

KIEP Working Paper No. 93-06

December 1993

**TAX IMPLICATIONS OF INTERNATIONAL  
CAPITAL MOBILITY**

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**KIEP**  

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**Working Paper**



**KOREA INSTITUTE FOR  
INTERNATIONAL  
ECONOMIC POLICY**

# **Tax Implications of International Capital Mobility**

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**December 1993**

## **<ABSTRACT>**

In the presence of international capital mobility, taxation based on the ownership of capital and taxation based on the location of capital have different implications for investment incentives and tax neutrality. Efficiency considerations based on tax neutrality may require unrealistic constraints on optimal tax policy like uniform taxation. Nonneutral tax systems may result in more arbitrage opportunities.

Due to overlapping tax jurisdictions and the diverse ways in which countries provide double-taxation relief, taxes distort the investment and financial behavior of international investors through various channels. The effectiveness of investment incentives and treaty-induced tax reductions hinges critically on the credit position of each investor before and after a tax change. The distinction between statutory and effective tax rates is important in the context of shifting taxable profits and tax-deductible expenses among the related parties of a multinational.

The analysis presented in this paper disputes several popular beliefs about tax effects on foreign investment in Korea. Investment incentives and existing bilateral tax treaties may not be as effective as generally perceived since many foreign investors are likely to be in a deficit credit position. In contrast, technology-related incentives may need to be maintained or even augmented to induce multinational R&D in Korea since Korea's low statutory and effective tax rates would make it a place in which to generate more taxable profits and less tax-deductible expenses. In many cases, the second best solution would require some degree of discrimination among investors of different nationalities. It seems desirable to base future treaty negotiations on such country-specific considerations rather than on a model treaty.

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As restrictions on international investment continue to be lifted in the world markets, taxes will play an increasingly important role in affecting price incentives related to the flow of capital. Once international capital mobility is recognized, some traditional propositions on capital taxation must be modified, and existing tax policies in this area need to be re-evaluated. The objective of this paper is to examine various implications of international capital mobility for tax policy both in a conceptual and a practical setting with particular attention given to the Korean case.

The paper begins with a discussion of tax neutrality in an open economy. The focus is on the distinction between taxation based on the ownership of capital and taxation based on the location of capital. Even at this conceptual stage, tax implications of moving from a closed economy to an open economy can be dramatic. The greater the mobility of financial capital among countries, the greater are the opportunities for international tax arbitrage. Efficiency considerations may require highly unrealistic constraints on the optimal tax rates such as uniform taxation, exemplifying the difficulty of international tax coordination.

The actual tax treatment of foreign source capital income is quite complex. There exist many other sources of distortion than can be described in a stylized theoretical framework. The efforts by countries to relieve double taxation of foreign source income are often incomplete and asymmetric across income types. The tax treatment of multinationals is extremely complicated, influencing both their real and financial behavior. The existence of alternative forms of international capital flows creates

additional complications. Foreign direct investment faces a very different statutory tax treatment than foreign portfolio investment. The role of tax treaties and investment incentives in attracting foreign investment is not as clear as generally perceived. The rest of the paper addresses practical aspects of taxing international capital income.

The organization of the paper is as follows: Section 1 analyzes the basic principles of tax neutrality in the presence of international capital mobility. The most standard practices of taxing foreign source income are summarized in section 2. Section 3 discusses various tax effects on international investment and financial behavior, while their implications for Korean tax policy are presented in section 4.

## **1. Tax Neutrality In an Open Economy**

This section discusses the distortionary effects of alternative capital income taxes in an open economy. The focus is on how capital mobility influences the design of tax policy. For simplicity, implications of risk and inflation are ignored. I assume that the world consists of small open economies so that capital mobility from one country to another will not affect the world rate of return.

In the absence of taxes, capital would flow between countries until the rate of return from investing in each country is the same. At this initial equilibrium, investors would be indifferent between investing in domestic and foreign capital. With taxes, after-tax rates of return will be equalized

among countries. Capital would initially flow from a high tax country (i. e. relatively low after-tax rate of return) to a low tax country. Increased capital intensity in the low tax country would lower the marginal product of capital and the pretax rate of return in the long run. Eventually, every investor earns the same net-of-tax rate of return regardless of where he locates investment.

Capital income taxes in an open economy can be imposed either based on the residence of the owner of capital or on the location of capital (or the source of income). Let  $t_{ij}$  denote the home-country's tax rate on  $i$ -owned,  $j$ -located capital. Thus,  $t_{df}$  denotes the home country's tax rate on domestically-owned, foreign located capital while  $t_{dd}$  is the tax rate on domestically-owned, domestically-located capital. Foreign-owned, domestically-located capital is taxed at the rate of  $t_{fd}$  in the home country. The foreign government's taxes on the same types of investment are denoted by an asterisk (\*). For example,  $t_{df}^*$  represents the foreign government's tax rate on domestically-owned, foreign-located investment.

A country taxes capital income either on the basis of the location or on the ownership of capital. From the perspective of the home country,  $t_{dd}$  and  $t_{df}$  are the examples of residence-based taxation while  $t_{dd}$  and  $t_{fd}$  represent source-based taxation. For the foreign government,  $t_{ff}^*$  and  $t_{fd}^*$  are the tools of residence-based taxation while  $t_{ff}^*$  and  $t_{df}^*$  represent source-based taxation. Note that the same investment activity can be taxed by both the home and foreign governments (' $t_{df}$  and  $t_{df}^*$ ' or ' $t_{fd}$  and  $t_{fd}^*$ '), but these taxes are based on different tax principles.

