The Changing Structure of Tax Policies for Foreign Direct Investment in Developing Countries

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1. Introduction

Developing countries keen to attract foreign direct investment (FDI) have typically used various preferential tax policies to be competitive. Tax holidays have been especially prevalent in the 1980s (Mintz [1990] and Shah [1995]) since they provide new foreign investors a low-tax regime for a qualifying period on the presumption that a company needs time to establish good levels of profitability.

With increased globalization, many developing countries have been incorporating new tax policies for multinationals to establish headquarter, financial and trading operations in their jurisdictions. To attract FDI, while preserving revenue by countering efforts by multinationals to shift profits from high to low tax jurisdictions, many

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countries have chosen low corporate income tax rates, low or no withholding taxes on income payments to non-residents, or low rates applied to income earned by holding companies. These policies seem to have become common in the past ten years compared to traditional tax holidays incentives.

Picking the top 15 developing countries in terms of the FDI as a proportion of GDP for the 1997-2001 years, I examine their tax regimes to find that special "financing"[1] regimes are commonplace or, alternatively, governments have dramatically lowered general corporate income and withholding tax rates to levels well below those typically found generally. The incentives seem to work. Leaving aside some countries with large natural resources (and therefore high rates of FDI), many developing countries with high levels of inbound investment and, in some instances relatively robust outbound investment rates, have attractive tax regimes with low rates, especially for finance or trading operations.

From an individual country's perspective, the new tax policy regimes for FDI are less distorting that previous ones, especially compared to tax holidays, which are becoming somewhat less popular in some countries. Certainly, only a few countries with the most significant levels of FDI use tax holidays – instead almost half have "financial" regimes that are highly attractive for multinational investment.

On the other hand, most countries with high degrees of FDI continue to rely on some fast writeoffs for capital costs such as accelerated depreciation and investment tax credits, even if corporate income tax rates are kept low.

Below, I shall first review the tax regimes of various developing countries with high levels of investment. I then provide a simple model to explain how income-shifting – the mobility of profits from high to low tax countries – has led to lower corporate income tax rates and less reliance on more traditional incentives. Conclusions follow.

2. The Changing Structure of Incentives for FDI

Countries hoping to attract FDI have typically used tax policies. FDI is beneficial to capital importing countries by increasing the both the supply of capital as well as

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[1] Financing regimes refer more generally to tax policies that apply low rates of corporate tax on international banking centres, holding companies, headquarter operations and trading income.

introducing improved management and technology transferred from abroad. As studies have shown, several factors influence FDI, including the size of the market, exchange rate controls, infrastructure, the quality of labour, political stability, and taxation. Common tax policies used to attract FDI include corporate income tax reductions, tax holidays, accelerated depreciation (including investment allowances), investment tax credits and preferential treatment of income such as low taxes on earnings from exports. De Mooij and Ederveen [2003] suggest, using meta-analysis, that the elasticity of FDI with respect to the host country tax rate is 3.3. However, most studies only take into account only certain tax incentives such as accelerated depreciation and investment tax credits and rarely examine the impact of tax holidays and certain other incentives that are much more difficult to model and quantify.[2]

To gain some understanding of existing tax regimes used to attract FDI, I analyze those countries that have been most successful in attracting FDI as measured as a proportion of GDP (taken for the years 1997-2002). Table 1 provides information on 15 countries with respect to their world rank among both developed and developing countries in attracting FDI as well as exporting FDI to other jurisdictions. Tax variables are also included such the corporate income tax rate, common withholding tax rates on dividends and interest (especially by treaty), the availability of a special financing regime to attract holding companies in finance and services, tax holidays, capital cost incentives and foreign exchange controls.

