

CHAPTER I

INTRODUCTION



Significance of the Study

A wide variety of investment incentives are being made available in many countries - both developed and developing - to provide stimulus to and/or to attract investment. A recent survey by Kopits shows that OECD countries have been increasing their use of tax incentives in the form of accelerated depreciation allowances, investment tax credits and cash grants to encourage investment.¹ For most developing countries, the provision of investment incentives has been increasingly vital, among other purposes, for the reinforcement of their economic development objectives and the competing for foreign investment.² Since the beginning of the last two decades, many instruments conventionally referred to as investment incentives have been actively adopted by governments of these countries to attract foreign investment to help speed up their economic development, and to channel investment into designated development regions

¹
George F. Kopits, "Industrial Countries Increase Their Use of Tax Incentives to Stimulate Investment," IMF Survey (April 20, 1981), pp.118-119.

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There are four main purposes for the use of investment incentives : to compensate for market imperfections; to reinforce development objectives; to provide stimulus to investment; and to compete for foreign investment.

or areas of high economic priority of the countries.³ Foreign direct investment provides a supplementary source of capital fund which makes it possible for developing host countries to meet their set investment goals and to accelerate growth beyond the limit set by domestic savings. The purpose of attracting foreign investment has been clearly demonstrated as a recent study of the investment strategies of multinational corporations conducted by Guisinger confirmed that in the majority of cases examined, host country incentives were the determining factor in the location decision.⁴

Being developing countries, Malaysia, Singapore and Thailand, all of which are among the five founding members of the Association of South East Asian Nations (ASEAN), share a tradition of elaborate tax incentive programs for encouraging investment. The tax incentives for investment take various forms, such as accelerated depreciation, investment tax credits, expansion reinvestment allowances, and income tax holidays during which firms classified as "pioneers" are entitled to partial or full exemption from corporate income taxes. The array of tax incentives is often provided to promoted enterprises through investment promotion law of each country which specifies the list of activities to be eligible for promotion together with the characteristics and extent

³ Although foreign direct investment is principally made by multinational enterprises, no distinction is made under this study between investment made by MNEs and that made by international firms.

⁴ Stephen E. Guisinger, "Investment Incentives and Performance Requirements : A Comparative Analysis of Country Foreign Investment Strategies," World Bank Working Paper (1983).

of incentives to be granted. This results in differential incentives applicable to enterprises that receive promotion and those that do not within the same country. When the levels of incentives are compared across countries, the available incentives should not also be evenly spread across countries.

The aim of the present study is to measure the combined impact of tax incentives and income tax regulations on the incentives to invest in business fixed capital in the three countries. The approach followed in this study is to consider the tax consequences of a hypothetical \$ 1 investment project, and focuses on the marginal investment decision of firms. The extent to which the investment incentives affect the cost of capital can be measured by the 'rental cost of capital' index. The measure was developed by Bond and Guisinger,⁵ and extends earlier work by Kopits,⁶ Hufbauer,⁷ and Guisinger and Kazi.⁸ The rental cost of capital index provides a way of incorporating various types of investment

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Eric W. Bond and Stephen E. Guisinger, "The Measurement of Investment Incentives Using the Rental Cost of Capital Model," Department of Economics Working Paper, The Pennsylvania State University (1983).

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George F. Kopits, "International Comparison of Tax Depreciation Practices," OECD Report (1975).

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Gary Hufbauer, "The Taxation of Export Profits," National Tax Journal 28 (March 1975) : 43-59.

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Stephen E. Guisinger and S. Kazi, "The Rental Cost of Capital for the Manufacturing Sector 1959-60 to 1970-71," Pakistan Development Review (Winter 1978) : 385-407.

incentives into a single figure indicating the combined effect of these incentives on the cost of capital services to the firm. The rental cost measure can also be used to quantify the benefits of different types of incentive packages, and to compare the attractiveness of the level of incentives across countries. Thus, the measure can be useful to the multinational enterprise or international firm and policy-makers in host countries.

The rental cost of capital measure is employed in this study to measure the effect of investment incentives on the cost of capital services to firms locating in Malaysia, Singapore and Thailand, and also to compare the attractiveness of investment incentive programs among these countries. The three countries were chosen because they include examples of two developing countries in the ASEAN region, which are considered to have strong growth potential compared to other developing countries with comparable development process, and the other city state which has, since the last decade, emerged as a newly industrializing country (NIC). These countries have adopted relatively liberal policies towards capital and technology flows, and have also been among the most rapidly growing regional recipients of foreign direct investment during the last decade. Moreover, they have to a certain extent to compete for foreign investment with other members of ASEAN and also with developing countries in other regions of the world.

Objective of the Study

The objectives of the study are as follows :

- 1) To measure the extent to which investment incentives in each individual country affect the cost of capital services to promoted firms locating there in relation to firms that receive generally (universally) available incentives, and to compare the degree of which various

incentive packages can alter the allocation of capital between industries or between regions within the same country.

2) To make cross-country comparisons of capital cost indexes to show the attractiveness of the incentive packages in Malaysia, Singapore and Thailand.

3) To review unique features of the tax and incentive regime in each country, with special attention given to the incentive packages in the other two countries under study other than Thailand so that this may provide the basis for formulating alternative regimes for examination in the Thai context.

