CHAPTER 1

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CHAPTER 1

INTRODUCTION

1.1 BASIC CONCEPT AND THE PROBLEM

Over the last two & half decades the flow of capital from the developing to the developed world has increased to a large extent. After the globalization of the financial markets such capital outflow is becoming a means of increasing returns of the households through portfolio diversification. Conventionally, the capital flow from the developed world to the developing world is better known as FDI, while the reverse flow is known as 'capital flight' (CF). Such type large capital outflow has proved to be an important case of serious macro-economic problems for many LDCs for the last 25 years. The prime concern is that capital flight amounts to a substantial portion of the resources which are essential for financing economic growth of the LDCs. Here we mention a report appeared in 'Financial times'-2002, which indicates that one of the most likely sources of unrecorded funding of the US colossal $392 billion current account deficit is capital flight from poor countries.

Capital flows from one country to another may take place for a number of reasons. Globalization of financial markets has resulted in capital flows that result from households' attempts to maximize returns through international portfolio diversification. Savings of households in advanced countries flow to developing countries through portfolio investment via Foreign Institutional Investors (FIIs) whose activities are now spread across stock markets worldwide. The expansion of world trade and commerce has increased enterprises' efforts to promote trade through providing export credits leading to movement of capital. Worldwide dispersal of productive units by multinational enterprises has led them to accumulate working balances abroad and invest directly in the acquisition of productive capacity abroad. Commercial banks' efforts to expand their activities have resulted in their accumulating deposits with foreign banks and acquiring claims on non-residents through portfolio and direct investment.

The above movement of capital can be considered to be "normal". However, capital outflows may also be motivated by the concern that assets held domestically would be subject to substantial loss or impairment due to risks of expropriation, exchange rate depreciation, taxation or other forms of financial repression. They are then not considered part of the normal flow process and defined as capital flight (Depler and Wlliamson, 1987)

For many developing countries, the ability to draw upon a large amount of financial capital offers large benefit. Economic output of these countries is constrained by low levels of capital per worker. Foreign resource inflows – fiscal deficits- can be used to raise their internal savings and to create a higher level of domestic growth . Access to the means of international capital markets provides the means to finance this resource flow. It is also argued that some for. Cap. Inflow , especially FDI, helps the transfer of managerial and technical knowhow. Portfolio investment and bank lending are also helpful in this respect. The free flow of capital across countries has a good effect of promoting more disciplined macroeconomic policies and reducing the policy defects. The obvious benefit of open trade in goods and services creates the pre-condition of positive net benefits of open trade in all financial institutions.

On the other hand the opening of the domestic financial markets creates added risk of frequent financial crisis in LDCs, and also in industrialized countries. These crises are blamed on wrong macroeconomic policies i.e. as bad fundamentals. But in recent crisis of Mexico and East-Asia with successful financial policy regimes provides a greater emphasis on inherent stability of financial markets. The risk that cross-border financial transaction can raise with relatively unsophisticated financial system and weak regulatory oversight. Today's crises are triggered by liquidity problems as the countries are caught in a maturity mismatch of their foreign assets and liabilities. This is similar to the financial panics of US banking system of 19th century. In addition because the lender and the borrower assume the risk of exchange rate change, a hazard is involved in International financial transaction, which is not present in domestic markets. In such case the Govternments are drawn in by their commitment to an explicit exchange rate or by the social consequences of large swings in currency values.

Most of the recent policy decision implicitly accepts the notion that open capital markets are highly beneficial, and policy for reform is directed towards reducing the risks of financial instability and crisis. Available measures of return on investment in emerging markets show a low correlation with overall global indexes of return. Again the return among emerging markets often shows low correlations with one another.

Here we are going to analyze the consequences of capital flight. Capital flight refers to international capital movements which respond to heightened economic and political uncertainty. This paper focuses on the experiences of developing countries, the essence of capital flight lies not in the level of economic development, but in the degree of economic, social, and political fracture. Indeed, capital flight has characterized both developed and developing nations throughout this century.

During the late 1970s and 1980s capital flight plagued many developing nations; the concurrent LDC Debt Crisis prompted both theoretical and empirical analyses

of flight. However, widespread interest in the topic abated as the immediacy of the crisis subsided, foreign lending dissipated, and countries embarked upon stabilization and structural adjustment programs. Towards the end of the 1980s many developing countries began to enjoy renewed capital inflows of a substantial magnitude. The capital inflows in fact were not driven primarily by domestic reform, but a conspicuous lacuna of attractive foreign (U.S.) investment opportunities, and that much of the investment in emerging markets was domestic investors reversing capital flight of the 1980s and hence limited in scope.

The political and economic events which occurred in Mexico throughout 1994, culminating with the devaluation of the peso in December, highlighted the fragility of these renewed capital inflows to emerging markets. In response to the Mexican crisis, international investors, investors of any nationality and residence with access to global capital markets, reduced their investment in Mexico and other emerging markets. Capital flight recurred.

Despite the negative connotation associated with the term capital flight, its impact on an economy is ambiguous. Indeed, only when its potentially detrimental effects are borne out during a crisis do economists, policy makers, politicians, bankers, and investors focus on its possible adverse effects on an economy, or potential for systemic contagion. The possible disruptive effects on domestic investment, the foreign exchange market and public finances which stem from flight become more severe and a greater possibility when one considers the magnitude of flight for some developing countries.[1] Flight on the order of 5 to 10 percent of GNP represents a substantial outflow of resources from the domestic economy.