As is shown in Table 1, the country with the greatest level of both inbound and outbound FDI – each almost 20% of GDP for 1997-2002 – is Hong Kong (which is no longer a developing country anymore). For many years, it has followed tax policies that tend to encourage holding companies to locate in Hong Kong to serve the Asian market (next to Tokyo, Hong Kong has the largest stock market in Asia). The financial sector, now almost one-half of GDP (Mintz and Richardson [2001]), has been encouraged by tax policies that keep corporate income tax rates (applied to Hong Kong source income only) below international norms as well as avoid levying withholding taxes on payments to non-residents. While Hong Kong has no special financing regime for financial or holding

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[2] Mintz and Tsiopoulos [1997] found that tax holidays seem to have little effect on foreign direct investment for Mediterranean countries.

companies, its tax system on the whole has encouraged financial businesses to locate there. Hong Kong steadfastly avoids policies that are targeted to special business activities although it does provide expensing for investments in machinery for many industries.

Hong Kong is an example of what I call a conduit country (Mintz [2004]) with high levels of both inbound and outbound capital flows. Other countries can also be characterized as conduit countries including Belgium-Luxembourg, Netherlands, several Scandinavian countries, Ireland and the United Kingdom. These countries have tax structures that are quite common – relatively low corporate income taxes, often below a 20% rate (the average is about 31% among industrialized and developing economies (KPMG [2004]), low or no withholding taxes with important treaty partners, exemption of foreign source income earned by affiliates operating abroad and little or no capital gains taxes. Conduit countries are able to attract high levels of FDI because of their low tax rate regimes as well as the absence of foreign exchange controls.

Hong Kong, of course, is not the only successful developing country that has attracted FDI as shown in Table 1. Some countries like Azerbaijan, Bolivia, Kazakhstan, Bahrain and, to a lesser extent, Chile[3], attract FDI to exploit rich natural resources that are a main source of income. Corporate income tax rates and withholding taxes earned from oil or mining production tend to be high and the governments rely less on special preferences like tax holidays and special financing regimes.

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[3] Chile has a special high tax regime for natural resource industries. See Ernst and Young [2004]. Singapore has a low tax rate of 10% on foreign-source income earned by resident companies.

Table 1: Top 15 Developing Countries Ranked by Sum of Outbound and Inbound

Foreign Direct Investment as a Percentage of GDP (1997-2001)

Developing Country	Rank[1]	Outbound FDI as % of GDP	Inbound FDI as % of GDP	CIT Rate %	Non-resident withholding tax (%)[2]	Special Financing Regime[3]	Tax Holiday	Capital Cost Write Offs[4]	Foreign Exchange Controls
Hong Kong	2	19.7	20.9	17.5	none	none	none	Exp	none
Azerbaijan	6	0.0	17.9	25	10	none	none	Acc	yes
Singapore	9	5.4	9.8	22	Div 0 Int 15	yes	yes (10 yrs)	Acc	none
Malta	12	0.1	12.4	35	None	yes	no	ITC	yes
Chile	13	3.2	7.8	17	Div 18 Int 35	yes	no	Acc	partial
Estonia	14	1.9	8.2	0	Div 0/26[5] Int 35	n/a	none	none	no
Bolivia	15	0.0	9.9	25/50	12.5	none	none	none	no
Seychelles	18	1.3	7.8	40	Div 0/15 Int 0/10	none	none	PR, Acc	yes
Macedonia	19	0.0	8.9	15	Div 0/15 Int 0/10	no	Yes[6] (3 yrs)	Acc	yes
Aruba	21	0.1	8.4	35	Div 5 Int 0	yes	none	none	yes
Kazakhstan	23	0.0	8.0	30	15	none	none	Acc	yes
Czech Republic	24	0.1	7.8	28	Div 5/15 Int 0/15	none	yes (10 yrs)	Acc	none
Jamaica	25	1.1	5.8	33.3	Div 0/15 Int 12.5/15	no (except trading)	yes (5-15 yrs)	Acc	none
Malaysia	27	2.0	4.6	28	Div 0 Int. 10/15	yes	yes (10 yrs)	Acc	yes
Bahrain	28	1.6	4.9	0	0 (46 for oil income)	none	none	none	none

