

TOWARDS RATIONAL FISCAL INCENTIVES

(Good investments or wasted gifts?)

**EPRA Sector: Fiscal
Report No. 1**

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Final Report

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Executive Summary

This study is literally about missing tax revenues. In an environment of declining public school quality and student test scores, classroom, textbook and teacher shortages, inadequate supplies of public health facilities, roads and ports, not to mention shortfalls in tax collections, where did the missing tax revenues that could be used to finance these really go? A large part of the answers can be found in this study.

The system of providing fiscal incentives to corporations in the Philippines is analyzed. The analysis confirms that a large amount of incentives being provided are redundant – they are given to many firms that would have invested anyway without them. The implication is that the Philippine government has failed to generate a large amount of revenues every year from these tax- and duty-exempt firms. The primary reasons for high redundancy are the following: (a) by international and even domestic standards, many of the tax- and duty-exempt firms were found to have high rates of return *even before receiving incentives*; and (b) a large number of firms are non-exporting domestic market-seeking investments, which the existing industrial organization literature suggests has low sensitivity to fiscal incentives. For the Philippines, the cost of redundant fiscal incentives in 2004 was estimated to be about 43.2 billion pesos (very close to 1% of 2004 GDP) for the Board of Investments (BOI) alone. An alternative method of estimating the cost of redundancy yields an even slightly larger estimate. Even given existing estimates of perceived corporate tax evasion and tax avoidance, and considering that the country's fiscal deficit is around 2% to 3% of GDP, a proper rationalization (or elimination) of most of BOI's fiscal incentives could result in major additional recurrent (yearly) revenue generation for the government. This could have profound short- and long-term effects on the government's fiscal health, with other direct and positive effects on the country's level of indebtedness, international credit rating, the cost of borrowing from international financial markets, domestic interest rates and the country's image as a viable (and fiscally stable) investment destination as a whole. More importantly, this could also augment the country's meager resources for human capital-augmenting expenditures in education and health, as well as provide for improvements in infrastructure.

Other investment promotion agencies, such as Philippine Economic Zone Authority, Subic Bay Metropolitan Authority and Clark Special Economic Zone, are estimated to have lower redundancy rates than the BOI (although the SBMA and CSEZ have estimated redundancies higher than the PEZA), and have also tended to contribute to fiscal losses in terms of foregone revenues. The redundancy for incentives-providing investment promotion agencies in general is further validated by the data: regression analysis using regional data confirm that proxy variables for incentives are not good predictors for regional investment in the Philippines. In the case of the BOI, no correlation is found between real regional gross capital formation and lagged real regional investment approvals, suggesting that much of the approved investments were not carried out as promised. This finding raises an interesting point: if investments were not carried out as promised, then this suggests widespread abuse of BOI fiscal incentive privileges and rampant tax avoidance and leakages. But this just reinforces the notion that the fiscal costs of fiscal incentives are high. Fiscal incentives therefore create fiscal losses on two levels – many of them are redundant, and in addition, they are very much open to abuse – they open up a variety of exploitable tax avoidance opportunities for firms that receive them.

The tragedy is that these fiscal losses recur year after year (and in roughly the same amounts), and they have for a long time deprived the country of valuable resources for expenditures on the true drivers of regional and international investment demand and the true source of real competitiveness in the country: literacy and infrastructure. Thus, continued emphasis on incentives as an investment inducement is an illusion. The point has arrived where investment promotion agencies are already clearly undermining their own efforts at promoting the country as a viable investment destination.

The impotence of incentives is further validated by the fact that although the annual Investments Priorities Plan provides more generous incentives to locators in areas defined as less developed, all types of investments have tended to cluster in Regions 3, 4, 7 and the National Capital Region. Thus, the objective of achieving a true regional dispersal of industries has never been achieved, even if that was the clear mandate of the early laws on incentives.

The clustering of most investments in areas with already viable initial conditions for investment has meant that viable employment opportunities for skilled labor have also tended to cluster in these areas. The clustering of past investments in a select few regions has also ensured that the demand for infrastructure and human-capital-enhancing public expenditures will also tend to cluster there at present and for the foreseeable future. Since it is inevitable that the government will need to supply these in order to remain supportive of existing investments, the current redundancy-ridden system of incentives provision has therefore tended to be inequality-preserving and inequality-reinforcing (both across regions and across social classes - in obvious violation of the equity principle of a good tax system). This calls for the taking of drastic corrective measures. Recommendations are made for the immediate reform of the system of fiscal incentives in the country. Among others, this includes the granting of incentives only to exporters, (at the very least) the elimination of the fiscal incentives-granting function of the BOI, the streamlining of other incentives, stricter screening and monitoring procedures at other investment promotions agencies to prevent leakages, greater coordination between the IPAs and the BIR in monitoring IPA-registered firms, and the consolidation of all incentives into a single law, which recognizes the potential negative fiscal and economic externalities of redundant incentives provision. Current legislative moves in precisely this direction should therefore be strongly supported. In order to strengthen the justifications for it, incentives rationalization should also go hand in hand with efforts to reduce graft and corruption in all branches of government.

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I. Introduction

In recent years, the Philippine government has faced increasing pressures to narrow its fiscal deficit. The cumulative effects of persistent budget deficits in the last seven years have led to a crowding out of essential infrastructure and social expenditures in the national budget, as debt service expenditures have increasingly dominated the national budget. Since many types of national government expenditures, such as, for example social expenditures in education and health lead to improvements in a country's human capital stock, and economic expenditures in infrastructure could generate significantly positive private production externalities and also lead to reductions in poverty, this means that the country's fiscal problems impose significant present and future social costs.²

Many economists have pointed out that a mixture of structural weaknesses in fiscal policies and revenue (and expenditure) administration are the causes of the problem. Contributing to the large budget deficits and requirements for additional domestic and foreign borrowing is the additional burden of responding to various claims related to mostly infrastructure- and government-corporation-related contingent liabilities. Work is currently being done to analyze government risk in this regard, but looking at other factors contributing to the country's fiscal problem will also be very important.

The offshoot of the ensuing debate over how to address the country's fiscal problem has led to variety of proposals. One of these proposals is the rationalization of fiscal incentives being provided by national government. In this regard, Congress has responded with the filing of House Bill No. 3295, The Consolidated Investments and Incentives Code of the Philippines (i.e., the Fiscal Incentives Bill), legislation which aims to rationalize the system of fiscal incentives offered by the national government. The bill has generated some controversy however, as potentially affected sectors have lobbied for the retention of their tax subsidies. The controversy has led to a need for a more thorough study of the effects of the bill. This study addresses the need for such analysis.

Figure 1 shows that the government's fiscal deficit has been improving in the last few years. However, this has not come about because of improvements in government revenue collection performance. In fact, while the economy has displayed somewhat robust real growth in the last few years (Table 1), tax collection has either fallen or remained flat (Table 2). Figure 2 shows the Philippine national government's revenue collection performance from 1996 to 2004. Note that overall revenues have fallen steadily, primarily because of the steady decline in tax collections. The steady decline in government revenues implies that improvements in the government's fiscal deficit have come primarily at the expense of a steady decline in government expenditures. The dramatic fall in expenditures is shown in Figure 3. Many types of productive expenditures have experienced declines in recent years, such as in health and infrastructure spending. As fiscal deficits have accumulated, the debt service component of national government expenditures has risen, at the expense of the component on productive expenditures. These developments have made studies on revenue-raising measures such as this one quite urgent.

² See Reside (2005) for some seminal work on the effect of Philippine government expenditures on output and other social and economic variables, such as poverty, literacy, roads, etc.

Figure 1: Philippine National Government Deficit as a Percentage of GDP

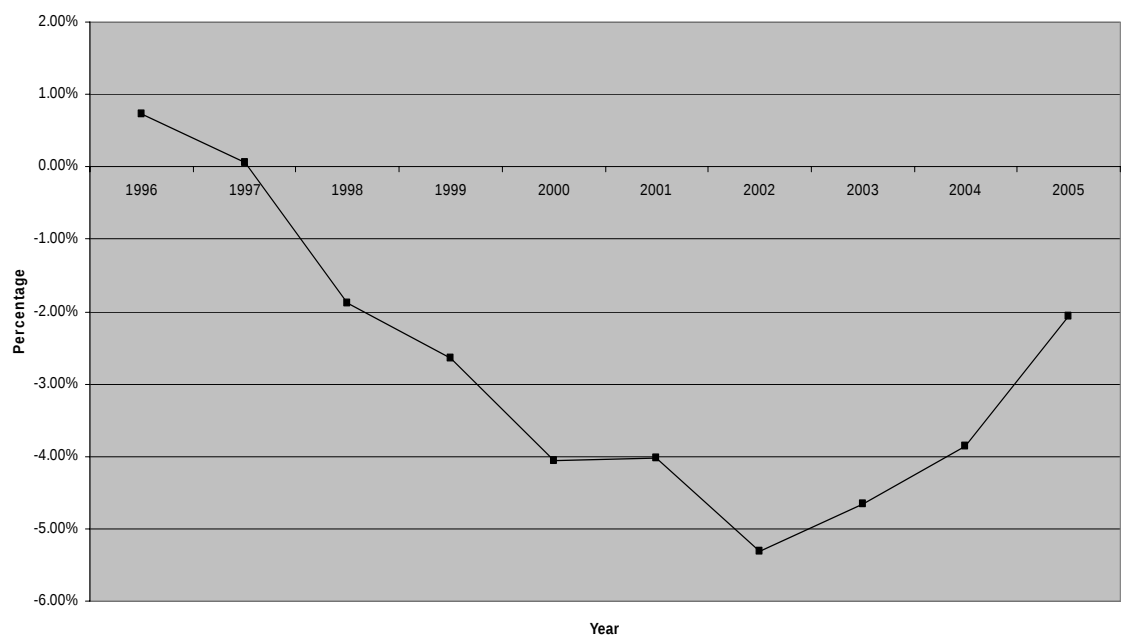


Figure 2: Philippine National Government Revenues as a Percentage of GDP

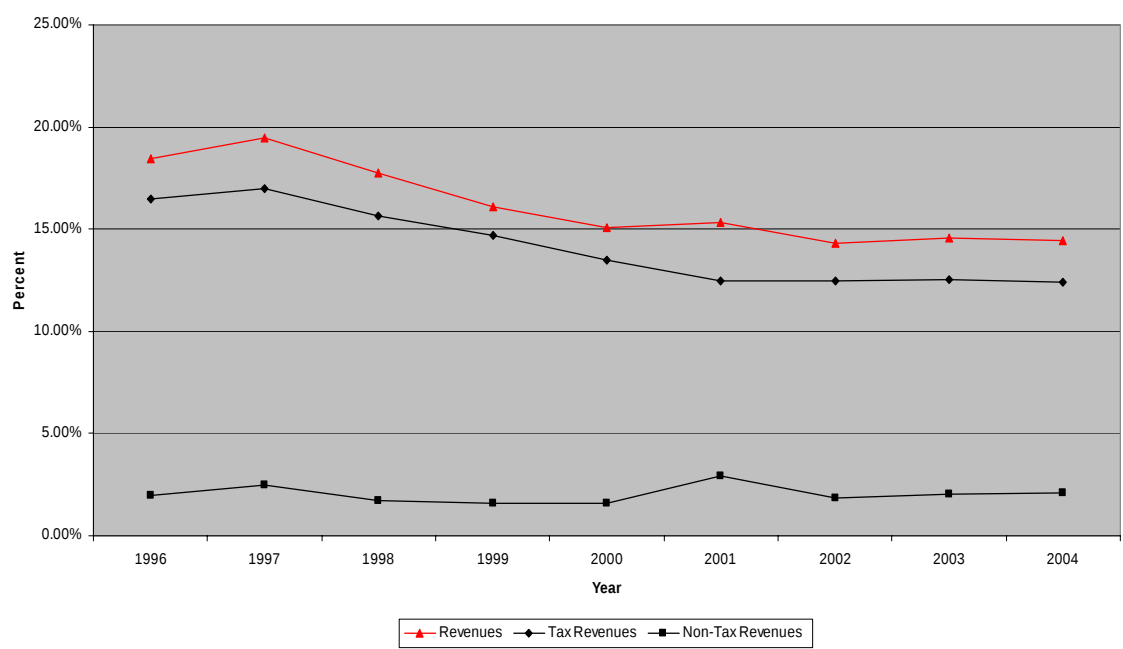


Figure 3: Composition of National Government Expenditures

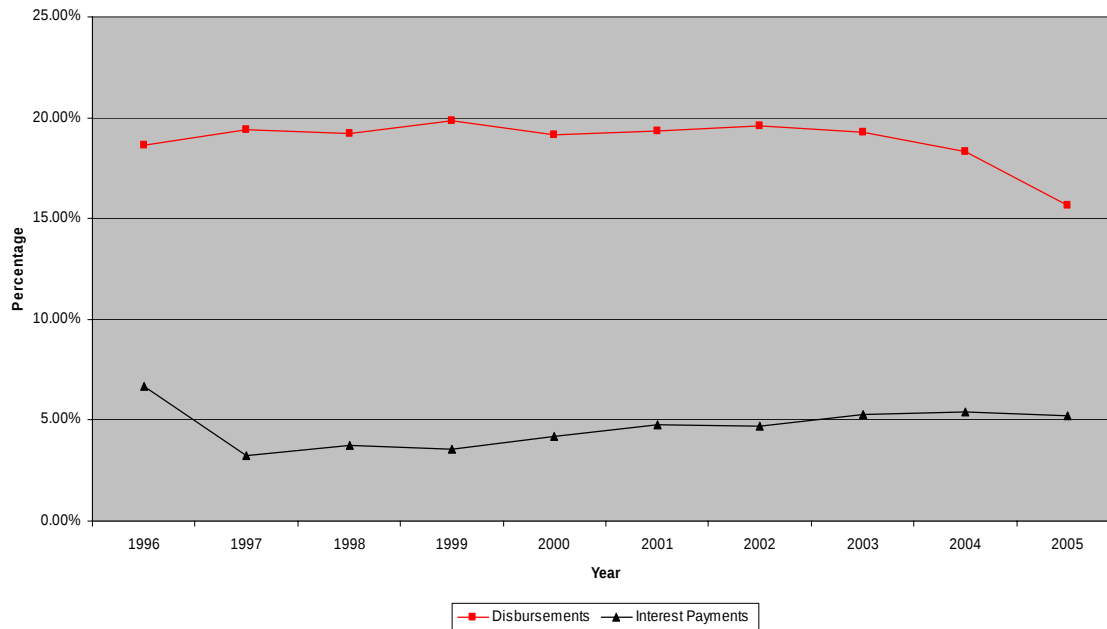


Table 1: Real national income accounts

Year	Real GNP	Real GDP	Growth in Real GDP
2000	1,037,856.00	937,000.00	2.14%
2001	1,061,283.00	990,042.00	5.66%
2002	1,106,000.00	1,034,000.00	4.44%
2003	1,162,500.00	1,081,000.00	4.55%
2004	1,234,561.00	1,145,799.00	5.99%
2005	1,305,535.00	1,204,533.00	5.13%

Source: National Statistics Coordination Board (NSCB)

Table 2: Fiscal risk

Year	Tax Effort	Non-interest expenditures as percentage of GDP	Growth in non-interest expenditures as percentage of GDP
2001	13.50%	0.148	
2002	12.80%	0.152	2.70%
2003	12.50%	0.14	-7.89%
2004	12.40%	0.129	-7.86%
2005	13.30%	0.113	-12.40%

Source: author's own calculations, Department of Finance (DoF) and Department of Budget Management (DBM)

The expenditure problem has had other profound effects. The efficacy of government policy levers to stimulate demand through public investment has effectively disappeared. In fact, tax expenditures of precisely the type being examined here in this paper are already being made to substitute for actual government expenditures (especially in sectors with potentially large economic and social returns, such as in health and infrastructure). Tax expenditures are defined as tax revenues foregone in the form of fiscal incentives. They are called tax expenditures in view of the desire that incentives will have the same stimulating effect on the economy as actual government expenditures.

II. Objectives of the Study

The main objectives of this study are to:

- a) Analyze the major provisions in and changes to House Bill No. 3295.
- b) Create a comprehensive list of the fiscal incentives to be affected by the Fiscal Incentives Bill.
- c) Quantify the social costs and benefits of fiscal incentives to be affected by the Fiscal Incentives Bill.
- d) Present options for drafting the bill, looking at improving its design, to reduce leakages and other opportunities for abuse.
- e) Recommend alternative courses of policy action with respect to fiscal incentives.

In addition, the answers to several fundamental questions of the Department of Finance are sought:

- 1) What should be the major objectives of the rationalization of incentives bill?
- 2) Which investments should be granted fiscal incentives? What types of incentives (and depth) are to be included in the investment incentives system? In particular, should tax credits be included?
- 3) What are the criteria/ requirements/conditions for availment of incentives for new investments? for expansion project?
- 4) Should locational incentives be adopted? Should incentives be based on location or on activity for BOI and ecozones?
- 5) Should the grant of incentives be based on performance? If so, are there any exceptions? What, if any?
- 6) Should incentives be time-bound or permanent?
- 7) Should BOI and ecozone incentives be equalized? Should incentives to ecozone locators be the same or different from those to non-ecozone locators? If yes or no, why?
- 8) Or should a premium be given to zone locators?
- 9) Should there be uniform requirements/conditions/privileges for all ecozones and non-ecozone investments? - e.g. export vs. domestic sales, nationality requirement, etc.
- 10) Should the Philippines make its tax incentives at par with Asian neighbors?

- 11) Or should other factors be considered apart from regional competitiveness?
- 12) How can government operationalize a tax expenditure budget?
- 13) There are several investment promotion authorities (IPAs) Board of Investments (BOI), Clark Special Economic Zone (CSEZ), Philippine Economic Zone Authority (PEZA), Cagayan Special Economic Zone Authority (CSEZA), and Zamboanga Special Economic Zone Authority (ZSEZA). The BOI Chairman is also the Chairman (?) of PEZA. What is the ideal relation among them? Should these IPAs be co-equal bodies? Why or why not?
- 14) As proposed in HB 3295, the BOI is both a policy-making body and an IPA. Is this an ideal structure?
- 15) At present there is a proliferation of special laws granting incentives for investment in a number of industries - jewelry, agriculture/fisheries, steel, etc. -Should their status be maintained, or should they be repealed and the incentives be placed under the ambit of the proposed omnibus investments law?

This study will provide guidance to answering some of these questions to the greatest extent possible.

III. Methodology/Framework and Review of the Literature

Recognizing the potential role played by fiscal incentives in attracting investment and stimulating growth, multilateral agencies such as the World Bank and the International Monetary Fund have recently begun to conduct their own research into the efficacy of tax incentives. A determination of the efficacy of tax incentives depends critically on an examination of their costs and benefits. If, for example, it is found that fiscal incentives are found to attract no new investment, then free-rider investors benefit while the Treasury loses (Wells, Allen, Morisset and Pirnia, 2001, Morisset and Pirnia, 2001). The IMF has relied on rough and ad hoc calculations and estimates to determine the efficacy of tax incentives in Cambodia, Laos and Vietnam (Fletcher, 2002).

Estimating the cost and benefits of fiscal incentives in the Philippines is at best seminal work with some early work done by Medalla (2002). Conducting such a study presents major challenges, considering that a wide variety of fiscal incentives exist in support of a wide variety of activities. Complicating the task is the fact that the existing literature on estimating the costs and benefits of fiscal incentives relies on methods for which data is non-existent or difficult to collect for the Philippines (such as various firm-level, cash flow and revenue data).

The most economically potentially significant fiscal incentives (from a growth and deficit standpoint) would most likely be those that spur capital formation, production, and real economic growth. These include (but may not be limited to):

- a) tax holidays;
- b) reductions in the statutory corporate income tax rate;
- c) enhanced/accelerated write-offs for capital expenditures;
- d) general or targeted investment tax credits; and
- e) reductions in dividend withholding tax rates.

Assuming that these are the most important incentives, the proposed work considers several methods for estimating the benefits and costs of fiscal incentives under the proposed bill.

In principle, the best method for evaluating the effectiveness of fiscal incentives is to weigh the return to society from the additional output growth and other benefits generated by the policy against the opportunity cost of using the tax revenues for other purposes. Since one is measuring the additional output growth or other benefits induced by fiscal incentives, one is in effect conducting a counterfactual exercise.

If the social return from the additional output growth is very high, then Congress may be willing to give up more tax pesos than the actual additional output induced by fiscal incentives. On the other hand, if the social return is only slightly higher than the private return, then lowering the cost of supported activities may induce too much of these activities. Under these circumstances, even though fiscal incentives induce greater economic benefits than the lost tax revenues, higher social returns may be achieved by spending the tax revenues on some other activity.

The general procedure outlined above presupposes that:

- i. it is possible to estimate the net social returns from the activities benefited by the incentives, as well as the social returns to spending tax revenues on government activities; and
- ii. measurement criteria exist with which to estimate social returns and social costs.

Conceptually, measuring the social benefits induced by a set of fiscal incentives is an exercise in which the researcher asks how much of the supported activities were supplied given government assistance than would have been supplied without. However, this counterfactual is very difficult to observe, and so a variety of methods have been developed to estimate the level of supported activities supplied by firms with and without the incentives.

IV. Plan of Activities for Fiscal Incentives Project

- 1) Review HB3295
- 2) Determine which existing laws are affected by the bill.
- 3) Determine which incentives are eliminated and which ones are retained.
- 4) Estimate past net benefits (if positive) or past net costs of fiscal incentives

The past cost of fiscal incentives equals tax revenues lost because of redundant fiscal incentives. The past benefits of fiscal incentives are the social value of wages, taxes and foreign exchange generated by past investments. The difference between the two is the past net benefit (cost) of fiscal incentives.

- 5) Determine if there are any implications for administrative expenditures to implement the bill
- 6) Estimate the cost of continuing with the present system of incentives

V. Possible Constraints

In this study, several potential constraints were faced. First of all, there may be no incentive for IPAs to be cooperative in this exercise, because:

- 1) they are the incentives-providing authority and, at the same time, investment project approving authorities; and
- 2) the primary metric by which they are judged is the amount of investment they generate in the economy.

Moreover, most IPAs have not had a long history of monitoring actual investment, employment and foreign exchange generated or devoted a significant amount of resources to these activities. Their primary data consists of *approved* levels of investment flows and employment. These reflect ex ante expectations and not ex post realizations. According to one senior official, the BOI only started seriously monitoring investment activities of registered firms in 2002, and do not have data on actual investments.

At times, it was difficult to obtain select data from IPAs which would have been of additional help in evaluating the effectiveness of incentives, such as average times to approval, rejection rates, realization rates for investment and other variables (proxies and indicators of the generosity with which incentives are provided). However, for the most part, the IPA's were generally very cooperative and generous with respect to granting this author the time for in-depth interviews. This study relied on several hours of interviews with BOI and PEZA officials. For this, this author is very thankful.

VI. Fundamental Principles of Taxation

The fundamental purpose of taxation is to mobilize revenue to finance the provision of public goods and services through the government budget. Therefore, the core principle of taxation is that the tax system should be an effective instrument for raising revenue. While fulfilling the revenue function, taxes also have a pervasive influence on economic decisions of individuals and businesses, and on social equity. Hence, the tax system should be structured to achieve the appropriate level of revenue as efficiently and fairly as possible. In short, a well designed tax system should be

- Effective in raising revenue;
- Efficient in its effect on resource allocation decisions of households and businesses; and
- Equitable in its impact on different groups in society.

Effectiveness

An effective tax system is one that satisfies revenue requirements, given the desired scope and size of government and the availability of non-tax financing. In dynamic terms, an effective tax system should be elastic, in the sense that revenue rises naturally with GDP without requiring frequent ad hoc measures. An effective tax system must be consistent with a country's administrative capacity to collect revenues. Even the best tax code can produce poor results if it is not well administered. The introduction of special investment incentives inherently complicates tax administration and creates loopholes through which companies and wealthy taxpayers avoid or evade other tax obligations. Special incentives bestowed on certain locations also create opportunities for smuggling, which can prove very costly in countries where corruption is rampant. The combination of loopholes, smuggling and other administrative leakages prove to be extremely damaging in countries with weak tax administration and critical revenue constraints.

Efficiency

An efficient tax system is one that minimizes the loss of economic welfare and growth due to tax-induced distortions in the incentives that guide private decisions on investment, production, technology, consumption, saving, work effort, financing, and even the legality of activities. Efficiency is especially important for poor countries that can least afford economic losses due to avoidable resource

misallocation. To minimize efficiency losses, most tax reform programs in developing countries aim to apply a moderate tax rate to a broad tax base. To the extent that special incentives shrink the tax base, revenue targets can only be achieved with higher tax rates on other activities or persons that remain chargeable. This may magnify the efficiency costs that inevitably accompany taxation. Yet the intent of any tax incentive policy is precisely to alter economic incentives in a direction that enhances growth potential and improves national welfare. This study attempts to determine whether tax incentives have led to a net improvement in growth and national welfare.

Equity

There is widespread agreement that an equitable tax system

- Minimizes the tax burden on the poor;
- Collects more from the rich than from those with lower incomes (vertical equity);
- Avoids excessive tax rates and arbitrary impositions all around; and
- Provides relatively uniform and non-discriminatory treatment of taxpayers with similar economic circumstances in terms of ability to pay (horizontal equity).

Equity issues are often neglected in deliberations about tax incentives, but they surely bear consideration as a matter of principle, and also because perceptions of unfairness can undermine the political sustainability of an incentive program. Investment incentives directly reduce the tax burden on income earned by relatively wealthy investors. As a result other taxpayers may bear a greater tax burden. For example, if investment incentives reduce company tax revenue, then governments may depend more heavily on indirect taxes which impose a greater burden on poorer segments of society. In addition, most programs are designed to favor certain taxpayers over others in similar economic conditions. To compensate for these inequities there must be a clear expectation that the tax incentives will truly and substantially foster equitable growth and job creation.

VII. Past and Proposed Legislation

Below is a timeline of major incentives laws:

Table 3: Timeline of Some Incentives-Related Laws

Year	Law Passed	Effect
1972	PD 1786 EPZA Law	
1987	Executive Order (EO) 226 Omnibus Investments Code	Provides the rules by which foreign investments in the Philippines may avail of incentives.
1991	RA 7042 Foreign Investments Act	Governs the entry of foreign investments without incentives decreasing the minimum paid-in equity from Five Hundred Thousand dollars (US\$500,000.00) to Two Hundred Thousand dollars (US\$200,000).
1992	RA 7227 Bases Conversion Development Act	Provides for incentives to enterprises located within the Subic Bay Freeport Zone.
1994	RA 7844 Export Development	Provides for incentives to

	Act RA 7718 Expanded BOT Law	enterprises in export business. Allows variations of scheme, eases restrictions on government financing and the setting of tolls and charges, and increases the opportunity for wholly foreign-owned corporations to undertake a project.
1995	RA 7903 Zamboanga City Special Economic Zone (CSEZ) RA 7916 PEZA Law RA 7917 Amendment to Bases Conversion and Development Act RA 7918 Amendments to Omnibus Investments Code RA 7922 Cagayan SEZ RA 7888 Amendment to Omnibus Investments Code	RA 7916 PEZA Law Provides for incentives to enterprises located within the Special Economic Zones. Allows the President of the Philippines to suspend the nationality requirements under the Omnibus investments Code in the case of equity investments by multilateral financial institutions such as the International Finance Corporation and the Asian Development bank.
1996	RA 8179 Amendment to Foreign Investments Act	
1997	NIRC (Net Operating Loss Carryover)	
1998	Downstream Oil Industry Deregulation Act	
1999	RA 8748 Amendment to PEZA Law	
2004	E.O. 313 signed	Exempts BOI-registered firms from paying taxes and duties on imported raw materials and capital goods
2006	E.O. 528	Extended and amended the effectivity of EO 313

Source: Congress of the Philippines

Table 4: Details of Several Investment Laws

Law	Summary
1. The Omnibus Investments Code of 1987 (Executive Order No. 226)	Provides the rules by which foreign investments in the Philippines may avail of incentives.
2. The Foreign Investment Act of 1991 (Republic Act No. 7042) as amended by R.A. 8179	Governs the entry of foreign investments without incentives decreasing the minimum paid-in equity from Five Hundred Thousand dollars (US\$500,000.00) to Two Hundred Thousand dollars (US\$200,000).
3. Bases Conversion and Development Act of 1992 (Republic Act No. 7227)	Provides for incentives to enterprises located within the Subic Bay Freeport Zone.
4. The Special Economic Zone Act of 1995 (Republic Act No. 7916)	Provides for incentives to enterprises located within the Special Economic Zones.
5. Export Development Act of 1994 (Republic Act No. 7844)	Provides for incentives to enterprises in export business.
6. Investor's Lease Act (Republic Act 7652)	Allows qualifying foreign investors to lease private lands for an initial period of up to 50 years renewable for up to 25 additional years.
7. Republic Act 7721	Eased the restrictions on the entry and operations of foreign banks.
8. Amendment of the Build-operate-transfer law (R.A. 7718, 1994)	Allows variations of scheme, eases restrictions on government financing and the setting of tolls and charges, and increases the opportunity for wholly foreign-owned corporations to undertake a project.
9. Republic Act No. 7888	Allows the President of the Philippines to suspend the nationality requirements under the Omnibus investments Code in the case of equity investments by multilateral financial institutions such as the International Finance Corporation and the Asian Development bank.

