs of offering the incentives. However, the question arises as to why it would be government policy to favor foreign firms over domestic firms. The discrimination leads to resentment, which is likely to reduce voluntary compliance with the tax system. Domestic firms will lobby, with justification, to have the incentives extended to them. This pressure can be difficult to resist, and so the incentives may spread, leading to a deterioration of the domestic tax system. Moreover, as seen above, the restrictions often do not work. Domestic firms are induced to enter into tax avoidance strategies that have proven difficult for tax authorities to counter.

## **2. Relief from Cross-Border Withholding Taxes**

Among their measures to encourage FDI, many developing countries provide tax relief from withholding taxes on certain interest and royalties and sometimes on dividends on foreign parent companies' investments in subsidiaries. The international chapter of this book explains how interest and royalties can be used for profit stripping. Removal of cross-border withholding taxes on these forms of income can increase the benefits from such tax planning. Such incentives can also be subject to many of the forms of planning outlined above in relation to tax holidays, to which they are closely related (often tax holidays for foreign direct investors and dividend withholding tax relief are applied to the same project).<sup>36</sup>

Levying such taxes can also simply increase the cost of funds and technology for local firms. In this case, the case the argument for relief from withholding tax is stronger, and carefully drafted provisions may be worthwhile. Such measures are not incentives as such, but rather remove barriers where the international tax regime produces more tax than would occur in purely domestic cases. Conversely, relief from withholding tax on dividends for portfolio, as opposed to direct, investment is often effectively eliminated by the tax system of the investor's country of residence. These issues are dealt with in the chapter on international taxation.<sup>37</sup>

Viewed as an incentive, relief from withholding taxes for a direct investment is poorly targeted in that it delivers a benefit to the investor only on repatriation (i.e., at the end of the day, not up front) and encourages repatriation whereas for the country where the investment occurs, it is better if the income generated is reinvested rather than repatriated.

## **B. Tax Incentives and Relief from Double Taxation**

To determine the tax treatment of FDI, it is necessary to look beyond the country where the activity takes place (the source country). It is also necessary to consider the tax treatment in the country of the foreign investor or parent company (the residence country). There are often further tax consequences in the residence country on income that is earned and taxed in the source country. This can lead to an interaction between the tax systems of the two jurisdictions

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<sup>36</sup>See Easson, *supra* note 6, at 418.

<sup>37</sup>See *supra* ch. 18, sec. VI(F).

that modifies the impact of a tax incentive compared with what it would be in the source country alone.<sup>38</sup>

### ***1. Relief from Double Taxation in the Residence Country***

An investment can take in a number of forms. The two basic methods are through a branch and through a subsidiary. A branch is simply a division of the foreign company making the investment, but it is not a separate legal entity. Accordingly, the branch's profits are ordinarily taxed as they are earned in the residence country under the principle of worldwide taxation.<sup>39</sup> Investments can also be channelled through a subsidiary, which is a separate legal entity, and whose income is usually not included in the income of the foreign parent until it is repatriated as a dividend.

Because a subsidiary is the normal form of investment for nonfinancial institutions, the balance of the discussion will focus on the treatment of repatriated dividends. Much of the discussion also applies to income earned in branches, except the residence-country tax consequences occur as the income is earned, rather than being deferred until it is repatriated as a dividend. Essentially, two types of tax treatments are applied to dividends paid to the residence country. These have very different implications for the potential effectiveness of tax incentives provided by the source country.

The first type of tax treatment is the foreign tax credit method. Under this method, the residence country applies its tax regime to the income when it is repatriated, but allows a credit for any foreign taxes paid to the extent that they do not exceed the amount of residence country tax that would be levied on the income. This system effectively means that the source country is allowed the first opportunity to tax the income, but that the residence country will tax the income if it is not fully taxed in the source country. When there is only one source of foreign income, the implications for tax incentives are clearly negative. To the extent that the incentive results in a tax liability that is less than the tax burden that would be applied in the residence country, then the benefit given is taxed back when the income is repatriated to the residence country. There is simply a transfer of tax revenue from the source country to the residence country. A number of important sources of FDI use the foreign tax credit method, for example, Japan, the United Kingdom, and the United States.

