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Abstract

Capital flight is defined as the movement of capital from resource-scarce developing countries to avoid social controls. It is measured as net unrecorded capital outflow, or the residual between officially recorded uses and sources of funds. Total capital flight from the Philippines was estimated at USD 138 billion (in 1995 constant prices) for the period 1970-2002. Including imputed interest earnings, the stock of capital flight as of 2002 was USD 218 billion. Indeed, by any yardstick, these figures are significant amounts of lost resources that could have been utilized to generate additional output and jobs in the country. Were it not for capital flight, the Philippines would have reached an economic performance like the Asian economic tigers.

JEL classification: F30, F40, O53
Keywords: capital flight, Philippines

1. Introduction

Research on the Philippines in the 1980s and early 1990s reported substantial amounts of capital flight (Boyce and Zarsky [1988]; Vos [1992]; Lamberte et al. [1992]; Boyce [1993]; Vos and Yap [1996]). The recent developments in the Philippines brought about by economic reforms and adjustment programs, including globalization and economic integration, would lead one to think that capital flight will cease to be an issue. However, our present research shows that substantial capital flight continues to be a problem for the country. As expected, high levels of capital flight occurred in periods of economic and political crises and instability. There were also cases of high levels of capital flight during periods of relatively robust economic growth. This latter observation is counter-intuitive and needs to be explained. Boyce [1992] and Beja [2005b], for example, explain the Philippine case

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using a revolving-door model of capital flight. But for now, we reconfirm the findings of the earlier studies that substantial amounts of capital fled the Philippines.

The paper has five parts. Following this introduction, we discuss in section two the concept of capital flight and why it is important to revisit capital flight. In section three, we present a definition of capital flight and methodology. Then, in section four, we discuss the results. Section five concludes.

2. Why capital flight?

Capital flight is not a new issue. There are studies documenting capital flight from Europe and the United States in the early 20th century and, in the case of Europe, during the 17th century and even earlier (Kindleberger [1987]). In the 1930s, John Maynard Keynes wrestled with the issue of capital flight (Crotty [1983]). After World War II, there were concerns about capital flight from Europe to the United States. In fact, this was a subject of debates at the Bretton Woods meetings (Helleiner [1994]). Even in recent decades, studies have documented capital flight from the Organization for Economic Cooperation and Development (OECD) countries (Gibson and Tskalotos [1993]). In other words, capital flight affects the developed world, too.

But capital flight is a particularly important concern for developing countries, including the Philippines, for at least three reasons. The first reason is capital scarcity. Briefly, capital flight contributes to the capital scarcity problem. It also restricts the capacity and ability of the affected country to mobilize domestic resources and to access foreign resources. Hence, in addition to a wide range of negative impacts, capital flight retards economic growth and development. In other words, it contributes to underdevelopment.

Second, capital flight can lead to a negative feedback process, which is especially true during periods of crises and uncertainty. As resource constraints become binding, and given the possibility of being cut off from external sources of funds, economic growth will be further limited and more capital flight could occur. Consequently, economic policies will become more difficult to implement and raising the social conditions of the people become a heavier burden to address. In short, capital flight makes the twin goals of economic growth and development much more challenging to pursue. Capital flight knocks off developing countries, already lagging behind on the economic ladder, several rungs lower. In this context, capital flight is a threat to the developing world.

A third reason concerns economic justice, particularly the distributive impacts of external indebtedness and capital fight as well as the legitimacy of external debt itself. When external debts are being squandered by the elite or inappropriately used to benefit only a few, the rest of society suffers. More importantly, the economic and social costs of external indebtedness and capital flight are imposed on the majority

of society. Thus, in this regard, we have to question the legitimacy of external debt itself and the rationale for continuing to honor such debts that society on the whole did not benefit from.

Recent interest in capital flight was triggered by the 1980s Latin American debt crisis.[2] In that period, there were two foci of research. One focus was the relationship between capital flight and external debt because capital flight undermined the ability of highly indebted countries to repay or service their mounting external debts (Lessard and Williamson [1987a]). The other focus was whether or not external borrowing fuels or propels capital flight, and vice versa (Boyce [1992], [1993]).

After the 1980s debt crises, capital flight became less of an issue and capital started to flow back to the developing countries (Drabek and Griffith-Jones [1999]; Ffrench-Davis and Griffith-Jones [1995], [2003]), perhaps with the exception of Africa (Boyce and Ndikumana [2001]; Collier et al. [2004]). Scholars stopped paying attention to capital flight. By the latter half of the 1990s, however, there was a resurgence of capital flight as developing countries faced more and intense financial and economic crises. Once again, scholars are interested in re-examining the issues.

We argue that there are at least three reasons why a reconsideration of capital flight is needed today, especially in the context of the Philippines. The first reason is, as in the past, external debts. Country indebtedness remains a big problem for developing countries such as the Philippines (Table 1). Recent experience suggests that developing countries are once again becoming vulnerable to debt-related crises (Jomo [1998]; Wade and Veneroso [1998]). Leung [2003], for example, presents some empirical evidence that increased indebtedness of developing countries is positively linked with increased intensity and frequency of debt-related economic cycles, a problem that he found to be especially significant in Africa and, to some extent, in Asia as well. The 1997-98 Asian financial and economic crises, for instance, were partly rooted in the accumulation of external debts, albeit private external debts. The recent fiscal crisis in the Philippines clearly points to the crucial issue of external indebtedness (see also de Dios et al. [2004], [2005]; Aldaba et al. [2005]). Like Boyce ([1992], [1993]), we argue that there remains a close link between capital flight and external debt.

The second reason relates to changes in the economic policies that have been adopted or, in some cases, forced upon developing countries. In particular, neoliberal economic policies have led to very aggressive deregulation and financial liberalization without ensuring, or in some cases neglecting, the appropriate governance structures and adequate administrative capacity (Demirguc-Kunt and Detragiache [1998]; Eichengreen and Mussa [1998]; Furnam and Stiglitz [1998]; Jomo [1998]; Montes [1998]). Consequently, we now have an economic environment that is more vulnerable to financial swings, crashes, crises, contagions, and economic stagnation.[3] In fact, some scholars argue that financial and economic

[2]The African debt crisis also began in the early 1980s. However, most of the capital flight research at this time focused on Latin America.

[3]Scholars have argued that deregulation and financial liberalization that result in massive capital

crises are inevitable under such context (Palma [2002], [2003]). Others have pointed out that the promised gains of financial liberalization have yet to be realized (Eatwell [1997]; Williamson and Mahar [1998]). For others, financial and economic crises are the necessary "growing pains" associated with the process of deregulation and financial liberalization and globalization (Prasad et al. [2003]).

Table 1. Share of total external debt to GDP, by region and the Philippines, 1970-2002

Region	*1970s*	*1980s*	*1990s*	*2000s*
Asia	0.21	0.29	0.38	0.47
The Philippines	0.33	0.54	0.69	0.67
Latin America	0.21	0.35	0.60	0.47
Africa	0.19	0.42	0.83	1.05

Source: Global development finance 2004 CD-ROM

We stress that the longer a country is in such a situation, and the longer it postpones the re-introduction of governance structures and administrative capacity, the higher are the chances that financial and economic crises will occur. Moreover, when crises occur, they will be more intense, and their social and economic costs will be very significant. When a country has a weak state like the Philippines (Hutchcroft [1998]; Fabella [2000]), these crises are compounded and prolonged. In this perspective, we argue that neoliberal policies have in fact made developing countries more vulnerable to capital flight. Furthermore, given developments from globalization and economic integration, large and volatile capital flight will be common. We further argue that this view fits the Philippine context well.