## A. Source-based Taxation and Capital Import Neutrality

Under a source-based tax, each country taxes capital income earned within its own jurisdiction. The equilibrium condition for domestic residents investing worldwide is

$$(1a) \quad r(1-t_{dd}) = r^*(1-t_{df}^*)$$

where  $r$  and  $r^*$  are local pretax rates of return for domestic and foreign investment, respectively.

The condition for foreign residents is

$$(1b) \quad r(1-t_{fd}) = r^*(1-t_{ff}^*).$$

If each host government does not discriminate against foreign investors,  $t_{dd} = t_{fd}$  and  $t_{df}^* = t_{ff}^*$ . This result is called “capital import neutrality.” In this case, equations (1a) and (1b) are equivalent. Since this condition is the same for investors in each country (regardless of their nationality), capital mobility does not create many complications. Capital simply moves where the after-tax rate of return is the highest.

## B. Residence-based Taxation and Capital Export Neutrality

Under a residence-based tax, each country taxes the capital income earned by its own residents regardless of where capital is invested. Investments by foreign residents are not taxed by the host government. The equilibrium conditions for investing abroad are

$$(2a) \ r(1-t_{dd}) = r^*(1-t_{df})$$

for the home country's residents and

$$(2b) \ r(1-t_{fd}^*) = r^*(1-t_{ff}^*)$$

for the residents of the foreign country.

If each home government treats the capital income of its residents equally in the tax laws regardless of the location of investment,  $t_{dd} = t_{df}$  and  $t_{fd}^* = t_{ff}^*$ . This result is called “capital export neutrality.” In this case, capital moves to the location where the pretax rate of return is highest.

## C. Implications for Optimal Tax Policy and Policy Coordination

In reality, a country may have both a source-based tax and a residence-based tax on international capital income. For example, a firm



operating in the United States pays corporate taxes to the U.S. government regardless of who owns the firm (source-based taxation), while a U.S. corporation operating abroad is, in principle, liable for U.S. taxes on its income (residence-based taxation). This U.S. firm also pays corporate taxes to the host government (source-based taxation).<sup>1)</sup>

In the presence of both residence-based and source-based taxes, the design of an optimal tax policy for a country and possible policy coordination between governments can be quite complicated and difficult. The following discussion shows that even in this highly simplistic setting, the equilibrium solutions may turn out to be very difficult to achieve in practice.

From the home government's perspective, there exist three tax rates to set:  $t_{dd}$ ,  $t_{df}$  and  $t_{fd}$ . The first two rates apply to home country residents' investments while the last relates to taxing foreign investors operating in the country.

If the home government's tax rates do not satisfy equations (1a) and (2a) simultaneously, home residents may find tax arbitrage opportunities to reduce their tax payments. These two equations are satisfied simultaneously only if

$$(3) \frac{(1-t_{dd})}{(1-t_{dd})} = \frac{(1-t_{df}^*)}{(1-t_{df})}$$

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1) Section 2 discusses the taxation of foreign source income in a more practical setting.

which implies  $t_{df} = t_{df}^*$ . The combination of equations (1b) and (2b) produces the similar condition for foreign residents, which is

$$(4) \quad t_{fd} = t_{fd}^*.$$

These two conditions essentially require that the two related governments impose the same tax rate on a given type of investment, which is highly unlikely in practice. If these conditions are not satisfied, investors will face different after-tax rates of return on domestic and foreign investment. Then, each investor has the incentive to engage in tax arbitrage, reducing his holdings of assets with the lower yield and increasing his holdings of assets with the higher yield.

What if every government sets its tax rates in such a way that capital import neutrality and capital export neutrality hold together? This suggests that each government set its three tax rates to be the same:  $t_{dd} = t_{df} = t_{fd}$  and  $t_{ff}^* = t_{fd}^* = t_{df}^*$ . In this case, equations (3) and (4) are reduced to uniform taxation of capital income regardless of its ownership and location.

Thus, a neutral tax system under which all investments are taxed at a uniform rate is the most effective in blocking tax arbitrage. A uniform tax rate across countries would require a serious tax coordination effort considering the disparity among the existing tax rates. The equilibrium conditions implicitly assume that a country's tax system is fully responsive to any tax changes abroad.

The moral of the discussion presented in this section is that as the mobility of capital among countries increases, it becomes more difficult to maintain neutral and efficient tax policy with respect to capital income. To the extent that the actual tax systems deviate from the equilibrium conditions, investors may involve in tax arbitrage activities. Even when all countries design tax policy in a way to preserve neutrality, the resulting conditions are still difficult to meet in practice.

In many cases, the actual tax systems do not preserve the principles of neutrality with respect to international investment. Then, the second-best outcome considering existing distortions may not result in a clean-cut solution like the uniform tax. The opportunities for tax arbitrage may likely be greater than in the neutral tax system. International tax coordination is more likely to depend on practical tools such as tax treaties. In such a practical setting, the proper understanding of existing tax distortions to investment incentives is essential for reforming and designing tax policy.

## **2. The Taxation of Foreign Source Income**

In practice, income from internationally mobile capital is subject to several layers of taxation. Host governments typically impose corporate taxes on income earned within their jurisdictions regardless of the ownership of capital. Many countries subject foreign source income to home-country personal income taxation. In certain cases, corporate surtaxes are

imposed by the home government. Countries also impose withholding taxes on income repatriated abroad.

Due to overlapping tax jurisdictions, certain foreign source incomes are subject to both home-country and host-country taxation. Such double taxation of international income should be a deterrent to international investment due to the implied high effective tax rates. In order to avoid such double taxation and encourage free flows of capital, home countries typically provide some kind of tax relief on foreign source income. The exact nature and extent of double-taxation relief differ across countries and types of income.