Source: International Monetary Fund, World Bank, and Ernst and Young [2004].
Notes:
1. Rank is among all developed and developing economies. Of top 10, developed economies include Belgium-Luxembourg (1), Netherlands (3), Sweden (4), Ireland (5), Denmark (7), United Kingdom (8), Finland (10).
2. Withholding taxes apply to both dividends and interest payment unless otherwise noted.
3. Either special regime or much lower tax rate on financial income, headquarter operations, holding companies.
4. Exp: Expensing for qualifying assets.
   Acc: Accelerated depreciation or investment allowance
   ITC: Investment tax credits, including research and development.
   PR: Preferential corporate tax rates for some activities, including export activities.
5. Estonia does not tax income but taxes certain payments made by companies. Dividends are exempt from the 26% tax rate if payments are made to non-residents with at least 20% participation in the Estonian establishment and do not reside in a low tax country.
6. Macedonia's "tax holidays" are generally similar to investment incentives in that income that is exempt is limited to the investments made by the firm.

Several countries besides Hong Kong in Table 1, however, have established financing regime tax policies to attract foreign investment. Singapore, Chile, Malta and Malaysia have created special regimes for financial income or holding companies. In some cases, like Estonia, Macedonia and Bahrain, the low or no corporate income taxes as well as zero withholding taxes encourages FDI as well. Those countries with the most significant outbound investment – Singapore, Chile and Malaysia – have clearly used their special financing regimes to encourage holding and financial companies. However, in the case of Malaysia, stringent currency controls limit its ability to attract FDI.

What is striking about these high-FDI countries is that tax holidays are limited to only one-third of the cases – Singapore, Macedonia[4], Czech Republic, Jamaica and Malaysia, only one-third of the countries involved.[5] Tax holidays, so common among developing countries, are not particularly important to many high-FDI countries. However, the holidays have been important for financial companies operating in some jurisdictions like Singapore.

Most of the high-FDI countries use accelerated depreciation, investment tax credits and other preferential treatment for capital investments. Estonia and Bahrain does not provide fast writeoffs for capital investments since they have no general corporate income tax. Bolivia and Aruba also do not provide incentives for capital investment.

To sum up, the fifteen high-FDI countries have either corporate income tax rates below 20% or special financing regimes (ten cases), withholding taxes below 5% with major partners (nine cases), tax holidays (five cases) and fast writeoffs for capital costs (11 cases).

3. <u>Why Tax Incentives are being restructured?</u>

Tax incentives are intended to increase capital investment and generate economic growth. However, their utility is limited by their effectiveness, complexity and fiscal cost. To capture the notion that tax reforms may be composed of rate reductions rather than accelerated depreciation, investment allowances and tax credits, I will introduce a

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[4] Macedonia tax holidays follow a pattern established by Bulgaria recently in exempting profits up to amounts invested in capital for a limited number of years. In other words, the incentive is more like an investment allowance than a tax holiday.
[5] Aruba had tax holidays and offshore financing regimes that were recently abolished, January 1, 2003. The Aruba Exempt Company (AVV) does not pay profit tax.

simple model to analyze the benefits of each type of reform. Tax holidays are left to a discussion below since they are more complicated to consider than simple rate reductions.

A Simple Income-Shifting Model with Capital Investment

Suppose an economy is composed of two sectors – domestic firms with capital investment equal to k, financed by a fixed supply of savings provided by entrepreneurs, and foreign multinationals with capital investment equal to K. Output produced by a domestic firm is f[k] and by a subsidiary of the multinational F[K], both strictly concave production functions (although given the fixity of k, output in the domestic sector is also fixed).

The multinational finances its capital investments in the capital importing country with offshore debt, D, and equity equal to K-D. In this model, financial transactions are used to shift income out of the jurisdiction, whereby the debt owners (which could be the multinational) are assumed not to pay tax on offshore debt interest that is provided to the subsidiary.[6] The international cost of equity finance is r and the cost of debt finance is i= r+c[D]/D, where c is the total attendant agency and bankruptcy cost of debt provided by the offshore lender (c is a function that is strictly convex in D).

The government taxes both domestic and multinational companies at the same rate, t, on profits net of debt financing costs (domestic firms have no debt finance by assumption). An investment tax credit equal to the rate x is provided to both domestic and multinational firms. Note it is assumed that the capital importer cannot discriminate between domestic and multinational firms under tax policy because treaties prevent it (or alternatively it is not practical to do so in real life).