The third reason for reconsideration is that capital flight, as pointed out earlier, means lost resources for the domestic economy and thus lost opportunities. Indeed, it is paradoxical that resources are flowing out of developing countries rather than into them, where resources are most needed to generate economic growth and development. Even very poor countries have become net creditors to the rest of the world (Boyce and Ndikumana [2001]). Such lost resources do not contribute to the expansion of domestic economic activities and the improvement of social welfare of domestic residents. Such lost resources (or more precisely, accumulated lost resources) imply lost tax revenues. Given that developing countries face fiscal constraints, lost tax revenues imply foregone public goods, infrastructure and services essential to sustain economic growth. Again, this issue is relevant to the Philippines today.

inflows are the problem and in fact caused the Mexican crisis in 1994-1995 and the 1997-98 Asian financial crises. Wade and Veneroso [1998] and Weiss and Hobson [2000] highlight the role of external forces in bringing about the weakening or removal of governance structures and neglecting administrative capacity.

Also, capital flight can mean lost resources for debt-servicing, thus making the social burden of external debt heavier. Since institutions are weak, fragile or missing in developing countries, the social and economic costs can be large and wide-reaching, affecting many in society. And because capital flight is often undertaken by the elite, the rest of society carries a disproportionate burden of the external debt. In fact, the elite are often able to shelter themselves from harm because they are able to move elsewhere and/or shelter their wealth abroad.

In short, we are once again interested in capital flight because of old and new issues. The lessons from the past are still very relevant to the current context, but with new dimensions to the same problem, new lessons have to be learned. We hope that this paper contributes to that end.

Before proceeding, the difference between normal capital flow and capital flight needs to be clarified. First, we note that capital flight is a type of capital flow but only because they have a common feature: both are movements of capital across countries. But the similarity ends there. Capital flows represent portfolio decisions, which are typically undertaken to exploit favorable returns to capital, among others. Capital flight, on the other hand, represents a decision to take out capital and take refuge in another country to avoid social control. In this context, social control means the actual or potential, as well as formal and informal, control on capital that includes government taxation and regulations on the use of foreign exchange, as well as the capacity of the government to direct resources into productive activities to generate robust economic growth, enhance competitiveness, and consequently, realize economic development. In other words, a normal capital flow is like to a two-way street in which the traffic of capital is dual-directional and presumably recorded in official statistics (i.e., the Balance of Payments).

In contrast, capital flight is more like a one-way street in which the traffic of capital is moving out and is typically unrecorded. Sometimes capital flight is financed by capital inflows such as external debts; other times, capital flight itself finances the capital inflows, returning in the guise of foreign investments, often to avail of the incentives extended to overseas investors (Eaton [1987]; Dytianquin [1988]). So it is possible to have large volumes of capital flows across countries with no capital flight involved. It is also possible to have no capital inflows to a country yet there are huge amounts of capital flight.

Lastly, we further note that when this capital flow perspective is employed, there is a problem in understanding capital flight: The notion of optimal portfolio allocation basically precludes unrecorded capital flows. In fact, in a two-way street capital flow, there should not be any unrecorded capital flows, especially when the environment is (already) deregulated and financially liberalized. If there are unrecorded capital flows, they are to be considered integral and normal and, whatever the outcome—including their adverse impacts on the country—it is presumed to be an optimal situation. Clearly, such a perspective ignores, and indeed does not

see, the social and economic impacts of capital flight, which we argue can be very significant and are shouldered by the majority in society (i.e., the non-elite or the poor). Therefore, while both capital outflow and capital flight share a common feature, there are in fact unique characteristics to capital flight. As such, it may mean that the affected countries, including the Philippines, take up policies that address capital flows in general but, at the same time, include policies that address capital flight itself.

3. A definition of capital flight and methodology

Like Boyce [1993], we define capital flight as the movement of capital from a resource-scarce developing country to avoid social control.[4] As pointed out earlier, social control means the actual or potential, as well as formal and informal, control on capital that includes government taxation, the social regulations on the use of foreign exchange and capital, as well as the capacity of the government to direct resources into productive activities. In this paper, we measure capital flight as the net unrecorded capital outflow, or the residual of officially recorded sources and uses of funds (Erbe [1985]; Morgan [1986]; World Bank [1985]; see also Boyce and Ndikumana [2001]; Epstein [2005]). Recorded sources of funds are net additions to external debt (ΔDET) and net non-debt creating capital inflows (NKI). NKI is the sum of net direct foreign investments (FDI), net portfolio investment equities (PORT) and other investment assets (OTH). Note that we use "net" to mean accounting all the inflows and outflows of funds. The recorded uses of funds are the current account deficits (CAD) and accumulation of international reserves (ΔRES). Thus

$$KF = \Delta DET + NKI - CAD - \Delta RES. \tag{1}$$

Equation [1] obtains what we call the baseline measure of capital flight (BKF). Positive estimates mean capital flight, while negative estimates imply "reverse" capital flight.[5] Moreover, since the variables on the right hand side of Equation [1] are the "officially recorded" transactions, a positive KF thus implies net unrecorded capital outflow; a negative KF implies net unrecorded capital inflows.

Data used in Equation [1] have errors and adjustments are needed to correct them. The first adjustment concerns CAD, in particular, to account for systematic trade misinvoicing. The size of the adjustment can be estimated via trading-partner data comparison. Empirical evidence shows that both import overinvoicing and export underinvoicing are significant mechanisms for capital flight (Bhagwati [1964], [1974]; Gulati [1987]; Boyce [1993]; Boyce and Ndikumana [2001]; Beja [2005a]; Epstein [2005]). Import underinvoicing, or technical smuggling, is often

[4]See Beja [2005a, 2005c] for a detailed discussion of capital flight definitions and measurement procedures.

[5]We follow the convention in the literature in which capital flight is denoted as a positive value. The reason for doing this is that capital flight is a type of foreign asset accumulation and thus a positive notation is employed. "Reverse" capital flight therefore means a reduction of the amount of foreign assets and thus a negative notation is used.

done to evade customs duties and trade regulations. It is a form of "reverse" capital flight in that it results in unrecorded flows of foreign exchange—smuggled goods must be paid for, even if they are not fully taxed. "Pure" smuggling, in which imported goods are not taxed or recorded at all, can also be captured by trading partner data comparison. In any of these cases, the current account is inaccurate and thus we need to make the adjustment.

To determine the magnitude of total trade misinvoicing, we follow three steps (see also Ndikumana and Boyce [2001]; Epstein [2005]). For the first step, we compute the size of export misinvoicing (*DX*) and import misinvoicing (*DM*) for the Philippines in its trade with major industrialized-country trading-partners:

$$DX = PX - CIF \cdot X \tag{2a}$$

$$DM = M - CIF \cdot PM, \tag{2b}$$

where *PX* is the industrialized-country trading-partner's imports from country *i*, and *PM* is the industrialized-country trading-partner's exports to country *i*. *X* and *M* are country *i*'s exports to and imports from industrialized-country trading-partners, respectively; and *CIF*, the cif/fob factor, is an adjustment for the cost of freight and insurance. The rationale for using trade data between the Philippines and its industrialized-country trading-partners is that information from the latter is presumed to be relatively more accurate compared to that from developing-country trading-partners. Positive values of *DX* and *DM* indicate net export underinvoicing and net import overinvoicing, respectively, whereas negative values of *DM* and *DM* indicate net export overinvoicing and net import underinvoicing, respectively.

The next step is to impute the global export and import trade discrepancies (*MISX* and *MISM*, respectively). To obtain *MISX* and *MISM*, we multiply *DX* and *DM* with the reciprocal of the shares of all industrialized-country trading-partners to the Philippines' total exports (*X_INDUS*) and total imports (*M_INDUS*), respectively:

$$MISX = DX / X\_INDUS \tag{3a}$$

$$MISM = DM / M\_INDUS. \tag{3b}$$

The last step is to obtain total trade misinvoicing (*MIS*) as the sum of Equations [3a] and [3b]. *MIS* is added to Equation [1] to obtain adjusted baseline capital flight (KF_{ADJ}):

$$KF_{ADJ} = KF + MIS. \tag{4a}$$

In addition to the trade misinvoicing adjustment, we make a second adjustment on *CAD* for the unrecorded income remittances (*UNREMIT*). For the Philippines, with its sizeable number of overseas workers, overseas remittances are a significant component in the current account. But empirical evidence shows that the size of informal overseas remittances is substantial, ranging from 10 to 80 percent of recorded remittances (Vos [1992]; Vos and Yap [1996]; Puri and Ritzema [1999]), hence a further adjustment to *BKF* is necessary.