The most extreme, simplistic and generous way to provide double taxation relief is to exempt foreign source income from home country taxation. In this case, the only taxes charged for foreign source income are the income and withholding taxes imposed by the host government. Only a few countries (e.g. the Netherlands and France) have adopted this 'territorial' system under which there is no residence-based taxation of foreign source income.

In practice, however, this exemption method is more prevalent than implied by the tax statutes of each country as a result of bilateral tax treaties. A pair of countries can agree to exempt from domestic taxation their residents' income earned in the other country.

Most countries assert the right to tax the income of their residents regardless of where the income is earned. Under this more conventional 'residence' system, foreign source income is subject to home country

taxation, but a credit or deduction is allowed for taxes paid to the host government. Korea also has adopted this system.<sup>2)</sup>

In practice, no country allows an unlimited foreign tax credit. Foreign tax credit is typically limited to the home country tax liability on foreign source income. Investors whose potentially creditable foreign taxes exceed the actual credit limit are said to be in an 'excess credit' position.<sup>3)</sup> Thus, foreign tax credit limitations are likely to be binding when the firm invests in a high tax country. If the foreign taxes paid are less than the limitation on credits, the firm is said to be in a 'full credit' or 'deficit credit' position.

When a multinational invests in several foreign countries, it is normally allowed to pool the income repatriated from all of these countries, and credit against the domestic taxes due on this income, any corporate and withholding taxes paid abroad on this income. In doing so, it can use excess credits from operations in one country to reduce any domestic taxes due on operations in another country. If, in total, its credits are sufficient to wipe out its domestic tax liabilities on its world-wide foreign operations, then no domestic corporate taxes result. In this case,

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2) Countries with the territorial system tend to tax passive foreign source income (e.g. most portfolio incomes) on a residence basis.

3) In some countries, these excess credits may be carried backward or forward (two and five years respectively in the U.S.).

In Korea, excess credits cannot be carried back or forward to other years. In lieu of claiming foreign tax credits (at the limitation amount), taxpayers may elect to treat all foreign taxes paid as a tax-deductible item.

its final net income is the same as in the territorial case.

In addition to providing foreign tax credits, residence system countries typically allow their firms to defer the home country tax on certain types of foreign source income until the income is repatriated. In general, active business income belongs to this category. Income from passive investment (dividends and interest, for example) are typically taxed on the accrual basis. Most countries do not allow the tax deferral for foreign branch income.

Tax deferral can be an important source of tax benefits since it may lower the effective tax rate on foreign investment under certain circumstances. Unlike the foreign tax credit, the main objective of which is to avoid double taxation of foreign source income, tax deferrals have been a source of controversy in some countries since this provision gives home-based multinationals a tax incentive to keep placing their earnings in foreign countries.<sup>4)</sup> Further, the deferral of the home tax on foreign source income is often regarded as a source of violating capital export neutrality since taxation of domestic source income generally cannot be deferred.

### **3. Tax Distortions to International Investment**

There are several channels through which tax rules affect international investment decisions. In addition to tax rules related to foreign source

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4) A recent U.S. tax bill (H.R. 5270: The Foreign Income Tax Rationalization and Simplification Act of 1992) includes a provision which repeals tax deferral.

income as discussed in section 2, tax policies towards local investment will also affect international investment by influencing the amount of creditable foreign taxes and the relative net rates of return in different countries. Tax rules can also influence the financial behavior of multinationals since they can diversify internationally the location of financing as well as investment. While international investment can be undertaken either in the form of individual portfolio investment or corporate direct investment, this section focuses on the incentive effects with respect to multinationals' direct investment mainly because it is the more dominating form of the two alternatives in terms of its presence in the world markets as well as the attention it has received.

#### A. The Effects of Foreign Tax Credits and Tax Deferrals on the Effective Tax Rate on Foreign Source Income

In general, the effective tax rate on foreign source income is influenced by the tax systems in both the firm's home and host countries. Under the territorial approach, the effective tax rate reflects only the host country tax payments. If the host country's effective corporate tax rate and withholding tax rate on dividends are denoted by  $t^*$  and  $w^*$  respectively, then the effective tax rate on repatriated dividends equals  $(t^* + (1-t^*)w^*)$ .<sup>5)</sup>

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5) The analytical part here focuses on dividend repatriation. Other forms of repatriation include interest, royalties, and service fees.

Under the residence approach with foreign tax credit, the total amount of credits and, accordingly, the effective tax rate on foreign source income will be determined by the relative magnitude of foreign and domestic taxes on income: i.e.  $(t^* + (1-t^*)w^*)$  vs.  $t$ , where  $t$  is the home country tax rate. If the firm is in a deficit credit position ( $t^* + (1-t^*)w^* < t$ ), it receives the full credits for the foreign taxes (deficit credit position). As a result, the effective tax rate becomes the home country tax rate  $t$ . If the firm is in an excess credit position ( $t^* + (1-t^*)w^* > t$ ), the amount of foreign tax credits are limited to the home tax ( $t$ ) and the effective tax rate reflects the foreign taxes paid ( $t^* + (1-t^*)w^*$ ).

If withholding taxes are ignored<sup>6)</sup>, the credit status (and the resulting effective tax rate) is determined by the relative magnitude of the home and host country tax rates,  $t$  and  $t^*$ . Due to various local investment incentives in the host country,  $t^*$  is generally lower than the statutory tax rate unless the adverse effects of inflation are very large. On the other hand, home country investment incentives are typically not extended to capital invested abroad<sup>7)</sup> and, therefore,  $t$  is approximately equal to the home country statutory corporate rate.