A striking feature of several debtor countries is the extent to which private capital outflow have eroded net inflows. These outflows have increased the cost of these countries of rising revenue to service debt, and have consequently generated concern about the prospects for debt repayment. The outflow means that borrowing by these countries added much less to domestic resources than was initially thought. In some cases this is reflected in the decline of domestic fixed capital formation. In addition funds invested abroad frequently escape the tax base of the borrowing-country Govt. for this reason these outflows have been referred to as capital flight. The implication of capital flight for public policy in both debtor and creditor countries remain largely uninvestigated. To a significant extent the standard portfolio diversification motives can explain two-way flow.

A major part of lending to LDCs has taken the form of public or publicly guaranteed debt. Even where no guarantee was provided, lenders have held governments accountable for the debt of private borrowers in default. There is evidence that governments assumed a substantial amount of private debt during the period in which capital flight appears to have been most dramatic. Through the budge constraint of the Govt. implicit or explicit public guarantees create

interdependence among private investment decision. A move by one borrower that increases the likelihood of his own default increases the expected tax obligation of the other borrowers. This increases the incentives of the other borrowers to place their own funds abroad, and increases the likelihood of default on their own loans as well. Capital flight arises as a form of contagion.

In most of the cases the mechanism of capital flight takes the form of outright fraud. Private borrowers have the ability to invest their own and borrowed funds from abroad, where they are not only less productive than in domestic investment projects, but they earn less than the cost of funds from abroad. Thus by placing the funds abroad they escape the obligations to repay his loan are to pay taxes to his Govt. this is largely observed in the operation of international capital markets. Transfer of these funds are often not recorded and affected through the activities like underinvoicing of export and overinvoicing of imports. Without official record taxation is difficult. At the same time borrowers can make if difficult for the lenders to match the identities of particular private depositors and private borrowers. Again interfamily transfer can make funds difficult to tress. Hence while lending institutions have knowingly accepted deposits of private individuals from large debtor countries, they apparently do not have the legal ability to use these deposits as collateral against the outstanding loans. Given the tax obligation of the domestic borrowers. Lenders can restrict loan amounts to ensure that investing domestically and subsequently repaying is in each borrower's interest. Potential nationalization of private debt means that the flight of any one borrower's capital raises the tax obligations of other borrowers. Hence it raises the incentive for other borrowers to invest abroad as well.

The borrower's effort in managing his project and generating return on his investment will determine whether he is able to finance repayment. But the incentive to put in necessary effort depends negatively on debt-service obligation and anticipated tax obligations. Here again potential nationalization of private debt implies that a low level of effort by one borrower, leading to his default, increases the tax obligation of others. Their incentive to expand effort diminishes as well the interdependence of borrowers' effort decisions generates some potential for contagion.

Capital flight from developing countries represents a lost potential for economic growth and development. In the contemporary literature of development economics, there has been increasing attention to the notion of capital flight. Many analysts have attributed sluggish economic growth and persistent balance of payments deficits in most developing counties to capital flight (Ajayi, 1996). In addition, capital flight has adverse consequences for developing countries.

First, the loss of capital through capital flight erodes the domestic tax base and therefore affects income redistribution.

Secondly, it reduces a bank's ability to create money for investment projects. Most importantly, capital flight contributes to the distribution of income from the poor to the rich (See Pastor, 1990, and Ajayi, 1997).

The literature also highlights several routes of capital flight from developingCountries. Prime among those are external borrowing and trade misinvoicing. Also many authors have identified factors that cause capital flight including risk of inflation, taxation, political risk instability, financial repression, weak institutions, ineffectiveness of macroeconomic policies, business cycles, overvaluation of exchange rates, and poor investment climate, to name a few (See, Hermes, Rensink and Murinde, 2002, Schneider, 2003 and Boyce and Ndikumana, 2002).

The integration of global markets for capital has increased the ease by which nationals of both developed and developing countries can move their assets abroad: both because controls of capital have been dismantled and because markets have they become more efficient. Such 'portfolio diversification' can be economically efficient in itself as it spreads risk, and indeed many developing country companies have become to emerge as 'southern multinationals' in their own right, while intra-regional investment flows are becoming more important.

The scale of Capital Flight from developing countries is a legitimate cause for concern because it implies potential investment foregone. The motives for capital flight are complex. On the one hand, the absence of secure property rights, excessive market risk and lack of policy credibility in some developing countries are often cited as 'legitimate' motives.1 On the other hand, the desire to avoid taxes, the criminal origin of assets and the anonymity of offshore accounts are also significant factors; but require International co-operation in order to tackle them.

In addition, financial crises in a number of leading emerging markets the latter half of the 1990s caused widespread concern about the premature liberalization of financial sectors in developing countries. In a number of cases large inflows of short-term funds led to overheating of the domestic economy, excessive credit expansion (and a decline in savings rates), real estate bubbles and over-valuation of the exchange rate. The large outflows of funds once the cycle turned, the collapse of investment and output, the rise of unemployment and the fiscal retrenchment; have had serious consequences for poverty and development, as did the 'contagion' for neighboring countries. These episodes renewed interest on capital controls.

The issue of capital flight from developing countries is dogged by misunderstandings and controversies which detract from attempts to find the appropriate and necessary responses. The question of a satisfactory definition of capital flight is not one which should be allowed to interfere with policy-making, and nor are methodological issues concerning data on the magnitude of flows.

Academic research on the question of capital flight from developing countries has been characterized by a number of confusions and controversies over these and other (primarily non-central) issues, which have gradually eroded the policy relevance and applicability of the results. The emphasis attached to capital flight has therefore been reduced also.