For this adjustment, we extrapolate the annual size of *UNREMIT* using an index for the size of unrecorded remittance (*UNREMIT Index*) on recorded overseas remittances (*REMIT*):

$$UNREMIT = REMIT \cdot UNREMIT\ Index. \tag{5}$$

Then, UNREMIT is added to Equation [4a], thus

$$KF_{ADJ} = KF + MIS + UNREMIT. \tag{4b}$$

The other set of adjustments concerns the financial accounts, ΔDET and *NKI* in particular. For ΔDET, the form of an adjustment concerns the impact of exchange rate fluctuations on the stock of external debt (*DEBT*). That is, long-term external debts (*LTDEBT*) are normally denominated in a mix of hard currencies. Fluctuations in these currencies will affect the US dollar (USD) value of *LTDEBT*, which will have an implication for *CDET*. Accordingly, the beginning-of-year adjusted external debt (*ATTD*) that accounts for the foreign exchange rate fluctuations (see also Boyce and Ndikumana [2001]; Epstein [2005]) is

$$ATTD_{-1} = \Sigma_{i=EU,\,DM,\,FF,\,Yen,\,SF,\,UK}\left[\left(\alpha_{i,t-1}LTDEBT_{-1}\right)\left(FX_i/FX_{i,-1}\right)\right] + \Sigma_{i=USD,\,MULT,\,OTHER}\left(\beta_{i,-1}LTDEBT_{-1}\right)$$
$$+ IMF_1\left(SDR_t/SDR_{-1}\right) + STDEBT_{-1}, \tag{6}$$

where α_i is the proportion of *LTDEBT* in Euros, British pounds, French francs, German marks, Japanese yen, and Swiss francs; β_i is the proportion of *LTDEBT* in *USD*, multiple and other currencies; *FX* is the exchange rate of the hard currencies to *USD*; *IMF* is use of *IMF* credits; *SDR* is the exchange rate between Special Drawing Rights and USD; *STDEBT* is short-term external debt; and the subscript -1 denotes the end of the last year (hence, the beginning of the current year). Note that the currency compositions of *MULT*, *OTHER*, and *STDEBT* are not known, so no adjustment can be performed on them. All things being the same, an appreciation in a hard currency relative to *USD* reduces $FX_t/FX_{i,-1}$ and $ATTD_{-1}$, so *DEBT* should be lower. With Equation [6], the adjustment factor for the impact of exchange rate fluctuations on the stock of external debt (*ADEBT*) is

$$ADEBT = ATTD_{-1} - DEBT_{-1}. \quad (7)$$

Equation [7] gives an estimate on the extent to which *DEBT* was affected by foreign exchange fluctuations. For instance, if the Japanese yen appreciated relative to USD, all others being the same, we expect to have a lower $ATTD_{-1}$ and *ADEBT* would be negative. Thus, ΔDET is not an accurate estimate of the net inflow of new borrowing.

We then calculate the adjusted change external debt (ΔDET_{ADJ}). Using Equation [7], we subtract *ADEBT* from ΔDET, thus

$$\Delta DET_{ADJ} = \Delta DET - ADEBT. \quad (8a)$$

Since $\Delta DET = DEBT - DEBT_{-1}$, it can be shown that Equation [8a] is also equal to

$$\Delta DET_{ADJ} = DEBT - ATTD_{-1}. \quad (8b)$$

Thus ΔDET_{ADJ} captures the external debt flows, and Equation [1] is re-calculated to obtain KF_{ADJ}:

$$KF_{ADJ} = \Delta CDET_{ADJ} + NKI - CAD - \Delta RES, \quad (4c)$$

Adding *MIS* and *UNREMIT* to Equation [4c] yields total capital flight (*TKF*),

$$TKF = \Delta CDET_{ADJ} + NKI - CAD - \Delta RES + MIS + UNREMIT \quad (4d).$$

With the estimates from Equation [4d], we perform computation for the analysis. To make TKF figures comparable across periods, we calculate real capital flight (RKF), using the United States producer price index (PPI) in 1995 constant prices as the deflator (see also Boyce and Ndikumana [2001]; Epstein [2005]).

Unfortunately, we cannot calculate the adjustment for the discrepancies in direct foreign investments (*FDI*) and portfolio equities (*PORT*) due to data constraints (see also discussion in JETRO [n.d.]; Lim [1998]). But when data allows, the procedure is basically similar to computing for *CDETADJ* above; that is, we basically obtain the discrepancies in the *FDI* data between source-country and host-country and likewise calculate the impact of foreign exchange fluctuations. The same is true for *PORT*.

With the estimates from Equation [8b], we perform computations for the analysis. To make *TKF* figures comparable across periods, we calculate real capital flight (RKF), using the United States producer price index (*PPI*) in 1995 constant prices as the deflator (see also Boyce and Ndikumana [2001]; Epstein [2005]):

$$RKF = TKF/PPI. \tag{9a}$$

To make *RKF* comparable across countries, we determine the relative burden of *RKF* to the size of the economy; that is,

$$RKF\_GDP = RKF/RGDP, \tag{9b}$$

where *RKF_GDP* is the relative burden of *RKF*, and *RGDP* is real gross domestic product in 1995 constant prices.

Second, we compute for the stock of capital flight (*SKF*). Capital flight is—potentially, at least—capital invested abroad, so it will incur some returns (see also Boyce and Ndikumana [2001]; Epstein [2005]). We calculate *SKF* as

$$SKF = (1+r)SKF_{-1} + TKF, \tag{10}$$

where r represents the 90-day United States Treasury Bill interest rate. Equation [10] is an estimate of the total amount of lost resources plus imputed earnings.[6] It is also a measure of the opportunity cost of capital flight.[7]

3.1. Measuring the economic cost of capital flight

To determine the economic cost of capital flight, we will use two procedures: the planning method and the multiplier method (Beja et al. [2005]; Lamberte et al. [1996]). The first method uses the incremental capital-output ratio (*ICOR*) to measure the potential output due to investment and its analog, which we call the incremental capital-labor ratio (*ICLR*), to determine potential employment.[8] On the other hand, the multiplier method uses the standard Keynesian aggregate demand setup to determine output and employment. Note that the estimates we present here are merely indicative of the full economic cost of capital flight. Obviously, a more detailed analysis of the transmission mechanism and the distributive impacts of capital fight will be needed to determine the full economic costs. But determining positive economic cost to capital flight implies that there are indeed adverse effects

[6]The results for *SKF* depend on the scope of the study. In t=0, *SKF*-1= 0 and so, *TKF0=SKF0*. Obviously, the starting point will affect *SKF* figures.

[7]We assume that capital flight is invested abroad, in some form or another. Moreover, like any invested asset, its value appreciates with the accrual of earnings. We impute interest earnings on investments and/or appreciation of asset value using a rate of return, which is the United States Treasury Bill interest rate. It may be the case that some of capital flight is spent as pure consumption and related activities, which reduces the size of the invested assets. But *SKF* can be regarded as a measure of the opportunity cost of capital flight, in that it measures the stock of assets that would have been available to the economy had this capital been invested at this rate of return. *SKF* also provides a suitable measure for comparison with total external debts (*DEBT*) since this includes accumulated interest arrears.

[8]We are aware of the limitations of the Harrod-Domar model (see discussion in, e.g., Easterly [2001]; also Griffin and Enos [1970]). We employ the planning method as a first approximation of potential output due to foreign investments. Montes [1989] presents an application of the *ICOR* to the Philippines. Lessard and Williamson [1987b] call this approach the "best case" scenario.

on society unaccounted for (i.e., there are externalities), and as such, government intervention is necessary and, in fact, justified.