The alternative basic system of taxing foreign-source income is the exemption method, employed by countries such as France, Germany, and the Netherlands. Under this method, there is no further tax on the repatriated profits, and so the effective taxing back of the incentive that occurs under the tax crediting method does not occur. In fact, simple categorization of countries is difficult because many countries incorporate aspects of both systems depending upon the type of income and its country of source. A foreign tax credit is applied in some of these countries in

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<sup>38</sup>For a detailed analysis of the relation between tax incentives in developing countries and taxation in capital-exporting countries, see Timo Viherkenttä, *Tax Incentives in Developing Countries and International Taxation* (1991).

<sup>39</sup>An exception is where the residence country uses the exemption approach for foreign-source business income. See *supra* ch. 18.

certain circumstances, such as when no tax treaty exists. Some exemption systems are structured on the basis of a “subject-to-tax” test or a “comparable tax” test.<sup>40</sup> This means that if a tax holiday exists the exemption is not available in the residence country and a credit system applies in its stead. In this event, the comments made in relation to credit systems become relevant.

In examining the extent of the reversal of source-country incentives through foreign tax credits, a number of qualifications need to be made to the simple case outlined. With taxation only on repatriation, to the extent that the earnings are retained in the source country and reinvested, they are not subject to residence-country taxation. Thus, adverse tax consequences can be deferred until the time of repatriation. There has been much theoretical discussion about the true impact of this system. Because the tax on the distribution will occur when the income is repatriated, firms should take it into account in making their investment decisions. However, there is little doubt that firms act as if the deferral inherent in taxation only on repatriation matters to them. Thus, to the extent that the adverse tax consequences can be delayed they are less problematic to the companies. Levying tax on income only when it is repatriated has implications for the design of tax incentives, namely, that incentives in the income tax of the source country are more likely to be effective than incentives that are provided at the time of repatriation, such as withholding tax relief. These latter incentives are more likely to lead simply to an increase in the other country’s tax revenues.

The next qualification is that the tax crediting systems of most countries are generally limited to the amount of tax that would have been paid on the foreign income in the residence country. This limit has two basic methods of calculation: country by country or worldwide (i.e., aggregating all foreign taxes levied on the firm for calculating the limit). Tax reforms in industrial countries over the past decade have, in some countries, lowered the overall domestic tax burden on foreign-source income below that of the amount of tax in the source country. This places many firms, particularly in the United States, in what is known as an excess foreign tax credit position. Taxation in the country of residence has been completely eliminated, and a residual source-country burden remains. In such circumstances, if the residence country operates a worldwide foreign tax credit limit, relief from source-country taxation does not result in a transfer of tax liability to the residence country and so is of benefit to the firm.

For a branch of a foreign company, the foreign tax credit limit can produce worse results for the taxpayer in the presence of incentives. In particular, if the residence country has a credit system without a system of carryback for excess foreign tax credits, reduced taxation in the source-country in the early years of the investment may actually result in overall increased source and residence taxation over a number of years, especially for incentives like accelerated depreciation that affect the timing but not the amount of tax deductions. The residence country collects tax on the investment in the early years because of the low source-country tax arising from the acceleration of the depreciation, but may not fully credit the higher source-country tax in later years because of its foreign tax credit limit. A subsidiary can usually overcome this kind of problem by planning the timing of dividend payments.

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<sup>40</sup>*E.g.*, AUS ITAA § 23AH.

The final qualification is that foreign tax credit regimes are difficult to operate effectively. In particular, if offshore financing companies are used, taxation in the residence country can be deferred indefinitely. Dividends paid from the source country can be routed to a third country that does not tax them (usually tax havens). Through tax planning, multinational firms can reduce or eliminate both source and residence taxation on FDI in many cases, as discussed in the international tax chapter under the heading of international tax avoidance and evasion, in which event the existence of tax incentives in the source country and the type of relief system in the residence country become largely irrelevant.

Nevertheless, despite these qualifications, many companies do take into account in their tax planning the eventual tax consequences in the residence country.<sup>41</sup> Whether this approach measures the actual impact residence-country taxation will have after all tax planning routes have been exploited or whether it is a simplification used in the evaluation of projects is not clear and certainly varies depending upon the situation of the foreign investor. Overall, this approach by multinational firms does appear to reduce the effectiveness of tax incentives.

