

The 'Problem' of Capital Flight — a Cautionary Note

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THE developing-country debt crisis and the dramatic decline in capital inflows from industrialized countries in the 1980s have stimulated concern among policy makers and academics about large outflows of private capital from developing countries. To the extent that these flows represent the effects of distortionary policies and political instability, or generally reflect 'abnormal' foreign investment by residents of developing countries, they bear the title 'capital flight'. The perceived importance of these capital outflows has produced a burgeoning literature examining the causes, consequences and policy implications of capital flight.¹

The literature portrays capital flight as an inefficient loss of domestic investment produced by policy distortions and amplified by the dynamic interaction of investment and policy decisions.² Underlying this view of capital flight, and the policy recommendations that follow, are the strong empirical and conceptual presumptions that economists can (i) identify the sources of *observed* capital outflows, (ii) determine their effects on efficiency and (iii) construct appropriate policies based on these observations.

This article analyzes the literature with the following question in mind. Is there a theoretical or empirical rationale for believing that any of the ways in which capital flight is measured reliably indicates the level or efficiency of domestic capital formation? More specifically, does the literature provide a basis for identifying the incentives behind observed capital flows, determining the implications of these flows and constructing appropriate policy responses? Statistical and conceptual arguments and empirical evidence force us to conclude that the answer is 'no'. The rich array of 'healthy' capital flows associated with the diversification of portfolios and the financing of international activities cannot be reliably disentangled from 'abnormal' flows associated with political instability and distortionary policies. In addition, there is no theoretical or empirical basis for

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assuming a stable link between any one measure of capital flight and the efficiency or level of aggregate domestic capital formation. Moreover, the interpretation of every observation in capital-flight data requires an independent survey of the country's economic and political environment. The apparent comparability of capital-flight statistics across time and between or among countries is illusory.

The same analysis also forces us to conclude that policies implemented to stop or reverse conventional notions of capital flight may not promote growth even if they are 'successful' in eliminating or repatriating 'capital flight' measured in some particular way. Indeed, policies designed to reduce the outflow of capital and repatriate capital invested abroad may reduce overall investment, slow down growth, lead to a shrinkage in the tax base and lower the country's debt-financing capacity.

CAPITAL FLIGHT: THE RECEIVED VIEW

Typical descriptions of capital flight include the following: 'abnormal' capital flows 'propelled from a country . . . by any one or more of a complex list of fears and suspicions'; capital surreptitiously fleeing 'in the presence of conflict between the objectives of asset-holders and governments'; and capital outflows motivated by concerns of 'substantial loss or impairment . . . [arising from] . . . risks of expropriation, debt repudiation or exchange-rate depreciation'.³ These portrayals of capital flight strive to differentiate 'normal' outflows engendered by endeavours to finance international trade, exploit real investment opportunities or diversify portfolios from 'abnormal' flows motivated by distortionary policies or political instability.

While capital flight traditionally represents 'abnormal' capital flows, some investigators use a more expansive definition.⁴ When existing policies in a country already distort investment, marginal declines in aggregate capital formation are inefficient. This leads some authors to consider all outflows of capital as capital flight and to question the efficiency of any additional foreign investment by residents of developing countries.

While there is some debate over the precise definition of capital flight, the universally voiced concern is that some or all of all observed outflows of capital are direct losses of real domestic investment and reflect the effects of policy distortions. In addition to this common concern, studies of capital flight generally view it as a dynamic process in which short-run investment disincentives are magnified.

In order to present a simple characterization of this process, the elements common to developing countries, emphasized in the literature, are specified. They are then knitted together into a succinct characterization of the capital-flight

process. Although unrepresentative of any one study, this 'received view' captures the essential ingredients of the capital-flight literature.

Developing-country Environment

There are three related developing-country traits that form the foundation of the capital-flight process: (i) capital scarcity, (ii) fiscal and political constraints and (iii) limited access to international financial markets.

Whether rooted in political, legal or financial distortions, developing countries are capital scarce. That is to say, the physical return on capital is expected to be higher in developing countries than in industrialized ones. If the distortions which already exist were reduced, we would expect there to be a *net* inflow of capital to developing countries. Net flows of capital from capital-scarce developing countries to industrialized ones are often considered to be evidence of economic or political distortions.

The authorities of developing countries are, typically, bound by expenditure commitments and constrained by a limited set of revenue-raising opportunities. In order to maintain political power and national cohesion, governments must satisfy a variety of constituent demands. Binding expenditure responsibilities become critical in the face of severe limitations on the government's ability to impose direct taxes. Consequently, developing countries frequently resort to alternative means of public finance, such as the inflation tax and direct intervention in economic activity. Obviously, these political obligations and revenue-raising limitations restrict the degree of flexibility with which policy makers may respond to changing economic conditions.