The effective tax rate on foreign source income can also be affected by the deferral of the home country tax on foreign source income. Suppose

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6) In many cases, the withholding tax rate on corporate equity investment is lowered to about 10% by bilateral tax treaties.

7) In other words, the home country defines taxable foreign-source income based on some approximation to economic income.



that a subsidiary draws transfers from its parent company to finance its marginal investment. If the subsidiary is in a deficit credit position (i.e.  $t > t^*$  ignoring the withholding tax), the firm can lower the effective tax rate on foreign source income to the extent that it can defer home tax payments which are higher than foreign taxes on the same income. In the presence of tax deferrals, the effective tax rate can be expressed as a weighted average of  $t$  and  $t^*$  with weights being the dividend payout ratio (denoted by  $d$ ),  $(1-d)t^* + dt$ .

If the subsidiary becomes mature enough to cover its marginal investment expenditures by retaining its earnings ( $d=0$  at the margin), the deferral benefits will increase to the point where the effective tax rate on foreign investment is  $t^*$ . Note, however, that a subsidiary can lower the effective tax rate on its investment only when it faces higher tax payments in the home country (i.e. a deficit credit position,  $t > t^*$ ). If the firm is in an excess credit position ( $t < t^*$ ), the effective tax rate on foreign source income will become  $t^*$  regardless of the timing of income repatriation. Also, as noted earlier, not every type of foreign source income is eligible for deferral benefits. If a firm is in a deficit credit position and no deferral is allowed (effectively equivalent to the case of ' $d=1$ '), then the effective tax rate is equal to the home country tax rate ( $t$ ).

In summary, if a foreign subsidiary is either in an excess credit position or from a territorial system country, the tax consequence is obvious. When a firm is from a country using the foreign tax credit method and is in a deficit credit position, the effective tax rate can be significantly

influenced by the financing method and the deferral practice.

## B. The Effectiveness of Investment Incentives

One important distinction between a purely domestic firm and a multinational firm is that the latter typically has alternative locations for investment. To the extent that domestic investment and foreign investment are substitutable, the size of international investment will be affected by the relative net profitability in the firm's home and host countries. Given the pretax rates of return, the relative after-tax rates of return in different countries will be determined by statutory tax rates, measures of investment incentives and the adverse effects of inflation due to nominal tax accounting.

Generous depreciation allowances and investment tax credits will induce both domestic and inbound foreign investment to increase by lowering the effective taxation of investment income earned in the country. An increase in domestic investments by domestic and foreign firms may be made at the expense of investments that would have happened elsewhere. However, this "substitution effect" with respect to international location of investment is often misstated in literature and policy debates.

The common notion of tax-induced location choice is based on a comparison of the after-tax rates of return in different places: i.e.  $r(1-t)$  and  $r^*(1-t^*)$ , where  $t$  and  $t^*$  denote the effective tax rate on investment in each location. Thus, given the pretax rates of return, it is argued that the

statutory tax rates and investment incentives in each country will determine the attractiveness of the investment location for international investors.

The main flaw of such conventional wisdom is its failure to recognize the additional layers of taxation which may be imposed upon foreign direct investment, as discussed earlier. When choosing an investment place between the home country and a foreign country, for example, a multinational will compare  $r(1-t)$  with  $r^*(1-t^{fdi})$  rather than  $r(1-t^*)$ , where  $t^{fdi}$  denotes the effective tax rate on foreign direct investment. As discussed earlier,  $t^{fdi}$  is determined by the home country tax treatment of foreign source income as well as host country taxes.

Even under the territorial system, in which the home country does not tax foreign source income,  $t^{fdi}$  can differ from  $t^*$  due to the withholding tax.

As for a multinational firm from a residence system country with a high statutory corporate tax rate ( $t$ ), a change in investment incentives in a low tax host country ( $t^*$ ) may not affect the firm's foreign investment in that country since the effective tax rate on foreign direct investment would remain the same ( $t$ ) as long as this firm remains in a deficit credit position (i.e.  $t$  is larger than  $t^*$  plus any withholding taxes). If  $t$  is smaller than or very close to  $t^*$ , on the other hand, a change in host country taxes may affect the credit position of the firm (e.g. switching from an excess credit to a deficit credit position) and, therefore, the effective tax rate on the firm's foreign investment.

The preceding argument also has a strong implication for the tax

revenue that a host government can collect from foreign investors operating in that country. A reduction in the effective tax rate without accompanying increases in investment volume will result in a decrease in tax revenue. A tax change which would lower tax revenue but induce little new investment is certainly a suboptimal one.

### C. Tax Effects on Financing Decisions

In addition to affecting the real investment decisions of multinationals, taxes may influence the firms' financing decisions. A foreign subsidiary can finance its operations through various sources. It can draw funds either from the parent company in the home country or from local residents. Such external sources of funds are either equity or debt capital. The subsidiary can also retain its own earnings for reinvestment. The reinvestment decision is directly linked to the repatriation of investment income from the subsidiary to the parent. A host country will generally prefer high retention by foreign firms since it implies more capital accumulation and productive activities in the country.

The subsidiary's retention decision will very likely depend on the foreign tax credit status of the firm. As shown earlier, if a multinational is allowed to defer the home tax on its foreign source income and in a deficit credit position, it would lower the effective taxation of foreign investment by using the subsidiary's retained earnings as a source of financing foreign investment.

Tax rules can also affect the debt-equity mix of investment financing. In general, due to the tax deductibility of interest payments, debt financing should be preferred to equity financing as far as taxes are concerned. On the other hand, the perceived bankruptcy and agency costs associated with a high debt-equity ratio will prevent the firm from becoming too highly leveraged.