## **2. Tax Treaties and Tax Sparing**

One method that avoids the problem of the residence country taxing away the benefit of a source-country tax incentive is “tax sparing.” Under tax sparing, the residence country treats the income remitted as if it had been fully taxed and had not benefited from the tax incentive. This method ensures that the full benefit of the tax incentive goes to the investor and is not simply transferred as tax revenue to the residence country. Tax-sparing is usually granted under tax treaties. It is traditionally granted by industrial countries, which are most likely to be the residence country in the flow of international investments, to developing countries, which are more likely to be source countries. In more recent times, tax-sparing provisions have appeared in treaties concluded between industrial and transition countries, and can also appear in treaties among developing and transition countries.

The main role of tax-sparing provisions is to allow the source country to provide tax incentives without the concern that it is simply transferring tax revenue to the other country and so can be seen as preserving the sovereignty of the source country. This gives the source country more freedom in designing its incentive regime. The fixed-relief method described below can go further and act as an explicit subsidy or foreign aid program to the source country (or more specifically for investors in that country), where credit is provided by the residence country for more tax than is forgone by the source country.

When tax treaties are drafted, the tax-sparing provision is usually inserted in the article that provides for relief from double taxation. Tax sparing comes in two main forms. One form, which is more common and may be referred to as the contingent relief method, gives relief only for source-country tax that has actually been forgiven as a result of the tax incentive. In relation to a residence country that uses the foreign tax credit, it thus becomes necessary to identify the incentive and provide a method of calculation of the amount of tax forgone. This can be done most readily for simple reliefs in the form of tax holidays, low tax rates, and withholding tax

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<sup>41</sup>The consultations carried out in writing OECD, *supra* note 2, confirmed this approach by multinational firms.

reliefs. The true tax benefits of other incentives, such as tax credits, investment allowances, and, in particular, accelerated depreciation, are more difficult to calculate and so are not covered by this form of tax-sparing relief.

The other form of tax-sparing relief, which is less common and is usually confined to withholding taxes on passive income may be referred to as the fixed-relief method (or the matching credit). With this method, the taxpayer is usually deemed to have paid tax at a specified rate on a particular form of income. This approach avoids problems of identification of incentives and quantification of tax forgone. However, its operation is not limited to tax forgone under a specific incentive regime, and the effect on residence-country taxation depends on the relative rates of source-country tax on the specified income and the fixed rate of relief. This last feature no doubt explains why the fixed relief is usually confined to passive income. Tax treaties in this area specify an upper limit for source-country taxation and provide relief through a foreign tax credit (even in countries that generally use the exemption method for business income). Thus, it is a relatively easy matter to match the rate of credit with the limit on source-country taxation. Nonetheless, the source country may have lower rates of tax generally on the kind of income specified than the upper limit of the treaty, in which event the fixed relief more than compensates for any tax forgone under a tax incentive. In a few cases, this outcome is created by the treaty itself through specifying a fixed-relief rate above the withholding rate limit on passive income.<sup>42</sup>

While the fixed-relief method has the capacity to deal in a general way with incentives like accelerated depreciation where tax forgone is difficult to identify, it is rarely applied to business income, presumably for reasons just given. The failure of the contingent and fixed-relief measures to deal with such kinds of incentives can produce perverse results. Although the discussion earlier in this chapter suggests that tax holidays and elimination of cross-border withholding taxes are relatively less effective incentives than accelerated depreciation, the international tax system effectively favors the former over the latter, which probably explains why they are common in developing and transition countries.

In specifying the amount of unpaid tax that may be credited under the contingent relief form of tax sparing, the tax treaty usually refers specifically to the incentive legislation by name and section so that the particular incentives and the amount of tax forgone may be calculated. Not all countries, however, are willing to provide tax-sparing provisions, and a number of countries that have offered them in the past are reconsidering their position—the United Kingdom has indicated that it will offer them on a restricted basis in the future. The change in attitude is exemplified in part by the now common use of sunset provisions for tax sparing, often containing a five-year life with the possibility of extensions if both countries agree. The recent shift has been brought about partly on policy grounds (based on the failure of incentives to achieve the benefits claimed) and partly on antiavoidance grounds.