Source: Congress of the Philippines

VIII. Estimating the Past Cost of Fiscal Incentives

a) Introduction

By their nature, fiscal incentives are subsidies provided to attract potential investors. Their nature as subsidies implies that fiscal costs may be incurred whenever they are provided. There are several possible motives for the provision of fiscal incentives to attract investment:

- 1) To reduce poverty incidence and achieve a more equitable distribution of wealth;
- 2) To benefit from foreign knowledge and foreign technology spillovers;
- 3) To increase employment;
- 4) To remain competitive in attracting direct investment relative to international neighbors

The first three motives are consistent with traditional economic justifications for the provision of a subsidy. If the net social returns to marginal investments induced by the provision of fiscal incentives exceed the private returns, then there exists an ex ante justification for providing subsidies to attract marginal investments. In this case, the fiscal incentives constitute a subsidy that attempts to correct a market failure. Certain types of investments generate net positive spillovers for the rest of the economy. But if no subsidies were provided, the market failure would manifest itself in underinvestment in such activities. Fiscal incentives, equivalent to subsidies, therefore, have the effect of raising the private returns

relative to social returns of investment. The fiscal incentive induces additional investments and acts to correct the market failure.

While a potentially significant amount of fiscal revenues are foregone in order to attract investments, the fiscal cost is zero since the induced investments would never have been made in the absence of fiscal incentives. In order to estimate the cost of a given set of fiscal incentives, therefore, one must be able to determine those investments which receive fiscal incentives, but which would have been made without them. These investments are NOT induced by fiscal incentives and therefore, the fiscal revenues foregone constitute a real cost to government, since they would have been earned even if the investments had not been subsidized. The existing literature calls the fiscal incentives provided to such investments as “redundant”.

Redundancy may also be defined in terms of the ex post results of subsidized projects. If no spillovers or other positive externalities can be attributed to the subsidized activity ex post, then the incentives are considered redundant ex post and a fiscal cost has been incurred without a corresponding increase in social returns.

The level of investment redundancy (the redundancy rate) is therefore a key variable in the computation of the costs of fiscal incentives. The redundancy rate is also key in computing the benefits of fiscal incentives. The social benefits of fiscal incentives are the benefits of investments induced by the incentives. If the redundancy rate is high in the sense that investments would have been induced even without incentives, this would tend to limit the social benefit attributable to incentives.

The simple table below illustrates the point.

Table 5

Type of investment benefiting from fiscal incentives	Imposes fiscal cost attributable to fiscal incentives	Generates social benefit attributable to fiscal incentives
Redundant investments	Yes	No
Legitimately qualified induced investments	No	Yes

The main challenge in rationalizing fiscal incentives lies therefore, in separating investments that would not have been made but for incentives from investments whose incentives are redundant. Both non-redundant and non-redundant investments, however, create constituencies which will have built strong lobbies over time. Since it is usually difficult to ascertain investor types, it is anticipated that any moves towards eliminating some perks will be met with resistance from both investor types.

One of the key weaknesses of data from investment promotion agencies is the lack of data on actual outcomes (actual investments, actual figures for exports and imports, and actual employment generation). The lack of actual outcomes observed could potentially limit the usefulness of the analysis conducted by researchers. Nevertheless, part of the analysis in this study assumes that the data is useful. Otherwise, no conclusions may be drawn. In some instances, data on gross fixed capital formation from the NSCB is used to proxy for investment. In one empirical exercise conducted as part of this study, it is posited that the level of investments approved by IPA's in a given year should be a good predictor of real gross capital formation in future years.

As stated earlier, estimating the redundancy rate of incentives will be a key component of the cost-benefit analysis of incentives. The next sections discuss the estimation of the redundancy rate. The redundancy rate will first be formally defined, then estimated for each IPA.

b) The redundancy rate

The redundancy rate is the percentage of investors receiving fiscal incentives who would have invested anyway even if they had not been granted incentives. If tax incentives are given only to investors who would not otherwise have invested, and are exactly the amount required to attract them, then there is no revenue loss from the incentives - zero redundancy. On the other hand, if incentives are received by investors who would have invested anyway, redundancy exists and the foregone revenue from those redundant incentives represents a real uncompensated cost to the treasury. That cost is equivalent to a real subsidy to attract the incremental investors. The key is to isolate investments whose primary inducement would have come from tax incentives offered by the national government. By definition, incentives to these investments are not redundant because these investments would never have materialized without them.

c) Estimating the size of the redundancy rate – some background theory on investments and investment decision-making

In general, the size of the redundancy rate will be negatively related to the strength and significance of the investment-inducing effect of a given set of fiscal incentives.

What does the existing literature on investments say about the efficacy of tax incentives in inducing investment? Popular approaches to answering this question involve conducting investor surveys and/or taking some measure of the generosity of tax incentives, and then using regression analysis to compare the effects on incentives on investment as against other fundamental factors, such as political stability, market size, economic growth, agglomeration factors, legal and regulatory risk, etc. The latter approach is called investment location theory. *The general conclusion from this approach is that the importance of tax incentives is of second-order magnitude compared to the investment-inducing effect of other fundamental factors (so some factors would be more fundamental to investments than other factors).* For example, this is consistent with the typical motivation of most investors locating into the People's Republic of China. Although the tax incentives are generous, it is generally agreed that the most important motivating factor for investment is the size and (current and potential) strength of the domestic market in China (this would also seem to suggest that the redundancy rate in China will be high). So what role would tax incentives play in the investment decision? *For foreign direct investment, at least, the literature suggests that tax incentives will be an important factor for investors when they compare locations with similar fundamental attributes.* The literature acknowledges that the investment decision as a two-step process, where investors first compare potential locations based on their underlying fundamental capacities to sustain investment. Only after this is done will the tax incentive regime be compared. The literature therefore recognizes that tax incentives regime of one country may have an important role to play when competing against similar jurisdictions for FDI.

While there is a rich literature on the effects of tax incentives on FDI, there is much less written about the importance of tax incentives for inducing domestic investment. This study will attempt to make a contribution to the literature on the motivations behind domestic investment.

This study estimates the redundancy rate for investments in the Philippines using four methods:

- 1) inferring redundancy through an examination of the correlation between the value of investment approvals and subsequent real gross capital formation;
- 2) inferring redundancy through an examination of the process by which investment promotion agencies screen and approve project proposals;
- 3) developing a theory of investment motivation to determine investor sensitivity to fiscal incentives; and
- 4) using regression analysis applied to the theory of investment location.

The first method is a rough and simple test of the hypothesis that investment approvals in one period are a good predictor of subsequent capital formation. The test is one that tries to determine whether investment commitments are subsequently carried out by registered firms. If it is found that investment approvals and subsequent gross capital formation are not correlated, this suggests that either investment is not being carried out, or that the incentives were used for motives totally unrelated to investment, or that other factors (besides incentives) are the main drivers of investment. Whatever the underlying reason, the redundancy rate will tend to be high.

The second method examines screening and approval procedures at investment promotion agencies (IPA's) in order to determine whether leakages can occur. If it is found that incentives are not one of the main inducements for investment, then the redundancy rate is high.

The third method estimates the redundancy rate by using criteria based on investment motives to isolate those investors thought to be most sensitive to fiscal incentives. If it is found that most investment has been motivated primarily by factors other than those that reduce per-unit costs of production, this means that a given set of incentives has not been a significant inducement for investment and the redundancy rate would be high.

The fourth and final method attempts to statistically estimate the sensitivity of investment flows to incentives. All other factors held constant, the strength and significance of the investment-inducing effect of a given set of incentives can be gleaned from the size and significance of proxies used for incentives in our investment regression equations. If proxies for incentives are not significant, then the redundancy rate should be high. The primary rationale for using the fourth method is to further validate the results of the earlier three methods.

It is probably safe to say that existing economic theory about the factors underlying investment will be useful insofar as all types of investment, domestic and foreign, are concerned. Appendix is a review of the various economic theories of investment. This study will use variants of textbook investment models, with emphasis on investment location theory, to conduct an econometric investigation into its determinants. This way, one may, based on observed data, determine the relative importance investors actually place on tax incentives, allowing a more precise estimation of the redundancy rate. The regression equations will also accommodate variables considered relevant in investment location theory.

An alternative method, surveying investors to determine the actual importance they place on incentives, could also be implemented. However, the limited budget for the study has precluded this.

The process by which investors formulate investment decisions is generally well-known, and has been discussed in previous studies about investments in the Philippines (Wallace, et al, 1994). When making investment decisions, most investors first evaluate the merits of a given investment without considering the incentives. The decision to invest typically starts with an assessment of the quality of the investment opportunity, the anticipated returns and the ease with which that investment can take place, adjusted for risks that can prevent expected returns from being realized. Assessing the impact of incentives on cash flows and income is usually the last step in the decision process. Officials from

investment promotion agencies, as well as many investors themselves, acknowledge this. Investor surveys consistently reveal that more fundamental factors, such as a country's political stability, economic growth, size of market, and even consistency of legal and regulatory frameworks for business facilitation, outrank tax incentives as an inducement for investment location. The surveys suggest that tax incentives play an important but secondary role to these factors in the decision-making process for investment. This is consistent with what most investors confided to this author. In the words of one BOI-registered investor interviewed as part of this study, "one does not make an investment on the basis of incentives."

For most enterprises, therefore, sufficient ex ante justification for making the investment has already been made prior to the decision to register with the relevant investment promotion agency to obtain incentives. The investment project would already have a reasonable expected before-tax or before-incentive financial rate of return. An excellent recent validation of this is the decision by Smart Telecommunications, Inc. to announce first that it would be investing in 3G technology for cell phones, then only belatedly ask the BOI to qualify these investments for incentives after rival Globe Philippines obtained them from the BOI (justified investments with "pioneer status"). It is crystal clear that no incentives were required by Smart to justify the viability of its earlier commitment to investing in 3G technology.³

In the case of Smart, therefore, further inducements, such as the provision of tax incentives, will clearly be redundant. But this is not confined to Smart, as this study will demonstrate. In most instances in the Philippines, the provision of incentives tends to raise the rate of return beyond the rate that ensures the project is already viable. Naturally, the redundancy rate will be high. So will the fiscal cost.

d) The Sensitivity of Investments to Fiscal Incentives

Cross-country evidence on the efficacy of fiscal incentives in attracting foreign direct investment (FDI)

The economic literature on investment location has over time, analyzed the various cross-country determinants of foreign direct investment. Many of these studies have focused on the contribution of incentives relative to other investment inducements. *However, the cross country evidence is mixed at best - fiscal incentives have not been among the main cross-country determinants of FDI firm location.* Most investment location studies point out that fiscal incentives play a secondary role relative to more fundamental determinants of investment location such as the level of literacy of the population, the quality of infrastructure, and wage cost. Note that in the studies described in the table below, the main fiscal policy variable affecting investments is some measure of the average corporate tax rate or the statutory corporate tax rate. These, however, are not measures of the power of fiscal incentives per se. Marginal effective tax rates (METRs), which account for the effects of incentives would be the relevant proxy for the strength of fiscal incentives, but there are virtually no studies which use METRs, as they are difficult to derive across countries.

Previous studies have used imperfect proxies for fiscal incentives. In the study by Cheng and Kwan (2000), the number of special economic zones has a positive and statistically significant effect on the *location* of foreign investments *within* China, but there is no evidence that fiscal incentives *by themselves* actually attract FDI into China. Special economic zones are a mix of infrastructure and fiscal incentives inducements, and the authors make no attempt to isolate the effect of incentives.

³ On the other hand, it is also clear that Globe's BOI incentives are also redundant. They would have pursued the 3G investments even without incentives because they knew rival oligopolist Smart was pursuing them.

In a recent study of the locational choices of US multinational firms, Mutti and Grubert (2004) report that investments geared towards export markets, rather than the domestic market, is sensitive to host country taxation, that this sensitivity appears to be greater in developing countries than developed countries, and that the sensitivity is becoming greater over time. The level of taxation is proxied by the level of country average effective income tax rates. Note that this study does not focus on the role of fiscal incentives per se, but on the impact of the tax rate on the location of investments.

Based on older and new evidence, the evidence that by themselves, fiscal incentives play a major role in attracting FDI into a country (much less in inducing investment by resident domestic firms) appears to be weak. The evidence that low tax rates tend to be associated with higher levels of investment could be in fact construed to be evidence that countries with relatively low tax rates (and few fiscal incentives) are more capable of attracting FDI than countries with generous fiscal incentives but high statutory tax rates. *Lower tax rates are able to, on average, attract FDI into a particular location, but the empirical work does not distinguish whether the low tax rates are due to low uniform tax rates, or due to generous fiscal incentives targeted to some sectors and high statutory rates in other sectors. Therefore, the tax variable does not necessarily reflect the effect of tax incentives.* Nevertheless, it is probably more likely that the regime with uniformly low taxes will attract more FDI than the regime with generous fiscal incentives, but otherwise high tax rates. *In studies which focus specifically on the role of incentives, such as Wheeler and Mody (1992), the evidence on their potency is weak.*

The existing evidence also could be consistent with the lowering of statutory tax rates and the doing away with complicated systems of fiscal incentives altogether (an attractive proposition to most economists). Furthermore, much of the analysis is focused on the ability of lower tax rates to attract FDI. There are virtually no studies on the ability of fiscal incentives to induce domestic investments.

Scant evidence notwithstanding, there nevertheless appears to be some evidence that incentives do play a role in determining where investments may take place within a country, yet even this is open to debate. The Cheng and Kwan study cited earlier suggests that foreign investments tend to locate in Chinese special economic zones (SEZs). The investment-inducing effect of special economic zones cannot be fully attributable to incentives, however. SEZs are a combination of infrastructure, support services and incentives. But even if isolating the effect of incentives alone is a difficult task, it is still very likely that incentives do play a secondary role in the investment decision-making process.

Table 6: FDI firm location and the Role of Fiscal Incentives and Taxation: Some Empirical Applications

Authors	Theory	Variables affecting investment location
Wheeler and Mody (1992) Estimate a cross-country capital expenditure function in translog form. They find that: 1) agglomeration benefits and classical factors are dominant 2) investment responses can vary strongly by sector 3) elasticity patterns differ markedly by level of development	Mixture	Classical variables: Labor cost Level of corporate taxation Market size Agglomeration benefit indices: Infrastructure quality (transport, energy, communications) Degree of industrialization Level of foreign direct investment

In addition, they find that in developing countries, infrastructure quality and labor cost are dominant, followed by existing FDI. Corporate tax rates appear to be insignificant.		Risk: Geopolitical considerations Openness
Green and Villanueva (1991) Regress cross-country private sector investment to GDP against the variables in the last column. They find that the following variables are significant: 1) real interest rates 2) economic growth rates 3) domestic inflation 4) external debt burdens 5) public investment rates (+)	Ergodic (endowment-driven localization)	Real deposit interest rate Lagged percentage change in real GDP per capita Ratio of public sector investment to GDP CPI inflation rate Lagged level of per capita GDP Lagged ratio of the stock of external debt to nominal GDP Vector of country dummies
Cheng and Kwan (2000) Use GMM to regress Chinese investment against the variables in the last column. They find that the following variables are significant: 1) regional income (proxy for size of regional market) 2) wage cost (-) 3) infrastructure 4) number of special economic zones in a region 5) number of other zones in a region Note that educational attainment is not significant.	Ergodic	Lagged FDI stock Wages Per capita income Educational attainment variables Infrastructure variables (all roads, high grade and paved roads, presence of railway) Lagged policy variables (number of special economic zones in a region, number of other zones in a region)
Head, Ries and Swenson (1995) Conduct conditional logit estimates and find some support for the hypothesis that industry-level agglomeration benefits play a strong role in investment location decisions.	Non-ergodic (agglomeration externalities-driven localization)	
Mutti and Grubert (2004) Regress real gross product of USA-resident MNCs that originate from various host countries against various determinants. They also conduct probit analysis to determine the effects of various determinants on country choice. They generally find that investments geared towards export markets, rather than the domestic market, is sensitive to host country taxation, that this sensitivity appears to be greater in developing countries than	Ergodic	Real GDP Real GDP per capita 1 – tax rate 1- tax rate in alternative locations Real wage Host country sales Host country sales x (1-tax) Trade policy Distance

developed countries, and that the sensitivity is becoming greater over time. The level of taxation is proxied by the level of country average effective income tax rates. Note that this study does not focus on the role of fiscal incentives per se, but on the impact of the tax rate.		Probit regressions Parent characteristics (R&D/sales, advertising expenditures/sales, labor cost/sales, age, operating assets) Country characteristics (real GDP, real GDP per capita, adjacency, distance, ability to speak English) Policy variables ((1 – tax), trade barriers, corruption, intellectual property protection)
Gastanaga, Nugent and Pashamova (1998) Regress cross-country FDI flows against various policy/institutional variables, including corporate tax rates, tariff rates, the degree of openness to international capital flows, exchange rate distortions, contract enforcement, nationalization risk, bureaucratic delay and corruption. Many of these variables appear to significantly affect FDI flows. Increases in tax rates generally lead to a decline in FDI.	Ergodic	corporate tax rate tariff rates the degree of openness to international capital flows exchange rate distortions contract enforcement, nationalization risk bureaucratic delay and corruption oil prices
Wei (2000) This paper is a cross-country study on the effect of corruption on FDI. The author uses tobit regressions to analyze the effect of various factors on investment. The author finds that in general, higher tax rates lower FDI.		Tax rate Level of corruption Political instability GDP Population Distance from source country Linguistic ties Wages

As mentioned earlier, however, the literature also points out that fiscal incentives may, however, be important when foreign firms compare potential sites among locations that are perceived to be similar. According to PEZA officials, potential foreign investors to the Philippines almost always benchmark the Philippines against Malaysia and Thailand in terms of suitability as a location for manufacturing goods. The economic literature on FDI, as well as international investor surveys suggest that incentives offered by Philippine IPAs, are not among the most important factors affecting investment location decisions (not because they are not competitive, but because these are secondary to more important location determinants). Incentives, however, may be very important when firms decide among similar jurisdictions. The question arises then, about the extent to which we still measure up to our close competitors.

Even against countries perceived to be similar to the Philippines, such as Thailand and Malaysia, the country has been losing competitiveness with respect to the major fundamental investment determinants. The World Competitiveness Yearbook (WCY) is an annual ranking of countries based on their perceived investment location attractiveness. A country's rank on the WCY is a composite of its rankings relative to other countries in many variables known to be important determinants of investment location decisions. In fact, the overall competitiveness of the Philippines has consistently lagged behind its perceived competitors from 2000 to 2005. In terms of overall competitiveness, there is a clear and consistent separation between Indonesia and the Philippines, and the group comprised of Thailand, India, China, Malaysia, Hong Kong, Taiwan and Singapore. India, in particular, has joined the latter group in the last two years. In terms of particularly important human capital and infrastructure variables, Tables to all show the Philippines to be lagging behind many or all of its perceived competitors in the region, except for Indonesia. The 2005 WCY cites the Philippines' weakest competitiveness criteria as primarily in human capital development (education, health).

From a FDI policy perspective therefore, the Philippines' choices are whether to enhance the level of fiscal incentives in a bid to induce additional investments, or to keep incentives at the same level as they currently are (almost at par with similar jurisdictions) or to reduce their scope, and with the last two options, using the savings or revenues generated to improve the fundamental investment-location-determining conditions to levels at par with other countries. So, the question is this: which policy instrument would be more effective in keeping us at par with similarly-perceived countries, thereby making us more attractive for investors? Is it providing more generous fiscal incentives or improvements in the quality of other fundamental investment factors, such as literacy and infrastructure? Given the growing disparities between the Philippines and its perceived competitors for FDI, it is more likely that improvements in factors other than incentives will lead to greater international competitiveness.

**Table 7: Overall country competitiveness rankings,
World Competitiveness Yearbook**

Country	2001	2002	2003	2004	2005
Hong Kong	4	13	10	6	2
Singapore	3	8	4	2	3
Taiwan	16	20	17	12	11
Thailand	34	31	30	29	27
Malaysia	28	24	21	16	28
China	26	28	29	24	31
India	42	41	50	34	39
Philippines	39	40	49	52	49
Indonesia	46	47	57	58	59

Source: World Competitiveness Yearbook, various issues

Table 8: Education: Ranking in 2005 IMD World Competitiveness Yearbook

Educational System (ability to meet the needs of a competitive economy)		Pupil-teacher ratio (primary)		Pupil-teacher ratio (secondary)	
Singapore	3	Malaysia	28	Malaysia	37
India	11	Taiwan	31	Taiwan	38
Hong Kong	15	Thailand	35	Indonesia	39
Taiwan	21	Hong Kong	43	Hong Kong	43
Malaysia	22	China	44	China	46
Thailand	35	Singapore	48	Singapore	47
Philippines	37	Indonesia	49	Thailand	50
China	53	Philippines	56	India	56
Indonesia	57	India	59	Philippines	58

Source: World Competitiveness Yearbook, various issues

Table 9: Infrastructure: Ranking in 2005 IMD World Competitiveness Yearbook

Road density		Efficiency of distribution system for goods and services		Infrastructure maintenance and development		Air transportation (quality encourages business development)		Water transportation (quality of harbors, canals, etc.)	
Singapore	2	Singapore	2	Singapore	1	Singapore	2	Hong Kong	1
Hong Kong	8	Hong Kong	3	Hong Kong	2	Hong Kong	3	Singapore	7
Taiwan	23	Taiwan	19	Taiwan	16	Malaysia	19	Taiwan	18
India	29	Malaysia	24	Malaysia	22	Taiwan	25	Malaysia	22
Philippines	34	Thailand	40	Thailand	29	Thailand	34	Thailand	32
China	38	India	47	China	42	India	40	China	47
Malaysia	41	China	53	India	49	Philippines	47	Philippines	48
Indonesia	44	Philippines	56	Indonesia	54	Indonesia	48	India	54
Thailand	49	Indonesia	59	Philippines	58	China	49	Indonesia	58

Source: World Competitiveness Yearbook, various issues

**Table 10: Health: Ranking in 2005 IMD
World Competitiveness Yearbook**

Public expenditure on health (as a percent of GDP)		Extent to which health infrastructure meets the needs of society	
Thailand	32	Singapore	6
Taiwan	38	Hong Kong	12
Malaysia	41	Malaysia	22
Hong Kong	43	Taiwan	23
Philippines	53	Thailand	30
Indonesia	54	India	41
China	56	China	49
Singapore	58	Philippines	50
India	59	Indonesia	51

Source: World Competitiveness Yearbook, various issues

Table 11: Philippines' weakest criteria (2005 WCY)

Criteria	2005 Rank
Pupil-teacher ratio (secondary education)	58
Pupil-teacher ratio (primary education)	56
Secondary school enrollment	58
Total health expenditure – percent of GDP	60
Dependency ratio – population under 15 and over 64 years old	59
Interest payments – percent of current revenue	49
Fixed telephone lines – per 1000 inhabitants	59
Overall productivity (GDP per person employed)	56
Investment risk – Euromoney creditworthiness rating	57
Internet users	57
Total public expenditure on education – percent of GDP	59
Country credit rating	52
GDP per capita	57
Foreign investors' freedom to acquire control in domestic companies	59
Customs' authorities ability to facilitate efficient transit of goods	57
Risk of political instability	56
Degree to which relocation of production is a threat to the future of the economy	59
Degree to which government decisions are effectively implemented	58
Adequacy and efficiency of energy infrastructure	56
Degree to which the country's image discourages business development	53

Source: World Competitiveness Yearbook 2005

Table 12: Philippines' strongest criteria (2005 WCY)

Criteria	2005 Rank
High tech exports as a percentage of total manufactured exports	1
Female positions – percent of legislators, senior officials and managers	1
Part time employment – percentage of total employment	1
Labor force growth rate	3
Cost of living index	3
Working hours – average number per year	5
Ecological footprint – hectares of biologically productive space – area units per person	3
Consumption tax rate	5
Collected total tax revenues as a percent of GDP	8
Youth unemployment – percent of labor force	2
Employment growth rate	8
Remuneration in services professions	5
Total hourly compensation for manufacturing workers	4
Availability of skilled labor	2
Degree to which language skills meet the needs of enterprises	12
Availability of competent senior managers	8
Degree to which discrimination poses a handicap in society	13
Availability of finance skills	13
Flexibility and adaptability of people	14
Openness of national culture to foreign ideas	14

Source: World Competitiveness Yearbook 2005

This section has analyzed the efficacy of fiscal incentives in playing a major role in FDI location decisions. The problem of competitiveness in the Philippines is that even among countries perceived as its competitors, the Philippines is clearly lagging behind overall in more fundamental drivers of investment than incentives. Thus, based on the evidence presented in this section, placing emphasis on increasing the generosity of incentives appears to be misguided.

The succeeding sections focus on further analyzing the efficacy of fiscal incentives. The next section tries to determine whether fiscal incentives have experienced any success at all in having induced investment across regions in the Philippines. The next sections of the study therefore use empirical methods to determine whether there is a statistical relationship between incentives and patterns of regional investment in the Philippines.

Within-Philippines (cross-region) evidence on the role fiscal incentives play in attracting FDI and investments by domestic investors

Ideally, one would like to find a good, consistent and systematic relationship between incentives and investment, and then investment to growth and other social outcomes, such as poverty and inequality. The first step in this process is to find a relationship between incentives and investment. In this study, this is accomplished in two ways. One way is through regression analysis, which will be discussed later. Another way is through an analysis of the correlation between the value of investment approvals and the value of real gross capital formation. This is a simple test of the extent to which firms registered with IPAs carry out their proposed investment plans. *If firms registered with investment promotion agencies fulfill their ex ante investment commitments, then one should observe a positive and significant*

correlation between the value of lagged regional investment approvals at the IPA level and ex post regional outcomes of real gross fixed capital formation as recorded by the National Statistical Coordination Board (NSCB). In other words, previous investment approvals should be a good predictor of future capital formation.

The following tables list the results of the simple correlation exercise investments registered with either the Board of Investments (BoI) or the Philippine Economic Zone Authority (PEZA). The data is comprised of annual data from 1990 to 2003 on real approved investments for BOI and PEZA by region, as well as real regional gross capital formation from the NSCB.