In the case of multinationals, however, such non-tax factors may be less significant. A multinational may face less risk of default, since it can pool relatively independent risks from its operations in several different countries and so be able to borrow more. In addition, if it can use its combined assets as collateral for loans, regardless of which firm does the borrowing, then it can concentrate its borrowing in the country where the deductions are most valuable. Thus, tax benefits from interest deductions may be a much more important determinant of corporate leverage for a foreign subsidiary than a purely domestic firm. Additionally, in most cases, the withholding taxes on interest are lower than on dividends, which is an additional incentive to borrow abroad.

The tax benefits of a high debt-equity ratio for a foreign subsidiary are also related to the strategic allocation of borrowing between the parent and the subsidiary. Given statutory tax provisions, one way to avoid an excess credit position for the subsidiary is to increase the share of tax deductible expenses (interest or royalties) in its remittances to the parent in order to reduce the amount of creditable foreign taxes.

#### D. Tax Effects on Multinational R&D Decisions

One major reason that countries attempt to induce inbound foreign investment is the potential transfer of advanced technology associated with the investment. Among the various factors which potentially influence the location of multinational R&D, local tax rules related to technological activities have received relatively little attention. Anecdotal evidence suggests that such tax rules may have a greater influence on multinational R&D decisions than generally perceived.

In general, technology-related activities receive favorable tax treatment in most countries. Royalties and license fees as well as R&D expenses are typically deductible from corporate taxable income. An important tax-minimizing strategy for a multinational which has operations in different tax jurisdictions is to shift tax deductible expenses, such as interest and R&D spending, to high-tax countries. For a given amount of deduction, a higher tax rate will generate greater tax relief. For example, in the wake of the Tax Reform Act of 1986 in the United States, which has reduced the corporate tax rate (46% to 34%) and made it more difficult for U.S.-based multinationals to allocate tax-deductible interest expenses among the parent and subsidiaries, many U.S. firms have found it more profitable to generate tax-deductible expenses (especially R&D expenses) in foreign countries with relatively high statutory tax rates and weak regulations with regard to expense allocation.

As in the case of interest expenses, these tax-deduction benefits

associated with R&D expenses and royalty payments are especially important for firms which are in an excess credit position. By increasing tax-deductible remittances in the mix of repatriated income, the subsidiary can effectively reduce creditable foreign tax payments ( $t^*$ ) and excess credits.

#### E. Relative Tax Advantage of a Portfolio vs. Direct Investment

Individual investors in risky corporate capital face strong economic incentives to diversify their holdings not only across firms within their own country but also across firms in other countries. The most commonly discussed method of such international diversification involves investing in multinational firms based in the home country which then invest throughout the world. Foreign direct investment is not the only means through which investors in one country can acquire ownership of equity in another country, however. The obvious alternative is for them simply to purchase shares in foreign equity in the securities market or to buy shares in a mutual fund which invests in foreign equity. These alternatives, known as portfolio investment, face a very different statutory tax treatment than foreign direct investment.

How do the net tax burdens compare on portfolio investments vs. corporate direct investments? Portfolio investment is given an advantage in the tax laws for the following two reasons. First, individuals who invest abroad through multinationals cannot claim a credit for withholding taxes

against their personal tax liabilities, whereas portfolio investors can, giving an advantage to portfolio investment. Second, a multinational in a deficit credit position ( $t > t^* + (1-t^*)w^*$ ) faces at least some domestic corporate taxes on repatriated earnings while there are no such home country surtaxes for portfolio investment income.

On the other hand, there are several factors which affect corporate direct investment in a favorable way. First, direct investment income typically faces lower withholding tax rates than portfolio investment income. Second, corporate investors have a variety of tax arbitrage opportunities such as manipulating transfer prices which are not readily available to portfolio investors.

The relative magnitude of these tax advantages is an empirical question, which will vary by country over time.<sup>8)</sup> In addition, there are many non-tax factors which also affect the relative importance of portfolio vs. corporate investments.

When corporations invest abroad, for example, they acquire both ownership and control over the foreign firms, whereas portfolio investors merely acquire ownership. This makes corporate investments more attractive to the extent to which there are synergy gains from joint operations of the domestic and foreign firms.

In addition, many countries have used some form of capital controls to regulate the international flow of portfolio investment. In developing

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8) See Gordon and Jun (1993) for the empirical estimates.



countries, outbound portfolio investment is often regarded as capital flight. Inbound portfolio investment is typically related to the development of local financial markets. Even among developed countries, capital controls have not been unusual until quite recently.

In general, countries with high pressure from capital flight are not likely to have high tax rates on portfolio investment income. These countries also have a large incentive to impose capital controls. Once capital controls are in place, tax rates may go up. In certain cases, tax rates themselves may be endogenous, responding to the pressure from foreign portfolio investment. Even the timing of changes in tax policy and capital controls can be coordinated in a way to minimize distortions during the transition. If a country wants to relax existing capital controls, it may well consider proper tax changes as well since capital flows will become more sensitive to tax distortions in the absence of capital controls.

Very little is known about the relations among taxes, capital controls and international capital flows. Past studies in this area were mostly concerned with the response of behavior to a given government policy. However, there have been detectable correlations between the change of capital controls and that of related tax policy in many industrial countries during the 1980s. A number of E.C. countries have gradually eliminated capital controls in the past decade in an effort to meet the goal of a free market. During the same period, many of these countries have also reformed their tax systems, especially those provisions concerning international capital flows.

## **4. Implications for Korean Tax Policy**

The optimal tax treatment of foreign investment depends on the goals of the government and the extent to which investors respond to given tax rules. Tax rules which are optimal in a closed-economy setting may well be suboptimal in the presence of internationally mobile capital. The recent trends in worldwide tax reform have reflected the concerns about the efficient allocation of internationally mobile capital, and about the international competition for tax revenues.