During the period in which capital flight has generated concern, the authorities of developing countries have faced particularly restricted access to international financial markets. The result is that short-run negative shocks cannot be smoothed by foreign borrowing.⁵

In combination, these factors restrict the ability, and also the incentive, of governments to respond to shocks through changes in fiscal expenditures and/or borrowing. In addition, they increase the costs of directly raising revenues as well as the social costs of the associated outflows of capital.

Spiral of Policy and Capital Flight

Recent discussions of capital flight have focussed on the investment behaviour of the residents of developing countries, following the debt crisis of the early 1980s. Although studies carried out so far have concentrated on different aspects of the capital-flight phenomenon, the phrase 'capital flight' denotes a commonly understood set of issues.

The standard view of capital flight is that exogenous economic events interact with existing policies and/or provoke new policies which cause perceived private returns on domestic investments to fall. Adverse economic events and the desire to maintain real spending, including subsidy and transfer levels, prompt the public sector to increase claims on the private sector and become more directly involved in economic activity. The resulting decline in private returns to domestic investment diverts the savings of residents abroad and this, in turn, reduces domestic investment, growth and government revenues. These effects are exacerbated when governments, faced with a dwindling tax base, bound by political and financial commitments and limited in their access to international credit, enact more interventionist policies. Indeed, simply the anticipation by the private sector of increased public-sector claims and involvement can initiate this process. Although arguably over-simplified, this policy-flight-policy spiral embodies the traditional characterization of capital flight.⁶

The two 'adverse economic events' most frequently cited as triggering capital flight in the 1980s are deleterious movements in the terms of trade and soaring international interest rates.⁷ Rising interest rates and adverse terms-of-trade movements influence the investment decisions of residents directly by changing relative rates of return and indirectly by altering government policies. These wealth shocks affect expected and realized government behaviour by changing the constraints on government budgets. Public-sector foreign liabilities increase directly because increases in international interest rates enlarge foreign obligations. In addition, as private-sector foreign liabilities rise and the value of national output falls, many firms become insolvent. Mounting concern over pervasive private-sector bankruptcy puts pressure on governments to 'socialize' private-sector foreign debt.⁸ Thus public-sector liabilities balloon beyond the direct impact of international interest rates.

These events prompt investors to anticipate higher taxes or confiscation and, therefore, they divert investment abroad. This outflow retards growth and reduces local tax bases. In order to capture the resources necessary to satisfy burgeoning fiscal responsibilities, governments raise marginal rates of taxation or enact other interventionist policies.⁹

This scenario characterizes the experience of some heavily-indebted developing countries in the early 1980s. As this process unfolded, ratios of public-sector debt to gross domestic product (GDP) rose, tax bases declined, international reserves fell and authorities increasingly resorted to inflationary financing of fiscal expenditures.¹⁰ The resulting higher inflation combined with officially repressed nominal rates of interest and exchange rates to produce negative domestic real rates of interest and severely over-valued exchange rates.¹¹ Thus fiscal, monetary and exchange-rate policies fostered the expectation of larger real interest-rate differentials and anticipated real exchange-rate devaluations added a further inducement to residents to transfer their savings abroad.

Some Standard 'Cures'

After interpreting some or all of the observed capital outflows from developing countries as representing significant and inefficient losses of aggregate investment — that is, as capital flight — many authors go on to argue that some measure of capital flight should be used to evaluate and to formulate national policies. Standard 'cures' for capital flight may be classified into two categories: those devoted to stimulating investment in general and those devoted specifically to repatriating capital which has been invested abroad and to stemming further outflows of capital. The former attempt to entice capital back by establishing an attractive investment climate. These 'cures' include adoption of 'appropriate' macro-economic policies such as restrained fiscal budgets, moderate money creation, competitive interest rates, realistic exchange rates and less government intervention.

By contrast to these general growth policies, tax-amnesty, tax-treaty and capital-control programmes are designed to restrain outflows of capital and to force or induce the repatriation or taxation of capital held abroad.

A SCEPTICAL RECONSIDERATION

In the traditional view of capital flight presented above, distortionary policies and/or expected policies divert domestic savings abroad, lower the country's production capabilities and increase the likelihood of default on international obligations. Although this scenario seems representative of the causes and implications of observed outflows of capital for some heavily-indebted countries in the early 1980s, it is unclear whether this process accurately characterizes other countries or periods. More fundamentally, it is unclear whether any measure of capital flight is a consistently informative indicator of efficient domestic capital formation.

Measures of capital flight fall into two categories: (i) those that attempt to distinguish capital flight from 'normal' outflows of capital (motivation-based measures); and (ii) general measures of total outflows of capital by the resident population. In order to interpret observed capital flows as direct losses of efficient aggregate investment, it is necessary to make some strong assumptions.