In particular, a change of approach from examining the institutional framework in developing countries to emphasizing the role of (developed) host countries for capital flight instead is advocated. This emphasis is less concerned with efforts to repatriate the capital flight of individuals such as Mobutu or Mahathir, but much more generally with the interactions between home and host country systems of taxation and financial supervision. It is argued that – partially through the weakening of the debate mentioned - host country systems have operated with a lack of responsibility towards developing home countries, which has generated incentives for flight independent of political and external debt conditions in developing home countries. Efforts to redress these failings of host country systems should be put at the top of a new and more high-profile agenda of policy responses to capital.

1.2 OBJECTIVE OF THE STUDY

The primary objective of the study is to measure the volume of capital outflow flow from Six South Asian countries, with a comparison of their pre and post macroeconomic liberalization era. The selected countries are India, Pakistan, Bangladesh, Nepal, Bhutan, and Sri Lanka. Thus the time period for the study is chosen from 1987-88 to 2003-04. The method of estimation of capital flight requires the calculation of total stock of external claims. The stock of external claim is the sum of recorded claims of non-residents less direct investment abroad using BOP data, cumulated errors and omissions from BOP account and an estimate of unrecorded stock of the external claims. The relation between trade openness , overall balance position , growth rate and domestic inflation is shown with that of capital flight to consider the fact whether liberalization has influenced such out flow of capital.

The amount of capital flight is to be estimated on the basis four or five different estimates (methods are discussed in the following). Then our objective is to analyze the related factors influencing capital flight from the countries those are selected for the purpose of the study. Basic variables are to be determined on the basis of the literature surveyed. Then a model for capital flight is to be determined which will capture the effects of the selected variables. Considering several risk and return factors their relative effectiveness is also to be judged. Finally some policy prescription will be done on basis of the study. Another important objective is to predict for the future so that such type of illegal outflow can be avoided to some extent.

Our next objective is to find out a link between income distribution and capital flight for these selected countries. In this regard the link considering poverty-inequality – openness is related with capital flight is also stressed out. In what ways such link matters for overall growth and income distribution is the other objective of the study

1.3 DEFINITION

During the early 1990s the interest for the capital flight phenomenon waned, since most Latin American countries had reduced their external debt problems and capital started to flow back to many of the emerging economies in this region, as well as to East Asia.

Yet, from the mid-1990s the international financial system was confronted with the outbreak of several major financial and economic crises. These crises contributed to large outflows of capital from several developing countries and led to renewed attention to the capital flight phenomenon. First, in 1994-95, Mexico and some Latin American countries experienced the Tequila crisis. Then, in 1997-98, several Asian countries experienced a deep financial and economic crisis, followed by Russia in 1998 and Brazil in 1999.

These financial crises added an important dimension to the capital flight problem. For example, the mounting complexity of imbalances in the underlying economic fundamentals in the Asian economies culminated into a scenario of collapsing exchange rates and share prices, initially in Thailand and Indonesia, which provoked domestic and international investors to immediately withdraw their money, and thereby caused panic on the international financial markets. There were even fears of bank runs which, due to bandwagon and contagion effects, threatened the stability of the international banking system. In this context, the Asian financial crisis demonstrated how adverse domestic economic conditions influence the behavior of domestic and international investors in accelerating capital flight.

In general Capital flight is the accumulation of resident, claims on non-resident, that escape control by domestic Government; i.e. they are not subject to any taxation or regulation or confiscation. It is the short-term speculative capital exports by private non-basic sector.

Before considering the definition of capital flight , its effects – and hence its importance to development – should be considered. The effects of capital flight can be seen under two main headings. Firstly, it compounds the already serious problem of capital scarcity in the poorest countries; this will result in increasing (relative) reliance on foreign capital, with the associated problems. In particular, difficulties in accessing, and maintaining the stability of access to International capital markets, are a persistent problem for the poorest countries. Secondly, capital flight generally results in increasing levels of inequality in these societies; the poorest are not able to investment overseas in order to avoid

domestic taxation, and therefore not only bear the brunt of tax-financing of deficits, but also the necessary increases to maintain revenue levels in the face of capital flight.

1. Broad definition of capital flight

All outflows of resident capital if invested in the domestic economy would yield a higher rate of social return.
A variant of this concept is a narrower approach often termed **hot money flows** in which only resident outflows which accrue in the short term or those which get reflected in the errors and omissions category in the balance of payments are be treated as capital flight.

2. Capital flight defined as a response to discriminatory treatment of domestic capital

In this concept capital flight is only that part of resident capital outflow which is a response to asymmetric risk...

3. Illegal transaction concept of capital flight

This concept links only those outflows of capital to capital flight which are illegal.

1. The Broad definition

The most widely used concept of the term capital flight links the loss of capital through domestic capital outflows to a lowering of national utility. This definition of capital flight is based on the assumption that all outflows of capital by the domestic resident sector if domestically invested would yield a higher rate of social return. This definition includes measured acquisitions of foreign assets by banks and individuals plus errors and omissions in the balance of payments. This approach leads to a very broad definition of capital flight since it includes all reported and unreported increases in foreign assets of the public and private sector. Some economists prefer to work with a narrow version of this definition where capital flight is confined to short term capital of the private sector and errors and omissions in the balance of payments.