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<sup>42</sup>Brazil is one country that often exhibits this feature in its treaties; Indonesia and Malaysia use the fixed-relief method, but the rate is usually matched to the maximum withholding rate, *see* Vann, *Tax Treaties: Linkages Between OECD Member Countries and Dynamic Non Member-Economies* 57-87 (1996); “Brazil-Canada income tax treaty, art. 22(3); Brazil-France income tax treaty, art. 22(2)(d); Indonesia-Japan income tax treaty, art. 23(2).

For example, in the case of a tax-sparing credit for interest received from a developing or transition country that has a special incentive relief in relation to withholding tax on the loan, it is possible to shop for an appropriate tax-sparing treaty and to use the deemed tax-sparing credit to reduce the tax on income derived locally. Thus, a financier based in a third country lends to two subsidiaries in the selected country with the necessary tax-sparing treaty. One of the subsidiaries invests in the other by way of share capital with the loan funds it has received, and that other subsidiary then lends the total funds to the enterprise in the developing or transition country. The on-lending subsidiary receives more interest than it pays (because part of the ultimate loan funds has been routed into it as share capital) and so has a tax liability in the country where the subsidiary is based. The amounts of the loans have been so planned that this tax liability is offset by the deemed tax-sparing credit (no tax having in fact been paid in the developing or transition country on the outgoing interest). The subsidiary that invested the loan funds from the parent in the other subsidiary has no income from the transaction, but can use interest deductions against other income and so reduce tax in the country where the subsidiary is located.<sup>43</sup> Provisions are now being inserted in tax treaties to overcome such tax planning,<sup>44</sup> but the possibilities of misuse of the tax-sparing credit are obvious from this example. In the case of royalties, tax schemes based on tax sparing often rely on the fact that the definition of royalties in most treaties includes payments for equipment leasing<sup>45</sup> so that finance leases can benefit from the same form of tax planning.

The discussion of tax sparing above has been related to situations where a foreign tax credit is operating in the residence country (which generally includes all countries in respect of interest, royalties, and portfolio dividends), and the tax sparing results from treaty provisions. Even when a country uses an exemption system for foreign branch income and FDI dividends, tax-sparing-type issues can arise, for example, when the exemption is predicated on a subject-to-tax or comparable-tax test. The treaty provisions necessary to provide for tax sparing in such cases are usually simpler, specifying that some tax or a comparable tax is deemed to be paid without having necessarily to calculate the amount of tax, as under the contingent relief method. Some countries even structure their domestic tax system so that unilateral tax sparing is possible.<sup>46</sup>

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<sup>43</sup>If the ultimate loan is to be \$1,000, the parent might lend \$750 to subsidiary 1 and \$250 to subsidiary 2 at 10 percent interest. Subsidiary 2 invests \$250 in shares of subsidiary 1, which then lends \$1,000 to the developing or transition country company at 10 percent. Subsidiary 1 thus has interest income of \$100 and interest expense of \$75, leaving a profit of \$25. If the withholding tax rate on interest that is forgone in the developing or transition country under its tax incentive is 10 percent and the corporate tax rate in the country of the subsidiaries is 40 percent, subsidiary 1 has a tax bill of \$10 on its income of \$25 and a tax sparing credit of \$10 under the treaty, so that it pays no tax. Subsidiary 2 has interest expense of \$25 which it can offset against other income.

<sup>44</sup>See, for example, the protocols to New Zealand's tax treaties with Singapore (1993) and Fiji and Malaysia (1994).

<sup>45</sup>The 1992 change to art. 12 on royalties in OECD, Model Tax Convention on Income and on Capital (OECD, Paris, looseleaf), which has not to date been reflected in many actual treaties, was based on the nature of this income rather than on considerations relating to tax sparing. See OECD, Trends in International Taxation 13 (1985).

<sup>46</sup>E.g., AUS ITAA § 160AFF (providing for the making of tax-sparing regulations under its unilateral foreign tax credit); Australia has also structured its controlled foreign company regime to permit tax sparing, *Income Tax Regulations* s 152H.

### **3. *International Double Nontaxation***

The various tax avoidance devices used internationally to avoid source and residence taxation are catalogued in chapter 18, along with possible legislative responses. The assumption there is that international double nontaxation is a bad thing that both the residence and source countries should seek to prevent. From an economic perspective, double nontaxation favors international investment over domestic investment, which is generally not regarded as desirable.