Proponents of motivation-based measures must assume that

(1) these measures reliably isolate or reflect distortion-induced outflows of capital by residents of developing countries

and

(2) changes in these measures cause or signal changes in the efficiency of domestic capital formation.

Users of more general measures must assume *either* that

(3) changes in these measures reliably reflect changes in distortion-induced outflows of capital and changes in distortion-induced outflows cause or signal changes in the efficiency of domestic capital formation
or that

(4) changes in these measures cause and/or reliably indicate general movements in efficient investment and national welfare.

These assumptions form the basis of analysis for the remainder of this section. We first discuss the measurement issues raised in points 1 and 3 and then discuss the theoretical and conceptual issues related to points 2, 3 and 4. We conclude that *none* of these assumptions can be reliably confirmed.

Measurement of Capital Flight

It is impossible to generate a consensus estimate of capital flight because of severe data problems and because the distinction between capital flight and normal outflows of capital is vague. Consequently, many competing and conflicting measures have emerged. Instead of reviewing all the empirical studies of capital flight, we simply discuss and distinguish the most widely-used measures. We conclude that reliable estimates of 'abnormal' capital flows are unavailable and, indeed, are unlikely to become available. Therefore, the capital-flight debate has come to focus on measures which do not attempt to isolate distortion-induced resident outflows of capital.

One measure of capital flight that strives to delineate 'normal' capital flows engendered by portfolio diversification or trade-financing motives from 'abnormal' flows provoked by distortionary policies is a *narrow measure*.¹³ This measure estimates the 'hot money' element of the capital account by including only short-term capital outflows by the non-bank private sector and the errors and omissions of the balance of payments. It is puzzling that errors and omissions are classified as resident capital outflows motivated by distortionary domestic policies. Indeed, for many countries, errors and omissions are the *only* component of the narrow measure of capital flight. Measurement problems such as over-invoicing and under-invoicing of imports and exports are an important vehicle for capital flight and are not reflected in errors and omissions. Furthermore, since short-term and long-term securities are actively traded in international financial markets, there is little liquidity distinction between the two assets. More importantly, purchase of foreign real estate or equities because of fears of domestic expropriation certainly falls under the rubric of capital flight, but is not included in the narrow measure. Thus the narrow measures may significantly misrepresent distortion-motivated outflows of capital.

Another motivation-based measure of capital flight is the *derived measure*.¹⁴ It estimates the fraction of a country's stock of foreign assets that does not yield recorded investment income. More specifically, this measure adds identified

capital outflows in the balance of payments to errors and omissions and adjusts for unrecorded flows. It makes this adjustment by noting that the annual change in the stock of external debt as reported by the World Bank is typically higher than the flows reported in the balance of payments. This discrepancy is included in the measurement of private-sector foreign assets. After choosing an interest rate, the derived measure computes the stock of foreign assets that would generate the income *recorded* in the balance-of-payments statistics. The difference between this measure and the estimate of total foreign assets is the derived measure of capital flight.

It is worth emphasizing the conceptual distinction between the derived measure of capital flight and the 'standard' capital-flight scenario. The derived measure implicitly equates capital flight to unrecorded capital outflows by residents. But this is only one component of capital flight in the 'received' view. If capital flight is produced by an externality in which 'the social rate of return on capital invested domestically exceeds the private rate of return on such investments or in which there is a shadow value of foreign exchange that exceeds the market price . . . [or] if the nature of the distortion is the absence of credibility on the part of the policymaker . . . [then] . . . whether or not the income from foreign investments is reported seems irrelevant'.¹⁵

In addition, the statistical problems inherent in the derived measure make it an unreliable estimate of the unrecorded component of capital flight. The derived measure requires considerable faith in foreign investment income statistics, debt figures and the choice of an interest rate to capitalize past returns. Incomplete data or small deviations of the actual return on foreign investments from the proxy interest rate may result in large discrepancies between the estimated stock of assets held abroad by residents and the actual stock. These data problems are exemplified by the finding that, as estimated by the derived measure, the summation of capital flight from Argentina, Brazil, Mexico and Venezuela is smaller than the corresponding '*distortion-induced*' outflows of capital from either Japan *or* the Federal Republic of Germany over the period 1975-85. These limitations highlight the dubious nature of the derived measure and shed doubt on its usefulness as an economic indicator.