It is often referred to as the "hot money" measure. However, both the broad and narrow version are based on the assumption that the magnitude captured in the estimate leads to loss of national utility or welfare. This belief is reflected in the restrictive assumptions on which the broad and the narrow measure of capital are based and assumes that the social rate of return on domestic investments is higher than the private rate of return. Presumably if capital the most widely used concept of the term capital flight links the loss of capital through domestic capital

outflows to a lowering of national utility. This definition of capital flight is based on the assumption that all outflows of capital by the domestic resident sector if domestically invested would yield a higher rate of social return. This definition includes measured acquisitions of foreign assets by banks and individuals plus errors and omissions in the balance of payments. This approach leads to a very broad definition of capital flight since it includes all reported and unreported increases in foreign assets of the public and private sector. Some economists prefer to work with a narrow version of this definition where capital flight is confined to short term capital of the private sector and errors and omissions in the balance of payments. It is often referred to as the "hot money" measure. However, both the broad and narrow version are based on the assumption that the magnitude captured in the estimate leads to loss of national utility or welfare.2 This belief is reflected in the restrictive assumptions on which the broad and the narrow measure of capital are based and assumes that the social rate of return on domestic investments is higher than the private rate of return. Presumably if capital did not leave the country domestic invisible resources would have gone up by that amount. This is, of course, assuming that no leakage into conspicuous consumption or consumption of foreign goods would take place.

Capital flight - according to both the broad and narrow definition - is negatively correlated to aggregate domestic investment and that these reductions in domestic investment are inefficient. Gordon and Levine (1989) reason that traditional capital theory provides no basis for the presumption regarding the nature and stability of the relationship between total resident capital outflows and capital formation. The complex and dynamic process of growth, technological change and political evolution elicits a rich array of possible relationships among capital flows by residents and foreigners. Moreover, even if this relationship is known, it is not possible to classify changes in investment as efficient or inefficient by observing gross capital outflows.

Much of the capital flight literature is based on the assumption that resident capital outflows adequately capture distortion-induced flows and that these signal changes in the level and efficiency of domestic investment. There is no sound basis for such an assumption. In a later section the components of resident capital outflows are discussed and show that the estimated capital flight consists of a normal component. If the normal component were a stable and steady function of a set of variables it would be easy to elicit the abnormal component but there is no reason to believe that capital outflows from an economy are stable over time.

Investors move their capital in response to the changing risk/return environment and real investment opportunities. This also occurs when firms transfer capital abroad to finance their operations. In addition, a second assumption that they have harmful effects on the efficiency of domestic investment is not supported by empirical evidence. Asymmetry in incentives faced by domestic and foreign investors and the possibility of substitution between different assets and

investors leaves the relationship between outflows of resident capital and domestic investment unclear.

Varman-Schneider (1991) discusses the problems in linking the definition of capital flight to some notion of welfare. The first problem is that economic principles assume that utility maximizing consumer behavior and profit-maximizing producer behavior accompanied by efficient distribution leads to maximum national welfare. Yet, in the case of capital flight, utility maximizing behavior of private capital exporters may lead to the creation of disutilities (Such as a decline in investment and growth) thereby resulting in a decline in national welfare.

This outcome is contradictory to accepted economic principles and makes the definition of flight in terms of national utility extremely contentious. The subjectivity involved in defining social return presents another problem. It is difficult to prove that social return on domestic investment would be higher than private returns. If, in reality, actual returns are equal to social returns then the hypothesis outlined in the national utility definition is correct. But if the perceived returns are higher than actual social returns, control of capital flight will lead to sub-optimal outcomes. Defining capital flight in terms of social return results in unavoidable subjectivity as measurement of social return is at best arbitrary due to human judgment/error.

2. Capital flight defined as a response to discriminatory treatment of domestic Capital

Traditionally capital flight was defined as a one-way flow caused by political and economic uncertainty. 4 The destabilizing effects of capital flight are then easily noticeable because of a real resource transfer. The debate on capital flight after the 1982 debt crisis departed from the earlier debate because empirical evidence in the late 1970s and after pointed to a new phenomenon: foreign borrowing flowing in and private capital moving out. The traditional definition had to be modified to explain this new phenomenon. A suitable definition of capital flight should then be able to explain two-way flows of capital in an unstable, uncertain environment and distinguish between "normal" and "flight induced" outflows of capital. If capital inflows are taking place it does not follow that the abnormal components of capital outflows is small or even zero. Movements of capital in and out of a country can occur in response to perceived changes in risk and return influenced by uncertainties not captured by portfolio theory. It is this component of the outflow that is termed capital flight. Capital flight is a sub-set of international asset deployments or portfolio adjustments undertaken in response to an unusual perceived deterioration in risk/return profile associated with assets located in a particular country that occur in the presence of conflict between the interests of asset holders and governments. Two-way flows of capital occur because of the differential impact on domestic and foreign investors arising from asymmetries in information, risk, return and the impact of political risk.

Capital flight, in this case, is defined as a response to discriminatory treatment of domestic capital. It is a component of private capital outflows. Capital flight can co-exist with massive inflows of capital. The latter may indeed be a source of finance for the outflow of flight capital. The paradox is explained by asymmetrical information, political and economic risk. Capital flight then, according to this definition, is one side of a two-way flow driven by the attempt to arbitrage a yield/risk differential. There are two categories here:

I) Resident outflows, which finance an inward flow of capital motivated by a desire to arbitrage a tax or risk differential. Capital flight from China is a good example of this. Resident capital comes back into the country in the guise of foreign direct investment.

II) Resident outflows that are financed by an inflow of external capital such as external borrowing to finance capital flight. Mexico is a good example of this type of capital flight.