Table 13: Correlations between investment approvals and real gross domestic capital formation

Region	Current BOI Investment Approvals and Real Gross Domestic Capital Formation	Current PEZA Investment Approvals and Real Gross Domestic Capital Formation	1 Period Lagged BOI Investment Approvals and Real Gross Domestic Capital Formation	1 Period Lagged PEZA Investment Approvals and Real Gross Domestic Capital Formation	2 Period Lagged BOI Investment Approvals and Real Gross Domestic Capital Formation	2 Period Lagged PEZA Investment Approvals and Real Gross Domestic Capital Formation
1	0.06	-0.23	-0.27	-0.38	-0.26	-0.22
2	0.09	0.00	-0.07	0.00	-0.14	0.00
3	0.05	0.48	-0.28	0.53	-0.42	0.35
4	0.07	0.81	0.11	0.79	-0.07	0.68
5	0.11	0.00	-0.28	0.00	0.00	0.00
6	0.47	0.00	0.20	0.00	0.08	0.00
7	-0.02	0.55	-0.10	0.44	-0.44	0.32
8	-0.30	0.00	-0.33	0.00	-0.34	0.00
9	0.07	0.00	-0.01	0.00	-0.12	0.00
10	0.11	0.00	0.02	0.00	-0.21	0.00
11	0.26	0.00	-0.03	0.00	-0.23	0.00
12	0.43	0.00	0.18	0.00	-0.01	0.00
NCR	0.19	-0.10	0.12	-0.75	-0.17	-0.66

Source: Author's estimates

Note: where correlations equal zero, there were insufficient observations

Table 14: Correlations between investment approvals and real capital stock

Region	Current BOI Investment Approvals and Real Capital Stock	Current PEZA Investment Approvals and Real Capital Stock	1 Period Lagged BOI Investment Approvals and Real Capital Stock	1 Period Lagged PEZA Investment Approvals and Real Capital Stock	2 Period Lagged BOI Investment Approvals and Real Capital Stock	2 Period Lagged PEZA Investment Approvals and Real Capital Stock
1	-0.02	-0.14	-0.18	-0.32	-0.08	-0.18
2	0.06	0.00	-0.05	0.00	-0.14	0.00
3	-0.04	0.51	-0.27	0.57	-0.23	0.39
4	0.13	0.87	0.07	0.76	-0.08	0.75
5	0.05	0.00	-0.02	0.00	0.31	0.00
6	0.39	0.00	0.20	0.00	0.09	0.00
7	-0.01	0.64	-0.18	0.35	-0.50	0.39
8	-0.26	0.00	-0.28	0.00	-0.33	0.00
9	0.06	0.00	-0.02	0.00	-0.11	0.00
10	0.12	0.00	-0.03	0.00	-0.20	0.00
11	0.21	0.00	-0.01	0.00	-0.18	0.00
12	0.46	0.00	0.20	0.00	-0.08	0.00
NCR	0.13	-0.52	-0.03	-0.90	-0.21	-0.35

Source: Author's estimates

Note: where correlations equal zero, there were insufficient observations. Capital stock was computed on the basis of perpetual inventory method

The cross-region correlation exercise reveals that:

- 1) there is medium to strong positive correlation between real gross fixed capital formation and current and lagged PEZA investment approvals in Region 4. There is weak correlation between real gross fixed capital formation and current and lagged PEZA investment approvals in Regions 3 and 7. There is no correlation between real gross fixed capital formation and current and lagged PEZA investment approvals in Region 1; and
- 2) there is little or no correlation between real gross fixed capital formation and lagged BOI investment approvals in any region.

These results suggest that to a limited extent (at least in Region 4, and especially the Cavite-Laguna-Batangas-Rizal-Quezon (CALABARZON) area), PEZA-registered investors have fulfilled their ex ante investment commitments to a greater extent relative to BOI-registered investors. While BOI incentives cover a broader set of investors than PEZA incentives, the result means that much of the promised investments in fixed capital by BOI investors have simply not been realized. The poor results may also reflect on the efficacy of the annual Investments Priorities Plan (IPP), the ability of the Board itself to target, screen and monitor firms, as well as on the limited power of incentives to induce actual investment. The results in this section call into question the ability of the BOI (and the IPP) to fulfill its mandate for dispersal and redistribution, goals all explicitly mentioned in EO 226. *This finding raises an interesting point: if investments were not carried out as promised, then this suggests widespread abuse of BOI fiscal incentive privileges and rampant tax avoidance and leakages. But this just further reinforces the notion that the fiscal costs of fiscal incentives are high.*

If real regional gross capital formation is more sensitive to PEZA incentives compared to BOI incentives, then this suggests that the redundancy rate and the cost of BOI fiscal incentives will tend to be high. But what accounts for the lack of sensitivity of regional investment and capital formation to BOI incentives? The answers are discussed in the next part of this report.

e) Estimating the BOI Redundancy Rate through Evaluation of the Investment Screening and Approvals Criteria⁴

By definition, the redundancy rate is positively related to the investment-inducing strength of a given set of fiscal incentives. The investment-inducing strength of a given set of fiscal incentives is, however, very much dependent on the type of project applying for incentives. If a project has ex ante high expected financial returns prior to the application of incentives, the inducing effect of a given set of incentives will be low and so the redundancy rate will be high. But if a project has low ex ante expected financial returns prior to the application of incentives, the inducing effect of incentives will be high and so the redundancy rate will be low.

A common practice in investment promotions agencies in the Philippines is to subject financial indicators of investment project proposals to a review. Project cash flows are typically evaluated to ensure that projects meet standard financial criteria for viability prior to the application of incentives. *But if that is the case, this seems to suggest that most (if not all) incentives would in fact be redundant. The strength of the inducement effect of incentives is offset by the outright viability of the project. The main effect of incentives is not to induce further investment, but to raise private rates of return beyond those already deemed viable for the investment to take place.*

For example, a well-known benchmark hurdle rate in the Philippines is that for infrastructure projects with private sector participation. A 15% financial internal rate of return (FIRR) is an acceptable rate of return and hurdle rate for most infrastructure projects in the Philippines.⁵ Since infrastructure projects are inherently riskier than typical investment projects (due to massive up-front capital investment requirements and longer gestation periods), it follows that most investment projects submitted to the BOI would be satisfied with such a return. Interviews with several highly-placed officials within the BOI confirm that around 95% projects submitted for approval of the BOI generate an FIRR of 15% or greater *prior to the application of incentives*. Therefore, it follows that ex ante, most projects would have been viable from an ex ante standpoint even without the provision of incentives. In fact, several BOI officials concede that by domestic and international standards, a rate of return of 15% and above is already considered high. Since most projects have rates of return higher than 15%, it follows that by all standards, the rate of return on most BOI-registered projects is high to very high, by domestic and even international standards.

The formulation of the annual Investments Priorities Plan (IPP) by the BOI also tends to reinforce the redundancy of incentives. The IPP identifies sectors (and geographic locations) which will qualify for tax incentives for a particular year. The IPP is developed every year by an inter-agency team headed by the BOI. A sector's estimated domestic resource cost (DRC) is the main criteria used by the inter-agency team in developing the IPP. In order to develop a list of sectors which will qualify for incentives, NEDA is requested to make a computation of domestic resource costs (DRCs) for select industries. By definition, DRCs are measures of a country's comparative advantage in producing a particular product. A high (low) DRC is indicative of a country's comparative advantage (disadvantage) in a particular sector. The annual IPP includes sectors in which the country has a comparative advantage in production. If sectors identified

⁴ This section benefited tremendously from lengthy in-depth interviews with several senior BOI officials.

⁵ Based on information from NEDA Investment Coordinating Council meetings.

in the IPP are those in which the country already has a comparative advantage, the issue therefore, is whether qualifying them for incentives will provide them with an added inducement to invest at all.

Thus, the redundancy of fiscal incentives tends to be reinforced by the screening and approval procedure of investment promotion agencies. The current screening structure favors investments that are already financially viable without incentives in the sense that they get incentives even after it has been demonstrated that they are financially viable (actually, projects get incentives *because* they are financially viable). The implied redundancy rate, going by the BOI's screening procedures, should be very high, if not 100%.

What traditional international trade theory predicts the observed pattern of investment will be may also be helpful in explaining why providing fiscal incentives for certain investments may be unnecessary. Traditional international trade theory suggests that countries will tend to specialize in producing goods in which they have a comparative advantage. Therefore, if the economy is open, the observed pattern of domestic (and foreign) investment, even without fiscal incentives as a stimulus, should be to specialize in the production of goods and services with favorable DRCs. Insofar as it assumes that some investment will exploit the use of superior technologies in certain domestic industries relative to foreign countries, the Ricardian approach to trade will apply in explaining investment. On the other hand, where the pattern of investment is based on exploiting a country's comparative advantage in the use of relatively abundant factors of production, the Heckscher-Ohlin (HO) model will be more applicable. The HO model may help explain the observed pattern of investment when countries have identical technologies in production. The applicability of trade based on increasing returns to scale economies of production to explaining observed patterns of investment appears to be limited.

What does the literature say about targeting investors more effectively? The literature on fiscal incentives targeting recommends that redundancy can best be reduced by providing incentives to investments with low financial returns but high economic returns. The table below illustrates the point:

Table 15

Ex Ante Characteristics of Non-Exporting Investment Proposals	High financial returns	Low financial returns
High economic returns	High redundancy rate; project can be viable without incentives	Low redundancy rate; project is not viable without incentives
Low Economic returns	High redundancy rate; project can be viable without incentives	High redundancy rate; project is not viable without incentives

Source: Bolnick (2004)

The requirement that the project have high economic returns follows from standard public finance theory that the provision of subsidies will only be justified if economic or social returns from an activity exceed private returns from it.

f) Estimating the Redundancy Rate by using theories of investment motivation to distinguish between incentive-sensitive investments and non-incentive sensitive investments

In the previous section, it was seen that the impact of incentives provision by Philippine IPAs is that it may raise expected returns for (for marginal and even highly profitable) projects. This suggests that most, if not all incentives would in fact be redundant. The next question to ask is, therefore, whether there are any circumstances under which a government would rationally provide fiscal incentives to a firm that will pursue potentially highly profitable investment opportunities in the country.

The answer, in this section, is yes, under three circumstances:

- 1) if investors are sufficiently mobile to be able to extract even better terms from other jurisdictions;
- 2) if the investors' primary motivation for investment is to compete in foreign export markets against exports from third countries. In this case, reducing unit costs of output production (perhaps adjusted for productivity of labor) will tend to be very important; and
- 3) if the social benefits and spillovers from the investment far outweigh the costs of providing incentives.

(3) above is simply the economic justification of subsidy provision. One of the implications of the above is that investors geared towards production for the domestic market will not be as sensitive to incentives. The redundancy rate can therefore be estimated as roughly the proportion of non-exporting investments to total investments.

Investments Registered Under the Board of Investment (BOI)

Industrial organization (IO) theories of investment can serve as an invaluable guide in reckoning the redundancy of incentives. IO theory examines the underlying motivations for investment by firms. The classic theory of foreign direct investment classified by motivation is due to Dunning (1993, 1995, 1998). Dunning classifies FDI as either of three types:

- a) market-seeking;
- b) resource/asset-seeking; and
- c) efficiency-seeking

Market-seeking investors are primarily motivated by the size and strength of domestic markets. Such investors are typically characterized as having privileged access to inputs. Resource or asset-seeking investments are primarily motivated by the availability of raw materials and/or access to technological and created assets. Such resource-seeking investors are typically characterized to have privileged access to markets. Finally, the primary inducement of efficiency-seeking investments is the cost of resources and assets adjusted for labor productivity. Such investments are usually made by investors which have privileged access to both inputs and markets. Dunning's classification of FDI by motivation has also been demonstrated by Coyne (1994, 1995) to yield important information about an investor's response to tax incentives. Both market-seeking and resource/asset-seeking investments should not be very responsive to tax incentives, since per-unit reducing costs of production will not be the primary inducement for investment in both cases. The following table summarizes the classification:

Table 16

Type of investment classified by motives of MNCs (Dunning)	Principal economic determinants in host countries	Investors' response to tax incentives (Coyne)	Major characteristics of investors
Market-seeking (import-substituting)	Market size and per capita income Market growth Access to regional and global markets Country-specific consumer preferences Structure of markets	Low, since investors are primarily drawn by access to potentially large market shares. If provided, therefore, the redundancy rate is likely to be high	Privileged access to inputs Oligopolistic industry
Resource/asset-seeking (supply-oriented)	Raw materials Low cost unskilled labor Skilled labor Technological, innovatory and other created assets (e.g., brand names), including as embodied in individuals, firms and clusters Physical infrastructure (ports, roads, power, telecommunications)	Low, since investors are primarily drawn by access to important resources or assets. If provided, therefore, the redundancy rate is likely to be high	Privileged access to markets worldwide Economies of vertical integration
Efficiency seeking (cost-reducing rationalized investment)	Cost of resources and assets listed under B, adjusted for productivity of labor resources Other input costs, e.g., transport and communication costs to/from host economy and costs of other intermediate products Membership in a regional integration agreement conducive to the establishment of regional corporate networks	High. If provided, therefore, the redundancy rate is likely to be low.	Privileged access to both markets and inputs

Source:

One way to compute the cost of fiscal incentives is therefore to obtain data on investments by sector and then to categorize each sector according to any of the three classes mentioned above. An attempt to do just this was made in an earlier version of this report. Such a scheme could, however, be subject to much discretion on the part of the analyst, which may result in ad hoc classifications. Nevertheless, the classification could provide a useful first approximation for the redundancy rate. Indeed, this method was the basis for computing the BOI redundancy rate in the midterm report. Only in the electronics sector was there a clear-cut justification for labeling an industry as efficiency-seeking (and therefore, deserving of incentives).

A more convenient and much neater categorization can be made if one recognizes that the exporter-non-exporter dichotomy captures much of the dynamics and motivations in the table above. By definition, non-exporting investments are investments whose production is intended for the domestic

economy. *Therefore, non-exporting investments are domestic market-seeking investments.* Going by Coyne's classification, therefore, non-exporting investments should not be as sensitive to fiscal incentives relative to exporting investments. Exporting investments would tend to exhibit greater sensitivity to incentives because their outputs compete in foreign markets on the basis of cost, and incentives could play a potentially important role in unit cost reduction. *Therefore, one could get a sense of the level of the redundancy rate by classifying investments by intended market (exporter versus non-exporter).* By nature, PEZA investors produce primarily for export (the required proportion of exported output required for one to qualify for PEZA incentives is 70%, although Filipino locators in PEZA ecozones may sell up to 50% of their output in the domestic market). A breakdown of BOI investors exporters (since 1969) by sector is presented in Table 17 below. The statistics suggest that historically, the BOI has catered primarily to domestic market-seeking investments. Therefore, it should follow that most incentives received by BOI-registered firms are redundant. The redundancy of domestic market-oriented investment is also captured in the study by Mutti and Grubert cited earlier in this paper.

Table 17: The ratio of BOI-registered exporters to all BOI-investors, 1969 – 2005 (by sector)

Sector	Agriculture	Wood	Transport Equipment	Trading	Toys	Processed Foods	Mining	Information Technology
Number of Projects	5.11%	22.69%	12.41%	10.80%	16.94%	22.46%	14.29%	11.11%
Project Cost	6.46%	14.98%	13.20%	24.33%	67.15%	15.96%	49.04%	7.03%
Employment	3.72%	36.62%	18.09%	10.05%	23.95%	35.47%	13.82%	11.18%

Source: Board of Investments

Sector	Engineering	Electronics	Construction	Clothing	Chemicals	Chemical-Based Consumer Products
Number of Projects	12.41%	30.46%	15.29%	18.24%	7.58%	20.86%
Project Cost	20.95%	35.73%	2.55%	24.21%	3.99%	21.88%
Employment	24.09%	34.26%	15.61%	24.93%	6.74%	21.53%

Source: Board of Investments

Based on the table above, the electronics sector had the highest total of exporting investments, accounting for 30.46% of BOI-registered enterprises that are in the electronics sector. Most industries have exporting investments accounting for very little of total projects, project cost and employment. *Combined with the result of the investor-screening exercise and analysis, where it has been determined that BOI-registered investments are very profitable ex ante, these results suggest that the redundancy rate for BOI-registered investments will be akin those estimated in Thailand, Indonesia and Vietnam – in the range of 80 percent and above in most sectors.* The table below is an application of the Dunning-Coyne framework to the exporter-non-exporter dichotomy:

Table 18

Type of investment classified by motives	Principal economic determinants in host countries	Investors' response to tax incentives	Major characteristics of investors
Market-seeking (import-substituting)	Large market size and high per capita income High current and expected future market growth With relatively free access to regional and global markets Country-specific consumer preferences	Low, since investors are primarily drawn by access to potentially large markets and large market shares. If provided, therefore, the redundancy rate is likely to be high	Privileged access to inputs Member of oligopolistic industry Investors of this type have greater ability to serve host country market
Export-oriented (cost-reducing rationalized investment)	Cost of resources and assets listed above, adjusted for productivity of labor resources Other input costs, e.g., transport and communication costs to/from host economy and costs of other intermediate products Host country may be party to a regional integration agreement conducive to the establishment of regional corporate networks	High, since part of main motivation for investment is unit cost reduction. If provided, therefore, the redundancy rate is likely to be low.	Investors are likely to have privileged access to both markets and inputs Investors of this type have greater ability to access host country resources
Export-oriented (resource-seeking)	Raw materials Low cost unskilled labor Skilled labor (possessing particular skills) Technological, innovatory and other created assets (e.g., brand names), including as embodied in individuals, firms and clusters Physical infrastructure (ports, roads, power, telecommunications)	Depends on the quality and quantity of specific resource or asset being sought. If the resource or asset is easily reproducible in other countries, the sensitivity of investors to incentives will tend to be high. If not, then investors will not be as sensitive	Privileged access to markets worldwide Investors will desire economies of vertical integration Investors are able to cut down on production costs as a result of cheaper factors of production or greater productivity and production efficiency

Source: Author

By the criteria discussed in this section of the study, the implication is that the BOI would tend to have a relatively high redundancy rate, while to the extent that PEZA investors produce for export markets, the PEZA would tend to have a relatively low redundancy rate. Other IPA's such as SBMA and CSEZA, could be evaluated the same way.

The initial process of classifying investors by motive and intended market could be further validated through regression analysis. As defined earlier, the level of the redundancy rate will be determined by the sensitivity of investment to tax incentives. This study uses regression analysis to evaluate the level of this sensitivity. If the results suggest that the sensitivity of investment to incentives is low (high), the redundancy rate will be high (low).

One potential policy implication of the foregoing analysis is the need for IPAs to be careful in further relaxing rules on allowed domestic sales of registered export producers. The greater the extent to which registered firms sell to the domestic market, the less valuable to them will be fiscal incentives.

In order to pin down a figure for the current BOI redundancy rate, one could determine the value of BOI investments that are non-exporting (domestic market-seeking) as a total of all BOI-registered investments. Using data obtained from the BOI, the following historical ratios were derived:

Table 19a: BOI Redundancy: 1969-1995

Type of investor	Exporter	IT-Related	Tourism
Value of investments as a proportion of total investments	1.19%	0.16%	6.28%
Cumulative		1.35%	7.64%
		Exporter + IT	Exporter + IT +Tourism
Maximum value of redundant investments as a proportion of total value of investments	98.81%		
Minimum value of redundant investments as a proportion of total value of investments			92.36%

Note: Maximum (minimum) value of redundant investments as a proportion of total value of investments equals 100% minus investments by exporters (exporters, IT-related and tourism combined)

Table 19b: BOI Redundancy: 1996-1999

Type of investor	Exporter	IT-Related	Tourism
Value of investments as a Proportion of total investments	2.53%	0.11%	5.80%
Cumulative		2.64%	8.44%
		Exporter + IT	Exporter + IT +Tourism
Maximum value of redundant investments as a proportion of total value of investments	97.47%		
Minimum value of redundant investments as a proportion of total value of investments			91.56%

Table 19c: BOI Redundancy: 1999-2005

Type of investor	Exporter	IT-Related	Tourism
Value of investments as a proportion of total investments	10.93%	4.46%	1.08%
Cumulative		15.39%	16.47%
		Exporter + IT	Exporter + IT + Tourism
Maximum value of redundant investments as a proportion of total value of investments	89.07%		
Minimum value of redundant investments as a proportion of total value of investments			83.53%

Table 19d: BOI Redundancy: 2001-2005

Type of investor	Exporter	IT-Related	Tourism
Value of investments as a proportion of total investments	9.55%	4.88%	0.85%
Cumulative		14.43%	15.28%
		Exporter + IT	Exporter + IT + Tourism
Maximum value of redundant investments as a proportion of total value of investments	90.45%		
Minimum value of redundant investments as a proportion of total value of investments			84.72%

Table 19e: BOI Redundancy: 2005

Type of investor	Exporter	IT-Related	Tourism
Value of investments as a proportion of total investments	4.94%	0.35%	0.44%
Cumulative		5.30%	5.74%
		Exporter + IT	Exporter + IT + Tourism
Maximum value of redundant investments as a proportion of total value of investments	95.06%		
Minimum value of redundant investments as a proportion of total value of investments			94.26%

The tables above were constructed using data on the value of investments arranged by type of investor. In the registration data supplied by the BOI, registration numbers clearly identified most exporting investments, but did not specify whether or not IT-related investments were also service exporters. In this exercise, it is assumed that some or all of the IT-registered investments are exporting

investments. For purposes of comprehensiveness in accounting for all foreign-exchange-earning enterprises, tourism-related investments were included as well.

The tables above suggest that historically, the BOI redundancy rate based on the value of registered investments is above 90%. The redundancy for the period 2001-2005 is between 85% and 90%, but for 2005 alone, the redundancy rate is relatively high at 95%. *While the NUMBER of BOI registered exporter, IT-related and tourism related enterprises has increased in recent years, the basis for calculating the fiscal cost of incentives is the VALUE of BOI registered exporter, IT-related and tourism related investments. As the statistics show above, this has remained a small part of the overall value of the BOI investment portfolio. This means that very, very large, domestic market-seeking investments dominate the value of BOI investments (for recent examples, see Globe and Smart). The fiscal costs associated with BOI can be primarily be traced to these investments.*

Validating estimated redundancy rates using regression analysis applied to models of investment location

This section uses regression analysis to

- 1) infer and/or validate the size of the redundancy rate from the data; and
- 2) in conjunction with the classification of investments by investor motivation and intended market, to distinguish incentive-sensitive investments and sectors from those that are not in order to validate our investor classifications.

Appendix 1 describes several traditional and non-traditional economic models of investment. Regression analysis will be applied to models of investment location (a mix of various economic models of investment) to validate the earlier redundancy rate estimates from the data. As mentioned earlier, the size of the redundancy rate will be negatively related to the investment-inducing effect of incentives. Appendix 1 presents the results in detail. Summary results of regression analysis performed thus far are displayed in the table below (the dependent variable is regional real gross fixed capital formation, which is an observable variable reflecting to actual investment– collated by NSCB):

Table 20

Model	Generally significant variables (variables in <i>italics</i> significant in some specifications estimated)	Suggested strength of incentives
Sample period: 1980 – 2003 annual data	Level of functional literacy (+) Lagged number of PEZA ecozones (+) Level of paved roads/road density (+) Status of electrification (+) Real per capita GDP (+) Lagged past PEZA investment approvals (+) <i>Lagged agglomeration effects (ratio of manufacturing gross value added to regional GVA) (+)</i> <i>Index of compensation in manufacturing (-)</i>	Number of PEZA ecozones was significant, but dummies for BOI and PEZA laws were insignificant or had significantly negative effects (especially the BOI dummy) Lagged past PEZA investment approvals, a proxy for the generosity of incentives, was significantly positive in some regressions

Source: Author

The table of results above suggests that in general, the PEZA Law and the incentives embodied within the law appear to have been more successful at inducing investment compared to EO 226. The absolute number of PEZA ecozones in a region, as well as the level of past investment approvals, is a significant predictor of actual investment in most cases, while proxies for BOI incentives are not.

Even if they tend to be more of an inducement than BOI incentives, one should probably still exercise some caution in interpreting the significance of PEZA incentives. During discussions with senior PEZA officials, they emphasized that locators, as well as investors in ecozones tended to place the greatest emphasis on proximity and access to seaports and airports as the most important factors driving location decisions. This again suggests that incentives again play a secondary role to other factors (in this case, access to infrastructure) in the investment location decision. The greater the extent to which data on number of PEZA economic zones and lagged investment approvals by region are good proxies for access to viable ports and infrastructure, the lower is the implied power of the PEZA investment incentives themselves.

So what has been the main effect of PEZA incentives? Have PEZA, SBMA and CSEZ incentives been effective in inducing investments? The empirical results in the previous sections seem to suggest that relative to the BOI, the PEZA has been a more successful investment inducer.

As a tool to attract foreign investor-exporters, PEZA incentives are subject to some of the limitations mentioned earlier regarding the cross-country ability of incentives to be a major factor in inducing investment. The Mutti and Grubert (2004) study on American MNCs, however, suggests that

PEZA incentives are potentially important for as long as PEZA continues to target investors that are primarily exporters. *The greater the role played by domestic market conditions in motivating investment, the less sensitive will the investors be to host country tax policies. This is also consistent with Dunning and Coyne, as well as to the exporter-non-exporter dichotomy discussed earlier.*

This author has mixed views, however, over the use of PEZA incentives to attract ecozone developers. On the one hand, prior to the passage of the PEZA Law in 1995, only four publicly-developed and operated ecozones existed. The research on Philippine ecozones prior to 1995 lamented the poor performance of these public ecozones (Warr, 1985). In spite of this, there appeared to be growing demand for ecozones in the Philippines, if the conditions were appropriate – at the time, the Philippines appeared to be competitive with respect to manufacturing wages, availability of skilled and unskilled labor and other factors, such as infrastructure. The national government’s ability to develop more ecozones, however, was constrained by its fiscal resources, as well as its limited managerial and development ability. Since their entry in 1995, private developers have clearly demonstrated superior performance in terms of developing the required support facilities and utilities in ecozones, as well as in forming partnerships with foreign firms capable of attracting foreign investor-locators. By enabling a transfer of development risk away from the government and into the private sector, ecozones in Region 4A have been a clear PEZA success.

Table 21: Total PEZA developer investment (in millions of pesos)

Year	Amount
1995	7,535.05
1996	42,631.37
1997	106,191.21
1998	32,827.33
1999	118,917.27
2000	82,642.00
2001	45,193.55
2002	11,295.25
2003	2,950.88
2004	4,423.36

Source: Philippine Economic Zone Authority

Replicating PEZA’s Region 4A success in other regions, however, has been much more difficult. The unintended consequence of allowing private firms to develop subsequent ecozones has been for private developers to naturally choose the least risky locations. This has led to a clustering of ecozones within the CALABARZON area – in close proximity to existing major seaports and airports. Because ports sufficiently capable of handling the shipment of exports and imports, as well as quality infrastructure were confined to this area (and this area alone), the efficacy of the PEZA incentives in spreading investments (and ecozones) over a wider geographical area is effectively limited.

Besides providing incentives to manufacturing-centered ecozone developers, PEZA also began providing incentives to developers of information technology-oriented buildings and parks in the late 1990s.⁶ These IT buildings and parks have since hosted many of the call centers and other outsourced and

⁶ Loosely defined, an “IT Park” is an area which has been developed into a complex capable of providing infrastructure and other support facilities required by IT enterprises, as well as amenities required by professionals and workers involved in IT enterprises, or easy access to such amenities. An “IT Building” is a building, the whole or part of which has been developed by public or private corporate entities to provide infrastructure and other support facilities required by IT enterprises, as well as amenities required by professionals and workers involved in IT enterprises, or easy access to such amenities.

IT-enabled businesses that have chosen the Philippines as location. In the case of IT buildings and parks, the developer is typically the owner of the building. The PEZA has a system of accrediting IT building and IT park developer investments. Such investments are intended to cover the investment cost optic fiber connection, redundant power (UPS or large generators), building security monitors for security minimum requirements of PEZA for accreditation. Compared to developers of manufacturing-centered ecozones, there appears to be much less of a justification for providing incentives to IT building and IT park developers. Information technology investments are clearly resource-seeking investments (skilled IT and English-speaking call center professionals), and there is strong evidence that these investments would have been outsourced to the country, as the Philippines has become a highly preferred destination for such. Furthermore, most of the professionals who would tend to be qualified to work on these jobs tend to cluster in the NCR area and other already well-developed areas of the country.⁷ This has a similar inequality-reinforcing effect to the clustering already observed in PEZA's manufacturing-centered ecozones, but is worse, since the IT buildings and parks are located in the richest part of the country.

What is the estimated redundancy rate of PEZA, SBMA and CSEZ?

The exporter-non-exporter dichotomy for estimating redundancy can be applied to other IPA's. Unfortunately, this study was not able to obtain investment data from authorities at either SBMA or CSEZ of the same quality as that obtained from the BOI and the PEZA.

For CSEZ and SBMA, an upper limit for the estimate of the redundancy rate could be:

- 1) the greatest extent to which an individual investor may sell output to the domestic market outside the zone and yet qualify to be registered within the zone as an exporting investor; or
- 2) the extent to which other non-exporting but registered enterprises sell any of their output to domestic markets outside the zone.

Examples of CSEZ- and SBMA-registered enterprises that are non-export (or tourism-) oriented include: retail outlets, trading, warehousing and transshipment, port-related firms, services (banks, consultancy, information technology related firms, estate development and housing developers). Incentives enjoyed by the firms under these categories would tend to be redundant insofar as they do not serve the export-oriented firms.