As government restrictions on the behavior of foreign investors continue to be lifted in Korea, taxes will play an increasingly important role in affecting price incentives related to the inflow of foreign investment. Since 1984, the Korean government has been taking big steps to liberalize foreign direct investment. Most industries have been opened to foreign investment and various restrictions have been eliminated. During 1984-1988, inbound foreign direct investment more than quadrupled.

In addition, Korea's stock market has recently been opening to outside investors, as highlighted by the fact that foreigners are now allowed to buy Korean shares directly though to a limited degree. By affecting the rate of return on foreign ownership of Korean equity, tax policy could well be a natural and very effective means of influencing the behavior of foreign investors in the process of and after relaxing capital controls.

In the past, tax policy toward foreign investment in Korea was

discussed mostly in the context of special incentives in the tax laws. Foreign direct investment has been substantially regulated through a variety of non-tax guidelines until recently, and the use of tax incentives has not been based on the principle of capital import neutrality. In most cases, foreign investors did not compete with each other and domestic firms on a level playing field. Strict regulations have limited the presence of foreign direct investment to certain targeted areas such as activities conducive to export promotion or technology transfer. The focus of existing tax treaties is also limited to the reduction in withholding taxes on repatriated income and to the exemption from taxation of certain types of investment such as international aircraft and vessel operations.

Many of the existing tax provisions related to foreign investment are either outdated or insufficient in dealing with the increasing presence of foreign capital in Korea. Piecemeal changes of an existing distortion without considering the major factors affecting the behavioral incentives of foreign investors may result in other distortions. Based on the analysis presented in the preceding sections, I outline below some of the basic issues which need to be dealt with in future tax changes.

#### A. Incentives in the Tax Laws

A foreign corporation operating in Korea is subject to tax on its Korean-source income in the same manner as a resident corporation.<sup>9)</sup> The basic corporate tax rates are 20 percent for the first 100 million won and

34 percent on the balance. In addition, there is a resident surtax of 7.5 percent on income tax liability.<sup>10)</sup> Therefore, the top statutory corporate rate is 37 percent. Foreign corporations are also eligible for domestic investment incentives such as tax credits (at the rate of 10-15 percent) for qualifying investments.<sup>11)</sup>

In order to attract foreign investment conducive to economic growth, the Korean government grants various incentives to certain types of foreign investment under the Foreign Capital Inducement Law (FCIL) and the Tax Exemption and Reduction Control Law (TERCL).<sup>12)</sup> Most of

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9) Nonresident corporations without domestic places of business in Korea are generally taxed (through withholding) at flat rates on gross receipts from Korean sources.

A branch of a foreign corporation is subject to corporation taxes on its income generated from Korean sources at the same rate as Korean corporations. Allocation of expenses from the head office may or may not be allowed as deductible expenses of the branch, depending on the reasonableness of the charge and the provisions of tax treaties. However, the remittance of after-tax earnings from a branch to its overseas headoffice does not attract withholding taxes thereon.

10) The previous tax rates, which varied by the type of corporation (such as general corporations, including listed corporations, unlisted large-scale corporations, and nonprofit domestic corporations) were abolished by the 1990 tax revision. The defense surtax was also repealed, effective January 1, 1991.

11) For example, investments in energy saving, pollution control, R&D, vocational training facilities, and employee housing. In addition, companies engaged in certain industries as defined in the Industry Development Law are also eligible for investment tax credits.

12) Taxes on income derived from certain high-technology businesses is 100 percent exempt for the first three years plus the year of registration, and is reduced to 50 percent for an additional two years, in reference to the ratio of stock or shares owned by the foreign investor. In addition, acquisition taxes, property taxes, and the aggregate land tax are reduced by 50 percent throughout the period for which the income tax is exempt or reduced. Also, the related dividend income of the foreign investor is 50 percent exempt from income tax for five years.

Royalties paid under a technical inducement agreement accepted by the government in accordance

theses incentives are concentrated in technology- or export-related activities. Prior to the recent liberalization efforts, such incentives were often coupled with an approval of entrance.

As the Korean government has taken a more neutral stance toward foreign investment in terms of screening and performance requirements, more foreign firms are likely to respond to the price incentives involved in such targeted incentives as well as the general corporate tax system.

### Investment Incentives

Korea is a low tax country by international standards. The statutory corporate tax rate of 37 percent<sup>13)</sup> is lower than that for most industrial

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with the FCIL may be exempt from withholding taxes for five years from the date of acceptance if an application for the tax exemption is approved by the Ministry of Finance. Furthermore, the compensation received by a foreigner working in Korea under such a technology inducement agreement is exempt from income taxes for five years from the date of acceptance.

Under the Tax Exemption and Reduction Control Law (TERCL), the compensation of eligible foreign technicians employed by domestic entities in specified businesses is also exempt from income tax for five years from the date of their entrance into Korea. In addition, a foreign exchange license may be obtained for overseas remittances of management fees under an inducement of technology.

The TERCL provides various incentives to stimulate exports. These include tax deductibility provisions for overseas market development and export losses, special depreciation of certain export-related assets, exemption of export goods from value added taxes, and refunds of customs duties paid for imported raw materials used to manufacture export goods. There are also two tax-free zones where foreign-owned firms can manufacture, assemble or process export products using tariff-free imported raw materials and semi-finished goods.

13) Note that it is the top rate combined with the residence surtax.

countries.<sup>14)</sup> Various tax incentives make the effective tax rate on investments even lower. Given a pretax rate of return, Korea seems to be an attractive location for investment by promising a relatively high net rate of return.