As the above discussion suggests, measures of capital flight which attempt to categorize capital flows by intent are subject to pervasive statistical problems. In particular, they make heroic assumptions about the accuracy of official statistics and the ability of investigators to understand the motives which lie behind the various classifications of those statistics. In addition, they accept the plausibility and the stability of adjustments to existing statistics which are intended to isolate distortion-induced capital outflows. Furthermore, the inability of researchers to categorize poorly-measured capital transactions by intent is unlikely to change. For these reasons, many use a broad measure of resident capital outflows which does not attempt to categorize capital flows by intent.

The *broad measure* of capital flight equals measured acquisitions of foreign assets by non-bank private residents plus errors and omissions in the balance of payments. More specifically, the broad measure is equal to inflows of capital in the form of increases in external debt and net foreign direct investment minus the current-account deficit together with changes in external assets of the central bank and commercial banks. This residual measure makes little attempt to separate capital flight from total outflows of capital because data limitations prohibit a meaningful distinction between the two.

Even this measure is plagued by a number of statistical problems.¹⁶ The broad measure attributes errors and omissions entirely to capital transactions, but errors and omissions do not merely represent outflows of capital. There is also no obvious reason why direct investment abroad by residents of developing countries and investment abroad by domestic banks should be excluded from the broad measure of capital flight. In addition, statistical difficulties — such as mis-invoicing of imports and exports, exchange-rate changes which alter the dollar value of external debts, unrepatriated interest income on unrecorded foreign asset holdings and imprecise estimates of the stock of external debt — lower the confidence which may prudently be attached to the broad measure of capital flight.

Some Conceptual Quandaries

The last sub-section demonstrated that investigators are currently unable to isolate distortion-initiated flows and there seems little reason to believe that additional research will separate capital transactions into motivation-based categories. The inability to categorize capital transactions by intent has prompted many to use the broad measure of capital flight. Neither theory nor empirical evidence, however, provides a rationale for assuming a stable relationship between residents' outflows of capital and distortion-motivated capital flows. On the contrary, an efficient, 'healthy' economy implies a rich array of capital flows as residents diversify portfolios, companies finance international operations and investors exploit real investment opportunities. Thus there is no reason to believe that 'normal' flows are stable enough for changes in the broad measure consistently to mimic distortion-initiated transactions.

Furthermore, there is no reason to believe that either residents' total outflows of capital or distortion-induced flows consistently signal changes in the level or efficiency of domestic investment. Asymmetric incentives and potential substitutions among domestic and foreign investors leave these relationships ambiguous and potentially unstable.

We provide four suggestive cases which demonstrate that the correlation between residents' outflows of capital and aggregate domestic investment could be positive or negative. Moreover, even if the direction of the correlation were

known, we cannot classify changes in investment as efficient or inefficient simply by observing residents' outflows of capital.

Case 1: Business-cycle Effects

Consider a developing country with no policy distortions and a single major export item. This 'healthy' growing economy generates *net* capital inflows even though residents invest abroad to diversify portfolios and firms increase accounts abroad to facilitate the expansion of foreign operations. In these circumstances, capital outflows reflect booming investment and economic growth, not distortionary policies. Similarly, if this country were to suffer a recession, the *reduction* in 'capital flight' as measured would signify a drop in national income, not an elimination of inappropriate macro-economic policies. These effects imply a positive correlation between residents' outflows of capital and domestic investment and the changes in investment are efficient.

Case 2: Technological Effects

Suppose an inexpensive foreign source of the major export good is discovered. A number of domestic investors shift their capital abroad in response to this shock. The broad measure accurately indicates economic troubles for the country, but these outflows of capital are not the result of distortionary policies. The outflows are an economically efficient response to an event that altered the profitability of investing domestically. In this case, capital outflows and investment are negatively correlated and the change in aggregate investment is efficient.

Case 3: The Received View

Suppose the country is suddenly plagued by financial repression, over-valued exchange rates and high anticipated marginal tax rates that divert national savings abroad. If 'normal' capital flows are constant, the resulting changes in residents' total outflows of capital accurately signal the inefficient effects of these new policies on aggregate investment. In these conditions, the correlation between the foreign investment by residents and aggregate domestic investment is negative and the change in investment is inefficient.

Case 4: Asymmetric Incentives

Finally, suppose that in an attempt to bolster flagging investment, domestic authorities provide competitive subsidies to foreign investors. In order to raise sufficient funds to meet fiscal responsibilities, however, they increase taxes on resident investors. These asymmetric policies further divert resident savings overseas, but they could also increase aggregate domestic investment. In this case, the potential efficiency loss caused by distortionary policies is subtle and related to changes in ownership of domestic capital. The correlation between aggregate investment and capital outflows is positive, but the efficiency effects of these

changes are ambiguous. Note that in this case, even if we can accurately identify outflows of capital as distortion induced, we cannot reliably determine whether domestic investment has fallen below its efficient level.