For the planning method, we assume the counterfactual of zero total capital flight (*TKF*); that is, we assume that *TKF* is also the increase in domestic productive physical investments at time *t*, which we will call *KF*-cum-investment (Lessard and Williamson [1987a]). Thus, the potential additional output (or lost output) is:[9]

$$Y_t = TKF_t / ICOR_t, \tag{11a}$$

and the potential additional employment (or lost employment) is:[10]

$$L_t = TKF_t / ICLR_t, \tag{12a}$$

Equations [11a] and [12a] obtain estimate of potential (or lost) output and employment at time *t*. Since capital provides a stream of "benefits" in production, past *KF*-cum-investments also provide a stream of output and employment at time *t*, so we modify Equations [11a] and [12a], respectively, as follows:[11]

$$L_t = \left\{KF_t + \Sigma KF_m\, i(1-\delta_n)\right\} / ICLR_t, \quad m = 1\ldots(t-1)\ n = 1,\ldots m \tag{11b}$$

$$L_t = \left\{KF_t + \Sigma KF_m\, i(1-\delta_n)\right\} / ICLR_t, \quad m = 1\ldots(t-1)\ n = 1,\ldots m \tag{12b}$$

where δ is the depreciation rate; Π is a "product" operator. At $t = 1$ (i.e., current period), Equations [11a] and [11b], and [12a] and [12b], are equal.[12]

[9] $ICOR = \Delta K/\Delta Y$. $1/ICOR$ is a measure of the marginal efficiency of capital; that is, how much output (Y) can be had with a unit of capital, all other things the same. When *GDP* declines or when net fixed capital formation is negative in a particular year, the *ICOR* will be negative. To avoid this problem, we use the previous five-year average of ICOR as proxy for that year. In addition to productive physical investments, we also assume: (1) there is an exogenous demand for investments; and (2) the sectoral impacts of *KF*-cum-investment is the same across sectors (i.e., there is fixed proportion in factor inputs).

[10] $ICLR = \Delta K/\Delta L$. $1/ICLR$ is measure of how much employment (L) can be generated with a unit of capital, all other things the same. The same assumptions hold in Footnote 3.

[11] In particular, Lessard and Williamson [1987b] argue that KF_t has some adverse impacts on current and future output, equivalent to some multiple of *KF*. They call this approach as the "worst case" scenario.

[12] Note that the results are sensitive to the starting point of the calculations. Let KF0=0 and δ0=0. Note lim ($KF_m\Pi(1-\delta n)$) = 0; that is, *KF*-cum-investment will be "fully" depreciated in future period t+i. But if we instead we assume that KF was invested in financial assets and then the total assets (plus the accrued earnings) are used for investments, we therefore have in the numerator of Equations [11b] and [12b]: [$\Delta SKF_t + \delta SKF$-1], where SKF is stock of capital flight and ΔSKF is the change in *SKF*. This latter approach focuses on gross investment.

[13] Keynes [1964: 245] made the following assumption: "We take as given the existing skill and quality of available labor, the existing quality and quantity of available employment, the existing technique, the degree of competition, the tastes and habits of the consumer, the disutility of different intensities of labor and the activities of supervision and organization, as well as the social structure

As for the multiplier method, we follow Lamberte et al. [1992].[13] Consider the following:

$$M - X = KI, \tag{13}$$

where M and X are imports and exports, respectively, and KI is net capital inflows. Note that the left-hand side of Equation [13] is defined as the current account deficit (CAD). Note further that Equation [13] is a standard open economy macroeconomic identity and assumes zero capital flight (and zero change in international reserves). Introducing KF in Equation [13], we have

$$M - X = KI - TKF. \tag{14}$$

That is, the external balance is *ex post* equal to the net of net capital inflows and capital flight.[14] An increase in TKF, all other things being the same, has an adverse impact on CAD (see also Lessard and Williamson [1987b]; Pastor [1990a]). That is, $d(M-X) / dTKF < 0$.

The marginal effect of TKF on M, or $dM/dTKF$, is negative, too. If an economy is especially import-dependent in its production of exports, as the Philippines is (Lim and Montes [2001]; Ozawa [2000]; Balisacan and Hill [2003]), reductions in imports due to capital flight can mean reductions in exports production and thus a reduction in economic growth as well. Moreover, reductions in the level of production can mean reductions in employment in the manufacturing sector, particularly the export sector.

How $dM/dTKF < 0$ operates will depend on the composition of M. That is, a reduction in M can mean a reduction in consumer goods (C) or reduction in investment goods (I), or both:

$$-dM = -(\alpha\, dC + \beta\, dI), \tag{15}$$

where α and β are the proportions of consumption goods and investment goods in M, respectively.

From aggregate demand theory, we know that reductions in domestic resources—due to, say, KF—can mean reductions in the national income and imports, $-(dY + dM)$. With Equation [5],

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including the forces…which determine the distribution of national income." In similar fashion, we assume: (1) a binding foreign exchange constraint; (2) capital outflows imply reductions in the domestic savings, thus limiting economic growth; (3) the economy is below full employment; (4) an exogenous aggregate demand, i.e., exogenous investment demand (only productive investments are undertaken), plus effective demand for consumption and employment; (5) no accelerator effects or technology is given.

[14]We can introduce KF in Equation [3] since capital flight is defined as the net unrecorded capital outflow and now use a negative sign on KF to mean that it is a (type of) capital outflow. In the derivation, we assume continuous functions to make the computation easier.

[15]In contrast to planning method, the multiplier method assumes that not all capital flight is KF-cum-investment. In particular, it assumes a proportion of total imports as productive inputs used in the manufacturing sector, in particular the export sector.

$$-(dY + dM) = -(\alpha\, dC + \beta\, dI). \tag{16}$$

Using the aggregate demand identity that Y is either consumed or invested according to the marginal propensity to consume *(c)* and marginal propensity to save *(1 – c)*, we have[15]

$$dI = (1-c)(dY + DM) \tag{17}$$

$$dC = c(dY + dM). \tag{18}$$

Solving the equations, Lamberte et al. [1992] obtain the marginal impact of imports on output, *dY/dM*, and investment, *dY/dM*, as[16]

$$dY/dM = \left[(1-\beta) + c(\beta - \alpha)\right] / \left[\beta - c(\beta - \alpha)\right] \tag{19}$$

$$dI/dM = (1-c) / \left[\beta - c(\beta - \alpha)\right]. \tag{20}$$

That is, the impact of *TKF* on *Y* via *M*, and on *L* via *M* through *I*, can be obtained using the relevant macroeconomic coefficients. Equation [19] obtains the potential additional output and, indirectly via Equation [20], the potential additional employment due to *KF*-financed imports in the manufacturing sector, in particular the export sector.[17]

4. Capital flight from the Philippines

4.1. Sources of data

To compute capital flight from the Philippines, we compiled data from various sources. Data for *DEBT* were taken from the Global Development Finance 2004 CD-ROM, while data for *NKI*, *CAD*, and *CRES* were taken from the International Financial Statistics 2004 CD-ROM. Exports and imports data were taken from the

[16]We do not estimate the marginal effect on labor demand because the Keynesian model does not have a labor supply function. We assume that the labor demand is met. However, Keynes [1964:248] states that "if we assume (as first approximation) that the employment multiplier is equal to the investment multiplier, we can, by applying the multiplier to the increment (or decrement) in the rate of investment brought about by the factors [ ] described [in Footnote 9], infer the increment of employment." Keynes [1989:80] explains that "the increase in the inducement to invest need not raise the rate of interest. I should agree that, unless the monetary policy is appropriate, it is quite likely to." We use *dI/dM* as proxy for the employment multiplier.