As emphasized in section 3, however, local investment incentives will not necessarily be effective in attracting foreign investment. From the perspective of foreign investors, the total effective taxation of their investment income is determined not just by the Korean taxes they pay but also by their home country's taxes on their Korean source income.

At one extreme, investors from a country with a the territorial system like the Netherlands and France, may find low corporate taxes in Korea to be very attractive since there are no additional home taxes on Korean source income in these countries.

At the other extreme, for investors from a country with a the foreign tax credit system and high statutory tax rates, low Korean taxes may not significantly affect their investment decisions. This is mainly because these firms are very likely to be in a deficit credit position (home tax liability is greater than Korean taxes paid), and the effective tax rate on Korean source income would remain the same at the level of their home country tax liability even when there are changes in their Korean tax liability.

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14) Industrial countries which had higher statutory corporate tax rates (combined federal and local rates) in 1989 include Japan (55%), Canada (44%), France (39%), Germany (56%), Italy (46%), Sweden (52%), Australia (39%) and the U.S. (39%). On the other hand, the U.K. (35%) and the Netherlands (35%), the two major direct investors in the world markets, had lower statutory corporate tax rates than Korea in 1989.

Although many industrial countries have cut their corporate tax rates during the past decade, most industrial countries still have higher statutory corporate rates than Korea. Further, since home country investment incentives are typically not extended to foreign source income, a firm's credit position will be approximately determined by the relative magnitude of its home country statutory rate vs. the Korean effective tax rates. Accordingly, most foreign firms operating in Korea will likely be in a deficit credit position.<sup>15)</sup>

For foreign firms in a deficit credit position, their Korean operations do not pose the problem of double taxation (no excess credits), which is certainly a favorable factor in attracting foreign investment. However, the overall effects of a change in Korean investment incentives on inbound foreign investment may not be as strong as conventional wisdom predicts and will likely be very uneven among foreign investors depending on their nationality and initial tax status.

### R&D Incentives

There is no shortage of explanations as to how a multinational chooses the location of technological activities. While tax rules have received only very sparse attention in this area, they may play a much more

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15) Thus, investors from a country whose statutory rate is lower than that for Korea can still be in a deficit credit position since the Korean effective tax rate is much lower than its statutory rate. See sections 2 and 3 for a detailed discussion of the tax credit position.

important role in determining multinationals' technology decisions than generally perceived.

As stressed in section 3, an important tax-minimizing strategy for a multinational which has operations in different tax jurisdictions is to shift tax deductible expenses, such as interest and R&D spending, to high-tax countries. For a given amount of deduction, a higher tax rate will generate greater tax relief. As in the case of interest expenses, these tax-deduction benefits associated with R&D expenses and royalty payments are especially important for firms which are in an excess credit position. By increasing tax-deductible remittances in the mix of income repatriation, the subsidiary can reduce creditable foreign tax payments and, therefore, excess credits.

In general, a global tax-minimizing multinational would call for a strategy that would generate more taxable profits in a low effective tax country whereas generate more tax-deductible expenses in a high statutory tax country. In this regard, Korea is not an attractive location to generate tax-deductible R&D expenses. In addition, most foreign investors operating in Korea will likely be in a deficit credit position. These firms will have less incentive to increase tax-deductible remittances like royalties than firms in an excess credit position.

Contrary to the case of investment incentives, therefore, extra local R&D incentives may play an important role in attracting multinational R&D. There has been debate about whether the Korean government has provided overly generous tax concessions to foreign firms. For some firms,



the incentives existing within the basic tax system alone would be large enough to bring technology-related activities to Korea. However, for a significant portion of foreign firms in Korea, extra incentives may be necessary and effective in order to increase their technology-related activities in Korea.

## B. Tax Treaties

In certain cases, a bilateral tax treaty may override domestic tax rules related to capital flows between the treaty partners. In general, bilateral tax treaties might be seen as benefiting the treaty countries by encouraging the free flow of capital between them, but these countries may lose some tax revenues. The benefits from treaties might be uneven among countries, especially between developed and developing countries since the direction of capital flows is usually one way. In certain cases, a treaty might simply become a vehicle for shifting tax revenues from one country to the other without changing much of the tax burden on investors.

The benefits investors receive from a treaty might also be uneven as a result of their differing initial tax status. As in the case of local investment incentives, an investor in a deficit credit position may not benefit from a treaty reduction in foreign tax since the home tax liability simply replaces the reduced foreign tax liability. In the case of investors with excess credits, on the other hand, the tax benefits from treaties directly accrue to the taxpayer. Many foreign investors operating in Korea

are likely to be in a deficit credit position and, therefore, may not benefit much from treaties between Korea and their home countries.

Although Korea has concluded bilateral tax treaties with about 30 countries, the focus has been limited to a reduction in withholding taxes on repatriated income and to an exemption from taxation of certain types of investment such as international aircraft and vessel operations. Note, however, that the main tax obstacle to investing in Korea is not that Korean taxes are high (excess credits or double taxation) but that major investors' home taxes are high (deficit credits). A treaty which completely exempts foreign source income from home-country taxation between treaty partners will be most desirable from the perspective of Korea since in that process Korea loses little (tax revenue) and gains much (inbound investment).

The effectiveness of investment incentives can be enhanced if a treaty includes a tax sparing provision. The concept of tax sparing is that the home country will grant a phantom tax credit with respect to foreign source income that has not in fact been taxed in the host country because of a tax holiday or other incentive arrangements. In this case, the effective tax rate on foreign source income may be more readily affected by investment incentive changes in the host country. Although granting tax-sparing credits is consistent with the exemption rules of territorial system countries, many residence system countries also grant tax-sparing credits to certain developing countries. The United States is the only major developed country that does not grant tax sparing credits to developing

countries.