Under criteria (a) above, a rough estimate of the upper limit for the redundancy rate in both economic zones can be obtained by using the greatest extent to which an individual investor may sell output to the domestic market and yet qualify to be registered within the zone as an exporting investor (the level of domestic sales of each zone). For the CSEZ and the SBMA, this means that the redundancy rate is *at most 50%*, because Filipino exporters that are allowed to register with either institution are allowed to sell at most 50% of their output in domestic markets (or at least 50% of their output in export markets).⁸ *This figure could be adjusted downward somewhat because foreign-owned exporting firms are required to sell at least 70% of their output to export markets to continue to qualify for incentives.*

⁷ One other argument against the provision of incentives to IT Buildings and parks (suggested by Dr. Felipe Medalla) is that given the status of the country as a preferred destination of outsourced investments, the developers would have attracted many call center and other outsourced operations anyway, and they would not require additional incentives to put up the necessary investments. The recent boom in IT-enabled outsourced businesses in the country has only given developers cause to raise rental rates, thus boosting their profitability even further. Dr. Medalla recalled that in the late 1990's PEZA had sought approval from the Cabinet to provide incentives to IT building and park developers. The Cabinet disapproved at that time, but PEZA apparently decided to go on with the practice.

⁸ An enterprise may still be entitled to incentives even if the activity is not listed in the IPP so long as:

If the redundancy rate may be roughly measured as the ratio of non-exporter to total investments, then for the PEZA, the redundancy rate should then be the extent of PEZA incentives provided to developers. In particular, given the resource-seeking nature of the investment locators, and given the status of the Philippines as a preferred destination, the PEZA redundancy rate is the ratio of IT building and park developer investments to total investments. Relative to manufacturing-centered PEZA ecozones, which cater primarily to efficiency-seeking investors AND are located outside NCR, there is much less justification for the IT buildings and IT parks. The tables below list the amount of PEZA-registered developer investments.

Table 22a: PEZA-registered developer investments by region (in millions of pesos)

Region	1995	1996	1997	1998	1999	2000	2001
NCR			29,893.00		90,621.72	12,150.51	117.86
CAR			217.00	1,086.00			
1		1,175.00	350.61	269.15	915.62		
2							
3	120.17	8,432.00	3,009.61		7,982.93		
4	6,894.89	26,162.15	52,043.59	13,740.26	18,784.10	5,174.84	45,075.69
5		206.04	1,971.80	1,413.94	46.28		
6			3,901.00	11,644.03	293.92		
7	520.00	1,987.01	3,824.00	4,507.00		63,995.63	
8		176.32	1,213.60				
9		899.59				509.60	
10							
11		936.26	8,500.00	166.95	272.70	449.33	
12		619.00					
13		2,038.00					
CARAGA						362.09	
ARMM			1,267.00				
TOTAL*	7,535.05	42,631.37	106,191.21	32,827.33	118,917.27	82,642.00	45,193.55
Locator investment	44,989.93	22,710.90	53,561.25	64,120.21	36,819.45	74,055.73	35,667.25
Total Investment	52,524.98	65,342.27	159,752.46	96,947.54	155,736.72	156,697.73	80,860.80

Source: Philippine Economic Zone Authority

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1. at least 50% of production is for exports, if Filipino-owned enterprise; and
 2. at least 70% of production is for exports, if majority foreign-owned enterprise (more than 40% foreign equity)

Table 22b: PEZA-registered developer investments by region (in millions of pesos)

Region	2002	2003	2004	2005	2006 (so far)
NCR	9,882.00	2,000.00	1,911.41	2,767.33	3,885.00
CAR					
1		100.00			
2					
3	328.19		378.09		95.40
4	836.68	527.88	508.54	864.62	157.75
5				498.38	
6				34.00	
7		320.00	1,159.46	775.35	322.31
8			350.00		
9	248.39				
10			115.86	245.00	
11		3.00			
12					
13					
CARAGA					
ARMM					
TOTAL*	11,295.25	2,950.88	4,423.36	5,184.68	4,460.46
Locator investment	27,445.86	28,395.06	46,137.74		
Total Investment	38,741.11	31,345.94	50,561.10	5,184.68	4,460.46

Source: Philippine Economic Zone Authority

Table 22c: Percentage of all PEZA investments, 1995-2002

Of Which:	1995	1996	1997	1998	1999	2000	2001	2002
All Developers	14.35%	65.24%	66.47%	33.86%	76.36%	52.74%	55.89%	29.16%
All investors	85.65%	34.76%	33.53%	66.14%	23.64%	47.26%	44.11%	70.84%
NCR Developers	0.00%	0.00%	18.71%	0.00%	58.19%	7.75%	0.15%	25.51%

Source: Philippine Economic Zone Authority

Table 22d: Percentage of all PEZA investments, 2003-2005

Of Which:	2003	2004	2005
All Developers	9.41%	8.75%	7.17%
All investors	90.59%	91.25%	92.83%
NCR Developers	6.38%	3.78%	3.83%

Source: Philippine Economic Zone Authority

Note that the last row of the Table 22d shows incentives provided to NCR developers. Most, if not all of these are investments in IT buildings and parks. With respect to the IT buildings and parks, therefore, the redundancy rate for PEZA varies from year to year, from a high of 58% in 1999 to the current level of around 3% to 4%.

CSEZ and SBMA present special challenges for estimation of redundancy. On the one hand, there are investors registered under both which are clearly export-oriented or at least non-export-oriented but clearly in support of export-oriented firms (such as banks, warehousing, port-related services). On the other hand, there seem to be a large number of other investors who clearly cater to both foreign and domestic markets (tourism facilities, estate developers, restaurants and duty-free shops, for example) and who do not seem to be subject to the 50% limit rule on domestic sales.

Under criteria (b), the extent to which other non-exporting but registered enterprises sell any of their output to domestic markets outside the zone reflects redundancy. In order to estimate this for CSEZ, individual investments were grouped depending on the likelihood that they satisfied this criterion. *This yielded the estimated redundancy rate of around 36.3% for CSEZ. For SBMA, criteria (b) yielded an estimated redundancy rate of between 13% to 22%, based on investments. For computational purposes, the redundancy rate of 17.5% is assigned to SBMA.*

Table 23: Clark Special Economic Zone (CSEZ)

Total number of operating firms in 2005	405
Of which: Somewhat to likely to be non-redundant (because some or most of them would be registered as export-oriented)	
Industrial enterprises	125
IT-Related enterprises	26
Tourism Estates	7
Sum	158
Percent to total enterprises	39.01%
Of which: Highly likely to be redundant under criteria (b) (primarily non-exporting)	
Commercial	38
Service Oriented	109
Sum	147
Percent to total enterprises	36.30%
Of which: All other enterprises	100
Percent to total enterprises	24.69%

Source: Clark Special Economic Zone

Table 24: Subic Bay Metropolitan Authority (SBMA)

Sector/industry	Number of investors	Investment
Duty free shops	31	31,162,037.00
Small scale business	10	174,356.00
Tourism-related	90	290,767,609.00
Trading of motor vehicles	71	115,502,906.00
Auctioneers	3	2,736,220.00
Estate development	16	288,374,868.00
Housing developers	7	8,258,385.00
Total	228	736,976,381.00
Percent of total, including tourism-related investors and investments	37.13%	22.08%
Percent of total without tourism-related investors and investments (likely to be redundant under criteria (b))	22.48%	13.37%
Total of all registered investors and investments	614	3,337,295,905.00

Source: Subic Bay Metropolitan Authority Legal Department

Criteria (b) above suggests that the PEZA ecozone redundancy rate will be lower than the redundancy rate for CSEZ and SBMA, since the latter will feature a greater number of firms whose output is available for sale to domestic markets outside the zone (for example, CSEZ and SBMA have the registered export enterprises themselves plus firms operating commercial, housing and retail shopping services). Therefore, following the principle that the redundancy rate for an IPA is directly proportional to its dependence on domestic market sales, the CSEZ and SBMA will be relatively more dependent on the strength of domestic markets than will PEZA ecozones. *Thus, among the IPA's, therefore, the PEZA would seem to have the lowest redundancy. The midterm report assigned a redundancy figure of 10% for PEZA, in order to capture some inevitable leakages and mis-targeting. Considering the leakage attributed to the IT buildings and IT parks, this figure is preserved for this final report. Summarizing, the proposed redundancy rates are 90% for BOI, around 36% for CSEZ, around 17.5% for SBMA and exactly 10% for PEZA.*

Estimating the Historical Cost of Fiscal Incentives

The empirical evidence discussed in previous sections of this study is already sufficient to allow one to roughly estimate the historical cost of fiscal incentives. This is done by IPA. In order to estimate the historical cost of fiscal incentives provided by the IPAs, the following procedures are followed:

- 1) Determine the redundancy rate per investment promotion agency
- 2) For each agency, compute the cost of the income tax holiday, if applicable
- 3) Estimate the value of the following variables:
 - a) Capital goods imports made by registered manufacturing firms – to determine the cost of tax and duty exemptions

- b) Raw materials imports made by registered manufacturing firms - to determine the cost of tax and duty exemptions
- c) Domestic capital equipment used by registered manufacturing firms – to determine the cost of tax credits on the use of domestic capital equipment
- d) Wages of registered manufacturing firms – to determine deductions on labor expenses
- e) Domestic capital equipment used by registered manufacturing firms – to determine the cost of tax credits on the use of domestic capital equipment

(a) to (c) will be based on which the costs of tax and duty exemptions are made. The following assumptions were made to simplify the analysis:

- 1) The overwhelming majority of the beneficiaries of BOI incentives are firms in the manufacturing sector;
- 2) A large majority of investment by private firms in a year is made by firms that are registered with any of the four main investment promotions agencies (IPA's: BOI, PEZA, Subic, Clark)

In order to derive estimates of the value imports of raw materials and capital goods, as well as wages paid to employees, the coefficients and values for the manufacturing industry (sector 03 in the PSIC) from the latest (1994) NSCB Input-Output Tables are used.⁹

⁹ The NSCB came out with the latest (2000) version of the input-output table in late March, 2006. However, technical coefficients for this study were not yet updated because NSCB still had to publish a complete set of IO tables.

Table 25

	Variable	Source IO Table	Value in Pesos	Share of Total/ Coefficient
A	Total Imports of Raw Materials	11 Sector C x C Import Matrix 1994	413,959,981,000.00	
B	Total Imports of Raw Materials by Manufacturing Firms	11 Sector C x C Import Matrix 1994	232,511,394,000.00	0.561676
C	Total Imports of Capital Goods	11 Sector C x C Import Matrix 1994	145,801,042,000.00	
D	Total Imports of Capital Goods by Manufacturing Firms	11 Sector C x C Import Matrix 1994	137,912,741,000.00	0.945897
E	Total Use of Domestic Capital Goods	11 sector C x C Domestic IO Table	407,339,000,000.00	
F	Total Use of Domestic Capital Goods by Manufacturing Firms	11 sector C x C Domestic IO Table	43,555,029,000.00	0.106926

Source: Author, 1994 Input-Output Tables from National Statistics Coordination Board (NSCB)

Note that for each aggregate, a share for all manufacturing firms has been derived. These shares will be the basis for estimating foregone revenues for each IPA. The table below then presents a step-by-step derivation of the relevant variables used in estimating foregone revenues in 2004 for the major incentives:

Table 26

	Variable	Source	Value		Computation
1	Total Imports of the Philippines	NSO	44,039,212,444.00	USD	
2	Total Imports of the Philippines	NSO	2,467,957,465,361.76	PHP	= 1 x 2
3	Total Imports of Raw Materials and Capital Goods, 1994	IO	559,761,023,000.00	PHP	
4	Total Imports of Raw Materials and Capital Goods by Manufacturing Firms, 1994	IO	370,424,135,000.00		= 5 + 6 (values)
4a	Share of Imports of Raw Materials and Capital Goods by Manufacturing Firms to Total Imports of Raw Materials and Capital Goods, 1994		66.18%		= 4 / 3
5	Total Imports of Raw Materials by Manufacturing Firms, 1994	11 Sector C x C Import Matrix 1994	232,511,394,000.00		

5a	Share of Imports of Raw Materials by Manufacturing Firms to Total Imports of Raw Materials and Capital Goods, 1994		62.77%		= 5 / 4
6	Total Imports of Capital Goods by Manufacturing Firms, 1994	11 Sector C x C Import Matrix 1994	137,912,741,000.00		
6a	Share of Imports of Capital Goods by Manufacturing Firms to Total Imports of Raw Materials and Capital Goods, 1994		37.23%		= 6 / 4
7	Average Exchange Rate, 2004	BSP	56.04 PHP / 1 USD		
8	Total Imports of Raw Materials and Capital Goods, 2004	NSO,BSP	35,114,548,660.00	USD	
9	Total Imports of Raw Materials and Capital Goods, 2004		1,967,819,306,906.40	PHP	= 9 x 7
10	Total Imports of Raw Materials and Capital Goods by Manufacturing Firms, 2004		1,302,212,434,675.19	PHP	= 9 x 4a
11	Total Imports of Raw Materials by Manufacturing Firms 2004		817,385,261,547.45	PHP	= 10 x 5a
12	Total Imports of Capital Goods by Manufacturing Firms 2004		484,827,173,127.74	PHP	= 12 x 6a
13	Total Exports of Manufactured Goods (USD)	NSO	35,443,407,470.00	USD	
14	Total Exports of Manufactured Goods Of Which		1,986,248,554,618.80	PHP	= 13 x 7
15	Total Exports of Manufactured Goods by BOI-Registered Firms	Residual	164,663,142,898.80	8.29% share to total	= 19 – 18 – 17 – 16
16	Total Exports of Manufactured Goods by PEZA-Registered Firms	PEZA	1,732,986,171,720.00	87.25% share to total	
17	Total Exports of Manufactured Goods by Subic-Registered Firms	SBMA	39,900,480,000.00	2.01% share to total	
18	Total Exports of Manufactured Goods by CSEZ-Registered Firms	CSEZ	48,698,760,000.00	2.45% share to total	
19	Total Exports of Manufactured Goods	NSO	1,986,248,554,618.80	100.00%	

				share to total	
20	Total Imports by BOI-Registered Firms		245,175,879,045.84	PHP	= 24 – 23 – 22 - 21
21	Total Imports by PEZA-Registered Firms	PEZA	998,949,650,160.00	PHP	
22	Total Imports by Subic-Registered Firms	SBMA	26,159,314,797.08	PHP	= 24 x 22a
22a	Share of imports by Subic-Registered Firms to Total Imports by All Registered Firms		2.01%	Assume same as export share	
23	Total Imports by CSEZ-Registered Firms	CSEZ	31,927,590,672.27	PHP	= 24 x 23a
23a	Share of imports by CSEZ-Registered Firms to Total Imports by All Registered Firms		2.45%	Assume same as export share	
24	Total Imports by All Registered Firms		1,302,212,434,675.19	PHP	= 10
	PEZA				
25	Total Imports by PEZA-Registered Firms	PEZA	998,949,650,160.00	PHP	= 21
26	Estimate of PEZA Raw Materials Imports		627,030,351,827.68	PHP	= 25 x 5a
27	Estimate of PEZA Capital Goods Imports		371,919,298,332.32	PHP	= 25 x 6a
28	Estimate of PEZA Exports	PEZA	1,732,986,171,720.00	PHP	
29	PEZA Net Exports		734,036,521,560.00	PHP	= 28 – 25
	BOI				
30	Total Imports by BOI-Registered Firms	Estimate	245,175,879,045.84	PHP	= 20
31	Estimate of BOI Raw Materials Imports		153,894,360,614.82	PHP	= 30 x 5a
32	Estimate of BOI Capital Goods Imports		91,281,518,431.02	PHP	= 30 x 6a
33	Estimate of BOI Exports		164,663,142,898.80	PHP	= 15
34	BOI Net Exports		(80,512,736,147.04)	PHP	= 33 – 30
	Subic				
35	Total Imports by Subic-Registered Firms		26,159,314,797.08	PHP	= 22
36	Estimate of Subic Raw Materials Imports		16,419,931,032.71	PHP	= 35 x 5a
37	Estimate of Subic Capital Goods Imports		9,739,383,764.36	PHP	= 35 x 6a
38	Estimate of Subic Exports		39,900,480,000.00	PHP	= 17
39	Subic Net Exports		13,741,165,202.92	PHP	= 38 – 35

	CSEZ				
40	Total Imports by CSEZ-Registered Firms		31,927,590,672.27	PHP	= 23
41	Estimate of CSEZ Raw Materials Imports		20,040,618,072.23	PHP	= 41 x 5a
42	Estimate of CSEZ Capital Goods Imports		11,886,972,600.04	PHP	= 41 x 6a
43	Estimate of CSEZ Exports		48,698,760,000.00	PHP	= 18
44	CSEZ Net Exports		16,771,169,327.73	PHP	= 43 – 40
45	Total Use of Domestic Capital Goods	2005 Philippine Statistical Yearbook Capital Formation for 2004 in current prices	797,874,000,000.00	PHP	
46	Total Use of Domestic Capital Goods by Manufacturing Firms	1994 IO Table	0.106926		
47	Total Use of Domestic Capital Goods by Manufacturing Firms		85,313,277,659.02	PHP	= 45 x 46
	Of Which				
48	Use of Domestic Capital Goods by BOI-Registered Firms		7,072,605,489.21	8.29% (BOI share to total IPA exports)	= 47 x 8.29%
49	Use of Domestic Capital Goods by PEZA-Registered Firms		74,435,160,747.32	87.25% (PEZA share to total IPA exports)	= 47 x 87.25%
50	Use of Domestic Capital Goods by Subic-Registered Firms		1,713,804,005.57	2.01% (Subic share to total IPA exports)	= 47 x 2.01%
51	Use of Domestic Capital Goods by CSEZ-Registered Firms		2,091,707,416.91	2.45% (CSEZ share to total IPA exports)	= 47 x 2.45%

Source: Author, 1994 Input-Output Tables from National Statistics Coordination Board (NSCB)

Table 27

Variable	2004 Dutiable Values	VAT (10% VAT rate) VAT on imports = (dutiable value + customs duty + excise tax if any) * VAT rate	Duty (2%) (Multiply values in Second column by 2% average tariff)	VAT + Duty
Imports of Capital Goods by BOI-Registered Firms	91,281,518,431.02	9,310,714,879.96	1,825,630,368.62	
Imports of Capital Goods by PEZA-Registered Firms	371,919,298,332.32	37,935,768,429.90	7,438,385,966.65	
Imports of Capital Goods by Subic-Registered Firms	9,739,383,764.36	993,417,143.96	194,787,675.29	
Imports of Capital Goods by CSEZ-Registered Firms	11,886,972,600.04	1,212,471,205.20	237,739,452.00	
Imports of Capital Goods by All IPA-Registered Firms	484,827,173,127.74	49,452,371,659.03	9,696,543,462.55	59,148,915,121.58
Actual Exemptions		40,141,656,779.07	7,870,913,093.93	48,012,569,873.00
Imports of Raw Materials by BOI-Registered Firms	153,894,360,614.82	16,312,802,225.17	9,233,661,636.89	
Imports of Raw Materials by PEZA-Registered Firms	627,030,351,827.68	66,465,217,293.73	37,621,821,109.66	
Imports of Raw Materials by Subic-Registered Firms	20,040,618,072.23	2,124,305,515.66	1,202,437,084.33	
Imports of Raw Materials by CSEZ-Registered Firms	16,419,931,032.71	1,740,512,689.47	985,195,861.96	
Imports of Raw Materials by IPA-Registered Firms	817,385,261,547.45	86,642,837,724.03	49,043,115,692.85	135,685,953,416.88
Total Use of Domestic Capital Goods 2005 PSY Capital Formation for 2004 in current prices	797,874,000,000.00			

Total Use of Domestic Capital Goods by Manufacturing Firms	85,313,277,659.02			
Of Which				
Use of Domestic Capital Goods by BOI-Registered Firms	16,062,477,432.53	1,638,372,698.12	321,249,548.65	
Use of Domestic Capital Goods by PEZA-Registered Firms	65,445,288,804.00	6,675,419,458.01	1,308,905,776.08	
Use of Domestic Capital Goods by Subic-Registered Firms	1,713,804,005.57	174,808,008.57	34,276,080.11	
Use of Domestic Capital Goods by CSEZ-Registered Firms	2,091,707,416.91	213,354,156.53	41,834,148.34	
Use of Domestic Capital Goods by IPA-Registered Firms	85,313,277,659.02	8,701,954,321.22	1,706,265,553.18	10,408,219,874.40
Total Taxes and Duties		144,797,163,704.28	60,445,924,708.58	205,243,088,412.86
Actual Total Taxes and Duties		135,486,448,824.32	58,620,294,339.96	194,106,743,164.28 (excluding BOI)
				Tax Expenditures

Table 28

Variable	Estimated Redundancy Rate in 2004	VAT (Multiply the tax expenditures above by the redundancy rate for the IPA)	Duty (Multiply the tax expenditures above by the redundancy rate for the IPA)	VAT + Duty
Imports of Capital Goods by BOI-Registered Firms	0.9	8,379,643,391.97	1,643,067,331.76	10,022,710,723.73
Imports of Capital Goods by PEZA-Registered Firms	0.1	3,793,576,842.99	743,838,596.66	4,537,415,439.65
Imports of Capital Goods by Subic-Registered Firms	0.175	173,848,000.19	34,087,843.18	207,935,843.37
Imports of Capital Goods by CSEZ-Registered Firms	0.36	436,489,633.87	85,586,202.72	522,075,836.59
Imports of Capital Goods by All IPA-Registered Firms		12,783,557,869.02	2,506,579,974.32	15,290,137,843.34
Actual Exemptions (without EO313)		4,403,914,477.06	2,506,579,974.32	6,910,494,451.38
Imports of Raw Materials by BOI-Registered Firms	0.9	14,681,522,002.65	8,310,295,473.20	22,991,817,475.85
Imports of Raw Materials by PEZA-Registered Firms	0.1	6,646,521,729.37	3,762,182,110.97	10,408,703,840.34
Imports of Raw Materials by Subic-Registered Firms	0.175	371,753,465.24	210,426,489.76	582,179,955.00
Imports of Raw Materials by CSEZ-Registered Firms	0.36	626,584,568.21	354,670,510.31	981,255,078.51
Imports of Raw Materials by IPA-Registered Firms		22,326,381,765.48	12,637,574,584.23	34,963,956,349.71
Total Use of Domestic Capital Goods				
Total Use of Domestic Capital Goods by Manufacturing Firms				
Of Which				

Use of Domestic Capital Goods by BOI-Registered Firms	0.9	1,474,535,428.31	289,124,593.79	1,763,660,022.09
Use of Domestic Capital Goods by PEZA-Registered Firms	0.1	667,541,945.80	130,890,577.61	798,432,523.41
Use of Domestic Capital Goods by Subic-Registered Firms	0.175	30,591,401.50	5,998,314.02	36,589,715.52
Use of Domestic Capital Goods by CSEZ-Registered Firms	0.36	76,807,496.35	15,060,293.40	91,867,789.75
Use of Domestic Capital Goods by IPA-Registered Firms		2,249,476,271.96	441,073,778.81	2,690,550,050.77
Total Taxes and Duties		37,359,415,906.46	15,585,228,337.36	52,944,644,243.82
Actual Total Taxes and Duties (without EO 313)		28,979,772,514.49	15,585,228,337.36	44,565,000,851.85
				Tax Expenditures Lost Due To Tax and Duty Exemptions

Source: Author, 1994 Input-Output Tables from National Statistics Coordination Board (NSCB)

Table 29: Estimated cost of tax and duty exemptions on imported capital goods

Estimate of capital goods imports in total imported inputs of manufacturing firms	Average tariff	Tax expenditures
BOI (EO 313)	2%	11,136,345,248.58
PEZA	2%	45,374,154,396.54
Subic	2%	1,188,204,819.25
CSEZ	2%	1,450,210,657.21
Total	2%	59,148,915,121.58

Source: Author's calculations

Table 30: Estimated cost of tax and duty exemptions on imported raw materials

Estimate of raw materials imports in total imported inputs of manufacturing firms	Average tariff	Tax expenditures
BOI	6%	25,546,463,862.06
PEZA	6%	104,087,038,403.40
Subic	6%	3,326,742,599.99
CSEZ	6%	2,725,708,551.43
Total	6%	135,685,953,416.88

Source: Author's calculations

Table 31: Estimated cost of tax credit on the use of domestic capital goods

Estimate of domestic capital goods used by manufacturing firms	Average tariff	Tax expenditures
BOI	2%	1,959,622,246.77
PEZA	2%	7,984,325,234.09
Subic	2%	209,084,088.68
CSEZ	2%	255,188,304.86
Total	2%	10,408,219,874.40

Source: Author's calculations

The estimated fiscal cost of tax incentives for each IPA may be derived by summing up the tax expenditures for each IPA, then multiplying each one by the IPA's estimated redundancy rate. This yields the following fiscal costs of tax and duty exemptions in 2004:

Table 32: Estimated total tax expenditures lost from non-income tax holiday incentives, 2004

Agency	Estimated redundancy rate in 2004	Estimated Value of Fiscal Loss	Share
BOI	0.9	26,398,544,829.70	59.24%
PEZA	0.1	15,744,551,803.40	35.33%
Subic	0.175	826,705,513.89	1.86%
CSEZ	0.36	1,595,198,704.86	3.58%
	Total	44,565,000,851.85	100.00%

Source: Author's calculations

The figure 44,565,000,851.85 Pesos represents the estimated fiscal cost of tax and duty exemptions of imports of capital goods and raw materials, as well as the cost of tax credits on domestic capital equipment. This is a partial estimate of the cost of fiscal incentives, as the cost of some incentives, such as the income tax holiday still need to be estimated.

The Cost of IPA Income Tax Holidays

How is the past cost of fiscal incentives to be estimated? The cost of providing fiscal incentives is the amount of tax revenues foregone because some amount of investment benefiting from the incentives would have been made even without the benefit of incentives. The proportion of investments that would have been made without incentives as a proportion of total investments made is called the “redundancy rate” in the seminal literature on fiscal incentives. The redundancy rate (R) is important because it provides direction in estimating the total amount of tax revenues foregone as a result of the provision of fiscal incentives. The seminal World Bank literature on fiscal incentives (Wells, et al, 2001, Morisset and Pirnia, 2001) has a simple formula for using the redundancy rate R in estimating taxes foregone as a result of income tax holidays:

$$S = \frac{R \times I \times Y \times T \times N}{(1 - R)I}$$

where

S = size of subsidy

R = redundancy rate (0 < R < 1)

I = total investment

Y = average return on assets (RoA) or return on investment (RoI) for investors

N = number of years duration of incentives

T = tax rate

The numerator equals the tax needlessly provided to investors (=subsidy). The denominator, which is (1 – R) I, equals the incremental investment attracted as a result of the provision of incentives. *Therefore, the ratio above is the ratio of the amount of the subsidy provided to the incremental investment attracted. Seen another way, it is the amount of the subsidy that is provided by the government in order to generate one unit of incremental investment. Ideally, the value of R in the formula for S above should be estimated by surveying investors themselves whether without incentives, they would have still made their investments.* Indeed, Nguyen, Hoang, Cung, Freeman and Ray (2004) estimated R (the redundancy rate) for Vietnam by surveying domestic investors on this question. Due to time and budget constraints, however, this option is not possible in the Philippines.

The product $I \times Y \times T \times N$ may be called the *level of tax expenditure associated with income tax holidays*. This product represents the *amount* of taxes foregone because of the ITH (i.e., taxes not paid by firms who are beneficiaries of the fiscal incentives). Since this measure does not distinguish between taxes that would have been paid by investors who would have invested even without the incentive and

taxes that would have been paid by investors who would not have invested but for the incentives, this product represents the total of both foregone redundant and non-redundant taxes. The true fiscal cost of a fiscal incentive, however, is limited to foregone redundant taxes, which would have been paid by investments which would have taken place even without the incentives.

A tax expenditure budget is a list of tax expenditures associated with each fiscal incentive. The rationale for having a tax expenditure budget is that it is a transparent accounting of the costs of providing fiscal incentives. Since fiscal incentives represent a subsidy to firms receiving them, the fiscal consequences are akin to expenditures. A thorough accounting of such tax expenditures is therefore seen in several developed countries as an integral part of the country's expenditure budgeting process. Monitoring the size of tax expenditures may be a useful tool in government's expenditure analysis.