These examples demonstrate the basic conceptual problems involved in interpreting estimates of the extent and consequences of capital flight. In particular, we cannot draw inferences regarding changes in aggregate domestic capital formation from such estimates. Moreover, even if we know the correlation between residents' outflows of capital and investment, we cannot determine whether the change in investment is efficient or inefficient.

In the light of these observations, let us reconsider the assumptions underlying the received view of capital flight. First, as discussed in the last sub-section, investigators cannot identify outflows of capital which are motivated by distortionary policies. Second, flows which are attributable to distortionary policies may not be inferred from broad measures of capital flight because of the potential volatility of 'normal', 'healthy' capital flows. The ebbs and flows of economic growth and the vagaries of the international economic system weigh against any presumption of stable 'normal' flows. Third, even if distortion-induced capital flight could be measured or inferred, this measure may be an unreliable indicator of aggregate investment; policy distortions may asymmetrically affect residents and foreigners. Finally, since the complex and dynamic process of growth, technological change and political evolution is likely to elicit a rich array of capital flows, there is no reason to expect that the broad measure of capital flight will reliably indicate either the level or efficiency of domestic capital formation.

We are forced to conclude that the received view represents only one of a broad spectrum of interpretations consistent with any given observation of capital outflows. Indeed, capital flight, as currently measured, has no clear implication for aggregate investment or the efficiency of domestic capital formation.

Some may view this conclusion as too extreme. Once a believable measure of total private outflows of capital is constructed, the motivation behind total capital outflows by residents may be imputed *ex post* via a comprehensive review of the country's economic and political environment. Thus only an estimate of total outflows of capital is required and the label 'capital flight' may be applied when circumstances suggest that capital is 'fleeing'. We have considerable sympathy for this argument. But the analysis required to apply the label 'capital flight' is far from simple. Since (i) 'normal' capital flows vary with growth, business cycles, product cycles and the vagaries of international competition and (ii) investors are confronted with a complex array of incentives, the feasibility of inferring the efficiency of observed capital flows is at best in doubt. Furthermore, every observation in capital-flight data requires independent analysis; that is, the apparent comparability of points in a time series or in a cross-section of capital-

flight statistics is illusory. Finally, given such a detailed analysis, the marginal usefulness of capital-flight statistics in evaluating the policy and investment climate of an economy is questionable.

SOME CASUAL EMPIRICISM

Even if the conceptual ambiguities in interpreting capital flight are accepted, it remains to be considered whether there is any empirical evidence for the predicted relationship between any measure of capital flight and aggregate investment: a negative contemporaneous correlation. In fact, there is a highly unstable relationship between capital-flight measures and domestic investment.

Figure 1 presents time series for the broad measure of capital flight and gross domestic capital formation (investment) for Argentina, Brazil, Mexico and Venezuela. The graphs in Figure 1 illustrate the empirical irregularities between the broad measure of capital flight and investment.¹⁷ There is certainly not a stable negative relationship between the broad measure and investment as the received view argues. In fact, Mexico exhibits a generally positive correlation between the broad measure and investment. For Argentina, Brazil and Venezuela, it is impossible to identify any consistent pattern.

Although an observer may be able to identify episodes consistent with the conventional view for some heavily-indebted countries in the early 1980s, the evidence also clearly illustrates the dangers of applying the obvious inductive argument: we cannot extrapolate the interpretation of capital flows in a few countries in the early 1980s to other countries or to other periods.