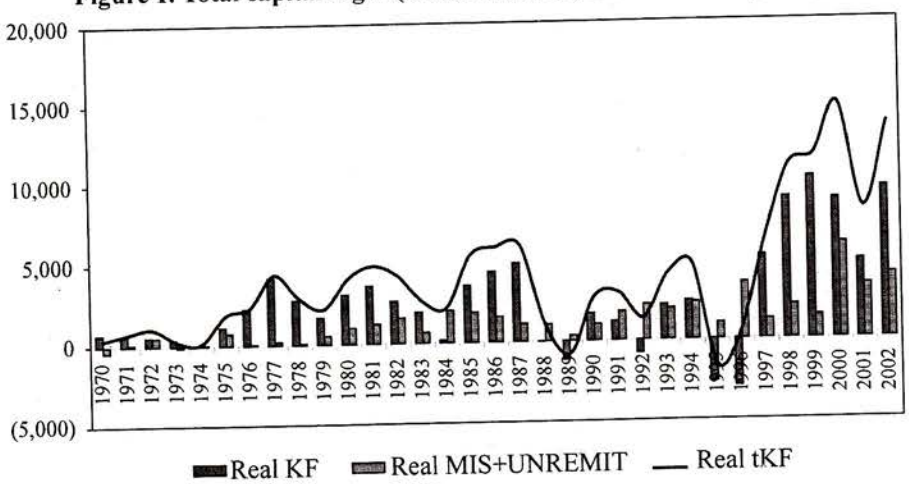
[17]As alternative, Fishlow [1985] and Pastor [1990a] estimate the growth rate coefficient of imports using a model like *YG = f(XG, MG, Z)*, where *YG, XG, MG* are real growth rates of output, exports, and imports, respectively, and *Z* is a vector of exogenous variables. In his calculations, Pastor [1990a] assumes a proportion of the capital flight stock as *KF*-cum-investment, too. In our case, we assume that the share of total productive imports (i.e., raw materials and capital inputs used in producing commodities) to *GDP* as the proportion of *KF*-financed imports.

Direction of Trade Statistics 2004 CD-ROM. The rest of the economic variables were taken from the World Development Indicators 2004 CD-ROM.

4.2. Philippines capital flight: capital flight 2000[18]

Total capital flight (*TKF*) from the Philippines followed a cyclical pattern from 1970 to the mid-1990s (Figure 1). The distinct pattern reflects the economic boom-bust cycle that the country experienced throughout in the post-World War II period (see also de Dios [2000]; de Dios and Hutchcroft [2003]). What appears to be a different trend in the early 1990s is actually part of the overall boom-bust cycle.[19] From the mid-1990s, the trend indicated a rapid rise in *TKF* and remained high since 2000s. We think that this observation is consistent with the economic-capital-flight boom-bust cycle of the Philippines; that is, during an economic bust, *TKF* was in a boom, then the *TKF* cycle tapers off in the latter stage of a crisis when most of the capital had left. The reverse pattern applies when the Philippines was in an economic boom.

Figure 1. Total capital flight (in USD millions; 1995 constant prices)



The frequency of the *TKF* cycle is also consistent with the Philippines' recent economic history in which the economic boom often spans a brief period—usually three years—and is cut abruptly by an external or internal crisis. The pattern since

[18]To transform the Philippines from its dismal status as the "sick man" of Asia, Mr. Fidel Ramos embarked on an economic program to make the country take off to NIC-hood at the turn of the 21st century. Thus the slogan: "Philippines 2000!" From 1992, massive and rapid deregulation and liberation programs were undertaken but without instituting or neglecting the requisite governance reforms. Adapting the Ramos slogan, we say: "Capital Flight 2000!"

[19]Indeed, there was optimism in the post-Marcos period that the Philippines would finally take off to higher economic growth. Unfortunately, the combination of policy failures, political instability, and natural calamities postponed economic takeoff and the Philippines fell back to the boom-bust cycle.

the mid-1990s reflects a different type of cycle, perhaps driven by deregulation and financial liberalization, and a resurgence of foreign capital inflows to the country. Total *TKF* in the 1970s was USD 16 billion; for the 1980s, it was USD 36 billion; and for the 1990s, USD 48 billion. In the early 2000s, TKF was USD 37 billion. For the whole period, we obtained *TKF* at USD 138 billion and a stock of capital flight (*SKF*) at USD 218 billion. Clearly, the Philippines lost a significant amount of resources to capital flight in the last three decades.

What is particularly interesting in Figure 1 is the spike in 2000, which perhaps reflects the way a political crisis impacts a liberalized but weak economy. Using a threshold of 5 percent of GDP, we find that there are periods between 1970 and 2002 when the shares of TKF were relatively high, namely: 1976 to 1982, 1985 to 1987, 1994, and 1996 to 2002.[20] There are also periods when the shares exceeded 8 percent of GDP: 1977, 1981, 1986-1987, and 1997 to 2002. Above 10 percent of GDP, we have 1986, 1997, and 1999 to 2002.

Figure 1 shows that high levels of capital flight occurred during periods of domestic economic crises, especially in the 1980s to the early 1990s. In the early 1980s, the Latin American debt crisis was an important trigger of the 1983-84 Balance of Payments crises. In the years before the crises, the Philippines was experiencing a rapid slowdown in economic growth as debt burden and global economic slowdown took their toll on the economy. Adding to the economic woes were the adverse impact of the collapse of the capital market and the Dewey Dee defaults.[21] Then the assassination of Senator Benigno Aquino in 1983, followed by the political and social unrest, aggravated the economic insecurity and uncertainty. The country went into a deep recession in 1984-85. Because of the debt crisis, the Philippines was largely cut off from external funds. The capital flight in 1983-85 could have been fueled by domestic resources. Thus, we can see substantial capital flight in the first half of the 1980s until 1988.

In 1986, Mrs. Corazon Aquino was installed as President. A difficult recovery characterized the following years. A series of coup d'états from 1986 to 1989 undermined economic and political stability. An economic recession and an electrical power supply crisis in 1991 to 1992 stalled any economic recovery. With the Ramos government quickly addressing the electrical power crisis in 1992, some investor confidence returned. From 1993, the Philippines appeared headed for an economic turnaround, experiencing its longest economic expansion since the mid-1980s, but with the 1997-98 Asian financial and economic crisis, economic recovery was

[20] Five percent of *GDP* is a threshold we use to mean a critical level of capital flight. Beyond it, capital flight may have adverse implications on the *BOP* or the economy. We leave it as future research what the exact threshold is for the Philippines. Using a threshold as benchmark is not a new procedure in the sense that economic and financial analysts use some critical number to anticipate, for example, a devaluation of the currency. A common benchmark used is 4 percent share of *CAD* to *GDP*. Moreover, Callioux and Griffith-Jones [2003] find that the smallest capital flows reversal in the financial account associated with a financial crisis is 4.8 percent (see also Calvo [1998]; Calvo and Reinhart [1999a, 1999b] on capital flows sudden stops and reversals). We contend that capital flows reversals that result in economic or financial crisis also result in capital flight.

[21] Mr. Dee was a Marcos crony who absconded on his debts with 16 commercial banks, 12

again interrupted. As in the previous decades, economic slowdown appears to have resulted in capital flight. Fortunately, because the Philippines had a shorter period of capital accumulation, capital flight in the late 1990s was not as large as those of the other affected countries in the region. After 1998, concerns about the domestic economy reemerged, especially after the election of Mr. Joseph Ejercito Estrada to the presidency. What happened in the late 1990s seems similar to the occurrences of the earlier decades: domestic economic and political instability induced capital flight. Mr. Estrada's impeachment in 2000, the social unrest in 2001, and the insecurity of the successor government of Mrs. Gloria Macapagal-Arroyo reinforced doubts on the sustainability of the country's economic growth. We thus find that since 1998, capital flight has been large and generally rising. The increase in capital flight in 2002 may reflect the continued concerns on the Arroyo government and, in particular, the social unrest and political instability occurring around this time.[22] Recent developments in the country would once again lead us to argue that there might be a resurgence of capital flight.

4.3. Economic cost of capital flight: basic estimates

Table 2 presents results for the Philippines using the planning method. For 1970, a total loss in output was estimated at USD 3 million and lost jobs at about 4,100. In 1971, we obtained a total loss in output of USD 10 million, of which about USD 1 million was due to previous years' capital fight. In the same year, total loss in jobs was 13,000.