An estimate of S should provide revealing answers to some of the Philippine Department of Finance's (DoF) questions (What activities should be granted tax incentives? Should locational incentives be granted? Should a premium be given to zone locators?) The size of the subsidy S per location, or per sector could be estimated to aid in answering these questions. *The size of the subsidy for a particular location or sector could be compared against the benefits from the induced investments in order to have a sense of the trade-offs involved in granting fiscal incentives.*

The fact that leakages (after investment approval) are a major problem when it comes to incentives, as well as the fact that at times, it is difficult to ascertain whether investments are receiving redundant or non-redundant incentives (during investment screening) suggests that the fiscal incentives problem is essentially an asymmetric information problem. Since the process of screening (and monitoring) of firm beneficiaries may be flawed, the problem may have both adverse selection and moral hazard dimensions. This study will examine the role both problems play in creating revenue leakages for government, and it will also attempt to provide advice for the proper design of incentives packages, improving screening and monitoring of firms (and agencies) in light of the asymmetric information problem.

For BOI investments, the formula used for calculating the cost of the ITH equals $R \times I \times Y \times T \times N$. Using the redundancy rate (R) of 80% for BOI, an average return on investment (Y) of 20%, a tax rate of 32% and $N = 4$, the fiscal cost of the ITH in 2004 was estimated to be equal to 16,779,333,369.60 Pesos, or 0.39% of 2004 GDP. Add this to the earlier estimate of the cost of tax and duty exemptions on capital goods and raw materials imports and tax credits on raw materials the result is a partial fiscal cost estimate of 43,177,878,199.30 Pesos for BOI alone in 2004 (0.89% of 2004 GDP).

For BOI, the estimate of S, the ITH subsidy required to attract one peso of investment equals about 1.249882 (= $(0.9 \times 0.2 \times 0.32 \times 4) / (1 - 0.9)$), or 2.30 pesos. The estimated BOI redundancy rate (= around 90%) is slightly larger in size to those estimated for Thailand, Indonesia and Vietnam in previous studies. The BOI redundancy rate reflects the quality of investor targeting and screening. For the BOI, the size of the redundancy depends on:

- 1) the redundancy in its investment approval system (providing incentives to investments that are demonstrated to be ex ante viable – therefore providing incentives only has the effect of increasing rates of returns beyond those rates required by investors); and
- 2) the redundancy in the Investment Priorities Plan (the propensity for the IPP to include and induce market- and resource-seeking investments).

Most market- and resource-seeking investors will confide that they will prefer market protection (large market share-protecting) measures to tax incentives. Of course the first-best strategy is to ensure that

distortionary modes of market protection, such as tariff barriers, are not implemented. Rather, the first best strategy is for the country to ensure that markets are strong, growing and robust.

If this independent valuation of the 2004 cost of the BOI ITH is close to previous estimates, then this tends to validate the formula for computing the cost of the ITH, as well as several assumptions made earlier:

- 1) most of the firms qualifying for exemptions will receive 4-year ITH; and
- 2) the average (pre-tax) rate of return to investments qualifying for incentives is around 20%.

The validation of the last assumption tends to support the contention that firms qualifying for incentives already have a fair rate of return prior to actually benefiting from them. The average rate of return of 20% is also consistent with rates of return earned for most investment projects in similar countries.

An alternative method of computing the value of redundant fiscal incentives of the BOI

An alternative method of estimating the size of redundant incentives has been suggested by the author's colleague at the UP School of Economics, Felipe Medalla. He suggests that one could classify tax expenditures by intended market of investment, and by nationality. The following procedure was performed to derive the figures under this method:

- 1) Information on the breakdown of investors by nationality was gathered from the BOI
- 2) The same information includes information about which registered investors were also registered exporters and non-exporters. This allows one to construct the following table:

Table 33: Composition of 2004 BOI investments by nationality and motivation

Nationality	Domestic market-seekers/Non-exporters	Exporters
Filipinos	46.14%	5.01%
Non-Filipinos	44.35%	4.50%
Total	90.49%	9.51%

Source: Board of Investments

- 3) In order to estimate the fiscal cost of incentives by nationality and by incentive, the shares computed above were applied to tax expenditures for the ITH and tax expenditures arising from other fiscal incentives that were estimated in the previous section. The results are presented in the following tables:

Table 34: Total 2004 income tax holiday tax expenditures by motivation by nationality: BOI

	Domestic market-seekers	Exporters	Total
Filipinos	8,602,467,191.01	933,210,674.84	9,535,677,865.86
Non-Filipinos	8,268,168,792.71	839,857,085.43	9,108,025,878.14
Total	16,870,635,983.73	1,773,067,760.27	18,643,703,744.00

Source: Author's calculations

Table 35: Total 2004 raw materials tax expenditures by motivation by nationality: BOI

	Domestic market-seekers	Exporters	Total
Filipinos	11,787,497,818.96	1,278,728,363.63	13,066,226,182.59
Non-Filipinos	11,329,426,715.25	1,150,810,964.22	12,480,237,679.47
Total	23,116,924,534.21	2,429,539,327.85	25,546,463,862.06

Source: Author's calculations

Table 36: 2004 imported raw materials incentives tax expenditures of which: VAT (by motivation by nationality)

	Domestic market-seekers	Exporters	Total
Filipinos	7,526,956,438.62	816,537,388.82	8,343,493,827.44
Non-Filipinos	7,234,453,203.71	734,855,194.02	7,969,308,397.73
Total	14,761,409,642.33	1,551,392,582.84	16,312,802,225.17

Source: Author's calculations

Table 37: 2004 imported raw materials incentives tax expenditures of which: Duty (by motivation by nationality)

	Domestic market-seekers	Exporters	Total
Filipinos	4,260,541,380.35	462,190,974.81	4,722,732,355.15
Non-Filipinos	4,094,973,511.54	415,955,770.20	4,510,929,281.74
Total	8,355,514,891.88	878,146,745.01	9,233,661,636.89

Source: Author's calculations

Table 38: 2004 total domestic capital goods tax expenditures by motivation by nationality: BOI

	Domestic market-seekers	Exporters	Total
Filipinos	904,197,273.04	98,088,900.38	1,002,286,173.42
Non-Filipinos	869,059,481.35	88,276,592.00	957,336,073.35
Total	1,773,256,754.39	186,365,492.38	1,959,622,246.77

Source: Author's calculations

Table 39: 2004 total imported capital goods tax expenditures by motivation by nationality: BOI

	Domestic market-seekers	Exporters	Total
Filipinos	5,138,466,366.14	557,429,811.55	5,695,896,177.69
Non-Filipinos	4,938,781,666.64	501,667,404.25	5,440,449,070.89
Total	10,077,248,032.78	1,059,097,215.80	11,136,345,248.58

Source: Author's calculations

Table 40: 2004 imported capital goods incentives tax expenditures of which: VAT (by motivation by nationality)

	Domestic market-seekers	Exporters	Total
Filipinos	4,296,094,830.70	466,047,875.23	4,762,142,705.94
Non-Filipinos	4,129,145,327.85	419,426,846.18	4,548,572,174.03
Total	8,425,240,158.55	885,474,721.41	9,310,714,879.96

Source: Author's calculations

Table 41: 2004 imported capital goods incentives tax expenditures of which: Duty (by motivation by nationality)

	Domestic market-seekers	Exporters	Total
Filipinos	842,371,535.43	91,381,936.32	933,753,471.75
Non-Filipinos	809,636,338.79	82,240,558.07	891,876,896.87
Total	1,652,007,874.23	173,622,494.39	1,825,630,368.62

Source: Author's calculations

Table 42: 2004 total tax expenditures by motivation by nationality: BOI

	Domestic market-seekers	Exporters	Total	Percentage
Filipinos	26,432,628,649.15	2,867,457,750.41	29,300,086,399.56	51.15%
Non-Filipinos	25,405,436,655.95	2,580,612,045.90	27,986,048,701.86	48.85%
Total	51,838,065,305.10	5,448,069,796.31	57,286,135,101.41	100.00%
	90.49%	9.51%	100.00%	

Source: Author's calculations

The final table above presents a breakdown of BOI-registered firms' estimated total tax expenditures by investor nationality and by motivation in 2004. *If only incentives provided to exporters are considered non-redundant, then the redundancy rate of the BOI is quite high, about 90.49%. This is higher than the estimates derived earlier in this study (the midterm report suggested around 83%). The fiscal cost of redundant BOI incentives in 2004 is also estimated to be around 51.8 billion pesos, again, higher than the BOI estimates derived earlier (about 45.8 billion pesos). Based on the above table, the total fiscal cost of incentives is almost evenly divided between Filipino investors and non-Filipino investors.*

IX. Net Benefits of Fiscal Incentives

As important as it is for determining the cost of fiscal incentives, the redundancy rate is equally crucial for determining the benefits of fiscal incentives. The literature for evaluating the social benefits of incentives is scant, and very few attempts have been made at quantification. This study assumes that the main benefits of investment come from three sources: employment generation, withholding taxes on wages and net exports. The following tables display estimates of the net benefits of the PEZA and BOI for 2004. For simplicity, the social multiplier for all variables was set to 1.

Table 43a: Estimated PEZA Net Benefits 2004 with Redundancy of 10%

Variables	Value	Source
Employment	406,752	PEZA
Average Monthly Wage in Manufacturing	17,090.15	Labor Force Survey and author's estimates
Annual Earnings	83,417,455,948.47	PHP
Average Withholding Tax Rate	15%	
Taxes earned by government on PEZA employment	12,512,618,392.27	PHP
Exchange Rate	56.04	
Net Exports	734,036,521,560.00	PHP
Total PEZA Benefits	829,966,595,900.74	
Redundancy Rate for PEZA	10%	
Total Non-Redundant PEZA Benefits	746,969,936,310.66	
Total PEZA Cost	874,349,479,803.40	
Total PEZA Net Benefits in 2004	(127,379,543,492.74)	PHP

Source: Author's calculations

Note that even with a relatively low rate of redundancy (10%, the same as that assumed in the midterm report in this study), PEZA would have negative net fiscal benefits. Note that this cost-benefit analysis only covers the financial costs of investments, so the value of non-financial spillovers are not quantified in this analysis. When a 5% rate of redundancy was used, estimated 2004 PEZA net benefits equal the figures in the table below:

Table 43b: Estimated PEZA Net Benefits 2004 with Redundancy of 5%

Variables	Value	Source
Employment	406,752	PEZA
Average Monthly Wage in	17,090.15	Labor Force Survey and

Manufacturing		author's estimates
Annual Earnings	83,417,455,948.47	PHP
Average Withholding Tax Rate	15%	
Taxes earned by government on PEZA employment	12,512,618,392.27	PHP
Exchange Rate	56.04	
Net Exports	734,036,521,560.00	PHP
Total PEZA Benefits	829,966,595,900.74	
Redundancy Rate for PEZA	5%	
Total Non-Redundant PEZA Benefits	788,468,266,105.70	
Total PEZA Cost	437,174,739,901.70	
Total PEZA Net Benefits in 2004	351,293,526,204.00	PHP

Source: Author's calculations

Additional simulations of the redundancy rate for PEZA revealed that 8% was the greatest redundancy rate that could be afforded to still get a non-negative net benefit. Redundancy rates higher than 8% led to negative net benefits. This result highlights the fact that there is very little room for redundancy even with respect to PEZA. This also underscores the need to continue to implement tight controls and screening procedures at PEZA.

Table 44: Estimated BOI Net Benefits 2004

Variables	Value	Source
Estimated Employment in BOI-Registered Firms	131,620.00	Author's Estimates
Average Monthly Wage in Manufacturing	17,090.15	Labor Force Survey and author's estimates
Annual Earnings	26,992,874,163.95	PHP
Average Withholding Tax Rate	15%	
Taxes earned by government on BOI employment	4,048,931,124.59	PHP
Exchange Rate	56.04	
Net Exports	(80,512,736,147.04)	PHP
Total BOI Benefits	(49,470,930,858.49)	
Redundancy Rate for BOI	90%	
Total Non-Redundant BOI Benefits	(4,947,093,085.85)	
Total BOI Cost	43,177,878,199.30	
Total BOI Net Benefits in 2004	(92,648,809,057.79)	PHP

Source: Author's calculations

It is not surprising that the BOI yielded highly negative net benefits in 2004. The high redundancy rate almost guarantees it. The lack of additional data for CSEZ and SBMA make a complete net benefit analysis impossible. However, with their higher rates of redundancy relative to PEZA and lower shares of exporting investments relative to total registered investments, it is highly likely that the net financial fiscal benefits for these zones are also negative.

X. An analysis of the real effects of the current system of fiscal incentives provision

This study finds that the provision of fiscal incentives, especially by the BOI, is very fiscally costly. In spite of this, however, they continue to be provided, even if there is limited evidence of their efficacy in inducing investment across countries, much less within the Philippines. The economic literature focusing on the efficacy of incentives by themselves is scarce, and the few studies that have been done either find no causality running from incentives to investment or find that only export-oriented enterprises are sensitive to incentives. This tends to confirm recommendations made in industrial organization-type studies which emphasize that domestic market-seeking investors will have a low sensitivity to incentives. This seems reasonable, since such investors would primarily be motivated by high and growing per capita incomes, as well as capturing market share away from rivals.

There is also another strong, cross-region (within the Philippines) proof that incentives by themselves do not induce investment (real capital formation), and that their power to do so is of secondary importance relative to other, more potent inducers of investment (a vibrant domestic economy, a well-educated work force and good infrastructure): year after year, the annual Investments Priorities Plan (IPP) grants more generous fiscal incentives to businesses locating in areas considered to be less developed (LDAs) (longer tax holidays, regardless of status or type of project, and tax deductions equivalent to expenditures incurred in the development of necessary and major infrastructure). However, statistics on investment approvals from the investment promotion agencies themselves show no evidence that a province's inclusion in this list has led to an increase in investments to these areas over time (see table below). Investments have instead gravitated towards regions with stronger and richer economies, better infrastructure and greater levels of functional literacy – factors that, compared to incentives, are

more fundamental inducers of investment. Thus, investments have flowed into regions that are already well-developed and competitive to begin with. This result, by itself is clear proof that incentives by themselves are an inferior tool for inducing investment relative to other variables.

Table 45: Average regional shares in total BOI investment project approvals

Region	NCR	1	2	3	4	5	6	7	8
Average, 1979-2003	28.19%	2.49%	0.41%	7.92%	25.11%	1.66%	3.91%	3.19%	4.07%
Average, 1987-2003	22.90%	3.41%	0.60%	10.30%	29.24%	1.03%	4.32%	3.93%	2.42%
Average, 1995-2003	14.40%	3.46%	1.04%	12.61%	26.47%	0.76%	5.23%	1.65%	0.40%
Average, 2000-2003	18.79%	3.70%	0.01%	12.42%	15.37%	0.33%	10.74%	0.98%	0.50%

Source: Board of Investments

Table 46: Average regional shares in total BOI investment project approvals

Region	9	10	11	12	CAR	ARMM	13	Several locations	Not Indicated
Average, 1979-2003	0.45%	4.74%	3.35%	1.16%	1.24%	0.24%	2.01%	9.82%	0.04%
Average, 1987-2003	0.54%	1.98%	2.43%	1.17%	0.38%	0.01%	0.87%	14.44%	0.06%
Average, 1995-2003	0.43%	2.44%	2.27%	0.91%	0.18%	0.00%	0.50%	27.16%	0.08%
Average, 2000-2003	0.38%	1.49%	4.40%	1.26%	0.15%	0.00%	0.37%	28.93%	0.18%

Source: Board of Investments

Table 47: Number of PEZA locators, 1995-2004

Region/Year	Total	NCR	1	2	3	4	5	6	7	8	9	10	11	12
1995	410	5	11		47	259	0		87	1		0	0	0
1996	532	10	11		55	357	0		98	1		0	0	0
1997	613	14	12		62	406	0		118	1		0	0	0
1998	686	18	11		69	460	0		127	1		0	0	0
1999	759	20	11		74	517	0		136	1		0	0	0
2000	856	26	12		76	588	0		153	1		0	0	0
2001	946	50	13		70	654	0		157	1		1	0	0
2002	1,009	68	14		75	690	0		159	1		1	0	1
2003	1,137	101	14		82	758	0		179	1		1	0	1
2004	1,261	134	17		81	827	1		197	1		1	1	1

Source: Philippine Economic Zone Authority

Table 48: Average regional shares in total PEZA approved investments

REGION	Total	NCR	1	2	3	4	5
average (1980-2004)	100.00%	2.59%	15.25%	0.00%	18.63%	44.72%	0.00%
average (1980-1995)	100.00%	0.01%	22.78%	0.00%	26.22%	26.26%	0.00%
average (1995-2004)	100.00%	6.49%	1.83%	0.00%	5.00%	79.01%	0.00%
average (2000-2004)	100.00%	12.71%	3.18%	0.00%	3.95%	69.59%	0.00%

Source: Philippine Economic Zone Authority

Table 49: Average regional shares in total PEZA approved investments

REGION	6	7	8	9	10	11	12
average (1980-2004)	0.00%	18.19%	0.08%	0.00%	0.35%	0.04%	0.15%
average (1980-1995)	0.00%	24.72%	0.00%	0.00%	0.00%	0.00%	0.00%
average (1995-2004)	0.00%	6.12%	0.19%	0.00%	0.87%	0.10%	0.39%
average (2000-2004)	0.00%	7.67%	0.38%	0.00%	1.75%	0.00%	0.77%

Source: Philippine Economic Zone Authority

Table 50: Real gross domestic capital formation per capita, 1988-2003 (in Pesos)

	Region	2003	Rank	Average, 1988-2003	Rank
Philippines		2.60		2.71	
National Capital Region	NCR	7.09	1	8.56	1
Central Visayas	7	3.59	2	2.66	3
Cordillera Autonomous Region	CAR	2.87	3	3.23	2
Southern Tagalog	4	2.63	4	2.51	4
Cagayan Valley	2	2.55	5	2.13	6
Northern Mindanao	10	2.23	6	1.74	9
Ilocos Region	1	2.10	7	1.63	10
Central Luzon	3	1.87	8	1.87	7
Socksargen	7	1.84	9	2.42	5
Western Visayas	6	1.57	10	1.30	12
CARAGA	13	1.46	11	1.87	8
Eastern Visayas	8	1.31	12	1.20	13
Bicol Region	5	0.97	13	1.09	14
Davao Region	11	0.83	14	1.51	11
Zamboanga Peninsula	9	0.79	15	1.09	15
Muslim Mindanao	ARMM	0.29	16	0.69	16

Source: National Statistics Coordination Board

Note that in terms of BOI investment approvals, the envisioned EO 226 goal of greater regional dispersal of industries has never been achieved. BOI investment project approvals have tended to be cluster in the NCR, as well as Regions 3 and 4, which are already relatively well-developed regions. NCR still has the greatest share of BOI investment approvals, with its share amount even increasing from 2000 – 2003. The share of approved investments in Mindanao has not improved. Among the other regions, only investment approvals in Region 6 appear to have risen consistently. Investments under the category “several locations” has also tended to rise, but the BOI provides no information on the regional breakdown of these.

The relative neglect of infrastructure and education (the most investment fundamentals as validated by the regression results in this study) in less developed areas has contributed to their historical lack of competitiveness and inability to attract investments, and no matter how generous incentives are

for these areas, the lack of investment fundamentals simply outweigh the possible inducing effects of incentive generosity. The inadequacy of investment fundamentals in less developed areas has also compromised the ability of freeports and economic zones located in these areas to attract locators. The overall result has been a clustering of investments in NCR, Regions 3, 4A and 7 – all places that have the best access to viable infrastructure - ports (sea or air) and skilled, functionally literate labor. Clustering of investments is not necessarily bad for particular industries – witness the agglomeration economies realized by high technology firms in Silicon Valley, but in the case of the Philippines, the clustering in a few regions is observed for investments across ALL industries.

The clustering of investment in areas with already viable initial conditions for investment has meant that employment opportunities for skilled labor have also tended to cluster in these areas. The clustering of past investments in a select few regions has also ensured that future infrastructure and human-capital-enhancing public expenditures will also tend to cluster there at present and for the foreseeable future because that is where the demand is: witness the national government's efforts to improve access to Ninoy Aquino International Airport (NAIA) via the South Luzon Expressway (SLEX). *The justified current emphasis on servicing the needs of already clustered industries, however, further reinforces regional disparities. This is not to say that these public expenditures should not be undertaken. These expenditures are vital and inevitable. Much of the country's exports depend on it. The point is that a true regional dispersal of industries will in turn lead to a greater dispersal of the demand for good infrastructure, which, if adequately supplied by a less fiscally-constrained government, will lead to enhanced opportunities for everyone in all regions.*

The overall result of incentives policy has actually been the opposite of the intended effect of industrial policy: there is no evidence that industrial policy has played a meaningful role in equalizing incomes both across regions and across classes. *The current system of incentives provision by the BOI has tended to be inequality-preserving and inequality-reinforcing. The clustering of practically all investments in well-situated and well-endowed areas has effectively prevented a true regional dispersal of industries. This preserves and reinforces disparities in income and employment opportunities across regions (see poverty and inequality statistics below).* Meanwhile, the drawing away of already scarce resources away from education and infrastructure has ensured that people reliant on public schools will continue to get what they pay for, and those reliant on well-maintained public roads with access to markets. Furthermore, across classes, it is mostly capitalists who have mostly benefited from fiscal incentives, the poor and middleclass taxpayers have borne the brunt of the fiscal cost of incentives.

If fiscal incentives provided to domestic market seeking investors are gradually phased out, then the best way to compensate affected domestic market-seeking investors is by ensuring a vibrant domestic market – raising per capita income across regions and over time.

An alternative way of looking at fiscal incentives is to view them as a subsidy provided by the government. The conventional economic justification for subsidy provision is that subsidized activities should generate large, positive externalities or spillover effects for the rest of the economy. In this study, spillovers are measured in terms of export earnings, employment and taxes generated. With its emphasis on domestic market-seeking investors, the carrying out by the BOI of its incentives-granting function has clearly not created sufficiently large externalities to justify its continued provision of incentives. Firms registered with the BOI are primarily net importers, and in some instances, incentives are received way after companies have made significant commitments to invest in new technologies.

With respect to the BOI, therefore, the government should simply cut its losses. Clearly, inconsistencies exist between the incentives-granting function of the BOI, and its investment promotion function (the former takes valuable resources directly away from the latter). The former is clearly

wasteful, but the latter could be more potentially helpful if the effort is better endowed. The same can also said between the incentives-granting function of the BOI and the PEZA.

The benefits of a rationalized system of incentives could go to fund a combination of education and infrastructure needs, as well as to strengthening the capabilities of PEZA and other freeports to curb smuggling (which, as a byproduct of this study, has also been shown to be significant). Many studies in international competitiveness rank the Philippines close to the bottom in most of the infrastructure-related and human-capital-related indicators of investment competitiveness. This includes road density, public expenditure on education as a proportion of GDP, and student-teacher ratio at the primary and secondary levels. Note that the Philippines is at the bottom of the rankings for those human capital competitiveness indicators which can be corrected through greater spending (even if the country already spends the largest portion of its productive budget on education). Revenues generated through a proper rationalization of fiscal incentives should go to true competitiveness-enhancing measures – improvements in infrastructure and education. Expenditures on education tend to have highly significant and long-lasting effects on functional literacy. Table 56 below presents simple pooled fixed effects least squares regressions of stock variables, regional road length and regional functional literacy, against corresponding annual real levels of expenditure on roads and education. The results reveal that on average, every one real 1985 peso spent on the education portion of the budget raises functional literacy by .04 percent. On the other hand, every peso of real 1985 national government expenditure on roads tends to increase current road length by 0.14 kilometers (see Table 57). Though quite rough results, they nevertheless help to demonstrate the productivity of government expenditures (regardless how inefficient or unproductive government spending is perceived to be). Note that real education expenditures tend to have very profound and long-lasting effects on functional literacy.

Apart from roads, other competitiveness- and growth-enhancing expenditures are investments in the development of viable, capable and accessible seaports and airports. From interviews with PEZA officials and based on observed data on investments, these seem to be important factors in investment location decisions.

Ultimately, the country's competitiveness as a destination for both foreign and domestic investment lies not in fiscal incentives, but in expanding access – access to input markets well-functioning markets for inputs - reasonably-priced skilled labor and managerial ability (a particular strength of our country); access to ports (infrastructure); and access to vibrant markets, BOTH foreign and domestic.

Summarizing, the combination of the following policies:

- a. preservation of the system of costly fiscal incentives; and
- b. inadequate spending on infrastructure and education.

By tending to preserve and reinforce existing cross-regional disparities in levels and qualities of income, infrastructure and literacy, has tended to contribute to and reinforce cross-regional inequality and poverty. The former (providing costly and redundant fiscal incentives), by greatly reducing resources available to the government, has directly contributed to the latter (inadequate infrastructure and education). These results serve to demonstrate the opportunity costs of incentives provision.

The DTI then, has greatly incongruous and inconsistent institutions. On the one hand, it has an incentives-granting body whose registered firms are for the most part legitimately qualified to get incentives, but are starved of adequate infrastructure and English-speaking labor. On the other hand, it has an incentives-granting body giving a huge amount of costly fiscal incentives, which directly deprives the other of physical and human capital support. *The DTI budget is very misleading. Its visible budget*

consists of appropriations to its attached agencies, PEZA, BOI and its own internal activities. But it is its invisible budget that has proven to be one of the national government's largest and least cost-efficient.