Domestic and foreign multinational after-tax profits are equal to the following respectively:

(1) $\Pi_d = (1-t)f[k] + xk$

(2) $\Pi_f = (1-t)\{F[K]-iD) + xK$

It is assumed that $0 \leq D \leq K$ due to financial constraints.

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[6] In principle, the offshore lender could be owned by the multinational. Bankruptcy and agency costs remain relevant to operations.

The optimal capital and debt decisions for the multinational are determined as follows (the domestic firm's investment is fixed by supply):

(3) $F'(1-t) = r$ (investment in K)

(4) $(r+c')(1-t) = r$ (debt decision)

Note for an interior decision for debt, we require that the tax benefit of interest deductibility to be offset by the marginal resource cost of debt finance. We also note the following comparative static effects:

(5) $\partial K/\partial t = F'/(1-t)F'' <0$ and $\partial K/\partial x = -1/(1-t)F'' >0$

(6) $\partial D/\partial t = i/c'' > 0$ and $\partial D\partial/x = 0$

The responsiveness of investment and debt finance depends on the respective second derivatives of the production and debt cost functions as expected. In Mintz and Smart [2004], multinationals can finance capital internally without cost, thereby implying that $c''=0$ so that the multinational would be either fully debt or equity financed.

The government's revenues from both types of firms is the following:

(7) $T = t\{f[k] + F[K] - iD\} - x(k+K)$

The government is assumed to maximize the weighted average of domestic-owned after-tax profits and tax revenues whereby the latter is multiplied by the (fixed) shadow cost of public funds, λ (>1):

(8) $W = \Pi_d + \lambda T$

The government maximizes welfare choosing t and x. Using the first-order conditions (3 and 4), we obtain the following optimal solutions for the profit tax rate and investment tax credit respectively:

(9) $t = \{(1-1/\lambda)f+F-rD-c\}/\{-(F'+x)\partial K/\partial t +(r+c')\partial D/\partial t\} > 0$

(10) $x = \{(1-1/\lambda)k+K\}/\{tF'-1\}\partial K/\partial x < 0$ if $tF' < 1$

The optimal profit rate is positive: the numerator is positive so long as profits are positive and the denominator is also positive given that capital demand declines and leverage rises with profit taxation as shown in the numerator. Clearly, the optimal tax rate is lower the more sensitive the tax base – capital investment and income-shifting through debt responds greater to an increase in the profit rate (the base shrinks with a higher tax rate).

The optimal investment tax credit is negative if the cost of the credit is more than any profits taxes generated by additional capital investment (otherwise the credit would be positive if the converse holds). In other words, the investment tax credit, when negative, is a tax on capital assets.

Optimal tax rates therefore will depend on the elasticity of the tax bases. If debt finance is very sensitive to tax changes (as determined by c"), then the optimal profit tax rate is low due to income-shifting. It would further imply, therefore, that the government would rely on capital taxes to generate revenues from businesses.[7] If capital investment is very sensitive to changes in tax rates, then both the profit tax rate and investment tax credit rate (capital tax rate) will be low.

Note further that the greater the importance of the domestic sector (as indicated by f and k), the higher will be the profit tax rate and investment tax credit.

To sum up, the above simple model comes to the following conclusions:

- Greater income-shifting by multinationals through debt finance pushes corporate tax rate down and reduces the incentive to use investment tax credits (or increase the incentive to use capital taxes).

- Countries with a small multinational sector will be less concerned with income-shifting and thereby less willing to cut corporate taxes.

Some recent evidence has been provided suggesting that income-shifting (whether through financial transactions or transfer pricing), has become increasingly important (Jog and Tang [2001], Mintz and Smart [2004], Grubert and Slemrod [1998] and Hines [1999] and Bartelsman and Beetsma [2000]). Given the significant increase in FDI, particular in the late 1990s, one can understand why governments have become more concerned about income-shifting in general in designing their corporate tax systems.