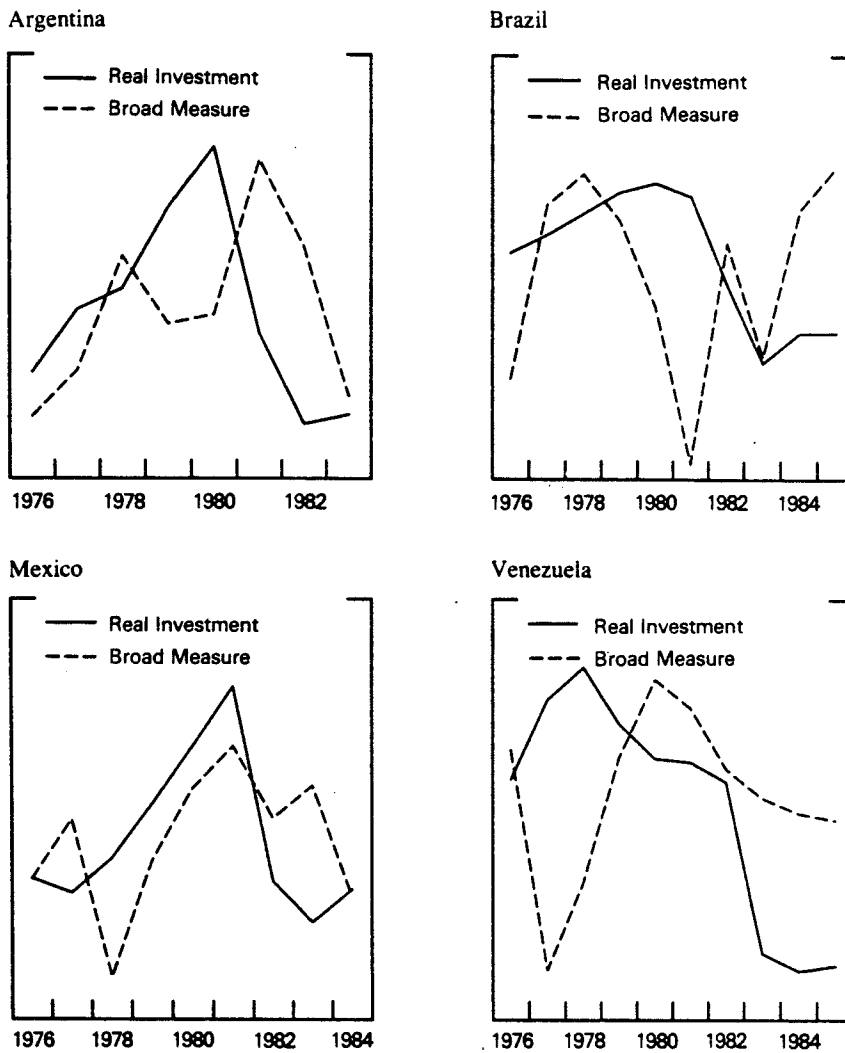
THE 'CURES' RECONSIDERED

The above discussion demonstrates that the observation of capital flight has no direct implications for investment or growth. Nonetheless, it is important to evaluate the effects of policies put forward to 'cure' capital flight. There are two general approaches. One approach seeks directly to stem and reverse residents' outflows of capital. The second aims to provide a 'healthy' investment climate by implementing long-run growth policies.

Instead of focussing on the political, economic and legal constraints which produce distortionary policies, or on the distortionary policies themselves, the direct approach makes use of tax treaties, tax amnesties and capital controls in an attempt directly to stem capital outflows and/or induce repatriation. Thus these policies appear to be fundamentally mis-directed. The basic rationale advanced in favour of them is the belief that capital not invested abroad will induce one-for-one increases in domestic investment.¹⁸ This obviously ignores potential substitutions between savings and consumption and between foreign and domestic investors.

A number of tax treaties have been proposed with the aim of putting assets held abroad in the domestic tax base, thus removing any tax incentive for foreign rather

FIGURE 1

Broad Measure and Investment: Scaled^a

^aThese are 'real' values, scaled to facilitate comparison.

than domestic investment. The hope is that this would slacken government budget constraints and facilitate the policy reforms necessary for creating a favourable investment climate.

There is considerable doubt, however, whether such tax treaties are effective or attractive. We agree with Ingo Walter, of New York University, who expresses his scepticism at the feasibility of taxing offshore assets in noting that this strategy exhibits 'an underlying contempt for human ingenuity'.¹⁹ Furthermore, *symmetric* tax treaties potentially reduce the government's claim on the primary tax base: domestic output. The total tax base can in fact fall if foreign holdings of domestic assets are removed from the tax base.²⁰ Finally, the effect on aggregate investment (and thus future tax revenues) is ambiguous. Repatriated capital may substitute for foreign investment and direct investment by foreigners may fall due to the application of the potentially higher marginal tax rates of the home country.

Another policy proposal designed to repatriate capital which has been invested abroad is a tax-amnesty programme. By harming the credibility of policy makers, tax-amnesty programmes may reduce normal tax collections and provoke more distortionary means of raising revenue. This would, paradoxically, imply greater outflows of capital and slower growth.²¹

The most extreme repatriation policies are those aimed at directly limiting outflows of capital — that is, capital controls. The long-run ineffectiveness of capital controls is well documented.²² Even if they are successful in arresting the flight of capital, the alternative to foreign investment may not be domestic investment, but consumption. In addition, the more effective capital controls are in stemming outflows the more under-diversified will resident portfolios become.²³ Thus capital controls may lower domestic savings and distort the composition of portfolios. Moreover, controls deter repatriation because (i), once an investor repatriates capital, the range of investment opportunities open to him shrinks and (ii) the controls are a signal of the likelihood of additional government intervention. Thus capital controls are not only ineffective, but potentially they discourage domestic investment.

Many who view capital flight as a symptom of poor policies sensibly argue that countries should change those policies with the aim of establishing a 'hospitable' investment climate for residents and foreigners. We do not disagree with this prescription; removing policy distortions is as laudable as it is politically difficult to implement.