In the late 1970s and early 1980s, external borrowing financed capital flight. Defining capital flight as outlined above is superior in that it distinguishes between the normal and abnormal component. The disadvantage in adopting this definition universally is that capital flight does not necessarily coexist with inflows of capital, nor is it the only type of capital flight that may occur. A point may be reached when inflows of capital from abroad tapers down or comes to a standstill. This event is likely to occur when foreign investors become aware that capital flight is taking place and see it as a sign of a potential risky country to invest in or - even without the knowledge of capital flight - perceive a deteriorating actual or potential investment climate. Alternatively, inflows of capital may have occurred because the government of a particular country offers special incentives and guarantees to foreign investors up until a point when the stock of liabilities to non-residents becomes sufficiently large for it to become worthwhile for the government to consider introducing taxes in order to remove the asymmetry between domestic and foreign investors. When the opportunities to arbitrage a risk differential become limited, credit to developing countries can decrease or stop altogether.

Another sub-set of two way-flows concerns outflows of capital finance and inflow. The case of Hong Kong and China are illustrative of this. At some point, it is possible that real capital flight takes place and the funds are no longer intermediated back into the economy. Defining capital flight as a response to economic and political instability has the advantage that it encompasses both a one-way or two-way flow. Reduction of the former entails an improvement in the overall investment climate. A reduction in the latter implies removal of the factors leading to discriminatory treatment of domestic capital. The situation can also change over time from one to the other. The very magnitude of resident capital outflows from developing countries suggest they cannot be interpreted as capital

flight in terms of real resource transfer. Difference in regions and countries could account for a wide range of factors affecting these outflows and inflows.

3. Defining Capital Flight as an Illegal Transaction

Capital flight is often defined as an illegal transaction which occurs when traders keep capital abroad by the falsification of trade documents. Capital flight can be transacted by deliberately underinvoicing exports and/or overinvoicing imports. Bhagwati (1964) and Bhagwati, Krueger, Wiluswadia (1974) regard the occurrence of capital flight through the faking of trade documents as a consequence of exchange controls in LDCs. Under this interpretation capital flight only occurs when domestic investors transfer illegally earned foreign exchange abroad. The purpose of the transfer is assumed to be a desire to avoid investments in the domestic financial market. Confining the definition of capital flight in this way is very restrictive as it ascribes the occurrence of capital flight to one channel – trade and, as a consequence, only to one group of transactors - traders. However, the agents transferring money abroad may not only be traders. It is well known that during the debt crisis capital flight transactions were not just carried out by, but other private investors as well. Therefore, restricting capital flight to an illegal transaction captures only a small component of total flight capital.

Capital flight can also be transacted through several other channels such as cash movements or smuggling of goods, antiques, precious gems, gold, silver and other precious metals. Bribery may be another conduit for capital flight and has a special feature: the capital involved need neither originate in the country concerned nor enter the country at all. The e corruption of government officials and politicians in various arms deals is well known. Bank transfers and swap arrangements are also possible channels for transferring money abroad. A
Further drawback of this definition is that it may include earnings kept abroad to evade quotas and tariffs. They are included in the estimation even though it is not possible to measure them statistically and it is therefore not possible to distinguish between the flight component and the component due to such evasions.

Thus we have the following definitions of Capital Flight in a nutshell:

(I) "Outflows from developed countries are called foreign investment while from developing countries the same activity is called capital flight. Investors from developed countries are seen to be responding to investment opportunities while investors from developing countries are said to be escaping the high risks they perceive at home...

"Thus, CAPITAL FLIGHT can therefore be defined as the acquisition or retention of a claim on non-residents that is motivated by the owner's concern that the

value of his asset would be subject to discrete losses or impairment if his claims continue to be held domestically (Deppler & Williamson, 1987)."

(ii) CAPITAL FLIGHT [is defined as] International capital movements which respond to heightened domestic economic and political uncertainty..., CAPITAL FLIGHT responds to the degree of domestic macroeconomic mismanagement, postulated to generate a domestically undiversifiable risk that can significantly reduce the returns to local investment."
Schineller, 1997b, p.1.

(iii) "The problem [of assessing] CAPITAL FLIGHT is to measure the accumulation of claims of nonresidents that are not subject to taxation, regulation, or, in extreme circumstances, confiscation by domestic governments."
- Dooley & Kletzer, 1994, p.4

The three quotes above present a useful illustration of the main difficulties which beset the problem of defining of capital flight.

Four distinct types of private sector acquisition of overseas assets should be distinguished.

First, there is direct investment overseas by larger domestic companies resident in developing countries. This may reflect

- their 'newly industrializing' status (such as firms from Korea, Taiwan, Malaysia and Mexico investing manufacturing plant in the US and the EU);
- companies seeking the means of market access to developed countries markets (such as oil company acquisition of distribution networks); or
- Emerging regional patterns of investment such as those of South Africa, Brazil in Mercosur and India in South Asia.

Further, as local banks grow in size and experience, they can be expected to lend abroad, particularly to neighboring countries. This is an entirely natural development and clearly should not be restricted.

The Latin American experience in the 1990s is particularly notable, following the East Asian FDI outflows of the 1980s. UNCTAD estimates "assets held abroad by firms headquartered in [Argentina, Chile, Mexico and Brazil to be] between $40 and $50 billion" (UNCTAD, 1999, p.66). While there have been losers – notably sub-Saharan Africa – the overall picture is one of increasing outward FDI, including from the least developed countries.