What About Tax Holidays

As discussed above, countries with high levels of FDI do not use tax holidays – yet with a lower profit tax rate for qualifying years at the inception of the project, it

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[7] Capital taxes, however, can be avoided by leasing arrangements if the tax is applied only assets owned by companies operating in the jurisdiction.

would seem the tax holiday would be a popular measure to encourage FDI as well as combat income-shifting since tax rates are kept low.

As sensible this might be – and some countries like Singapore and Malaysia cling to tax holidays – the tax holiday is inferior as an incentive compared to low corporate tax rate regimes provided on a permanent basis. There are several reasons for this as reviewed in Mintz [1990].

First, tax holidays are only given to some firms – new ones entering a market – rather than all companies operating in the jurisdictions. The tax holidays then create a competitive advantage to new companies to the detriment of existing companies that have taken a longer run view of the economy. Governments are pressured to provide other incentives so that non-holiday companies can compete with tax holiday firms. The corporate tax system develops a "Swiss cheese" look over time with more distortions and complexities accompanied by eroding tax revenues. Given the importance of income-shifting, it would seem that a broad-based approach to corporate rate reductions would make more sense.

Second, identifying "new" from older companies can be a mug's game. Companies may close down at the end of the holiday to mysteriously appear as new companies to qualify for new holidays. This leads to not only extending holidays for longer periods of time through churning but heightens the distortions arising from competitive advantages given to holiday companies.

Third, the revenue cost of holidays can be quite substantial without necessarily providing substantial incentives for business investment. If companies must write down capital assets for depreciation purposes and are unable to claim interest deductions, unadjusted for inflation, during the holiday, they could pay quite significant taxes on income earned after a holiday is completed. In the case of Bangladesh and Malaysia in the late 1980s, for example, tax holiday effective tax rates on investments were even above the effective tax rates in the post-holiday period (Mintz [1990]). Further, with debt financing and transfer pricing, companies could shift income from non-holiday to associated holiday companies to shelter income from taxation. The holiday is blunted in its effect by such tax avoidance practices.

Given these problems with tax holidays, it would seem natural for governments to seek other low-rate incentives to encourage foreign direct investment. Some countries, like Bulgaria, Hungary (in the early 1990s) and Macedonia have actually abandoned tax holidays in favour of low corporate tax rate regimes.

4. Conclusions

Countries receiving substantial foreign direct investment are relying less on tax holidays than on low corporate tax rate regimes. Although it is still popular to provide accelerated depreciation, investment allowances or other incentives for capital investments, the most innovative incentives in the 1990s have been to lower corporate income tax rates sharply.

Theoretically, sharply reduced corporate tax rates would be predicted from a model in which corporate profit tax bases are more elastic with respect to changes in corporate tax rates. Businesses are able to shift profits easily from high-tax to low-tax jurisdictions without moving people or machines. As shown theoretically, if anything, incentives directed at capital costs would be reduced, or alternatively, countries would rely on asset-based taxes to raise revenues if such taxes are less susceptible to tax avoidance. Empirical work is needed to analyse in more detail the effect of tax incentives on foreign direct investment.

The implications of the changing structure of tax incentives for FDI are important to both domestic and international tax policy.

Domestic policies would need to be adjusted when business tax rates are kept low, in order to ensure that corporate and personal taxes on income are integrated. When the corporate income tax rate is brought below the top personal tax rate, dividend and capital gains taxes paid by individuals are preferentially set so that individuals pay the same tax (corporate and personal) regardless of whether the income derived is in the form of dividends, capital gains or interest and other payments that are deductible from corporate income but fully taxed at the individual level.

On the other hand, international tax policies for a country will be significantly influenced by new low-corporate tax regimes, specifically with respect to the incentive to undertake cross-border investments rather than investing domestically. As discussed in

Mintz [2004], the effect of special financing regimes is to provide opportunities for multinationals to invest in foreign jurisdictions with tax-efficient financing compared to domestic companies.   Too much cross-border investment is encouraged since international tax regimes are not neutral between domestic and cross-border investments. This creates some difficult issues for international tax co-ordination, which is a subject going beyond the thrust of this paper.

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