When a developing or transition country grants a tax incentive to a foreign investor and an industrial country grants a tax-sparing credit in relation to that incentive, the outcome will often be double nontaxation of the income in question (in the source country because of the incentive and in the residence country because of the tax-sparing credit). Here the countries are cooperating to bring about a situation of double nontaxation, rather than cooperating to prevent it. It is no wonder in particular that taxpayers seek to exploit tax-sparing situations and in general that there is a lack of clarity as to whether double nontaxation is good or bad.

In recent years, industrial, developing, and transition countries have moved to create tax niches that attract internationally mobile activities, especially regional headquarters and offshore finance centers. These regimes work by giving tax exemptions or reductions to the activities in question. It is not customary to give tax sparing relief for such activities, and indeed companies that benefit from such regimes are increasingly being excluded from the reliefs under tax treaties. It is often possible nonetheless to achieve double nontaxation through such arrangements especially if the country of ultimate ownership is an exemption country. These regimes are the subject of further comment in relation to tax competition below.

### **4. *Tax Treaty Network***

Apart from countries entering into tax treaties specifically for the benefits of tax sparing, a tax treaty network is an important ingredient in the mix of tax policies to attract FDI. Tax treaties are dealt with in more detail in chapter 18. There are two broad groups of tax treaties that require a different policy perspective. The first comprises treaties between countries in a region and countries outside the region that are prospective sources of FDI. From the perspective of the foreign firm, a tax treaty establishes the “rules of the game” for the interaction of the source-and-residence country tax systems. From the perspective of the taxing authority, it provides access to the exchange of information facilities that would allow a better chance to police some of the cross-border tax avoidance schemes that firms might employ.

The second group comprises treaties between countries within a region. Tax treaties among countries within a region should be designed to facilitate flows of investment and trade within the region reflecting historic close economic ties. Such treaties often result in provisions on withholding taxes that are less stringent than in treaties with countries from outside the region. They should also be used to allow closer administrative cooperation to help counteract regional tax evasion. This difference in treaty policy within a region is well reflected, for example, in the tax treaties of the Baltic countries (Estonia, Latvia, and Lithuania).

The two groups of treaties have the potential to interact in ways that can hamper a country's ability to ensure that it receives its fair share of tax revenues. This problem can arise if withholding tax rates on certain types of distributions between countries in the region and between countries within and outside the region vary, which is most likely to occur if countries in the region operate separate tax treaty negotiation programs. To counter this problem, countries that maintain close economic links should attempt to develop a coordinated tax treaty strategy and perhaps negotiate in concert. Consideration should also be given to the problem of treaty shopping in this context and the possible inclusion of provisions to protect the domestic tax base against this practice.

### **C. Tax Competition**

Experience with tax incentives, particularly in Asia,<sup>47</sup> suggests that, when so-called footloose manufacturing plants for export are choosing the location for a new plant, they may be influenced by tax incentives when they are comparing sites in different countries that are otherwise similar. This influence may also occur when a firm targets a region for a strategic investment, but is indifferent as to which country it operates from. For example, it may view any one national market in the region to be inadequate for efficient production and may plan to supply the entire region from one plant. Countries may therefore be tempted to try to attract these footloose export industries.

Another reason that policymakers give for offering tax incentives is that they are necessary to maintain their country's competitive position vis-à-vis neighboring countries. They may view another country as having a natural advantage, such as location or raw materials, that makes it more attractive as a destination for foreign investment.

This rationale can be criticized on basic principles. All countries face natural advantages and disadvantages in relation to other countries. A tax incentive merely shifts the private disadvantage from the investor in the particular activity to other economic agents in the country. It does nothing to change the total disadvantage to society because it does not affect the social rate of return which is the sum of the private after-tax return and the taxes collected from the activity. In fact the competitive position of the country might be diminished overall as the production in the economy is less efficiently organized than it would have been without the incentive.

It is not necessary to rely on such economic efficiency arguments, however to see the potential futility of tax competition. A country that views itself as competing for foreign investment will respond to the tax incentives of another country by introducing some form of offsetting incentive. In the end, the tax incentives offered by the two countries do nothing to alter the relative incentive to invest between the two countries. The only result of the competition is that both countries receive lower tax revenues. They would both be better off if they could agree not to compete.

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<sup>47</sup>See Easson, *supra* note 6, at 437–38.