The same analysis applies for the subsequent periods. Thus, during the 1984-85 Balance of Payments crises, at least USD 215 million of output was lost due to each year's capital fight. Counting the lost output from previous years' capital flight, we obtain total lost output of USD 964 million in 1984 and USD 633 million in 1985. For these two years, a total of 1.3 million jobs were lost. In 1991, when the Philippines again had a major economic crisis, a total of USD 220 million of output was lost, of which USD 66 million was due to previous years' capital flight. One hundred ninety-three thousand jobs were lost that year. During the 1997-98 Asian financial and economic crisis, the Philippines lost a total of USD 712 million and USD 912 million of output each year. In these years, a total of 1.5 million jobs were lost. Thus, contrary to the conventional view, our results suggest that the Philippines had significant losses during the 1997-98 Asian financial and economic crises, particularly due to capital flight. Notice in Table 2 that economic growth rates would have been higher by 0.9 percent if there had been no capital flight. It is clear that for the period 1984-85, the Philippines had a major recession. We determined that the economy had contracted at least 6 percent per year. Between 1970 and 2002, if there had been no capital flight, there would have been 13 million jobs created, or 387,000 jobs per year.

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investment houses, 17 other financial institutions, and about USD 4 million of postdated check allegedly to finance his world-class gambling addiction.

[22]The same argument applies today. Aldaba et al. [2005], for example, argue that even with positive signs of economic recovery, the Philippines' economic performance remains narrow, shallow, and hollow—again raising the issue of the sustainability of economic growth.

Table 2. Foregone streams of output and jobs, planning approach (output in USD millions; jobs in thousands), 1970-2002

Year	*Foregone output on KF_t*	*Foregone output on past KF*	*Total foregone output at t*	*Potential growth rate*	*Actual growth rate*	*Total jobs lost at t (in 1,000)*
1970	2.8	-	2.8		3.8	4.1
1971	9.1	1.2	10.4	5.5	5.4	13.3
1972	15.7	4.6	20.4	5.5	5.4	24.9
1973	3.8	16.3	20.1	9.0	8.9	21.9
1974	3.6	16.0	19.6	3.6	3.6	23.6
1975	44.8	8.3	53.1	5.7	5.6	59.3
1976	61.3	39.5	100.8	9.0	8.8	94.7
1977	120.4	114.4	234.8	6.1	5.6	224.9
1978	77.0	176.0	253.0	5.7	5.2	282.4
1979	94.8	261.0	355.8	6.3	5.6	373.8
1980	146.0	233.7	379.7	5.9	5.1	406.6
1981	190.6	231.8	422.4	4.2	3.4	538.4
1982	140.3	325.0	465.3	4.4	3.6	646.8
1983	118.3	566.9	685.2	3.0	1.9	160.8
1984	216.4	747.5	963.9	(5.8)	(7.3)	637.1
1985	215.4	417.8	633.2	(6.2)	(7.3)	661.0
1986	172.9	162.4	335.3	4.1	3.4	657.9
1987	458.6	486.2	944.7	6.0	4.3	511.7
1988	444.2	627.9	1,072.1	8.6	6.8	544.0
1989	35.4	433.0	468.4	7.0	6.2	412.2
1990	2.2	227.3	229.5	3.4	3.0	239.5
1991	153.8	65.9	219.7	(0.2)	(0.6)	193.0
1992	97.2	101.7	198.8	0.6	0.3	227.9
1993	87.5	216.0	303.5	2.6	2.1	352.3
1994	126.7	191.2	317.9	4.9	4.4	386.9
1995	93.0	198.8	291.8	5.1	4.7	366.1

Table 2. Foregone streams of output and jobs, planning approach (output in USD millions; jobs in thousands), 1970-2002 (continued)

Year	*Foregone output on KF_t*	*Foregone output on past KF*	*Total foregone output at t*	*Potential growth rate*	*Actual growth rate*	*Total jobs lost at t (in 1,000)*
1996	242.5	279.4	521.8	6.5	5.8	626.1
1997	391.0	321.2	712.2	6.1	5.2	732.5
1998	312.6	599.5	912.1	0.5	(0.6)	808.5
1999	503.2	731.1	1,234.3	4.9	3.4	942.4
2000	876.5	746.0	1,622.5	7.9	5.9	943.4
2001	547.2	1,617.9	2,165.2	5.4	3.0	392.3
2002	935.6	2,323.7	3,259.4	8.0	4.4	261.3
Total	6,940.3	12,489.3	19,429.6	143.2	119.2	12,772.0
Average	210.3	390.3	588.8	4.5	3.6	387.0

Table 3 presents results for the multiplier approach. In 1970, we obtained total lost output of USD 31 million and lost jobs of 2,000 in the manufacturing-cum-export sector. In 1971, we estimated total lost output of USD 96 million and lost jobs of 5,000 in the manufacturing-cum-export sector. During 1984-85 Balance of Payments crises, we obtained lost output of USD 2 billion in each year. For the two years, a total of 268,000 jobs were lost in the manufacturing-cum-export sector. Economic growth rates would also have been higher if capital flight had been restricted by an average of 2.5 percent per year.[23] We find that the multiplier model still projects a recession in both 1984 and 1985, with the economy contracting by at least -3 percent each year. But in both 1991 and 1998, the Philippines would have only experienced an economic slowdown, attaining a modest rate of growth of 2 percent each year. The implication of these results is that the mid-1980s crisis was indeed a significant crisis period in the Philippines. In fact, this conclusion confirms the analysis of scholars that the 1980s was an economic turning-point for the country (Balisacan and Hill [2002], [2003]). If capital flight had been restricted, Table 3 indicates that on average the Philippines would have generated 69,000 jobs per year in the manufacturing-cum-export sector. In other words, about 2 million jobs were lost in the manufacturing-cum-export sector from 1970 to 2002.

[23]Estimates in Table 2 might be too low. We argue that this large disparity in the adjusted growth rates might be due to the high ICORs (i.e., low marginal efficiency of capital).

Table 3. Foregone output and jobs, multiplier approach (output in USD millions; jobs in thousand), 1970-2002

Year	*Foregone output on t*	*Share of GDP*	*Potential growth rate*	*Actual growth rate*	*Total jobs lost at t (in 1,000)*
1970	31.0	0.1		3.8	1.6
1971	96.3	0.3	5.7	5.4	4.8
1972	162.4	0.5	5.9	5.5	8.2
1973	36.6	0.1	9.0	8.9	1.7
1974	41.4	0.1	3.7	3.6	2.1
1975	480.7	1.2	6.8	5.6	24.8
1976	673.4	1.5	10.4	8.8	31.4
1977	1,355.4	2.8	8.6	5.6	64.9
1978	893.1	1.8	7.0	5.2	45.8
1979	994.6	1.9	7.6	5.6	53.5
1980	1,779.3	3.2	8.5	5.2	96.0
1981	2,920.6	5.0	8.6	3.4	156.8
1982	2,283.5	3.8	7.5	3.6	122.6
1983	1,406.0	2.3	4.2	1.9	17.7
1984	1,831.2	3.2	(4.4)	(7.3)	102.6
1985	2,212.6	4.2	(3.4)	(7.3)	165.6
1986	3,085.0	5.7	9.3	3.4	221.8
1987	2,862.0	5.0	9.6	4.3	157.7
1988	2,613.7	4.3	11.3	6.8	134.9
1989	312.5	0.5	6.7	6.2	16.8
1990	32.3	0.1	3.1	3.0	1.3
1991	1,490.6	2.3	1.7	(0.6)	49.3
1992	1,336.0	2.0	2.4	0.3	57.7
1993	1,260.4	1.9	4.0	2.1	48.0
1994	1,843.9	2.6	7.1	4.4	73.9
1995	1,460.0	2.0	6.7	4.9	57.6
1996	1,607.1	2.0	8.0	5.9	76.4
1997	2,444.5	3.0	8.3	5.2	97.0
1998	1,824.1	2.2	1.6	(0.6)	64.3

Table 3. Foregone output and jobs, multiplier approach (output in USD millions; jobs in thousand), 1970-2002 (continued)