Providing a 'hospitable' investment environment does not simply involve altering particular policies associated with the onset of capital flight. Distortionary policies themselves are symptoms of more fundamental incentives and constraints. It is political commitments, limited revenue-raising technologies, restricted access to international credit and limited contracting that elicit the ostensible 'cause' of capital flight; in other words, poor policies. Fundamentally, promoting a stable investment climate and long-term growth involves altering these incentives and constraints. The mere elimination of policies associated with capital flight need not repatriate capital invested abroad or encourage investment

at home. Investors will realize that the underlying sources of those policies have not been altered and they will therefore anticipate the re-emergence of those policies or of similar alternative policies.

CONCLUSION

The debt crisis of the early 1980s has evolved into a structural debt problem for many developing countries. The limitations of standard national-accounts data and continuing negotiations among financial institutions, international organizations and governments of developing countries have created a high demand for reliable economic indicators. Capital-flight estimates have been widely put to this use. The received view presents a coherent interpretation of capital outflows as the product of policy distortions. Given the unique and severe conditions confronting heavily-indebted countries in the early 1980s, compelling reasons existed for applying this interpretation to that situation. But, even for heavily-indebted countries in the early 1980s, the empirical evidence in support of the received view is weak.

Statistical problems, conceptual quandaries and empirical evidence force us to conclude that capital-flight observations cannot be interpreted consistently; the same capital-flight observation may require different interpretations in different time periods or in different countries. The indeterminacy implied by economic theory and the instability documented by the empirical findings clearly suggest the dangers in using measures of capital flight as indicators of domestic investment or future growth or as signals of when to intensify or mitigate efforts for policy reform. Indeed, the policies proposed to reduce outflows of capital, and to repatriate flight capital held abroad, may be ineffective or counter-productive.

1. This article represents the views of the authors and should not be interpreted as reflecting those of the Board of Governors of the Federal Reserve System in the United States or other members of its staff. We thank Heidi Lyss for research assistance and Maria Carkovic, Allen Frankel, David Howard, Robert Kahn, Richard Levich, Larry Promisel, Garry Schinasi, Charles Siegman and Ingo Walter for helpful discussions.

2. See, for example, the collection of essays in Donald Lessard and John Williamson (eds), *Capital Flight and Third World Debt* (Washington: Institute for International Economics, 1987) and the important synthesis and extension of the literature by Michael Deppler and Martin Williamson, 'Capital Flight: Concepts, Measurement and Issues', in *Staff Studies for the World Economic Outlook* (Washington: International Monetary Fund, 1987) pp. 39-58.

3. Charles Kindleberger, *International Short-term Capital Movements* (New York: Augustus Kelley, 1937); Ingo Walter, 'The Mechanics of Capital Flight', in Lessard and Williamson (eds), *op. cit.*; and Deppler and Williamson, *op. cit.*, respectively.

4. See 'LDC Capital Flight', *World Financial Markets*, Morgan Guaranty Trust Company, New York, March 1986, or *World Development Report 1985* (New York: Oxford University Press, for the World Bank, 1985).

5. See Rudiger Dornbusch, 'Comment', in Lessard and Williamson (eds), *op. cit.*

6. The importance of the spiralling characteristic varies across capital-flight episodes. The degree to which authors explicitly discuss the spiral also differs. Lessard and Williamson, 'The Problem and Policy Response', in Lessard and Williamson (eds), *op. cit.*, ch. 9; Carlos Diaz-Alejandro, 'Latin American Debt: I Don't Think We are in Kansas Anymore', *Brookings Papers on Economic Activity*, Washington, No. 2, 1984, p. 335; and Dornbusch, *op. cit.*, are very explicit while all the ingredients of this process are discussed in Deppler and Williamson, *op. cit.*, and others.

7. Many debt-ridden countries suffered a sharp deterioration in the terms of trade during 1979-83. For example, Brazil's terms of trade fell by approximately 40 per cent, while the terms of trade for Chile and Colombia dropped by about 25 per cent. Following the oil-price hikes of 1978-79, the terms of trade for Venezuela and Mexico also fell.

Real interest rates (anticipated and unanticipated) in the United States rose in the early 1980s while the average *ex post* real domestic interest rate of 66 capital-importing developing countries remained negative. This shift was aggravated by a general reduction in tax rates on non-resident income in industrialized countries. See Deppler and Williamson, *op. cit.*, pp. 49-51.