Second, there is the justifiable diversification of financial portfolios away from domestic assets in order to reduce the risk inherent on exposure to domestic assets, particularly when local capital markets are narrow and shallow. In this way savings can be protected from domestic business cycles and exogenous

shocks. One good example of this is the policy of some natural resource exporters (primarily oil producers but also some mining economies) to acquire substantial overseas assets as a buffer against future declines the quantity or price of their exports; when investment in their own economies would face the barriers of limited adsorptive capacity and pro-cyclical valuation. Another is the problem of large pension funds in developing countries, where the regulatory restriction of their portfolios to domestic investment grade assets limits them in effect to a few large domestic firms and government bonds. They are thus highly vulnerable to volatile domestic markets; and would benefit from being allowed to invest abroad in (say) US Treasury Bills – which would in effect increase the country's foreign reserves.

Third, there is the acquisition of overseas assets for the purpose of evading the proper exercise of the powers of domestic authorities. On the one hand, developing country treasuries find it very difficult to tax overseas assets effectively, particularly because they do not enjoy full exchange of information with host countries. Thus the larger wealth holders in developing countries are attracted towards overseas assets in order to evade tax – even though this involves breaking the law. On the other hand, the proceeds of criminal activity – particularly the proceeds of narcotics deals, arms trade and smuggling - but also 'commissions' on government procurement and the like, are commonly held abroad in order to avoid the attention of domestic authorities.3 Offshore financial centers are a major recipient of capital flows from developing countries in this category and, as in the case of developed countries, their activities present a serious problem for fiscal and law enforcement.

Fourth, the shift from domestic to overseas assets in order to avoid imminent loss of ownership or value. The former eventuality refers mainly to the prospect of nationalization of large land holdings or key firms (such as banks) by radical regimes. This has become less significant since the end of the Cold War, but is still relevant when there are major regime shifts or immigrant communities are threatened. The latter eventuality is probably more common, and occurs when the prospect of an economic collapse (particularly a large devaluation) or of the outbreak of conflict leads wealth holders to anticipate a sharp decline in asset values. In this context, it should be noted that industrialized countries themselves have always imposed capital controls in wartime and that there is wide recognition that crisis management may require similar action.

The first and second categories above tend to strengthen the developing economy and reflect a beneficial participation in the process of globalization. The overseas asset acquisitions should be reported in the balance sheets of firms, banks and funds in the usual way and subject to appropriate prudential supervision by the financial authorities. In marked contrast, the third and fourth categories above can be properly described as 'capital flight': they are essentially matters of the placing of personal wealth beyond the reach of the appropriate authorities and are thus a cause for concern.

Finally, it should be noted that not all capital flight is 'lost' to the home country. In many cases (including those of China, Mexico and Russia in particular) flight capital is actually re-invested in the country of origin. The explanation is that in this way a domestic investor can gain both tax exemption and the protected status of foreign investor.

The term capital flight connotes illegal movements of capital from one country to another. This connotation implies that there may be 'normal or "legal" and "abnormal" of "illegal" flows (Kindle Berger, 1987). Normal capital flows are those which are sanctioned by the Govt. the question of legality of capital flows, then implies that the country in question imposes exchange or capital controls, the fact that complicates the issue of "capital flight". For instance, it is argued that capital flight has taken place even in countries that have no capital control such as Argentina, Mexico and Venezuela (Lessened &Williamson, 1987). Hence labeling capital outflows from such countries as 'capital flight" while similar flows from industrialized countries as "resident foreign investment" is arbitrary.

However , Lessened &Williamson, refers to "capital flight" as capital that "runs away" or 'flees' abnormal risks at home regardless of whether or not the flight is legal. Measuring capital flight, thus defined, requires an attempt to measure 'normal" capital outflow and deduct it from total outflow. Dooly (1986) attempted the measurement of abnormal outflows defined as those propelled by the desire to escape the control of domestic authorities corresponds to the concept of capital fleeing abnormal risk at home (however his method of measuring "normal" capital flows has generated controversy)

But there is no significant way scientific way of separating "normal "from "abnormal" flows. In addition the consequences of capital outflow to the national economy are the same whether the outflow is normal portfolio diversification or abnormal flight. If the normal outflow is small the resulting economic cost from the resident capital outflow will be modest. However, the cost will escalate when normal capital outflows are reinforced by money running away from abnormal risks at home.

1.4 THE UN AND CAPITAL FLIGHT

The UN general assembly at the 2005 World Summit resolved to "support efforts to reduce capital flight and measures to curb the illicit transfer of funds."

Research by the Tax Justice Network has revealed that the amount of funds held by individuals in offshore and onshore tax havens, and undeclared in the country of residence, is about $11.5 trillion. This estimates capital flight from all countries, and not only from developing countries. Annual worldwide income on such undeclared assets is estimated to be about $860 billion, and the annual world wide tax revenue lost is approximately $255 billion. That figure is equal to the annual funds needed to reach the UN's Millennium Development Goals.

Onshore tax havens include financial centers which are important members of the IMF, such as Luxembourg, Switzerland, the United Kingdom and the United States. Offshore tax havens include jurisdictions monitored by the IMF in its Offshore Financial Sector Assessment Program. Capital flight exacerbates the problem of emerging market countries being net capital exporters. The IMF itself has expressed concern over this issue "in light of the conventional wisdom suggesting that capital normally flows from capital rich to capital-scarce emerging markets".

The United Nations has emphasized the need for developing countries to mobilize domestic resources for development, and has spoken out against capital flight. The 2001 UN report by the high level panel on financing for development 2001 (also known as the Zedillo report) stated "... globalization has progressively undermined the territoriality principle on which traditional tax codes are based. Developing countries would stand to benefit especially from technical assistance in tax administration, [and] tax information sharing that permits the taxation of flight capital."