Year	*Foregone output on t*	*Share of GDP*	*Potential growth rate*	*Actual growth rate*	*Total jobs lost at t (in 1,000)*
1999	3,081.5	3.6	7.2	3.4	93.5
2000	5,882.8	6.5	12.9	5.9	143.5
2001	2,759.0	3.0	6.0	3.0	28.0
2002	6,643.6	6.8	11.6	4.4	38.5
Total	57,737.2				2,260.3
Average	1,749.6	2.7	6.2	3.6	68.5

One very interesting observation emerges from the tables: if capital flight had been restricted, reduced, or reversed, the Philippines would have attained economic growth rates comparable to those of Indonesia, Malaysia, and Thailand.[24] In fact, over the three decades, the Philippines lost on average of 0.9 percent of *GDP* growth using the planning method or 2.5 percent using the multiplier method, or an average of 1.7 per cent peryear. It is also important to note that our results for the Philippines using the multiplier method confirm those of Lamberte et al. [1992] and Vos and Yap [1996]. We therefore make the conclusion that were it not for capital flight, the Philippines would have attained the status of an "economic tiger" and thus have taken its position as a bona fide member of the second tier Newly Industrialized Countries (NIC) in Asia.

Obviously, the results we presented do not account for all the effects of capital flight on welfare. These results merely suggest that while there are indeed tangible losses to capital flight, there are intangible or immeasurable losses, too. A detailed analysis of the transmission mechanism of the impacts will be necessary to fully appreciate the economic costs of capital flight.

In addition to the results we presented, we can infer that as the burden of external debt becomes heavier over time, the costs of capital flight, too, will increase. We also argue that since capital flight is often undertaken by the elite—those who are able to more elsewhere or shelter their wealth abroad—the costs of capital flight will accrue disproportionately to the rest of society in the form of, say, higher taxation, interest rates, inflation, poorer public infrastructures, etc. What makes this situation more disheartening is that for some analysts, capital flight is merely an optimal portfolio decision, something normal and integral to financial globalization and economic integration and their concomitant processes; thus, they ignore or do not see the adverse impacts of capital flight to society. Capital flight therefore creates conditions in which the twin goals of economic growth and development become

[24]The average of the actual economic growth rates of Indonesia, Malaysia, and Thailand was 6.4 percent for the same period.

even more challenging to pursue. Clearly, determined political action is needed to address this issue. It is therefore important that the Philippine government pursue alternative and progressive economic policies, including exploring the use of capital management techniques (D'Arista [1996]; D'Arista and Griffith-Jones [2001]; Epstein et al. [2003]), in order to encourage capital to stay within the domestic economy and curtail capital flight.

5. Conclusion

Was capital fleeing the Philippines? Using the residual of the officially recorded sources and uses of funds, our answer is indeed affirmative: the Philippines had substantial capital flight over the period 1970 to 2002. As expected, high capital flight occurred during periods of economic and political crises in the country. What was more interesting is that capital flight also occurred during periods of economic growth. Total capital flight from the country was USD 138 billion in 1995 constant prices. Counting imputed interest rate earnings on capital flight over three decades, we obtained USD 218 billion as of 2002. Indeed, these estimates mean significant amounts of lost resources that could otherwise have been used within the domestic economy to generate more output and jobs and thus bring about a better quality of economic growth, raising the social welfare of the Filipinos in the process. On average 387,000 jobs were lost each year using the planning method, or 68,500 manufacturing sector jobs were lost each year using the multiplier method. Furthermore, an average of 1.7 percent of growth rate was lost each year for the same period. We therefore argued that the Philippines would have grown at significantly higher levels and, moreover, would have reached the status of an Asian economic tiger.

Table 4, Comparative economic performance, actual and adjusted, 1970-2002

Year	*Actual growth rate*	*Planning method adj. growth rate*	*Multiplier method adj. growth rates*
1970-74	5.4	4.7	4.9
1975-79	6.2	6.6	8.1
1980-84	1.4	2.3	4.9
1985-89	2.7	3.9	6.7
1990-94	1.9	2.2	3.6
1995-99	3.7	4.6	6.4
2000-02	4.4	7.1	10.2
Average	3.6	4.5	6.2

References

Aldaba, F., C. Bautista, G. Bautista, R. Bayot, W. Belen, K. Chua, L. de la Cruz, A. Domdom, L. Dumlao, J. Francisco, G. Guiang, C. Habito, S. Lantican, L. Lanzona Jr, J. Magadia, S.J., R. Neri, H. Pasimio, M. Padiron, E. Palanca, M. Perez, N. Pepito, F. Sia, P. Simon-King, R. Tamangan, R. Tan, O. Templo, B. Tolosa Jr, P. Tuano, V. Venida, and R. Yap, S.J. [2005] "Beneath the fiscal crisis: uneven development weakens the republic". Position paper, Department of Economics, Ateneo de Manila University.

Beja, E. [2005a] "Capital flight from Southeast Asia: Case studies on Indonesia, Malaysia, the Philippines, and Thailand", unpublished Ph.D. dissertation, University of Massachusetts Amherst.

Beja, E. [2005b] "Revisiting the revolving door. External debt and capital flight: A Philippine case study", Working Paper.

Beja, E. [2005c] "Capital flight: meanings and measures", in G. Epstein, ed., *Capital flight and capital controls in developing countries*. Northampton, MA: Edward Elgar.

Beja, E., P. Junvith, and J. Ragusett [2005] "Capital flight from Thailand", in G. Epstein, ed. *Capital flight and capital controls in developing countries*. Northampton, MA: Edward Elgar.

Bhagwati, J. [1964] "On underinvoicing of imports", *Bulletin of Oxford University Institute of Economics and Statistics* **26**: 389-397.

Bhagwati, J. [1974] *Illegal transactions in trade theory and measurement*. Oxford, UK: North Holland.

Boyce, J. [1992] "The revolving door? External debt and capital flight: Philippine case study", *World Development* **20**(3): 335-349.

Boyce, J. [1993] *The political economy of growth and impoverishment in the Marcos era*. Manila, Philippines: Ateneo de Manila University Press.

Boyce, J. and L. Ndikumana [2001] "Is Africa a net debtor? New estimates of capital flight from severely indebted sub-Saharan African countries, 1970–1996", *Journal of Development Studies* **38**(2): 27-56.

Boyce, J. and L. Zarsky [1988] "Capital flight from the Philippines, 1962-1986", *Journal of Philippine Development* **15**(2): 191-222.

Cailloux, J. and S. Griffith-Jones [2003] "Global capital flows to East Asia: surges and reversals", in S. Griffith-Jones, R. Gottschalk, and J. Cailloux, eds., *International capital flows in calm and turbulent times: The need for new international architecture*. Ann Arbor, Michigan: University of Michigan Press.

Calvo, G. [1998] "Capital flows and capital market crises: The simple economics of sudden stops", *Journal of Applied Economics* **1**(1): 35-54.

Calvo, G. and C. Reinhart [1999a] "When capital inflows come to a sudden stop: consequences and policy options", Mimeo.

Calvo, G. and C. Reinhart [1999b] "Capital flows reversals, the exchange rate debate, and dollarization", *Finance and Development* **36**(3): 13-15.

Collier, P., A. Hoeffler, and C. Patillo [2004] "Africa's exodus: capital flight and the brain drain as portfolio decisions", *Journal of African Economies* **13**: 15-54.

Crotty, J. [1983] "On Keynes and capital flight", *Journal of Economic Literature* **21**: 59-65.

D'Arista, J. [1996] "International capital flows and national macroeconomic policies", Institute of Economic Research, Otaru University of Commerce. Discussion Paper No. 32.