8. Carlos Diaz-Alejandro explains that, after the debt crisis began, internal and especially external pressures forced governments of developing countries to assume or subsidize private foreign obligations. Consequently, instead of unprofitable firms undergoing bankruptcy proceedings and their physical assets being sold to new entrepreneurs, private debt became a public burden. See Diaz-Alejandro, *op. cit.*

9. The central government's share of GDP (as measured by expenditures plus lending minus repayment) rose by 37, 32, 85 and 25 per cent for Argentina, Brazil, Mexico and Venezuela respectively between 1979 and 1983. See the *International Financial Statistics Supplement on Government Finance* (Washington: International Monetary Fund, 1987).

10. The public-sector deficit as a percentage of GDP more than doubled between 1980 and 1982 for Argentina, Brazil, Mexico and Venezuela. Total reserves minus gold for these countries between 1979 and 1982 fell by 73, 56, 60 and 10 per cent respectively. And the rate of growth of domestic credit in 1983 was more than 50 per cent greater than the rate of growth of domestic credit in 1979 for those countries.

11. The black-market premium on foreign exchange between 1979 and 1983 rose from 0.1 to 98.0 in Argentina, from 8.2 to 59.1 in Brazil, from 5.1 to 17.7 in Chile, from 0.9 to 20.3 in Mexico (65.8 in 1982) and from 0.2 to 202.3 in Venezuela. See Eli Remolona and William Gasser, 'Capital Flight from Twelve Major Debtor LDCs', unpublished manuscript, New York Federal Reserve, 1986.

12. This section relies heavily on Robert E. Cumby and Richard M. Levich, 'On the Definition and Magnitude of Recent Capital Flight', in Lessard and Williamson (eds), *op. cit.*

13. John T. Cuddington, *Capital Flight: Estimate, Issues and Explanations*, Princeton Studies in International Finance No. 58 (Princeton: International Finance Section, Department of Economics, Princeton University, 1986).

14. Michael Dooley, 'Country-specific Risk Premiums, Capital Flight and Net Investment Income Payments in Selected Developing Countries', *IMF Departmental Memorandum*, Washington, No. 17, 1986.

15. Cumby and Levich, *op. cit.*, p. 36.

16. Ernesto Zedillo notes that in Mexico coverage of debt-reporting was broadened in 1983 so that estimates of capital outflows are inconsistent inter-temporally. Ernesto Zedillo, 'Case Studies: Mexico', in Lessard and Williamson (eds), *op. cit.*

17. Graphs of the broad measure and investment for the remaining Baker-15 countries, as well as graphs of other measures of capital flight, are available from the authors.

18. See Lessard and Williamson, *op. cit.*, p. 224.

19. Walter, *op. cit.*, p. 127.

20. Indeed, many developing countries have resisted tax treaties for this reason. See Lessard and Williamson, *op. cit.*

21. As an Argentine businessman recently said: 'I just throw my tax assessment away every year. I prefer to pay when the government offers a tax amnesty. It's a lot cheaper that way.' *Washington Post*, 26 January 1988, p. C1.

22. Walter, *op. cit.*

23. The question of the socially optimal level of diversification is subtle and the analysis of the potential distortions involved is well beyond the scope of this article. Needless to say, the optimal level of diversification in investment flows is not zero.



Thurrow-ly Confused!

IN JANUARY this year, at the annual meeting of the World Economic Forum in the Swiss ski resort of Davos, Professor Lester C. Thurrow, of the Massachusetts Institute of Technology, caught newspaper headlines with a speech entitled 'GATT is Dead'. Set out below, from Professor Thurrow's text, are three paragraphs on the problem and one on his solution:

'The recent Montreal GATT meetings [the mid-term review of the Uruguay Round negotiations] ended in total failure. Future meetings will also end in failure. The agenda guarantees it. What is now being negotiated cannot be negotiated. . .

'GATT's corpse will be propped up. The diplomatic activity necessary to deny GATT's death is already under way. But GATT cannot be resurrected. No one in the near future is going to find a path that leads to significant multilateral reductions in trade barriers.

'Given this reality, it is far better to channel what is, I believe, an irresistible movement toward trading blocks in a benign direction rather than refusing to face up to reality until that reality has in fact created the very monster that everyone wants to avoid. Pretending that what will happen won't happen is not the route to success. . .

'What needs to be done is clear. A range of *permissible management techniques* should be defined so that *block managers* focus on broad categories of products rather than highly specific products. Blocks might be required to keep imports growing at least as rapidly as their GNPs. GATT is dead but some system of international rules is not beyond our capacity' (emphasis added).

A Plug for Economic History

'Given all the weaknesses of econometric techniques, we should be open-minded enough to accept that truth does not always wear the garb of equations and is not always born inside a computer. Other ways of testing, such as appeals to qualitative economic history, should not be treated as archaic.'

— Thomas Mayer, 'Economics as a Hard Science: Realistic Goal or Wishful Thinking?', *Economic Inquiry*, Los Angeles, April 1980, p. 176.