Table 51: Poverty incidence (percent of families by region), Philippines

Poverty incidence	Philippines	NCR	Region I	Region II	Region III	Region IV	Region V	Region VI
1997	28.06	4.79	31.40	27.13	13.89	22.81	46.86	37.22
2000	27.50	5.70	29.40	25.20	17.30	15.20 (4A) 36.30 (4B)	45.30	36.60
2003	24.70	5.00	24.40	19.30	13.70	14.9 (4A) 39.7 (4B)	40.5	31.3
Change (1997- 2003)	(3.36)	0.21	(7.00)	(7.83)	(0.19)		(6.36)	(5.92)
Change (2000- 2003)	(2.80)	(0.70)	(5.00)	(5.90)	(3.60)	(0.30) (4A) 3.40 (4B)	(4.80)	(5.30)

Source: National Statistics Coordination Board

Table 52: Poverty incidence (percent of families by region), Philippines

Poverty incidence	Region VII	Region VIII	Region IX	Region X	Region XI	Region XII	CAR	ARMM	Caraga
1997	29.85	39.89	31.85	37.80	31.08	45.34	35.93	49.98	44.67
2000	31.50	37.50	38.50	37.90	27.70	40.70	30.70	53.70	43.70
2003	23.70	35.50	44.10	37.90	28.10	32.00	24.80	45.70	47.30
Change (1997- 2003)	(6.15)	(4.39)	12.25	0.10	(2.98)	(13.34)	(11.13)	(4.28)	2.63
Change (2000- 2003)	(7.80)	(2.00)	5.60	-	0.40	(8.70)	(5.90)	(8.00)	3.60

Source: National Statistics Coordination Board

Table 53: GINI coefficient, Philippines

	Total	NCR	Ilocos Region	Cagayan Valley	Central Luzon	Southern Luzon	Bicol Region	Western Visayas
1985	0.447	0.415	0.401	0.386	0.399	0.406	0.380	0.450
1988	0.445	0.426	0.374	0.396	0.386	0.403	0.388	0.408
1991	0.468	0.428	0.404	0.417	0.399	0.424	0.391	0.403
1994	0.451	0.397	0.381	0.406	0.363	0.402	0.412	0.406
1997	0.488	0.463	0.426	0.413	0.364	0.426	0.437	0.441
2000	0.481	0.446	0.407	0.422	0.357	0.423	0.447	0.460
2003	0.481	0.413	0.397	0.441	0.349	0.406 (4A) 0.435 (4B)	0.465	0.439
Change (1997-2000)	(0.01)	(0.02)	(0.02)	0.01	(0.01)	(0.00)	0.01	0.02
Change (1994-2000)	0.03	0.05	0.03	0.02	(0.01)	0.02	0.04	0.05
Change (1988-2000)	0.04	0.02	0.03	0.03	(0.03)	0.02	0.06	0.05

Source: National Statistics Coordination Board

Note: The higher the GINI coefficient, the greater the level of inequality in a region

Table 54: GINI coefficient, Philippines

	Central Visayas	Eastern Visayas	Western Mindanao	Northern Mindanao	Southern Mindanao	Central Mindanao
1985	0.454	0.390	0.395	0.454	0.393	0.371
1988	0.460	0.404	0.409	0.442	0.402	0.358
1991	0.460	0.415	0.406	0.438	0.435	0.405
1994	0.442	0.420	0.386	0.416	0.411	0.428
1997	0.475	0.446	0.468	0.495	0.450	0.454
2000	0.470	0.482	0.460	0.471	0.459	0.439
2003	0.471	0.458	0.520	0.477	0.457	0.458
Change (1997-2000)	(0.01)	0.04	(0.01)	(0.02)	0.01	(0.01)
Change (1994-2000)	0.03	0.06	0.07	0.05	0.05	0.01
Change (1988-2000)	0.01	0.08	0.05	0.03	0.06	0.08

Source: National Statistics Coordination Board

Table 55: GINI coefficient, Philippines

	CAR	ARMM	CARAGA
1985			
1988	0.374		
1991	0.437	0.320	
1994	0.410	0.313	
1997	0.465	0.349	0.438
2000	0.445	0.342	0.414
2003	0.429	0.346	0.429
Change (1997-2000)	(0.02)	(0.01)	(0.02)
Change (1994-2000)	0.04	0.03	0.41
Change (1988-2000)	0.07	0.34	0.41

Source: National Statistics Coordination Board

Table 56: Pooled Least Squares Fixed Effects Regression results –effect of government education expenditures (DECSEXP) on functional literacy (FUNLIT) by region

Dependent Variable: FUNLIT?				
Method: Pooled Least Squares				
Sample (adjusted): 1984 1992				
Included observations: 9 after adjustments				
Cross-sections included: 13				
Total pool (balanced) observations: 117				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.709	0.766	-3.54	0.00
DECSEXP?(6)	0.046	0.024	1.97	0.05
DECSEXP?(7)	0.046	0.024	1.92	0.06
DECSEXP?(8)	0.077	0.023	3.40	0.00
DECSEXP?(9)	0.053	0.018	2.88	0.00
DECSEXP?(10)	0.056	0.018	3.10	0.00
DECSEXP?(11)	0.046	0.019	2.44	0.02
R-squared	0.93	Mean dependent var		4.15
Adjusted R-squared	0.92	S.D. dependent var		0.27
S.E. of regression	0.08	Akaike info criterion		-2.19
Sum squared resid	0.55	Schwarz criterion		-1.74
Log likelihood	147.32	F-statistic		74.90
Durbin-Watson stat	0.33	Prob(F-statistic)		4.98E-49

Source: Author's estimates using EViews

Interpretation: Every one peso of real 1985 education expenditures (DECSEXP) raises functional literacy (FUNLIT) by between 0.04 to 0.077 basis points

Table 57: Pooled Least Squares Fixed Effects Regression results – effect of government road expenditures (RDXP) on road length (RD) by region

Dependent Variable: RD?				
Method: Pooled Least Squares				
Sample: 1980 2003				
Included observations: 22				
Cross-sections included: 13				
Total pool (balanced) observations: 286				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.495	0.684	9.50	0.00
RDEXP?	0.141	0.035	4.05	0.00
R-squared	0.70	Mean dependent var		9.27
Adjusted R-squared	0.69	S.D. dependent var		0.61
S.E. of regression	0.34	Akaike info criterion		0.72
Sum squared resid	31.32	Schwarz criterion		0.90
Log likelihood	-89.55	F-statistic		49.51
Durbin-Watson stat	0.23	Prob(F-statistic)		0

Source: Author's estimates using EViews

Interpretation: Every one peso of real 1985 road expenditures (RDEXP) raises road length (RD) by 0.14 kilometers

Some additional, but very important concerns

Although much of this study involves isolating the cost of incentives as the cost of providing incentives to non-exporters, there is no doubt that additional fiscal costs can be incurred when recipient firms abuse their incentive privileges. There is already some evidence of this in the earlier parts of the study. Recall that there are very low correlations between actual regional gross capital formation and prior BOI-approved investment flows, evidence that investment commitments simply did not materialize to the extent promised, which could mean that incentives were not motivated by investment motives, but by other motives, such as tax avoidance.

The mere existence of an incentives-providing body BY ITSELF invites opportunities for abuse IF screening and monitoring capability are very weak (as appears to be the case with the BOI, and to a lesser, but still non-trivial extent, the other IPAs). In economics, the appropriate terms to describe the situation are *adverse selection* and *moral hazard*. These problems come about in situations where principals – in this case the approving authorities, the BOI, PEZA, etc., - have insufficient information about agents – in this case, firms applying for registration with incentives. This information asymmetry

(agents have more information about themselves than the principal does) plays a large part in giving rise to the large fiscal cost of incentives.

Adverse selection is a situation where firms applying for registration have motives beyond those stipulated in the project proposal (e.g., the opportunity for applying tax avoidance schemes for the benefit of related firms). In this case, the mere existence of an incentive-providing IPA may draw many applicant firms with tax-avoiding motivations (unknown to the IPA) to register various projects (known and visible to the IPA). In this case, the pool of applicants for fiscal incentives is diluted with deserving and non-deserving applicants. Clearly, the need here is to be able to distinguish the good from the bad applicants (through the implementation of good screening procedures).

On the other hand, moral hazard is a situation where firms already benefiting from incentives use these privileges for activities they were not intended to support (e.g., the use of accounting techniques to shift revenues and expenses across registered and non-registered firms and subsidiaries for tax avoidance purposes). In this case, the challenge is to monitor the firms benefiting from incentives.

The current problem with the IPAs is a classic case of information asymmetry. Moreover, the mere existence of the BOI and other IPA's are a moral hazard in itself: their mere presence creates exploitable loopholes in the revenue collection system (not to mention the possibility for outright connivance with IPA personnel). The question that should be asked of any IPA, or any law that guides them are the following:

- 1) Are the IPAs capable of screening applicants well enough?
- 2) Are the IPAs capable of monitoring beneficiaries well enough?
- 3) Does any proposed law governing incentives provision (or any changes to the existing regime) undermine the capabilities of the IPAs to screen or monitor investments?
- 4) What is the cost of improving screening and monitoring to reduce leakages?

If the answer to # 1 and # 2 is no, and the answer to # 3 above is yes and # 4 above is very, very high, and this applies to ALL IPAs, then the country is in grave danger. In this case, the first best solution is really just to eliminate as many incentives as possible and just lower the corporate tax rate to a low, uniform rate for everyone.

The severity of the problems mentioned above suggests that the metrics by which the success of an IPA is analyzed should be radically different from the existing framework in place in existing IPAs:

- 1) To what extent does a registered investment owe its existence to the incentives and to them alone?
- 2) By disapproving redundant incentives, how much did an IPA save the country?

In the case of investments in 3G technology, it is clear that Smart announced its investment commitment ahead of Globe, and DID NOT REQUIRE INCENTIVES. The subsequent application for registration by Globe of its investment with BOI incentives prompted Smart to ask the same from the BOI. Clearly then, Smart's initial investment was not prompted by incentives (but also, by transitivity, so is Globe's, since they are investments in absolutely the same technology). By approving the incentives in the first place, the BOI dissaved massively.

The issues raised here make it imperative that the screening and monitoring capabilities of ALL IPAs be examined carefully (not just the BOI, but also PEZA, etc.). Indiscriminate screening and insufficient monitoring are simply too expensive for the country given its persistent budget deficits. IPAs should therefore approve investments SPARINGLY, and only to the extent that they can monitor. To the extent that this reduces the amount of indiscriminate registrations, the government can then realize larger revenue collections, and should target them to the poorest regions of the country.

XI. How this study addresses questions posed by the Philippines' Department of Finance

This study is an attempt to quantify the costs and benefits of House Bill 3295. A distinction is made between exporting investments and non-exporting investments, where, relative to the former, the latter has been shown to be less sensitive to fiscal incentives. The results suggest that the continued provision by the Board of Investments of fiscal incentives to domestic market-seeking investments that are ex ante highly profitable (prior to the application of incentives to project cash flows) is very fiscally costly. The large estimated cost of redundant fiscal incentives is split almost equally among Filipino and non-Filipino investors.

There is strong evidence across countries that the power of incentives by themselves to induce investment is limited. Incentives policies will tend to work best when made part of a coordinated package of competitiveness-enhancing measures, such as greater public spending on education and infrastructure, which gives investors greater access both input and output markets. The reliance on incentives in the Philippines therefore tends to be over emphasized.

- a) What should be the major objectives of the rationalization of incentives bill?

To fine tune the targeting of investors.

To eliminate redundant incentives and this way, to raise necessary revenues. To legislate some definition of redundancy into the resulting law.

To have all incentives embodied in a single law; to simplify the framework for granting incentives.

To enforce stricter screening and monitoring of applicants for and beneficiaries of incentives.

- b) Which investments should be granted fiscal incentives? What types of incentives (and depth) are to be included in the investment incentives system? In particular, should tax credits be included?

Incentives could be based on underlying investment motivation, since classifying investments by motivation may shed light on the extent to which investors value fiscal incentives as an inducement for investment. This extent could be validated by way of regression analysis using traditional and non-traditional investment theories to determine the specification of the model.

Combining investment motivation theory with the exporter-non-exporter dichotomy is also crucial in identifying those investors that will be sensitive to incentives. It should be obvious that non-exporting investments will be domestic market-seeking investments. Therefore, they should be less sensitive to incentives than exporting investments. Given the propensity for IPAs to approve investments with high ex ante rates of return, it therefore follows that the redundancy rate could be measured given the relative proportion of exporting investments to total investments.

Given the current fiscal constraints, the relative capabilities for zone development, and the demonstrated relationship between capital formation and the number of ecozones in a region, it appears that private ecozone developers have played an important role in attracting investments into the country (especially in the Region 4). Thus, incentives to private ecozone developers outside urban areas should be maintained. Their capacity to attract investments overall, however, is constrained by factors which tend to hamper investments into the Philippines as a whole, such as inadequate infrastructure and low functional literacy rates. Incentives to developers of buildings and parks within urban areas should be discontinued.

- c) What are the criteria/ requirements/conditions for availment of incentives for new investments? for expansion project?

Special incentives should be limited to projects with high economic rate of return and a relatively low financial rate of return. The reason is to screen out projects where the tax incentives would be superfluous. Incentives should be limited to exporters (non-domestic market-seeking investors).

The main problem in the Philippines is that none of the criteria used for screening thus far focus on stimulating efficient projects that would not be undertaken in the absence of special incentives. Krugman (1994) has concluded that it is very difficult for governments to pick winners, or establish procedures that will not be driven by political interests rather than genuine economic benefits.

- d) Should locational incentives be adopted? Should incentives be based on location or on activity for BOI and ecozones?

Incentives could be based on underlying investment motivation, since classifying investments by motivation may shed light on the extent to which investors value fiscal incentives as an inducement for investment.

Since the literature on incentives suggests that they would be most sensitive to them, incentives should only be provided to exporting investments. Criteria for registering investments to qualify for incentives should be simple, easily verifiable both ex ante and ex post. The historical concentration of investments in NCR, and regions 3, 4 and 7 is solid proof of the failure of a policy of incentives based on location.

Based on the results of this study, the most important locational domestic determinants of investment are: infrastructure quality and quantity (as proxied by roads and extent of electrification), functional literacy, real per capita GDP, which are very much consistent with many views and theories of the investment location decision.

- e) Should the grant of incentives be based on performance? If so, are there any exceptions? What, if any?

Monitoring ex post results of registered investments on a regular basis could be costly, but necessary. At the very least, there should be strong incentives for firms to truly carry out their investment commitments. The exporter-non-exporter dichotomy discussed in this study means that the granting of incentives could be based on the extent to which overseas export markets are the actual target of firm production.

- f) Should incentives be time-bound or permanent?

Provided incentives are given only to exporting investors, there should be no problems making them permanent in nature.

- g) Should BOI and ecozone incentives be equalized? Should incentives to ecozone locators be the same or different from those to non-ecozone locators? If yes or no, why?

Since the overwhelming majority of BOI-registered investments are mostly non-exporting (as opposed to PEZA investments), most BOI investors would therefore be market-seeking investors who would be less sensitive to incentives relative to PEZA investors. Therefore, it follows that BOI and ecozone incentives should NOT be equalized.

IPAs need to ensure that ecozone locators are at least export-oriented and as much as possible. They should also ensure that as much production is targeted for the foreign market. The redundancy rate increases as domestic market orientation increases.

- h) Or should a premium be given to zone locators?

A premium is currently given to zone locators. Provided they remain primarily exporters, their current premia should be retained, but not perhaps increased.

- i) Should there be uniform requirements/conditions/privileges for all ecozones and non-ecozone investments? - e.g. export vs. domestic sales, nationality requirement, etc.
- j) Should the Philippines make its tax incentives at par with Asian neighbors?

The current proposal by Dr. Felipe Medalla in a companion study is to eliminate the income tax holiday, and to instead offer generous net operating loss carryover provisions to beneficiaries of incentives have the effect of strengthening inducements for actual investment, since NOLCO benefits cannot be claimed without first proof of actual investment. He also advocates wider use of accelerated depreciation.

- k) Or should other factors be considered apart from regional competitiveness?

Based on the results of this study, the most important locational domestic determinants of investment are: infrastructure quality and quantity (as proxied by roads and extent of electrification, as well as the presence of well-developed seaports and airports), functional literacy, and high real per capita GDP. These objectives may be achieved with appropriate fiscal reforms, including a well-thought out system of rationalizing fiscal incentives and coordinated expenditure reforms (a good mix of truly wealth-dispersing expenditures in education and infrastructure).

- l) How can government operationalize a tax expenditure budget?

This study estimates a tax expenditure budget per investment promotion agency.

- m) There are several investment promotion authorities (IPAs) BOI, BCDA, PEZA, CSEZA, and ZSEZA. The BOI Chairman is also the Chairman of PEZA. What is the ideal relation among them? Should these IPAs be co-equal bodies? Why or why not?
- n) As proposed in HB 3295, the BOI is both a policy-making body and an IPA. Is this an ideal structure?

Based on initial results, the BOI's incentive-providing capacity should be severely limited, if not eliminated altogether. Revenues from the rationalization of fiscal incentives could go to improving efforts at investment promotion by PEZA and other IPAs.

- o) At present there is a proliferation of special laws granting incentives for investment in a number of industries - jewelry, agriculture/fisheries, steel, etc. - Should their status be maintained, or should they be repealed and the incentives be placed under the ambit of the proposed omnibus investments law?

The first best solution would be to consolidate all fiscal incentives provisions into one bill, so as to simplify the administration of incentives. The resulting law could also do well to recognize the potential negative fiscal externalities of redundant incentives provision.

Additional research work is being carried out in order to determine how best to design the fiscal incentives regime of the future. In the Philippine Senate, there is currently one proposal to limit the provision of incentives to exporters, tourism enterprises and one other sector. The limiting of incentives to exporters and tourism has important implications for the BOI and is highly consistent with the results of this study. One proposal by Dr. Felipe Medalla is to eliminate income tax holidays and instead offer generous accelerated depreciation and net operating loss carryover (NOLCO) benefits to qualified investments. Table 58 below is a list of important fiscal incentives, their effects on the tax liabilities of corporations, advantages and disadvantages.

Table 58: A guide to fiscal incentives and other investment inducements

Type of incentive or inducement and effect	Advantages	Disadvantages
Income tax holiday (ITH) Exempts the firm from paying income taxes for a limited period of time	Relieves the tax authorities of the burden of administering them. Allows qualified investors to side-step often complex tax laws and corrupt tax administrations. Are neutral in their impact on the relative factor (capital and labor) intensities for qualified projects.	By exempting profits regardless of their amount, an ITH tends to benefit an investor who expects high profits and would have undertaken the investment even without tax incentives. They provide strong incentives for tax avoidance as taxed enterprises could enter into economic relationships with exempt ones to shift their profits to the latter via transfer pricing. The duration of an ITH, even if time-bound, is prone to abuse and extension by investors through creative re-designation of existing investment as new investment (e.g., the closing down and restarting of the same project under a different name but with the same ultimate

		ownership); Time-bound ITH tends to attract short-run projects, which are typically not as beneficial to the economy as long-term projects that would usually become profitable only toward the end of the ITH, and therefore, can make little use of such holidays even if losses can be carried forward; and The revenue costs to the budget are seldom transparent, unless enterprises enjoying the holidays are still required to file proper tax returns. The use of ITH, as opposed to a reduced tax rate, has one major disadvantage: it discriminates against investment in the future when the tax holiday is over. A reduced tax rate applies to income generated by investments made over the life of the investment project. In contrast, a tax holiday, only applies to income generated during the holiday period. Thus, a reduced tax rate tends to encourage investment over time to maintain capital equipment and to increase production capacity. Tax holidays discriminate against sequential or continuing investment. Thus, tax holidays discriminate against long-term investment. The inherent incentive is to attract short-term, mobile capital.
Net operating loss carryover (NOLCO) Governments that employ a low corporate tax rate often use two other mechanisms to lower the effective tax rate. One such mechanism is to allow investors	This measure is valued by investors who are expected to run losses in the first few years as they try to increase production and penetrate markets. Relative to the ITH, NOLCO provides stronger incentives for	The NOLCO creates the possibility that the firm will not be paying taxes (or will be paying a reduced amount) for a longer period than an ITH would allow. However, this quality also makes the NOLCO a stronger inducer of actual investment.

to carry losses forward (or backward) for a specified number of years (usually three to five years) for accounting purposes. Usually, only a fixed ratio of the loss with an upper limit is allowed to be carried forward (or backward).	investments to actually be undertaken because firms have to demonstrate first that they have actually incurred investment costs in order to claim the benefits of NOCLO.	
Investment tax allowance Investment allowances are special deductions against (i.e., which reduce) taxable income. Investment tax credits are special deductions against corporate income tax otherwise payable. Both of these are earned as a fixed percentage of qualifying investment expenditures. Two types of investment allowances are: 1) accelerated depreciation, where firms are allowed to write off capital costs over a shorter time period than that dictated by the capital's useful economic life, which generally is the accounting basis for depreciating capital costs. While this treatment does not alter the total amount of capital to be depreciated, it increases the present value of the claims by shifting them forward, closer to the time of investment. The present value (PV) of claims is greatest where the full cost of the capital asset can be deducted in the year the expenditure is made. 2) Deduction or enhanced deduction, where firms are allowed to claim total deductions for the costs of qualifying capital that equal	Relative to the ITH, accelerated depreciation provides stronger incentives for investments to actually be undertaken because firms cannot depreciate capital costs if they have not yet been incurred. Providing tax incentives in the form of accelerated depreciation has the fewest of the shortcomings associated with corporate income tax (CIT) rate incentives and all of the virtues associated with investment cost-recovery incentives. Since merely accelerating the depreciation of an asset does not increase the total allowable nominal depreciation of the asset beyond its original cost, little distortion in favor of short-lived assets is generated from the accelerated depreciation itself, and neither is there much incentive for an enterprise to engage in the kind of possible tax abuse connected with investment allowances/tax credits. Another meritorious aspect of accelerated depreciation is that by allowing faster deduction of investment costs, it effectively moves a CIT closer to a consumption-based tax and in the process, reduces the distortion that an income-based tax – such as the CIT in its regular form – would typically produce against investment. In the limit, acceleration of depreciation	Investment tax allowances have, however, two notable weaknesses: 1) they tend to distort the choice of capital assets in favor of short-lived ones, since a further allowance becomes available once an asset is replaced; and 2) qualified enterprises may attempt to abuse the system by selling and purchasing the same assets to claim multiple allowances, or by acting as a purchasing agent for enterprises not qualified to receive the incentive. A number of tax avoidance possibilities are encountered when the rate of credit and tax allowance is too high. If a generous investment allowance is provided, firms can flow services through a subsidiary and make money simply by increasing the amounts that the subsidiary charges its parent company for the services rendered. The basic problem is that, because the total amount of tax allowance and depreciation that can be deducted against taxable income exceeds the actual amount spent, the tax benefit to the parent company of spending one dollar exceeds the tax cost to the subsidiary of receiving a dollar of revenue.

(in the case of deduction) or exceed (in the case of enhanced deduction) the (market) price at which it is acquired. Depending on the rate at which these (inflated) costs can be depreciated, this may generate a stream of deductions that exceed, in PV, the corresponding acquisition costs. Investment allowances typically stipulate that certain percentages of the initial costs of plant and equipment investments can be written off immediately as expenses in the current period, in addition to the normal allowable depreciation on the full costs of such investments. This lowers the taxable income of the firm, lowering the tax base. Firms are allowed to claim total deductions for the costs of qualifying capital, thereby lowering taxable income and the tax base. Investment allowances are deductions from taxable income based on some percentage of new investment (depreciation). They tend to lower the effective price of acquiring capital. Investment allowances are given as a specified percentage of qualifying investment expenditures. Because they are deducted against the tax base, however, their value to the investing firm depends on the value of the corporate tax rate applicable to the tax base – the higher (lower) the tax rate, the higher (lower) is the amount of the tax relief on a given amount of investment allowance claimed. In contrast, variations in the corporate tax rate do not affect	would result in the full write-off of investment costs in the current year (investment expensing), so that the CIT becomes simply a tax on the net cash flow over time associated with the investment.	
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the value of investment tax credits.		
Investment tax credits Investment tax credits are special deductions against corporate income tax otherwise payable. Thus, they tend to reduce tax liabilities of a firm. They are earned as a fixed percentage of qualifying investment expenditures. Investment tax credits may be flat or incremental. A flat investment tax credit is earned as a fixed percentage of investment expenditures in a year on qualifying (targeted) capital. In contrast, an incremental investment tax credit is earned as a fixed percentage of qualifying investment expenditures in a year in excess of some base that is typically a moving average base (for example, the average investment expenditure by the taxpayer over the previous three years). The intent behind the incremental tax credit is to improve the targeting of the relief to incremental expenditures that would not have occurred in the absence of the tax relief. This targeting is not ensured, however, since investors may have planned to increase their investment expenditures beyond levels in prior years in any event. Investment tax credits, like investment allowances, are based on some percentage of new investment. They tend to lower the effective price of acquiring capital. Because they are not deducted against the tax base, however, their value to the investing firm does not depend on the value of the corporate tax rate applicable to the tax base –	Similar to investment tax allowances	Similar to investment tax allowances

the higher (lower) the tax rate, the higher (lower) is the amount of the tax relief on a given amount of investment allowance claimed. Thus, variations in the corporate tax rate do not affect the value of investment tax credits. In contrast with investment tax allowances, investment tax credits provides stipulated percentages of investment costs that could be deducted from CIT liabilities. If the CIT rate is uniform, investment allowances and investment tax credits are equivalent forms of tax incentives in all substantive aspects, and hence, share the same advantages and shortcomings – as the former are directly expressible in terms of the latter irrespective of the scale of the investments.		
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XII. Conclusions and Recommendations

Based on the analysis done in the earlier sections, this study recommends the following algorithm for determining the redundancy rate:

- 1) The literature has tried to define redundancy one way (above-average to very high returns). Do registered IPA-registered investments have above average ex ante returns?
- 2) If yes (as in the Philippines), then some (or all) of the amount will be redundant.
- 3) For most IPA's, the ex ante rates of return for most approved projects are high to very high by international and even domestic standards (> 15% rates of return)
- 4) Earning very high returns are a necessary, but not sufficient condition for the incentives to be redundant. To further distinguish, classify investments further by underlying motivation
- 5) The early literature used underlying investment motivation to classify sensitivity of investors to incentives
- 6) Thus, efficiency-seeking investors are shown to be highly sensitive to incentives, since their primary motivation is to reduce unit costs adjusted by productivity

- 7) Market- and resource-seeking investors are not as sensitive to incentives as the former
- 8) But the exporter-non-exporter classification also captures much of this argument and is a neater and offers the analyst more observable data to capture investment motivation
- 9) With respect to exporters (non-market-seeking investors), cross-country survey and empirical evidence supports the view that they will be sensitive to highly sensitive to the generosity of fiscal incentives.
- 10) Incentives tend to help them be more price-competitive or help to attract (away from competing countries) FDI exporters seeking better terms
- 11) The literature suggests that non-exporters (primarily domestic market-seeking investors) – will tend to have have low sensitivity to fiscal incentives relative to other inducements (such as a strong, vibrant domestic market)
- 12) The provision of fiscal incentives to non-exporting investments, who will mostly be reliant on the Philippines market for sales, AND who will earn above average to very high returns will by and large be redundant. One proposed rule of thumb for redundancy: it is roughly equivalent to the proportion of registered non-exporting enterprises to total registered enterprises.
- 13) Fiscal incentives are subsidies provided by the government. The economic justification for granting subsidies rests on the ability of the subsidized activity to generate social benefits way beyond the private returns to the firm. Proxies for social benefits include exports, employment, taxes generated. Evidence that investments generate other spillovers is very difficult to quantify.

This study finds that the provision of fiscal incentives is very costly, yet in spite of the fact that they continue to be provided, there is limited evidence of their efficacy in inducing investment across countries. In the BOI's case, the estimated fiscal cost of redundant incentives is very close to 1% of 2004 GDP (43,177,878,199.30 Pesos) – a reflection of the mostly domestic market (non-exporting) orientation of their registered investments. Considering that the country's fiscal deficit is around 2% to 3% of GDP, a proper rationalization of BOI fiscal incentives could have profound effects on the government's fiscal health, with other direct and positive effects on the country's international credit rating, the cost of borrowing from international financial markets, domestic interest rates and the country's image as a viable (and fiscally stable) investment destination as a whole. One way of capturing the BOI redundancy is a simple correlation of lagged regional BOI investment approvals and regional gross domestic capital formation (from the NSCB). Relative to the PEZA, BOI correlations were very low, strongly suggesting that committed investments to the BOI did not materialize.

The tragedy is that these fiscal losses recur year after year (and in roughly the same amounts), and they have for a long time deprived the country of valuable resources for expenditures on the true drivers of regional and international investment demand and the source of real competitiveness in the country: literacy and infrastructure.

PEZA incentives, insofar as they target exporters, have a much lower redundancy rate. This notwithstanding, the net benefit analysis reveals that even the PEZA has very little room for redundancy – the PEZA net benefits are very sensitive to the redundancy rate. This underscores the need for tight investment screening, monitoring and controls at the PEZA.

In addition to the weak cross-country evidence on the efficacy of incentives, this study provides evidence that even within the country, incentives have very limited power to induce investment (real regional gross capital formation).

The power of incentives is of secondary importance relative to other, more potent inducers of investment. The result of cross-country studies of investment location is very consistent with the results of the empirical work done in this study: by and large, the primary factors inducing investment in the Philippines are a vibrant regional domestic economy, a well-educated work force and good regional infrastructure. Variables proxying for the generosity of Philippines fiscal incentives are generally insignificant, or tend to reflect the three factors mentioned above. From the point of view of attracting FDI, therefore, PEZA, SBMA and CSEZ incentives will only be potent insofar as they are used to attract exporting investments. Due to data constraints, the fiscal cost of SBMA and CSEZ incentives are more difficult to measure. Insofar as these zones register firms that are not exporting, and also to some extent sell output to markets outside the zone, the redundancy rate for these zones should be higher than that of the PEZA (therefore, it is highly likely that both CSEZ and SBMA produce negative financial net fiscal benefits). The ability of these zones to sell exempted products to markets outside the zone should be tightly monitored. The greater the leakage, the greater the pure fiscal cost to the government.

Another proof that the power of incentives is of second-order importance relative to other factors that truly induce investment: year after year, the annual Investments Priorities Plan grants more generous fiscal incentives to businesses locating in areas considered to be less developed (LDAs) (longer tax holidays, regardless of status, among others). But there is no evidence that a province's inclusion in this list has led to an increase in investments to these areas over time. Instead, investments have gravitated towards regions with stronger and richer economies, better infrastructure and greater levels of functional literacy – factors that, compared to incentives, are more fundamental inducers of investment.

The clustering of most investments in areas with already viable initial conditions for investment has meant that viable employment opportunities for skilled labor have also tended to cluster in these areas. The clustering of past investments in a select few regions has also ensured that the demand for future infrastructure and human-capital-enhancing public expenditures will also tend to cluster there at present and for the foreseeable future.