D'Arista, J. and S. Griffith-Jones [2001] "The boom of portfolio flows to 'emerging markets' and its regulatory implications", in S. Griffith-Jones, M. Montes, and A. Nasution, eds., *Short-term capital flows and economic crises*. Oxford, UK: Oxford University Press.

de Dios, E. [2000] "The boom-bust cycle (will it ever end?)", in D. Canlas and S. Fujisaki, eds., *The Philippine economy: alternatives for the 21st century*. Tokyo, Japan: Institute of Developing Economies.

de Dios, E. and P. Hutchcroft [2003] "Political economy", in A. Balisacan and H. Hill, eds., *The Philippine economy. Development, policies and challenges*. New York, NY: Oxford University Press.

de Dios, E., B. Diokno, E. Esguerra, R. Fabella, M. Bautista, F. Medalla, S. Monsod, E. Pernia, R. Reside, Jr., G. Sicat, and E. Tan [2004] "The deepening crisis: the real score on deficits and the public debt", School of Economics, University of the Philippines. Discussion Paper No. 0409.

de Dios, E., B. Diokno, E. Esguerra, R. Fabella, M. Bautista, F. Medalla, S. Monsod, E. Pernia, R. Recide, Jr., G. Sicat, and E. Tan [2005] "The economy on a cusp: the proposed VAR amendments and their larger significance", School of Economics, University of the Philippines. Discussion Paper No. 0505.

Demirguc-Kunt, A. and E. Detragiache [1998] "Determinants of banking crises in developing and developed countries", *IMF Staff Papers* **35**(1): 81-109.

Drabek, Z. and S. Griffith-Jones [1999] *Managing capital flows in turbulent times: the experience of Europe's emerging market economies in global perspective*. New York, NY: Sharpe.

Dytianquin, N. [1989] "The economic of debt-equity swaps", Institute of Social Studies. Working Paper No. 69.

Erbe, S. [1985] "The flight of capital from developing countries", *Intereconomics* November/December: 268-275.

Easterly, W. [2001] *Elusive quest for growth: economists' adventures and misadventures in the tropics*. Cambridge, MA: MIT Press.

Eaton, J. [1987] "Public debt guarantees and private capital flight," *The World Bank Economic Review* **1**(3): 377-395.

Eatwell, J. [1997] "International financial liberalization: the impact on world development," United Nations Development Program. Discussion Paper No. 12.

Eichengreen, B. and M. Mussa [1998] "Capital account liberalization: theoretical and empirical aspects," International Monetary Fund. Occasional Papers No. 172.

Epstein, G. [2005] *Capital flight and capital controls in developing countries.* Northampton, MA: Edward Elgar.

Fabella, R. [2000] "The soft state, the market, and governance," *Philippine Review of Economics* **37**(1): 1-11.

Ffrench-Davis, R. and S. Griffith-Jones [1995] *Coping with capital surges: the return of capital to Latin America.* Boulder, Colorado: Reinner.

Ffrench-Davis, R. and S. Griffith-Jones [2003] *From capital surges to drought: seeking stability for emerging economies.* New York, NY: Palgrave.

Fishlow, A. [1985] "The state of Latin American economics" in Inter-American Development Bank, ed. *Economic and Social Progress in Latin America.* 1985 Report. Washington, DC: Inter-American Development Bank.

Furman, A. and J. Stiglitz [1998] "Economic crisis and insights from East Asia," *Brookings Papers on Economic Activity* **2**: 1-135.

Gibson, H. and E. Tskalotos [1993] "Testing a flow model of capital flight in five European countries," *Manchester School* **61**(2): 14-166.

Griffin, K. and J. Enos [1970] "Foreign assistance, objectives and consequences," *Economic Development and Cultural Change* **18**: 313-327.

Gulati, S. [1987] "A note on trade misinvoicing" in D. Lessard and J. Williamson, ed. *Capital flight and Third World debt.* Washington, DC: Institute of International Economics.

Helleiner, E. [1994] *States and the reemergence of global finance: from Bretton Woods to the 1990s.* Ithaca, NY: Cornell University Press.

Hutchcroft, P. [1998] *Booty capitalism: the politics of banking in the Philippines.* Quezon City, Philippines: Ateneo de Manila University Press.

International Monetary Fund (IMF) [2003] World Development Outlook 2003. Washington, DC: International Monetary Fund.

Japan External Trade Organization (JETRO) [n.d.] JETRO White Paper in Foreign Direct Investment. Tokyo, Japan: JETRO.

Jomo K.S. [1998] *Tigers in trouble: financial governance, liberalization and crises in East Asia.* London, UK: Zed Books Ltd.

Kindleberger, C. [1987] "A historical perspective" in D. Lessard and J. Williamson, ed. *Capital flight and Third World debt*. Washington, DC: Institute of International Economics.

Lamberte, M., J. Lim, R. Vos, J. Yap, E. Tan, and M. Zingapan [1992] *Philippine external finance, domestic resource mobilization and development in the 1970s and 1980s*. Makati, Philippines: Philippine Institute of Development Studies.

Lessard, D. and J. Williamson [1987a] *Capital flight and the Third World debt.* Washington, DC: Institute of International Economics.

Lessard, D. and J. Williamson [1987b]. "The problem and policy responses" in D. Lessard and J. Williamson, ed. *Capital flight and the Third World debt.* Washington DC: Institute for International Economics.

Leung, H.M. [2003] "External debt and worsening business cycles in less developed countries," *Journal of Economic Studies* **30**(2): 155-168.

Lim, J. [1998] "The Philippines and the East Asian economic turmoil" in Jomo K.S., ed. *Tigers in Trouble. Financial Governance, Liberalization and Crises in East Asia*. London, UK: Zed Books Ltd.

Lim, J. and M. Montes [2001] "Structural adjustment program after structural adjustment program, but why still no development in the Philippines?" paper presented at the Asian Economic Panel Meeting in Seoul, South Korea.

Montes, M. [1989] "Philippine structural adjustments, 1970 to 1989" in M. Montes and H. Sakai, ed. *Philippine macroeconomic perspective: Developments and Policies*. Tokyo, Japan: Institute of Developing Economies.

Montes, M. [1998] *The Currency Crisis in Southeast Asia*. Updated Edition. Singapore: Institute of Southeast Asian Studies.

Morgan Guaranty Trust Company [1986] "LDC capital flight," *World Financial Markets* March: 13-15.

Palma, G. [2002] "The three routes to financial crises: the need for capital controls" in J. Eatwell and L. Taylor, ed. *International capital markets*. Oxford, UK: Oxford University Press.

Palma, G. [2003] "The three routes to financial crises: Chile, Mexico and Argentina [1], Brazil [2]; and Korea, Malaysia and Thailand [3]" in H.-J. Chang, ed. *Rethinking development economics*. London, UK: Anthem Press.

Pastor, M. [1990a] *Capital flight and the Latin American debt crisis*. Washington, DC: Economic Policy Institute.

Pastor, M. [1990b] "Capital flight from Latin America," *World Development* **18**(1): 1-18.

Prasad, E., K. Rogoff, S.J. Wei, and A. Kose [2003] "Financial globalization, growth, and volatility in developing countries," National Bureau of Economic Research. Working Paper No. 10942.

Puri, S. and T. Ritzema [1999] "Migrant worker remittances, micro-finance and the informal economy: prospects and issues," International Labor Organization. Working Paper No. 21.

Vos, R. [1992] "Private foreign assets accumulation, not just capital flight: evidence from the Philippines," *Journal of Development Studies* **28**(3): 500-537.

Vos, R. and J. Yap [1996] *The Philippine economy: East Asia's stray cat?*. New York, NY: St. Martins.

Wade, R. and F. Veneroso [1998] "The Asian Crisis: the high debt model versus the Wall Street-Treasury-IMF complex," *New Left Review* **228**: 3-23.

Weiss, L. and J. Hobson [2000] "State power and economic strength revisited: what's so special about the Asian Crisis?" in R. Robison, M. Beeson, K. Jayasuriya, and H.-R. Kim, ed. *Politics and markets in the wake of the Asian Crisis*. London, UK: Routledge.

Williamson, J. and M. Mahar [1998] "A survey of financial liberalization," Princeton University. Princeton Essays in International Finance No. 211.

World Bank [1985] *World Development Report*. Washington, DC: World Bank.