The treaties Korea has negotiated generally follow the Model Treaty of the OECD. The OECD and the United Nations have drawn up model tax treaties as a starting point for negotiations between their member countries. The OECD model, first published in 1963 and most recently updated in 1992, has often been influenced by the views of the member countries. The U.N. model, published in 1980, focuses on the negotiations between developed and developing countries.

Bilateral tax treaties will likely play an increasingly important role in Korea's policy toward international investment. Policy issues related to foreign investment cannot be adequately addressed within the framework of the basic tax systems. In addition, targeted incentives may not necessarily have the desirable effects for the reasons elaborated above. Accordingly, there may arise a need to address country-specific issues in the framework of a bilateral treaty. As explained above, however, tax treaties can also be ineffective in inducing desirable behavioral changes by foreign investors.

In negotiating a treaty, the Korean government does not need to stick to a particular model treaty. Individual countries' preferred tax treaty policies may differ depending on their internal tax laws and depending on the balance of investment and trade flows between them and their potential treaty partners. In certain cases, the U.N. model or a hybrid model may be a better indicator of negotiations. For example, when Korea negotiates a treaty with a developing country, no existing model treaties

can be a good example. When Korea negotiates a treaty with major investing countries, tax sparing can be a very important benefit for Korea.

### C. Tax Policy Concerning the Form of Foreign Investment

Since foreign investors can now anticipate increasing flexibility in the way they invest in Korean firms, one important question facing the Korean government is whether to discriminate among the alternative forms of capital flows in terms of tax policy and capital controls.

Especially important in this regard is the treatment of portfolio investment in the tax laws. To the extent that both direct investment and portfolio investment are essentially cross-border financial transactions, the principles of tax neutrality as discussed in section 1 will be a starting point in designing an optimal tax policy. Note that portfolio investment is much more sensitive to tax arbitrage opportunities.

The experience in developed countries shows that tax effects on portfolio investment and direct investment can be quite different partly because these two types of investment receive different statutory tax treatment and partly because the incentives behind each type are not necessarily the same.

Another related question is the tax treatment of different sources of financing foreign investment. A foreign operation can be financed through internal funds or by resorting to external financing. The decision of debt vs. equity is also important because of its implications for tax arbitrage

opportunities.

Once the Korean government chooses to influence the relative importance of different forms of foreign investment, the respective incentives associated with each form of investment should be carefully evaluated to design optimal policy measures. Since foreign portfolio investment is still in an incipient stage, more research is urgent in this area.

#### D. Summary of Policy Implications

In designing and reforming tax incentives related to foreign investment in Korea, the implications of the basic corporate tax structures both in Korea and investor countries for the behavioral incentives for foreign firms should be adequately understood first. Special subsidies or tax treaties, designed without taking into account the existing incentives, will likely result in unfair or inefficient outcomes.

This paper disputes several popular beliefs held about tax policy toward foreign investment. Some of the main policy implications are summarized below:

1. Investment incentives in the tax laws may play a less important role in increasing overall foreign investment than generally perceived, as many foreign firms operating in Korea are likely to be in a deficit credit position in which changes in Korean taxes may not influence the total effective taxation of their investment income.

2. In contrast, R&D incentives may play a more important role in attracting multinational R&D than generally perceived since the incentive to generate tax-deductible expenses in Korea is very weak. First, a global tax-minimizing multinational would call for a strategy that would generate more taxable profits in a low effective tax country like Korea whereas generate more tax-deductible expenses in a high statutory tax country. Second, most foreign investors operating in Korea will likely be in a deficit credit position. These firms will have less incentive to increase tax-deductible remittances like royalties than the firms in an excess credit position. Hence, the existing R&D incentives may need to be maintained or even increased to attract multinational R&D.

3. Since special tax incentives are most effective for firms whose total effective taxation of Korean source income can be affected by Korean taxes (such as territorial system countries, low-tax residence system countries and countries providing tax sparing credits), it may be more efficient to discriminate among foreign investors depending on their nationality. One way to do that is the use of bilateral tax treaties.

4. Tax treaties which simply eliminate double taxation or lower withholding taxes may not be adequate in attracting foreign investment since the main tax obstacle to investing in Korea is not that Korean taxes are high (excess credits or double taxation) but that major investors' home taxes are high (deficit credits). A treaty which completely exempts

foreign source income from home-country taxation between treaty partners will be most desirable from the perspective of Korea since, in that process, Korea loses little (tax revenue) and gains much (more inbound investment).

5. Bilateral treaty negotiations need not always follow a model treaty such as the OECD model. A hybrid of existing models or region-specific models (e.g. distinguishing between developing and developed countries) needs to be developed depending on the balance of bilateral investment flows and the internal tax laws of treaty partners.

6. Any loan-guarantee policy designed to reduce bankruptcy or agency costs associated with high leverage should discriminate against foreign firms since multinationals are generally less susceptible to such costs than domestic firms.

7. Since foreign investors can now anticipate increasing flexibility in the way they invest in Korean firms, one important question facing the Korean government is whether to discriminate between foreign direct investment and portfolio investment in terms of tax policy and capital controls. More research is necessary on this subject.

8. Overall, more research needs to be done in this area. The relevance to actual policy making of the questions and claims made in this paper

essentially depends on the empirical magnitude of relevant behavioral incentives. The understanding of foreign tax systems is especially important since the effects of a given Korean tax policy may not be the same among foreign investors of different nationalities. As in other countries, a specific tax bill may contain a provision which requires the Ministry of Finance to conduct studies on the subject.



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