The combination of preserving the current system of providing redundant and costly fiscal incentives and the resulting inadequacy of resources devoted to true regional investment drivers, such as education and infrastructure, has been inequality-preserving and inequality-reinforcing (both across regions and across income classes – in obvious violation of the equity principle of a good tax system).

PEZA incentives to private manufacturing-centered ecozone developers have played an important role in that they have attracted significant private capital into export zone development. Investors into ecozones have demonstrated that they are superior relative to national government with respect to:

- 1) choosing the best locations;
- 2) building good investment support facilities and supplying reasonably-priced utilities;
- 3) developing and cultivating business-friendly environments; and
- 4) searching for foreign partners, who also attract locator firms from abroad

The privatization of export zones effectively transfers many risks away from the government and towards the private sector developer. Such risks include construction risk, market and demand risk. Some fiscal risk remains with the government, though, because both ecozone locators and developers pay no or greatly reduced taxes and import duties. The effect of providing incentives to ecozone private developers has been to encourage them to pick the best sites. Therefore, the decision to place ecozones in particular

sites most likely reflect inherent comparative locational advantages (such as proximity to airports, seaports and good access to these and a well-educated labor force). *The significance of the variable number of PEZA ecozones in the investment location regression analysis therefore more probably reflects these locational advantages, rather than the investment-inducing effect of PEZA incentives. The validity of the interpretation of this result tends to be reinforced by the fact that the proxy for the generosity of PEZA incentives, the log of lagged PEZA investment approvals, is not significant in the investment location regressions. Thus, among the PEZA incentives, the most effective appear to be those given to private (manufacturing-centered) ecozone developers.*

PEZA incentives have experienced limited success in: attracting investments into locations beyond NCR and Regions 3, 4 and 7. This is a reflection of profound economic inadequacies in other regions. Inadequacies which other facets of the current system of incentives provision have tended to magnify.

PEZA incentives to developers of IT buildings and parks in well-developed urban areas seem to be redundant because the Philippines has become such an attractive location for IT-enabled business process outsourcing investments. Compared to developers of manufacturing-centered ecozones which cater to mostly efficiency-seeking investments, IT buildings and IT parks host resource-seeking enterprises, which would have sought leases in buildings in urbanized areas even if the developers of these buildings did not receive incentives. The ratio of IT building and IT park incentives therefore is the basis for PEZA's redundancy rate.

The BOI's provision of largely redundant incentives to mostly domestic-market seeking investors illustrates the country's failure to use industrial policy as a tool for fostering greater regional dispersal of development and wealth. The first best policy for dispersing regional wealth away from NCR, Regions 3, 4 and 7 would have been through greater direct public investments in infrastructure and education. It is highly likely that costly incentives provision has played a direct role in depriving the country of large resources for more activities with more demonstrable wealth-dispersing effects.

Enhancing the attractiveness of other locations for investment in the country is better served through a combination of sustained expenditures in literacy and infrastructure development, more than through the intensive use of locational incentives.

It is clear that at the very least, the BOI function of providing incentives should be eliminated. The country will have much more resources available at its disposal for important social and economic expenditures. The DTI itself may also be able to have more resources for investment promotion. BOI officials always lament the fact that they have insufficient funds for investment promotion. The effect of eliminating the incentives-providing function of the BOI is to replace the invisible part of DTI's budget with one that is more visible (not to mention more limited and much more cost-effective).

The inequity in real gross capital formation (actual investment, registered or not) is depicted in the tables below. Note that:

- a) the share of NCR, Regions 3, 4 and 7, falling up to 1996, has been increasing since;*
- b) Luzon's share rose to beyond 81% in 1991, declined through 1998, but has displayed a steady increase since; and*
- c) Mindanao's share has fallen while the share of the Visayas has increased.*

Besides computing the cost of fiscal incentives on the basis of examining the extent of non-exporters registered with a particular IPA, one should also examine costs arising from the abuse by firms of incentive privileges. Where incentives exist at all, they provide exploitable tax loopholes for ALL

registered firms. Thus, even if incentives are not provided to redundant investments as defined in this study, they are still open to abuse by recipient firms. Thus, all IPAs should enhance screening and monitoring capabilities. It is also imperative that IPAs and the Bureau of Internal Revenue coordinate in the monitoring of conglomerates with IPA-registered subsidiaries.

While deliberate tax avoidance by firms is in general, undesirable from the revenue collection viewpoint, the motivation for it is strong when there are persistent perceptions of rampant graft and corruption, as well as highly inefficient provision of government services in both the revenue and the expenditure side. Thus, incentives rationalization and expenditure side reforms should go hand in hand. *Furthermore, this study makes it clear that even if one discounts leakages from revenue collection as a result of corruption, reduction in redundant incentives still yields major sources of revenues for the government.*

The result of a proper rationalization of fiscal incentives and a coordinated approach to expenditures geared towards greater international and regional competitiveness, as well as efforts to eliminate corruption and reduce inefficiency, is a situation where everyone gains in the long-run: wealth is better dispersed regionally, the country enhances its competitiveness as an investment destination, and even domestic market-seeking investors gain in the long-run – through the strengthening of domestic regional economies. True fiscal incentives rationalization ought to be welfare-improving for all.

Table 59: Regional shares of gross fixed domestic capital formation, Philippines, 1988-2003

Year	NCR	Ilocos Re- gion	Caga- yan Valley	Cent- ral Luzon	Sou- thern Luzon	Bicol	Wes- tern Visa- yas	Cent- ral Visa- yas	Eas- tern Visa- yas	Wes- tern Min	Nor- thern Min	Sou- thern Min	Cent- ral Min	CAR	ARMM	CA- RA- GA
1988	43.85%	2.55%	1.57%	6.63%	10.34%	3.45%	4.05%	5.59%	2.09%	2.52%	2.71%	3.26%	9.23%	2.16%	0.00%	0.00%
1989	55.60%	3.32%	1.93%	6.20%	7.69%	2.94%	3.87%	6.69%	-0.29%	1.63%	2.51%	3.38%	2.76%	1.76%	0.00%	0.00%
1990	50.78%	4.12%	3.13%	7.39%	9.34%	2.72%	3.58%	4.38%	1.84%	2.38%	1.63%	3.79%	2.14%	2.79%	0.00%	0.00%
1991	46.85%	4.11%	3.34%	7.91%	13.44%	2.18%	3.12%	4.86%	1.36%	1.47%	2.66%	3.42%	1.99%	3.30%	0.00%	0.00%
1992	49.04%	2.22%	1.65%	10.23%	10.76%	2.83%	3.96%	5.67%	1.37%	1.69%	2.16%	3.01%	3.75%	1.67%	0.00%	0.00%
1993	50.27%	1.88%	1.56%	8.95%	12.79%	2.57%	3.51%	5.18%	1.26%	1.60%	2.39%	3.63%	2.79%	1.62%	0.00%	0.00%
1994	45.36%	2.49%	3.26%	6.52%	14.84%	2.24%	3.27%	5.63%	1.72%	1.56%	3.20%	4.27%	3.62%	1.53%	0.50%	0.00%
1995	43.90%	3.56%	2.77%	6.07%	16.14%	1.99%	3.33%	5.34%	1.79%	1.48%	3.64%	4.35%	3.56%	1.37%	0.70%	0.00%
1996	42.41%	3.25%	3.09%	7.02%	13.82%	2.27%	4.45%	7.37%	2.38%	1.37%	2.31%	3.96%	3.35%	1.37%	0.52%	1.07%
1997	40.85%	2.85%	2.74%	6.13%	15.84%	3.02%	3.57%	7.75%	2.24%	1.53%	2.50%	3.88%	3.38%	1.58%	0.83%	1.30%
1998	34.54%	3.94%	3.03%	6.53%	13.64%	3.07%	4.43%	9.03%	3.28%	2.07%	2.77%	4.95%	3.01%	2.32%	1.48%	1.92%
1999	32.18%	4.41%	3.75%	6.45%	14.92%	2.90%	4.85%	8.29%	3.60%	2.32%	2.72%	4.41%	3.00%	2.89%	1.48%	1.83%
2000	35.03%	3.79%	3.85%	6.45%	13.30%	2.55%	4.98%	9.35%	3.29%	1.67%	2.51%	4.63%	2.89%	2.98%	0.37%	2.35%
2001	35.85%	3.78%	3.72%	7.09%	14.15%	2.38%	5.03%	9.21%	2.78%	1.38%	2.64%	4.56%	2.56%	2.39%	0.21%	2.27%
2002	34.53%	4.35%	3.82%	7.01%	14.90%	2.39%	5.02%	9.85%	2.96%	1.42%	3.17%	2.84%	2.67%	2.37%	0.37%	2.31%
2003	35.30%	4.39%	3.50%	7.43%	15.45%	2.39%	5.16%	10.11%	2.53%	1.30%	3.26%	2.37%	2.61%	2.14%	0.32%	1.72%

Source: National Statistics Coordination Board and author's calculations

Table 60: Regional shares of gross fixed domestic capital formation, Philippines, by island group 1988-2003

Year	Of which NCR+3,4,7	Luzon	Visayas	Mindanao
1988	66.41%	70.54%	11.73%	17.73%
1989	76.18%	79.45%	10.27%	10.28%
1990	71.88%	80.26%	9.80%	9.94%
1991	73.05%	81.13%	9.34%	9.54%
1992	75.70%	78.39%	11.00%	10.61%
1993	77.19%	79.64%	9.95%	10.40%
1994	72.35%	76.23%	10.62%	13.15%
1995	71.44%	75.79%	10.47%	13.74%
1996	70.61%	73.23%	14.19%	12.58%
1997	70.57%	73.01%	13.57%	13.42%
1998	63.74%	67.07%	16.73%	16.20%
1999	61.83%	67.50%	16.73%	15.77%
2000	64.13%	67.94%	17.62%	14.43%
2001	66.30%	69.37%	17.01%	13.62%
2002	66.29%	69.38%	17.84%	12.78%
2003	68.30%	70.61%	17.81%	11.58%

Source: National Statistics Coordination Board and author's calculations

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APPENDICES

Appendix 1

Economic Theories of the Determinants of Investment

Traditional Economic Models of Investment¹⁰

Accelerator model

Investment is also related to expected change in output. The “acceleration principle” is captured by this relationship:

$$I_t = v(Y_t - Y_{t-1}), \quad (6)$$

where I_t denotes real net investment and Y_t denotes real output. The coefficient v is the “acceleration coefficient” and is positive. The accelerator model is a simple description of investment spending that relies on a short history of output and the lagged stock of capital to determine the demand for new capital goods.

Demand for greater productive capacity must pass through stages of planning, approval, contracting and installation. The accelerator model implies that a greater demand for output today lifts investment spending over subsequent periods. An alternative way of expressing the accelerator principle is via the equation

$$I_t = \sum_{i=0}^n a_i Y_{t-i} + cK_{t-i}$$

Because investors seldom regard capital goods as liquid assets, the lags on output also represent their measured reactions as they distill transient changes in the demand for their output from more enduring changes in the growth of their markets. The fixed weights reflect the correlations among the current and past values of output, which investors apply to the recent course of output in order to derive their forecast of future output. The lagged stock of capital serves two purposes in the accelerator model. Because businesses’ demand for new investment goods depends on the difference between their potential need for capital assets and their existing stock of capital, the coefficient on this variable partly represents the speed at which they attempt to close this gap. Businesses also need to replace and renew their capital assets as they age or become obsolete. To the degree productive capacity tends to decay at a constant rate, this last term in the accelerator model also measures the investment that businesses must make in order to maintain their productive assets. The first effect opposes the second. The greater is the existing stock of capital, other things equal, the fewer new investments businesses need undertake in order to reach their optimal stock of capital. But, the greater is their capital, the more they must invest in order to maintain and replace aging assets.

Neoclassical model

Whereas the accelerator model proposes that businesses’ demand for capital is nearly proportional to their planned rate of production, the neoclassical proposes that competitive businesses invest in order to maximize their profits. The demand for new capital, consequently, varies with output, the relative price of capital goods, interest rates, and the incidence of taxes (Jorgenson 1963; Hall and

¹⁰ Much of this section adapted from Kopcke and Brauman (2001).

Jorgenson 1967; Jorgenson 1971). The neoclassical model, therefore, rests on a specific description of the economy's aggregate production function, which describes the maximal output that businesses can obtain from any stock of capital goods combined with other factors of production. In maximizing their profits, competitive businesses choose the amount of capital that they must employ to meet the demand for their output at least cost. Competitive businesses, individually, cannot influence the prices at which they can sell their output or the prices that they pay to obtain capital goods or other inputs. Altogether, these businesses supply the output that their customers demand at prevailing prices when the economy is in equilibrium. In these circumstances, the economy's production function describes the amount of capital that businesses must employ in order to meet their customers' demand most profitably given prevailing prices. The rate of return that competitive businesses earn on their optimal stock of capital equals their cost of employing this capital, which includes their cost of funds, their net tax liabilities, and their capital consumption charges. With common simplifying assumptions regarding the form of the production function, the optimal stock of capital in the neoclassical model is proportional to output divided by the cost of capital.

As was the case for the accelerator model, the demand for new capital goods is then proportional to the difference between the optimal and the existing stocks of capital, because spending responds comparatively slowly to changes in the demand for output. Investors consider the recent history of both output and the cost of capital when they assess their potential need for capital goods in the future. Inasmuch as investors likely respond to changes in the course of output differently than they do to changes in the cost of capital, the neoclassical model admits two sets of lags for these variables (Bischoff 1971). To the degree these lags are to reflect investors' forecasts of output and the cost of capital, this model, much like the accelerator model, depends on correlations among current and past values of these variables remaining fairly stable over time. Like the accelerator model, the neoclassical model includes the lagged value of the stock of capital. Here too, its coefficient represents the rate at which investors renew and replace capital as well as the rate at which they intend to close the gap between their potential need for capital and their existing stock of capital.

The neoclassical model attempts to measure the otherwise unobservable but critical return on marginal investments by specifying investors' behavior in sufficient detail. This approach allows the model more latitude in explaining investment spending, especially when the ratio of output to capital in the economy varies significantly in response to changes in the cost of capital. However, if these specific assumptions misrepresent the behavior of investors too greatly, the model might be neither more general nor more accurate than other approaches that appear to be less rigorous. For example, if businesses recognize that their plans for supplying output influence prices and interest rates, then the neoclassical model might predict that investment rises too strongly in response to a higher demand for output or a drop in the cost of capital. Conversely, if a greater demand for output coincides with individual companies' loss of market power, then investment spending might exceed that predicted by the neoclassical model. Moreover, if the price of capital goods rises in response to businesses' demand for more capital, then investment can rise more than the change in the cost of capital might predict. Nonetheless, the neoclassical model appeals to forecasters and policymakers because it attempts to define the optimal stock of capital by balancing the return on capital with the cost of capital, two important elements in most theories of investment. The explicit representation of the cost of capital in the model also shows how changes in economic policy directly influence the demand for capital.

The neoclassical investment model has its basis in the marginal conditions proposed by Fisher (1933). Here, the level of investment is determined by the user cost of capital (UCC). Though, theoretically, the simple neoclassical model is highly plausible, empirically it has generally been disappointing. Since it has failed to explain changes in investment, economists have devoted their attention to incorporating more realistic assumptions.

A Modified Neoclassical Model

An alternative version of the neoclassical model proposes that the stock of capital expands at a rate that is a constant fraction of the rate required to reach its optimum. This alternative view also happens to separate the influence of output on investment from that of the cost of capital, rather than binding them in one variable. Not only does this approach allow past values of output and the cost of capital more distinct weights, it also allows the model to compare the contributions of output and the cost of capital in explaining investment spending.

Q Theory of investment

The next school of thought based their explanation of investment decisions on Tobin's Q theory of investment and the view that net investment depends on the market value of capital relative to its replacement cost. Hayashi (1982) incorporated adjustment costs and tax parameters into the Q framework. The Q formulation gives more importance to the relationship between investment and the net profitability of investing capital.

Models based on the Q representation of firms' investment behavior dominated the empirical research in the eighties. This approach was preferred to the user cost of capital because it was easier to observe the market value of capital relative to its replacement cost. Unfortunately, the Q models did not perform well, empirically, in explaining either the longitudinal or time-series changes in investment.

In recent years, Auerbach and Hassett (1992) have expressed investment in terms of both the user cost of capital and an average Tobin's Q under certain conditions. They incorporate adjustment costs into the model and the relationship between investment and user cost is derived from the steady-state average user cost and a root of the linearised difference equation in capital stock. For further details, refer to Hassett and Hubbard (1996).

Non-Traditional Economic Models of Investment

The studies cited in Table 6 in the main text served as a guide in specifying the models estimated in this paper. This study will use various econometric methods in order to estimate the impact of fiscal incentives on actual investment, employment, and other variables. This study emphasizes the determinants of *actual* investment flows, in contrast to *proposed* investments. Data for the latter is collected by the Board of Investments (BOI), the Philippine Economic Zone Authority (PEZA), as well as other investment promotion agencies. Data for actual investment flows are available from National Statistical Coordination Board and the Bangko Sentral ng Pilipinas (BSP).

The following regressions presuppose that some amount of investment is good for the economy, and therefore, the growth of investment is a useful indicator of the benefits of fiscal incentives.

Econometric Model : Using intra-Philippines, cross-region data

Using panel equation estimation methods, regress actual (and proposed) investment flows against the following variables:

- 1) Investment – sources: regional data from NSCB, BSP, BOI, and PEZA. NSCB gross domestic capital formation data by region only available starting 1988.

- 2) Real wages – source: Labor Force Survey (LFS) – Average earnings per paid employee in establishments employing 10 or over by region and major industry group, Philippines (Table 8.8A in 2004 Labor Force Survey (LFS))
- 3) Real per capita GDP growth – regional GDP data and regional population data available starting 1980 from NSCB
- 4) Average years of schooling, functional literacy – for the former, data is to be constructed from the Labor Force Survey (data available starting 1987), for the latter, data is available from FLEMMS.
- 5) Road density – Paved road density data using DPWH raw data is available starting 1987; national road density data available in intermittent periods
- 6) Telephone density – Regional telephone density data available starting 1988 from the Philippine Yearbook.
- 7) Status of electrification – Regional status of electrification data available starting from 1980 from the Philippine Yearbook.
- 8) Ecozone density – (Need proxy for generosity of fiscal incentives) Data available from PEZA.
- 9) Political risk/war dummies for each region – war dummies could be made equal to 1 for ARMM. Dummies could also be made for stability of regional government.
- 10) Dummies for types of fiscal incentive regimes – in order to construct this variable, one would need to know the history of fiscal incentives in the Philippines (one could model change in regime as the signing of the 1987 Omnibus Investments Code).
- 11) Proxies for the generosity of fiscal incentives – lagged annual investment approvals by IPAs
- 12) Other variables considered
 - a) Population
 - b) Economic growth in competing countries (Thailand, etc.)
 - c) Improvements in generosity of fiscal incentives in other countries
 - d) others

One could also collect data on provincial basis, so the resulting cross-section regression would require provincial data. This will require much more resources, but will avoid some of the pitfalls of using Philippine regional data for regression analysis (with regional definitions being modified from time to time).

For this model, the dependent variable could be:

- 1) BOI-registered investment flows by year
- 2) PEZA-registered investment flows by year
- 3) NSCB gross fixed capital formation

Initially, pooled least squared estimates were derived. However, these could be questioned on the grounds of possible endogeneity of the regressors in the investment regression. If that is the case, then we need to use instrumental variables techniques to estimate this equation. The dependent variable was the

natural log of real gross domestic capital formation. The candidate regressors were current and lagged values of the variables in the previous table. Instruments used were lagged values of manufacturing to GDP ratio, functional literacy, number of economic zones, real wages, real per capita GDP growth, telephone density and extent of paved roads. In other words, instruments were used for agglomeration, education, incentives, wages, market strength and infrastructure. From the regression results below, note that the R-squareds of the fixed effects regressions tended to be better than the random effects regressions.

Pooled two stage least squares instrumental variables estimates (dependent variable: NSCB gross fixed capital formation by region)

Model		1	2	3	4	5	6
Variable	Expected Sign	Fixed Effects	Random Effects	Fixed Effects	Random Effects	Fixed Effects	Random Effects
C		24.682	24.242	-3.040	-3.235	59.103	1.377
(P-values)		0.000	0.000	0.666	0.426	0.103	0.887
MFGGDP?(1)	+	1.185	0.967	0.570	0.340	2.758	0.327
(P-values)		0.002	0.000	0.162	0.081	0.057	0.135
FUNLIT?	+			1.441	1.576	1.503	1.899
(P-values)				0.001	0.000	0.096	0.002
ZON?(1)	+	0.045	0.046	0.040	0.040	0.074	0.047
(P-values)		0.002	0.001	0.010	0.005	0.048	0.076
WAGE?	-					-4.830	-1.188
(P-values)						0.060	0.405
PAV?	+	1.657	1.607				
(P-values)		0.000	0.000				
RDDENS?	+						
(P-values)							
RPCGDP?	+			2.105	2.017	-0.215	2.356
(P-values)				0.005	0.000	0.914	0.000
EO226?	+						
(P-values)							
PRES?	-						
(P-values)							
R-Squared		0.87	0.54	0.87	0.78	0.40	0.70

Source: Author's estimates

Pooled two stage least squares instrumental variables estimates (dependent variable: NSCB gross fixed capital formation by region)

Model		7	8	9	10	11	12
Variable	Expected Sign	Fixed Effects	Random Effects	Fixed Effects	Random Effects	Fixed Effects	Random Effects
C		52.148	11.116	34.157	10.379	-15.808	-6.906
(P-values)		0.132	0.249	0.412	0.299	0.054	0.069
MFGGDP?(1)	+	2.427	0.511	2.005	0.504		
(P-values)		0.095	0.039	0.157	0.045		
FUNLIT?	+	0.898	1.782	1.603	1.829	1.245	1.402
(P-values)		0.581	0.103	0.043	0.001	0.007	0.001
ZON?(1)	+	0.067	0.050	0.070	0.057	0.035	0.045
(P-values)		0.068	0.020	0.077	0.012	0.069	0.014
WAGE?	-	-3.772	-2.224	-3.173	-2.079		
(P-values)		0.255	0.193	0.264	0.147		
PAV?	+	0.560	0.064				
(P-values)		0.674	0.924				
RDDENS?	+			-0.003	0.139	0.411	0.236
(P-values)				0.994	0.420	0.018	0.080
RPCGDP?	+	-0.085	2.259	0.920	2.196	3.496	2.441
(P-values)		0.960	0.000	0.696	0.000	0.000	0.000
EO226?	+						
(P-values)							
PRES?	-						
(P-values)							
R-Squared		0.58	0.57	0.64	0.58	0.84	0.76

Source: Author's estimates

Pooled two stage least squares instrumental variables estimates (dependent variable: NSCB gross fixed capital formation by region)

Model		13	14	15	16	17	18
Variable	Expected Sign	Fixed Effects	Random Effects	Fixed Effects	Random Effects	Fixed Effects	Random Effects
C		-18.625	-3.437	29.054	-12.471	25.581	-2.060
(P-values)		0.135	0.543	0.182	0.048	0.194	0.623
MFGGDP?(1)	+						
(P-values)							
FUNLIT?	+	1.193	1.538	-1.161	-0.299	-0.188	0.827
(P-values)		0.016	0.000	0.254	0.701	0.800	0.049
ZON?(1)	+	0.033	0.048	-0.010	0.000	0.010	0.028
(P-values)		0.096	0.006	0.673	0.988	0.591	0.076
WAGE?	-	0.289	-0.703	1.644	2.993		
(P-values)		0.764	0.452	0.110	0.066		
PAV?	+						
(P-values)							
RDDENS?	+	0.455	0.167	0.109	0.438	0.034	0.229
(P-values)		0.046	0.247	0.658	0.008	0.879	0.047
RPCGDP?	+	3.588	2.586	-1.611	1.378	-0.329	2.198
(P-values)		0.000	0.000	0.463	0.020	0.860	0.000
EO226?	+			-0.971	-0.598	-0.660	-0.260
(P-values)				0.011	0.009	0.026	0.025
PRES?	-						
(P-values)							
R-Squared		0.84	0.72	0.87	0.64	0.89	0.75

Source: Author's estimates

Pooled two stage least squares instrumental variables estimates (dependent variable: NSCB gross fixed capital formation by region)

Model		19	20	21	22
Variable	Expected Sign	Fixed Effects	Random Effects	Fixed Effects	Random Effects
C		42.376	7.119	42.932	9.565
(P-values)		0.048	0.214	0.053	0.097
MFGGDP?(1)	+	0.871	0.521	0.818	0.491
(P-values)		0.035	0.018	0.072	0.026
FUNLIT?	+	-0.578	0.649	-0.812	-0.074
(P-values)		0.453	0.129	0.446	0.912
ZON?(1)	+	0.013	0.029	0.011	0.025
(P-values)		0.506	0.071	0.583	0.089
WAGE?	-				
(P-values)					
PAV?	+				
(P-values)					
RDDENS?	+	-0.012	0.262	-0.034	0.207
(P-values)		0.959	0.025	0.888	0.077
RPCGDP?	+	-1.800	1.389	-1.764	1.447
(P-values)		0.367	0.008	0.392	0.007
EO226?	+	-0.796	-0.333	-0.826	-0.425
(P-values)		0.009	0.006	0.012	0.001
PRES?	-			0.245	0.816
(P-values)				0.742	0.215
R-Squared		0.89	0.74	0.88	0.66

Source: Author's estimates

The results of two stage least squares estimation on pooled data suggest that in general, the BOI incentives do not have an important positive impact on investments. Recall that BOI incentives are proxied by the dummy variable EO226, which equals one from 1987 – 1995, when the PEZA Law took effect and gave more generous incentives to firms locating within special economic zones. However, the number of special economic zones, appears to have had a very strong positive inducement effect on investments. This is true in both fixed and random effects regressions. Agglomeration effects also are highly significant, suggesting that investment in a region attracts further investment. Higher functional literacy also attracts investment, as well as good quality infrastructure (as proxied by roads). Levels of real wages do not appear to be an important inducement. While the number of PEZA ecozones appears highly significant, the main text argues that this variable is more likely to capture the effects of locational advantages inherent in Regions 3, 4, 7 and NCR, rather than the strength of PEZA incentives themselves.

Besides implementing two stage least squares using pooled data, it is also possible to consider stacking the cross section data for each variable on top of one another and using conventional instrumental variables panel estimation techniques, such as generalized method of moments (GMM). For this study, GMM was used to estimate a model with the same specification, and similar results initially emerge. Subsequent work will focus on producing further GMM estimates.

In order to draw as many policy recommendations as possible from this exercise, one would like to have as many independent sources of variation in the dependent variable. But high correlations among some candidate regressors prevent us from doing this.