Previously, many countries relied on exchange controls to try to prevent capital flight and resulting tax evasion. The increasing liberalization of economies and the resulting relaxation or dismantling of exchange controls has raised the question of how countries can combat capital flight. The liberalization of economic activity, resulting in the exponential increase in cross-border commercial and financial transactions, has converted the private sector into a world without borders. This has created a major problem for national tax authorities since it has not been accompanied by similar changes in their enforcement powers. The answer is to override bank secrecy in onshore and offshore financial centers, improve tax administration in developing countries, and further implement international exchange of tax information.

In a joint IMF-OECD-World Bank paper in March 2002, the three organizations indicated that they would assist developing countries in improving the effectiveness of their tax administrations, with the goal of increasing government revenues. "Developing countries must be able to raise the revenues required to finance the services demanded by their citizens and the infra-structure that will enable them to move out of poverty. Perhaps the greatest challenge facing these countries is to improve the effectiveness of their tax administration. In this context, the increasing globalization of the economy is relevant both for developed and developing countries. The constraints that it places on countries' ability to set and enforce their own taxes are felt increasingly keenly."

1.5 RESEARCH GAP AND EXPECTED CONTRIBUTION

In most cases the empirical studies on the determinants of capital flight implicitly use a portfolio model to decide which variables should be taken into account. Almost all studies estimate a reduced form equation. Consequently, this leads to equations of a rather *ad hoc* nature, which in a way is a shortcoming of the empirical literature on capital flight. Only Lensink *et al.* (1998) aim at estimating a full portfolio model, in which capital flight is taken into account as one of the assets, and which allows for investigating the simultaneity of different effects between different variables.

Most studies estimating a reduced form equation apply OLS. In some cases the empirical studies deal with time series, in other cases they use pooled regressions. As was already mentioned, most cases empirical studies implicitly use a portfolio model to decide which variables should be taken into account. If we take the different categories of determinants of capital flight as discussed in the previous section, the following broad picture emerges.

With respect to *macroeconomic instability*, one or more variables such as exchange rate overvaluation, government deficits, the inflation rate, and current account deficits appear in almost all studies. In particular, measures of the degree of exchange rate overvaluation are prominently present in these studies. The results of the empirical investigations indicate that macroeconomic instability causes capital flight. In most specifications variables measuring the extent of macroeconomic instability are statistically significant and positively related to capital flight.

Few studies focus on measures of *political instability* as determinants of capital flight. Several kinds of measures have been used. In some cases, the empirical investigations focus on the regime type as measure of political instability, using different dummy variables that proxy for the degree of democracy of a country. Other studies use dummy variables to measure issues related to the policy regime, such as indexes of civil rights and liberties. Still other studies use more direct measures for political instability, such as the number of assassinations and revolts, dummies for the fact that a country has been involved in a war situation.

In many studies, *capital inflow* variables are taken into account. In several cases these capital flows have been split into one or more forms of inflows. In particular, research has focused on investigating the impact of long-term versus short-term foreign debt. A few studies have also investigated the role played by aid flows. Among others, Bauer (1981) argues that development aid would be used to finance capital flight. The table shows that especially long-term debt inflows have a statistically significant influence on capital flight. The hypothesis put forward by Bauer on the relationship between aid and capital flight is supported in some of the studies surveyed.

Recent turmoil on emerging markets in recent years has prompted new interest in capital controls. Capital controls are permitted under the IMF Articles of Agreement - specifically Article VI, Section 3. Article VIII only requires member countries to avoid imposing restrictions on current account transactions, such as those related to trade in goods and services and the remittance of profits and dividends. Almost all IMF members, mainly developing countries but also industrial ones have imposed some capital account controls since WWII. Such controls are imposed with the objectives of limiting the acquisition of foreign assets by domestic residents and moderating or eliminating short-term speculative capital flows during and after a balance of payments crisis.

Much of the recent interest has been on restricting capital inflows (see FitzGerald, 1999) in order to prevent speculative 'bubbles'. The extensive literature for the industrial and developing countries (Dooley 1995, Gros 1987; Obstfeld, 1995, Eichengreen and Mussa, 1998) suggests that the government can drive a significant wedge between domestic and international yields on similar short-term financial instruments for extended time periods. In the five cases (Brazil, Czech Republic, Colombia, Malaysia and Mexico) during the 1990s examined in Glick (1997) the composition of flows has been effected by the lengthening of maturities, particularly in the cases of Chile, Colombia and Malaysia where the controls have been accompanied by an active monetary policy.

Quantitative restrictions have typically involved limitations on external asset and liability positions of domestic financial institutions (especially banks); on the domestic operations of foreign financial institutions; on the external portfolios, real estate holdings or direct investment of non-bank residents. Often the type of instrument to be used is controlled rather than the volume - such as restricting the ability of domestic borrowers to issue bonds on international markets. The difficulty with quantitative restrictions is that their scope and application will be uncertain, introducing an unknown element of investor risk, and amplifying the opportunities for corruption. In addition, the ability of even honest administrators to keep up with new forms of derivatives is limited.

Another notable fact is that none of the study is done considering the south Asian countries, viz. India, Pakistan, Bangladesh, Nepal, Bhutan and Sri Lanka from where a significant amount has flown out illegally to the industrialized nations of the west and in US. The present study tries to capture this gap by estimating the amount of flown out capital from these countries following different methodology of measuring Capital Flight. The relation between Capital Flight and the openness (total trade as a proportion of GNP)is shown for all the selected South Asian countries which helps to explain the fact that whether Capital flight has been influenced by increased international transaction after the era of Globalization or more out ward orientation

The various definitions of Capital Flight also explains that there is a link among External Debt, Price Index (Inflation level), Overall Balance position, Growth Rate with the estimated amount of Capital Flight other than Openness Index. This link is also explained in this study. The domestic macro problem, like capital account liberalization, has also influenced outflow of capital.