Scope of the Study

In accordance with the national growth and development objectives and the emerging economic trends, governments of the three countries under study have, in encouraging private investment, announced promotion policies for investments and listed activities to be eligible for promotion; these include, for example, investment projects engaging in production in areas of high economic priority (such as export-oriented industries, resource-based industries and labour-intensive industries) and regional diversification. Since each of the countries under study has at least, in addition to generally available incentives, one type of special incentive program, measurement of the effect of incentives will take two lines of calculation ;

i) Calculation of the rental cost index for each individual country under different incentive packages as prescribed by investment promotion law of each country. Here a distinction is drawn between universal incentives, which are those available to all firms, and special incentives, which are available to firms that meet certain requirements. Since each incentive package involves different types and levels of incentives, the resultant rental cost of capital should, therefore,

vary between regions or industries within the same country, depending on the nature and extent of incentives provided.

ii) Calculation of representative rental cost indexes for each country to be used for cross-country comparison purposes. The calculated representative rental cost of capital are also expected to differ across countries. Countries which provide greater incentives (net of any disincentives) should have lower rental cost.

The hypothetical investment project on which the calculation is based is the same in all countries. It is assumed to consist of two depreciable assets, namely equipment and structures, of which 60 per cent is equipment and 40 per cent structures. Unless specified by depreciation regulations in each country, a useful life of 10 years for equipment and 20 years for structures will be used in the calculation of depreciation allowances. The relevant discount rate used for depreciation allowances is a nominal rate of 15 per cent; also, a real rate of interest of 10 per cent will be assumed for all countries.⁹

Throughout the study we shall assume a representative firm in each country to be an ongoing firm that is able to use its tax credits to reduce taxable income at the time the investment is made - in other words, the firm remains profitable in the early years of operation so that the tax benefits can be absorbed immediately against taxable income; the investment is assumed to be financed by equity for all countries; and the firm is concerned solely with its tax burden : taxes levied on shareholders do not enter the calculation.

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The rationale for using these two different rates of interest is given in the theoretical framework of Chapter II.

Data Requirement and Data Sources

In applying the rental cost of capital index calculations to the tax law and tax incentives of each of the individual countries, the parameter values to be used in the rental cost calculations first have to be specified. The parameters in the rental cost formulas are of three different types. First, there are different tax rate parameters (the corporate tax rate u , the import tariff rate τ), and tax incentive parameters (the investment tax credit rate k , the derived tax-holiday tax rate u_H , etc.), where the relevant parameter values are given directly or indirectly by existing tax laws. Second, there are macrovariables : the expected rate of inflation π and the nominal rate of interest i . Third, there is a variable specific to the firm, that is, the economic rate of depreciation δ .¹⁰ The three types of parameters which are required in the ensuing rental cost calculations are summarized below.

- 1) Tax rate and tax incentive parameters
 - a) the import tariff rate and business tax rate on imported capital goods (τ);
 - b) the investment tax credit or capital grant or expansion reinvestment allowances (k);
 - c) the corporate tax rate (u);
 - d) the length of tax holiday (N_0), the tax rate during tax holiday (u), and the effective tax rate under tax holiday (u_H);

¹⁰

The firm's choice of cost-minimizing sources of funds, though should be regarded as specific to each firm, is not covered by the present study.

e) the present value of depreciation allowances (z), and the useful life for tax purposes for both equipment and structures (N_E and N_S).

2) Macrovariables

- the nominal rate of interest (i) of 15 per cent and the expected inflation rate (π) of 5 per cent will be assumed.¹¹

3) Firm-specific parameter

- the rate of economic depreciation (δ) is hypothetically set equal to 0.0879,¹²

The followings are the main sources of data used :

1. Board of Investment, Bangkok, for data on investment incentive schemes in Thailand.
2. Customs Department, Ministry of Finance, Bangkok, for data on import duties and business taxes on capital goods imports.

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The values taken from an ongoing research project of the World Bank on comparative tax project for a number of Asian countries.

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This is a weighted average of the rates derived by Hulten and Wykoff for the asset categories "general industrial machinery and equipment" and "building," using U.S. data. See Charles R. Hulten and Frank C. Wykoff, "The Measurement of Economic Depreciation," in Depreciation, Inflation and Taxation of Income from Capital, eds. Charles R. Hulten and Frank C. Wykoff (Washington, D.C. : The Urban Institute Press, 1981).

3. The 1984 IMG-IMC study for data on corporate tax and incentive systems in other countries.

4. Revenue Department, Ministry of Finance, Bangkok, for data on Thailand's corporate tax system and depreciation regulations.

5. Economic and Social Commission for Asia and the Pacific (ESCAP) - United Nations, Bangkok, for data on import duties and business taxes on capital goods imports for other countries.

6. Economics and International Division, Ministry of Finance, Kuala Lumpur, Malaysia, for data on tax incentive system in Malaysia.

7. Publication Section, Department of Statistics, Singapore, for data on tax incentive system in Singapore.

Organization of the Study

This study contains five chapters. Chapter I is the introduction which includes the objective and scope of the study, and a brief description of data used. Chapter II presents a brief review of related literature and introduces the methodology used in calculating the rental cost of capital. The theories of foreign direct investment which help explain the economic involvement of foreign firms in host countries are reviewed first; the second section turns to the theoretical framework which provides an analytical tool for measuring the effects of investment incentives on the cost of capital services to firms. This measure was developed along the line of the neo-classical theory of optimal capital accumulation. Chapter III summarizes the corporate tax systems and tax incentive schemes in Malaysia, Singapore and Thailand. Chapter IV employs the information provided in the preceding chapter to calculate the capital cost index for universal incentives and special incentive programs for each of the

three countries. The results obtained from the calculations for individual countries are then used to compare the attractiveness of incentive programs across countries. Finally, Chapter V offers a summary and some tentative conclusions of the study.