Econometric Model: Pooled data two stage least squares

List of variables used in econometric model

Variable (those in bold are in natural log form)	Definition (source)	Traditional Theories	Non-traditional theories	Agglomeration	Infra-structure	Incentives
Real GFCF (RGFCF)	Real gross fixed capital formation (National Statistics Coordination Board, NSCB Philippine Statistical Yearbook)					
BOI (EO226)	Dummy variable that takes the value of 1 from 1987 to 2003 and zero before 1987 (Effectivity of EO226)					x
PEZA (PEZA)	Dummy variable that takes the value of 1 from 1995 to 2003 and zero before 1995 (Effectivity of PEZA Law)					x
Lagged Real per capita GDP growth (RPCGDPGR)	Lagged real per capita GDP growth (NSCB)	x	x			
Lagged Real per capita GDP (RPCGDP)	Lagged real per capita GDP (NSCB)	x	x			
PEZA ecozones (ZON)	Number of PEZA ecozones (PEZA)					x
FVR	Dummy variable that takes the value of 1 from 1992 to 1998 (FVR regime dummy)		x			
Ratio of Paved to Total (PAV)	Ratio of length of paved roads to total length of roads in the Philippines (Department of Public Works and Highways annual reports)		x		x	
Ratio of MFG to GDP (MFGGDP)	Ratio of manufacturing gross value added to GDP (NSCB Philippine Statistical Yearbook)			x		
Inflation (INF)	Inflation rate (NSO)		x			
Real Lending Rate (RLEND)	Ex post real lending interest rate (International Financial Statistics, various issues)	x	x			
Index of compensation in MFG (WAGE)	Index of compensation in manufacturing (Yearbook of Labor Statistics, various issues)		x			

Variable (those in bold are in natural log form)	Definition (source)	Traditional Theories	Non-traditional theories	Agglomeration	Infrastructure	Incentives
Functional literacy (FUNLIT)	Functional literacy rate in the Philippines (National Statistics Office Functional Literacy in Education and Mass Media Survey (FLEMMS))		x			
Duminvlaw	Dummy variable that takes the value of 1 in 1987, 1992, 1994 and 1995 (Dummy for years in which major incentives laws were passed)		x			x
Annual UCC (UCC)	User cost of capital (Asian Development Bank)	x	x			
Telephone density (TEL)	Telephones per 1,000 people (NSCB)		x		x	
Prestran	Dummy variable that takes the value of 1 in 1986, 1992, 1998 and 2001 (Transition in Presidents)		x			
Growth in Real Govt Exp (RGOVT)	Growth rate of real government expenditures (Reside, 2005)		x			
National Roads (NRDDENS)	Ratio of length of national roads to total length of national roads in the Philippines (DPWH annual reports)		x		x	
Total Road density (RDDENS)	Ratio of total length of regional roads to total area of region (DPWH)		x		x	
Treasury Bill Rate (TBILL)	91-Day Tbill rate (Bangko Sentral ng Pilipinas)		x			
Presidential Transition (PRES)	Dummy variable that takes the value of 1 in 1986, 1992, 1998 and 2001 (Transition in Presidents)		x			
Asian financial crisis dummy	Dummy variable for period of Asian financial crisis (1997 onwards)		x			
Generosity of incentives provision	Past value of BOI investment approvals (BOI)					X
Generosity of incentives provision	Past value of PEZA investment approvals (PEZA)					X

Source: Author

Appendix 2

Dunning and Coyne's classification of FDI

Market seeking investors, tend to be those investors who possess superior technology and/or access to inputs and want to gain access to new markets or to increase their share in a market where they are already present. Rather than exporting to a particular market, producing a good locally may better adjust products to peculiarities of the local markets, due to proximity to the buyers; transportation costs can be reduced significantly and trade barriers can be effectively bypassed. *Market size and growth are essential characteristics for countries which host market-seeking FDI; yet those who impose import barriers tend to attract significantly more.* In Latin America in the 1960s and 1970s, when import-substituting policies were imposed, many investors considered FDI, which bypasses import barriers, the best option to target local markets. In Central-Eastern-European (CEE) countries in the early 1990s, market-seeking FDI made primarily through acquisitions, were predominant. During the privatization process, some foreign investors essentially bought monopolies in local markets. China is an example of a country, which in the 1980s and 1990s attracted the bulk of both market seeking investors and those who sought access to its cheap yet productive labor force.

The primary aim of resource seeking investors is to gain access to resources available in the host country. Such resources can be, for instance, raw materials, or some expertise particular to the local population. The availability and cost of these resources is often considerably lower due to natural factors (e.g. transportation costs or the local population's natural skills and expertise) or artificial factors (e.g. the host country's policies aimed at restricting the exports of raw materials). *Moreover, with a more constant supply resulting in continuous production being a major factor in some industries, improvements in this regard provide even stronger incentive on the part of many firms to invest overseas. In labor-intensive sectors, labor can be such a resource. It can be either cheap or its productivity can be proportionally higher than the premium on its price. Or, the structure of the labor force can be a decisive factor: companies in sectors with standardized mass production may seek one type of labor, whereas those whose production is more sophisticated and less homogeneous, may prefer another type. Seeking technology and know-how, a characteristic found predominantly among developed countries, is another major motivator for this type of FDI; the financial resources offered by the recipient state's superior financial system may well be another. Privileged access to markets and/or technology is an important characteristic of a resource seeking investor.*

Efficiency seeking investors aim to make optimal use of the factors of production at the international level. These investors aim at neither local markets nor resources, but at an opportunity to increase their efficiency by means of utilizing government-induced structural imperfections, e.g. tax differentials, or to reduce their risks by means of diversifying production.

Coyne (1995) takes Dunning's classification of FDI by motive and from these infers each type's sensitivity to taxation policies and fiscal incentives. Coyne makes a distinction between natural resource-seeking FDI and cost-reduction FDI which does not deal with natural resources. In this particular setting, the natural resource-seeking FDI are separated into a special category, because of possible implications that the difference between this and other types of resources may cause. Many studies, particularly those dealing with country risks and exchange rate risks, classify FDI on the basis of the destination of production: whether that is export-oriented or home market-oriented. This is justified because each type of orientation leads to a specific type of risk, which has little or nothing in common with the other.

Not only motivation factors can serve as a basis for classification, but also the means by which FDI are made may differ significantly: an investor may choose to build an entirely new enterprise, to buy and expand an existing enterprise, to expand its own operating facility, or to simply acquire full or partial

managerial control in an existing enterprise. Thus, under these criteria, FDI can be classified as “Greenfield”, “Brownfield”, expansion, acquisition, and joint venture.

Appendix 3

Comparison between proposed and current incentives

The following is a summary of incentives offered by HB 3295 compared to old incentives laws, as well as the expected effects of the HB3295:

Proposed incentives (HB 3295)	Current incentives (and laws)	Effects of proposed incentives
Registered enterprises shall be entitled to an ITH from the start of their commercial operations to the extent of their activity under the following categories: Category A: A registered domestic enterprise located in highly developed areas, as determined by the Board, shall be entitled to a four year ITH Category B: A registered domestic enterprise on the following shall be entitled to six years income tax holiday: 1) located in LDAs identified by the Board 2) producing/rendering new products/services or having strong backward or forward linkages Category C: Registered export enterprise will be entitled to 6 years ITH, and provided it has a large capital investment or sizeable employment generation, it uses high level technology and is located outside of Metro Manila, it is entitled to an 8 year ITH.	Income Tax Holiday (ITH) - BOI BOI-registered enterprise shall be exempt from the payment of income taxes reckoned from the scheduled start of commercial operations, as follows: New projects with a pioneer status for six (6) years; New projects with a non-pioneer status for four (4) years; Expansion projects for three (3) years. As a general rule, exemption is limited to incremental sales revenue/volume; New or expansion projects in less developed areas (LDAs) for six (6) years, regardless of status; Modernization projects for three (3) years. As a general rule, exemption is limited to incremental sales revenue/volume.	Benefits future investments characterized as: Large export-oriented enterprises registered with BOI with large capital investment and employment generation; also benefits BOI expansion and modernization projects
NOLCO – net operating loss during the first	(3) Net Operating Loss Carry-Over. - (TAX	Increases the amount of time an operating

three years from the start of commercial operations which had not been previously offset as a deduction from gross income shall be carried over as a deduction from gross income for the next five consecutive taxable years immediately following the year of such loss. Registered enterprises availing of ITH shall not be entitled to NOLCO. (Losses occurring during first three years can be carried over for the next five years)	CODE; available to all firms) The net operating loss of the business or enterprise for any taxable year immediately preceding the current taxable year, which had not been previously offset as deduction from gross income shall be carried over as a deduction from gross income for the next three (3) consecutive taxable years immediately following the year of such loss: Provided, however, That any net loss incurred in a taxable year during which the taxpayer was exempt from income tax shall not be allowed as a deduction under this Subsection: Provided, further, That a net operating loss carry-over shall be allowed only if there has been no substantial change in the ownership of the business or enterprise in that - Not less than seventy-five percent (75%) in nominal value of outstanding issued shares., if the business is in the name of a corporation, is held by or on behalf of the same persons; or (ii) Not less than seventy-five percent (75%) of the paid up capital of the corporation, if the business is in the name of a corporation, is held by or on behalf of the same persons. "For purposes of this subsection, the term 'not operating loss' shall mean the excess of allowable deduction over gross income of the business in a taxable year. Provided, That for mines other than oil and gas wells, a net operating loss without the benefit of incentives provided for under Executive	loss may be carried over from 3 to 5 years. This appears to benefit BOI-registered investments the most, since it provides BOI firms with the same NOLCO privileges which were absent before. Presently: In the present tax code, losses occurring during any one year can be carried over for the next three years and be deducted from gross income For PEZA firms, losses occurring during the first five years of operation can be carried over for the next five years
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	Order No. 226, as amended, otherwise known as the Omnibus Investments Code of 1987, incurred in any of the first ten (10) years of operation may be carried over as a deduction from taxable income for the next five (5) years immediately following the year of such loss. The entire amount of the loss shall be carried over to the first of the five (5) taxable years following the loss, and any portion of such loss which exceeds, the taxable income of such first year shall be deducted in like manner from the taxable income of the next remaining four (4) years. Net-Operating Loss Carry Over. (EPZA, PEZA LAWS) A net-operating loss incurred in any of the first five years of operation inside the zone may be carried over as a deduction from taxable income derived in such zone during the five years immediately following the year of such loss. The entire amount of the loss and any portion of such loss which exceeds the taxable income of such first year shall be deducted in like manner from the taxable income of the next remaining four years. The net-operating loss shall be computed in accordance with the provisions of the National Internal Revenue Code, any provision of this Decree to the contrary notwithstanding, except that income not taxable either in whole or in part under this Decree or other laws shall be included in gross income.	
Tax rate of five percent on gross income	(PEZA)	Changes the allocation of GIE. Previously, the

earned Except for real property tax on land, no local and national taxes under NIRC, such as income tax, excise tax, franchise taxes, shall be imposed on businesses operating within an ECOZONE, PIA or freeport. In lieu thereof, 5% of the gross income earned shall be paid. The allocation of the 5% GIE pertaining to the local government unit foregoing the taxes shall be governed by the charter or governing law of the IPA. The incentive of 5% tax rate on gross income earned shall not be available to BOI-registered enterprises. HB3295 – LIMIT 5% GIE TO 20 YEARS AFTER WHICH TAX CODE WILL APPLY.	SEC. 24. Exemption from Taxes Under the National Internal Revenue Code. - Any provision of existing laws, rules and regulations to the contrary notwithstanding, no taxes, local and national, shall be imposed on business establishments operating within the ECOZONE. In lieu of paying taxes, five percent (5%) of the gross income earned by all businesses and enterprises within the ECOZONE shall be remitted to the national government. This five percent (5%) shall be shared and distributed as follows: (a) Three percent (3%) to the national government; (b) One percent (1%) to the local government units affected by the declaration of the ECOZONE in proportion to their population, land area, and equal sharing factors; and (c) One percent (1%) for the establishment of a development fund to be utilized for the development of municipalities outside and contiguous to each ECOZONE: Amendment to PEZA Law SECTION 24. Exemption from National and Local Taxes.- Except for real property taxes on land owned by developers, no taxes, local and national, shall be imposed on business establishments operating within the ECOZONE. In lieu thereof, five percent (5%) of the gross income earned by all	shares of national government, LGU and the development fund were prescribed by the PEZA law. Now, the allocation depends on the charter or governing law of the IPA
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	business enterprises within the ECOZONE shall be paid and remitted as follows: a. Three percent (3%) to the National Government; b. Two percent (2%) which shall be directly remitted by the business establishments to the treasurer's office of the municipality or city where the enterprise is located. SBMA (BCDA) (c) The provision of existing laws, rules and regulations to the contrary notwithstanding, no taxes, local and national, shall be imposed within the Subic Special Economic Zone. In lieu of paying taxes, three percent (3%) of the gross income earned by all businesses and enterprise within the Subic Special Economic Zone shall be remitted to the National Government, one percent (1%) each to the local government units affected by the declaration of the zone in proportion to their population area, and other factors. In addition, there is hereby established a development fund of one percent (1%) of the gross income earned by all business and enterprise within the Subic Special Economic Zone to be utilized for the development of municipalities outside the City of Olongapo and the Municipality of Subic, and other municipalities contiguous to the base areas. In case of conflict between national and local laws with respect to tax exemption privileges	
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	in the Subic Special Economic Zone, the same shall be resolve in favor of the latter	
Accelerated depreciation of plant, machinery and equipment that are reasonably needed and actually used for the production and transport of goods and services may be depreciated using a rate not exceeding twice the rate which would have been used had the annual allowance been computed in accordance with the rules and regulations prescribed by the DoF Secretary and the provisions of the NIRC.	Accelerated Depreciation. (EPZA, PEZA LAWS) Fixed assets may be (1) depreciated to the extent of not more than twice the normal rate of depreciation or depreciated at the normal rate of depreciation if the expected life is ten years or less; or (2) depreciated over any number of years between five years and expected life if the latter is more than ten years; and the depreciation thereon allowed as a deduction from taxable income: Provided, That the taxpayer notifies the Bureau of Internal Revenue at the beginning of the depreciation period which depreciation rate allowed by this subsection will be used by it.	Extends accelerated depreciation rate INCENTIVE to non-PEZA firms
Capital equipment incentives Imports of capital equipment, spare parts, tools and die or those required for pollution abatement and control, cleaner production and waste reduction including the consignment thereof by registered export-oriented enterprises shall be exempted to the extent of 100% of taxes and customs duties (subject to certain provisions) The purchase of machinery and capital equipment and raw materials, supplies, parts and semi-finished products, used in the fabrication of machinery and capital equipment by a registered export-oriented enterprise, from a domestic manufacturer, shall be subject to	Exemption From Taxes And Duties On Imported Spare Parts (BOI) (c) Tax and Duty Exemption on Imported Capital Equipment. — Within five (5) years from the effectivity of this Code, importations of machinery and equipment and accompanying spare parts of new and expanding registered enterprise shall be exempt to the extent of one hundred percent (100%) of the customs duties and national internal revenue tax payable thereon: Provided, That the importation of machinery and equipment and accompanying spare parts shall comply with the following conditions:	Tax credit on imported spare parts now only extended to exporting BOI-registered enterprises.

zero percent VAT. The registered export-oriented enterprise shall be granted a tax credit equivalent to the amount of duties that would have been waived on the machinery, capital equipment and raw materials, supplies, parts and semi-finished products used in the fabrication of machinery and capital equipment, had these items been imported.	Amendment to EO226 (RA7918) "(c) Tax and Duty Exemption on Imported Capital Equipment and its Accompanying Spare Parts. — New, expanding/modernizing enterprise which have been registered with the Board of Investments on or before December 31, 1994 shall be exempt to the extent of one hundred percent (100%) of national internal revenue taxes and customs duties on importations of machinery, equipment and accompanying spare parts within the prescribed period under its law of registration or until December 31, 1997 whichever comes first: Provided, however, That the enterprise which shall register after December 31, 1994 shall be subject to the provisions of Republic Act No. 7716, and three percent (3%) customs duties up to December 31, 1997: Provided, finally, That the importation of machinery, equipment and accompanying spare parts shall comply with the following conditions: "(1) They are not manufactured domestically in sufficient quantity, or comparable quality, and at reasonable prices; "(2) They are reasonably needed and will be used exclusively by the registered enterprise in its registered activity, unless prior approval of the Board is secured for the part-time utilization of said equipment in a non-registered activity to maximize usage thereof or the proportionate taxes and duties are paid on specific equipment and machinery being permanently used for non-registered activities; and	
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	'(3) The approval of the Board was obtained by the registered enterprise for the importation of such machinery, equipment and accompanying spare parts. Exemption From Taxes And Duties On domestic capital equipment (BOI) (d) Tax Credit on Domestic Capital Equipment. A tax credit equivalent to one hundred percent (100%) of the value of the national internal revenue taxes and customs duties that would have been waived on the machinery, equipment and spare parts, had these items been imported shall be given to the new and expanding registered enterprise which purchases machinery, equipment and spare parts from a domestic manufacturer: Provided, That (1) That the said equipment, machinery and spare parts are reasonably needed and will be used exclusively by the registered enterprise in the manufacture of its products, unless prior approval of the Board is secured for the part-time utilization of said equipment in a non-registered activity to maximize usage thereof; (2) that the equipment would have qualified for tax and duty-free importation under paragraph (c) hereof; (3) that the approval of the Board was obtained by the registered enterprise; and (4) that the purchase is made within five (5) years from the date of effectivity of the Code. If the registered enterprise sells, transfers or disposes of these machinery, equipment and spare parts, the provisions in the preceding	
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	paragraph for such disposition shall apply. RA7918 Amendment to EO226 "(d) Tax Credit on Domestic Capital Equipment. — A tax credit equivalent to one hundred percent (100%) of the value of the national internal revenue taxes and customs duties that would have been waived on the machinery, equipment and spare parts, had these items been imported shall be given to the new and expanding enterprise registered with the Board of Investments as of December 31, 1994 which purchases machinery, equipment and spare parts from a domestic manufacturer: Provided, (1) That the said equipment, machinery and spare parts are reasonably needed and will be used exclusively by the registered enterprise in its registered activity, unless prior approval of the Board is secured for the part-time utilization of said equipment in a non-registered activity to maximize usage thereof; (2) That the equipment would have qualified for tax and duty exemption under paragraph (c) hereof; (3) That the approval of the Board was obtained by the registered enterprise; and (4) That the purchase is made on or before December 31, 1997 or December 31, 1999 as the case may be. If the registered enterprise sells, transfers, or disposes of these machinery, equipment and spare parts, the provision in the preceding paragraph for such disposition shall apply. Others	
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	(m) Exemption from Taxes and Duties on Imported Spare Parts. Importation of required supplies and spare parts for consigned equipment or those imported tax and duty free by a registered enterprise with a bonded manufacturing warehouse shall be exempt from customs duties and national internal revenue taxes payable thereon, Provided, However, That at least seventy percent (70%) of production is exported; Provided, further, that such spare parts and supplies are not locally available at reasonable prices, sufficient quantity and comparable quality; Provided, finally, That all such spare parts and supplies shall be used only in the bonded manufacturing warehouse of the registered enterprise under such requirements as the Bureau of Customs may impose. (EDA) [b] Importation of machinery and equipment and accompanying spare parts which are used in the manufacture of exported products at zero percent [0%] duty for a period of three [3] years, until 1997. EO313 Amendment to EO226 (2004) Section 1. Any importation of machinery and equipment, spare parts and accessories by enterprises registered with the BOI, except those covered under the Motor Vehicle	
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	Development Program, shall be subjected to zero and one (1) percent (1%) duty, as indicated in Section 2 hereof. Section 2. The zero and one percent (1%) duty on articles, equipment, spare part and accessories classified under Chapters 40, 59, 68, 69, 70, 73, 76, 82, 83, 84, 85, 87, 89, 90, 91 and 96 of the Tariff and Customs Code of the Philippines shall be granted to BOI-registered new and expanding export-and domestic-oriented enterprises, respectively, upon the issuance by the BOI of a Certificate of Authority; provided, that the importation of machinery and equipment, spare parts and accessories shall comply with the following conditions: a) They are not manufactured domestically in sufficient quantity, of comparable quality and at reasonable prices; b) They are reasonably needed and will be used exclusively by the enterprise in its registered activity, unless prior approval of the BOI is secured for the part-time utilization of said equipment in a non-registered activity to maximize usage thereof or the proportionate taxes and duties are paid on the specific machinery and equipment being permanently used for non-registered activities; and c) The approval of the BOI was obtained by the registered enterprises for the importation of such machinery and equipment, spare parts and	
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	accessories.	
Importation of source documents by IT-related firms shall be eligible for tax and duty free importation		New incentive
Raw material incentives Every registered export-oriented enterprise shall enjoy a tax credit equivalent to the internal revenue taxes and customs duties paid on the supplies, raw materials and semi-manufactured products provided the same are not sufficient in quantity, quality, or are not competitively priced which are used in the manufacture, processing or production of its export products forming part thereof, exported directly and indirectly by the registered export-oriented enterprise, based on the actual taxes and duties paid for such by the registered enterprise.	(BOI) Tax credit on raw materials and supplies. A tax credit equivalent to the national internal revenue taxes and duties paid on raw materials, supplies and semi-manufacture of export products and forming part thereof shall be granted to a registered enterprise. (EDA) [c] Tax credit for imported inputs and raw materials primarily used for the production and packaging of export goods, which are not readily available locally , shall be valid for five [5] years. <i>Provided, That the tax credit shall be issued within thirty [30] days from exportation.</i> [e] For exporters of non-traditional products who use or substitute locally produced raw materials, capital equipment and/or spare parts, tax credits equivalent to twenty-five percent [25%] of the duties that would have been paid had these inputs been imported ; <i>Provided, That this incentives would be available for a period of three [3] years upon effectively of this Act and can be extended for another three [3] years by the President upon the recommendation of the Secretary of Finance;</i>	Tax credit on imported raw materials now only extended to exporting BOI-registered enterprises.

	<i>Provided, further, That the Secretary of Finance, in consultation with the Export Development Council, shall prepare a list of non-traditional exports which are entitled to avail of this incentives: <i>Provided, That these incentives shall be granted only upon; [1] the presentation of a Bureau of Export Trade Promotion [BETP] certification of the exporter's eligibility, in compliance with the minimum wage and SSS laws; and that [2] in the case of importation, the items imported shall be used exclusively for production of export goods.</i></i>	
Incentives on breeding stocks and genetic materials Importation of breeding stocks and genetic materials within 10 years from the date of registration of commercial operation of the enterprise shall be exempt from all taxes and duties.	Tax Exemption On Breeding Stocks And Genetic Materials (BOI) Agricultural producers will be exempted from the payment of all taxes and duties on their importation of breeding stocks and genetic materials within ten (10) years from the date of registration or commercial operation. (BOI) Tax credit on tax and duty portion of domestic breeding stocks and genetic materials. A tax credit equivalent to one hundred percent (100%) of the value of national internal revenue taxes and customs duties on local breeding stocks within ten (10) years from date of registration or commercial operation for agricultural producers.	No apparent effect on costs.
Exemption from wharfage dues	Exemption From Wharfage Dues And Export Tax, Duty, Impost And Fees (BOI) All enterprises registered under the IPP will be given a ten (10) year period from the date of registration to avail of the exemption from	No apparent effect on costs.

	wharfage dues and any export tax, impost and fees on its non-traditional export products.	
Deferred imposition of minimum corporate income tax (MCIT) – The MCIT of 2% of gross income as of the end of the taxable year shall be imposed when the MCIT is greater than the income tax computed under the NIRC. The MCIT will only be imposed after the end of the enterprise's entitlement period to the income tax based incentives. (This imposes a minimum income tax to be paid when computations according to the NIRC yield an amount lower than MCIT)	TAX CODE LOSING FIRMS SHOULD PAY MCIT	MCIT WILL NOT BE IMPOSED DURING THE ITH
Tax treatment of merchandise in export processing zones Except as otherwise provided in this Code, foreign and domestic merchandise, raw materials, supplies, articles, equipment, machineries, spare parts and wares of every description, except those prohibited by law, brought into the Zone to be sold, stored, broken up, repacked, assembled, installed, sorted, cleaned, graded, or otherwise processed, manipulated, manufactured, mixed with foreign or domestic merchandise or used whether directly or indirectly in such activity, shall not be subject to Customs and internal revenue laws and regulations nor to local tax ordinances, the provisions of law to the contrary notwithstanding.	(EPZA Law) Except as otherwise provided in this Decree, foreign and domestic merchandise, raw materials, supplies, articles, equipment, machineries, spare parts and wares of every description, except those prohibited by law, brought into the Zone to be sold, stored, broken up, repacked, assembled, installed, sorted, cleaned, graded, or otherwise processed, manipulated, manufactured, mixed with foreign or domestic merchandise or used whether directly or indirectly in such activity, shall not be subject to Customs and internal revenue laws and regulations nor to local tax ordinances, the provisions of law to the contrary notwithstanding.	No apparent change in law.
Registered export oriented enterprises shall have access to the utilization of the bonded	(BOI)	

warehousing system in accordance with the rules of the BoC	(l) Access to Bonded Manufacturing/Trading Warehouse System. Registered export oriented enterprises shall have access to the utilization of the bonded warehousing system in all areas required by the project subject to such guidelines as may be issued by the Board upon prior consultation with the Bureau of Customs.	
Employment of foreign nationals	(BOI) (h) Employment of Foreign Nationals. Subject to the provisions of Section 29 of Commonwealth Act Number 613, as amended, a registered enterprise may employ foreign nationals in supervisory, technical or advisory positions for a period not exceeding five (5) years from its registration, extendible for limited periods at the discretion of the Board: Provided, however, That when the majority of the capital stock of a registered enterprise is owned by foreign investors, the position of president, treasurer and general manager or their equivalents may be retained by foreign nationals beyond the period set forth herein. Foreign nationals under employment contract within the purview of this incentive, their spouses and unmarried children under twenty-one (21) years of age, who are not excluded by Section 29 of Commonwealth Act Numbered 613, as amended, shall be permitted to enter and reside in the Philippines during the period of employment of such foreign nationals. A registered enterprise shall train Filipinos as understudies of foreign nationals in administrative, supervisory and technical skills	

	and shall submit annual reports on such training to the Board.	
Investment tax allowance An investment tax allowance to the extent of its actual investment, paid, in cash or in property, shall be allowed as a deduction from its taxable income not to exceed 30% spread within 3 years to be availed after the tax holiday.		Not available before. To compute cost, need to have data on actual investment flows. not to exceed 30% (subject to interpretation)
Double deduction for training expenses Expenses incurred for local training given to employees for the development of skills identified as necessary by the appropriate agencies, upon approval by the Board, shall entitle the registered enterprise to a special deduction from the taxable income equivalent to 100% of the total expenses over and above the allowable ordinary and necessary business deductions for said expenses under the NIRC, as amended, for a period of 5 years after entitlement of other income tax based incentives.		Not available before. To compute cost, need to have data on training expenditure.
Double deduction for R and D Expenses incurred for research and development conducted in the Philippines relating to the business shall entitle the registered enterprise to a special deduction from the taxable income equivalent to 100% of the total expenses over and above the allowable ordinary and necessary business deductions for said expenses under the NIRC, as amended, for a period of 5 years after		Not available before. Not available before. To compute cost, need to have data on research and development expenditure.

entitlement of other income tax based incentives.		
To raise the quality of basic education, a domestic enterprise that produces quality educational materials for the public school system shall be entitled to the incentives herein provided.		
	Additional Deductions from Taxable Income. (BOI) Additional deduction for labor expense (ADLE) For the first five (5) years from registration, a registered enterprise shall be allowed an additional deduction from taxable income equivalent to fifty percent (50%) of the wages of additional skilled and unskilled workers in the direct labor force. The incentive shall be granted only if the enterprise meets a prescribed capital to labor ratio and shall not be availed simultaneously with ITH. This additional deduction shall be doubled if the activity is located in an LDA. Additional deduction for necessary and major infrastructure works. Registered enterprises locating in LDAs or in areas deficient in infrastructure, public utilities and other facilities may deduct from taxable income an amount equivalent to the expenses incurred in the development of necessary and major infrastructure works. The privilege, however, is not granted to mining and forestry-related projects as they	Not in current version of HB3295.

	would naturally be located in certain areas to be near their sources of raw materials. RA7918 Amendment to EO 226 "(b) Additional Deduction for Labor Expense. — For the first five (5) years from registration a registered enterprise shall be allowed an additional deduction from the taxable income of fifty percent (50%) of the wages corresponding to the increment in the number of direct labor for skilled and unskilled workers if the project meets the prescribed ratio of capital equipment to number of workers set by the Board: Provided, That this additional deduction shall be doubled if the activity is located in less developed areas as defined in Article 40.	
	(EDA) [d] Tax credit for increase in current year's export revenue computed as follows: The first 5% increase in annual export revenue over the previous year would mean a credit of 2.5% to be applied on the incremental export revenue converted to pesos at the current rate; • The next 5% increase would be entitled to a credit of 5.0%; • The next 5% increase would be entitled to a credit of 7.5%; • In excess of 15% would be entitled	Not in current version of HB3295. Benefits DoF. THIS SUBSIDY HAS NEVER BEEN IMPLEMENTED

	to a credit to 10%. Such tax credit is only granted for the years when the performance is achieved . Export revenues used in the calculation of such tax credits shall be subject to verification as prescribed under the implementing rulers and regulations.	
Enterprises registered with the PEZA, SBMA, CSEZ, JHMC, PPMC, BTPI, CEZA, ZCSEZA and PIA may enjoy the ITH or NOLCO granted by the concerned IPA, prior to the 5% GIE		
Fiscal incentives under this Code shall be terminated after a cumulative period of 20 years from the date of registration or start of commercial operations, whichever is applicable, except that it could be extended with regard to industries deemed indispensable to national development.		

Source: House Bill 3295 and various laws on incentives