The problem of tax competition is not confined to developing and transition countries. The heightened tax competition among industrial countries in niche areas like headquarters and offshore finance regimes has become an area of concern.<sup>48</sup> Tax incentive regimes for foreign investors in developing and transition countries also give rise to tax competition, not only among these countries but also ultimately with domestic investment in industrial countries. There have been some attempts to reduce tax competition among transition countries.<sup>49</sup> International cooperation in these areas is likely to increase in future years with a view to establishing a narrower range of cases where international double nontaxation is an acceptable policy.

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<sup>48</sup>Commission of the European Communities, Taxation in the European Union, Brussels Mar. 20, 1996, Document No. SEC(96) 487 final; Commission of the European Communities, Towards Tax Co-ordination in the European Union (1997) COM(97) final; Commission of the European Communities, A Package to Handle Harmful Tax Competition in the European Union (1997), COM (97) 564 final. The EU in December 1997 and the OECD in January 1998 have approved packages of measures to deal with tax competition.

<sup>49</sup>The Czech Republic, Hungary, Poland, and the Slovak Republic agreed to phase out their tax incentives for foreign investors as of January 1, 1993.

## Appendix. Tax Holidays and Loss Carryforwards

The following example shows how a poorly designed tax holiday or insufficient loss carryforwards can be less beneficial to a start-up company than a good loss-carryforward period. In the example, a firm makes an investment of \$100 and begins production in the first year. Production is lower than full capacity because markets are just being developed. The firm incurs start-up costs of hiring and training workers and improving production techniques as well as initial marketing costs in the first two years. The net result is losses in the first two years and profit in the next three, with an overall profit of \$25 over the period. (see Table 2).

Taxes payable are calculated under a variety of assumptions.

In Case 1, there is a loss-carryforward period of five years. No taxes are payable until the fifth year, and the total of taxable income is equal to the total amount of profit.

**Table 2. Interaction of Loss Carryforwards and Tax Holidays**

Accounting Income for Firm with Initial Investment of \$100						
Year	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Total
Revenue	15	25	30	40	50	160
Start-up costs	20	15	0	0	0	35
Income	-5	10	30	40	50	125
Depreciation	20	20	20	20	20	100
Profit	-25	-10	10	20	30	25
Firm's Tax Calculation under Different Assumptions						
1. Multiple-year loss carryforward						
Year	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Total
Unused prior-year loss	0	25	35	25	5	-
Profit	-25	-10	10	20	30	25
Loss used	0	0	10	20	5	35
Taxable income	0	0	0	0	25	25
2. Two-year loss carryforward						
Year	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Total
Second prior-year loss	0	0	25	10	0	-
First prior-year loss	0	25	10	0	0	-
Profit	-25	-10	10	20	30	25
Prior-year loss used	0	0	10	10	0	20
Taxable income	0	0	0	10	30	40
3. Holiday, first production						
Year	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Total
Taxable income	0	0	10	20	30	60
4. Holiday, first profit Two year loss carryover						
Year	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	Total
Taxable income	0	0	0	0	30	30

Case 2 shows what can happen if the loss-carryforward period is restricted to two years. The losses that had previously been carried forward from year two to year five are no longer available, and so taxable income increases by \$5 in that year.

In Case 3, a tax holiday of two years starts when production begins, the form of holidays in a number of transition countries (a two-year period is short, but is used here to simplify the example). Unfortunately for the company, it is in the typical position of a large capital project and it registers losses in the first two years. Not only does it not receive the benefit of the holiday, but it loses the ability to shelter future income from tax with loss carryforwards. Accordingly, it begins to pay tax in year three at the expiration of the holiday, and its overall taxable income increases from \$25 to \$60 over the period.

In Case 4, the tax holiday starts in the first profitable year, year three, and continues for two years. In addition, it is assumed that the loss-carryforward period is two years. Both of these features have appeared in tax systems in transition countries. The first year of taxation is the fifth year, as in Case 1. However, the taxable income is greater as losses can no longer be carried forward from the second year. Therefore, total taxable income increases from \$25 to \$60.

These situations could be avoided only if the holiday were to start the first year that there were cumulative profits and if the loss-carryforward period were extended. However, this scenario provides a period of six years over which the project does not pay taxes, and the use of a full loss carryforward may well be the best targeted way to provide an incentive to invest while maintaining some revenues from taxation.