A few studies, discussed earlier, only mention the interlinked relation between Capital Flight and general Income Inequality of the nations. Present study tries to capture this important link by analyzing the inequality indices, like Gini and Theil index. The correlation among Openness- Growth Rate- Inequality is analyzed in this study, which remained nearly untouched in other studies so far. The well-known link between inequality and poverty is also explained in the light if the experience of the six selected countries and the derived result is compared with the experience of the other countries of the World. Global income share at different percentile levels, in this respect, are compared with the income share of the selected six countries. This gives an idea of unequal distribution of income, which in some sense motivates Capital Flight from these countries.

An extended empirical study is conducted in order to find out the growth-inequality nexus and to relate this with the flight of capital from these six countries. Here a comparison is also drawn with that for the rest of the world where also we have the same experience that capital flight necessarily aggravates poverty.

1.6 RESEARCH QUESTIONS

The present study tries to deal with the following research questions to satisfy the relevancy of the study:

1. How does the openness index (defined as total trade as a percentage of GNP) is linked with Capital Flight?
2. In what ways international trade and financial crises influences outflow of capital from developing countries?
3. How do domestic macroeconomic problems fueled capital out flows?
4. How capital flight does affect income distribution, especially in developing countries?
5. What are the different channels of affecting inequality through capital flight?
6. Why does the inequality and capital flight link matter?

1.7 HYPOTHESES TO BE TESTED:

In course of our research investigation we would like to test the following hypotheses relevant for our purpose:

i) The first hypothesis is that, the quantum of capital flight increases out of fear of domestic currency devaluation. The amount of capital flight is measured as a proportion of GNP and this is estimated for the six South Asian nations.

ii) Secondly, the relation between capital flight and openness index is established. How the other determinants of capital flight (influencing factors) are also correlated that is shown in the study. The relation among capital flight with external debt, price index, overall balance position and growth rate of GDP is captured here.

iii) The third hypothesis we want to test is that, capital flight mostly from developing countries to the developed nations may be due to political or financial crisis and macroeconomic instability. The testing of this hypothesis will be done with the help of historical data of those developing countries experiencing such a crisis.

The model finally selects four factors:

1. Investment return in home relative to the rest of the world.
2. Investment risk in home relative to the rest of the world.
3. The degree of co-movements between investment return at home and in abroad.
4. The ratio of foreign owned to domestic- owned wealth.

The Net Foreign Asset (NFA) is negatively related to the measure of domestic investment return and to the ratio foreign to domestic wealth, and NFA is positively related to measure of riskness.

The others hypotheses are (with the previous three):

iv) Capital flight is directly related to External Debt of the Nation.
v) The process of liberalization has influenced capital flight.
vi) Capital flight has a negative impact on income distribution.

Finally the openness—growth – inequality link is searched with that of capital flight for these countries. In order to find out this link the causal relation between inequality and poverty is explained also. The poverty inequality nexus is linked with the capital flight to show that capital flight necessarily affects poverty and in some cases it helps to increase poverty.

The study will also find the relation of Capital Flight with the other determinants of capital flight like, macroeconomic instability, amount of capital inflows, amount of capital outflows, public policy uncertainty etc.

Mainly OLS method will be followed to fit the linear equation stated earlier

1.8 REVIEW OF RELATED LITERATURE

The private benefit from access to international capital markets for both savers and borrowers and is a basic conclusion of welfare economics. Free capital movement tends to allocate to its most productive uses across countries and allow the residents of different countries to engage in welfare improving intertemporal consumption smoothing. Economic theory suggests that exception to this general rule is possible in cases in which pre-existing distortion violate the assumption necessary to support the "first-best" situation. Such "second best" argument is to be dealt with. If the economy is assumed to suffer from one distortion it is possible to improve welfare through the introduction of another distortion. One conclusion can be drawn that an ideal govt. dealing with one clear distortion can improve welfare by intervening in international capital markets (ICM). But not all arguments for govt. intervention in ICM are based on second best consideration. The govt. constraints on capital mobility may be welfare reducing areas in cases in which stable multiple equilibrium are possible. Thus first best equilibrium is possible through govt. intervention in ICM.

The Mudell-Fleming model is a good place to start an assessment of what the literature has to offer in evaluating policies that affect ICM. The M-F model stars from the assumption that policies designed to stabilize economic activity are useful and welfare improving. Further, the govt. values the ability to distort domestic spending decisions by altering the real interest rate in order to influence the growth in output and the rate of inflation. In this literature the primary existing distortion is the slow adjustment of nominal wages and prices. It follows that the assumption of flexible nominal prices eliminates the distortion and the rationale for welfare improving capital controls. If capital is free to move across national boundaries and the nominal exchange rate is fixed or heavily managed, the govt. loses control over domestic monetary conditions. If the exchange rate is not managed monetary policy still be under constraint of capital movements, because changes in domestic interest rates can generate large changes in nominal and real exchange rates. In contrast fiscal policy is a powerful tool for stabilizing domestic output even if capital markets are highly integrated. This theory provides criterion for evaluating the optimality of capital account restriction

Branson argues that existing capital control imply that govt. faces constraints on the application of fiscal policy for stabilization. It follows that removal of capital

controls may not be optimum unless the constraints on the effective utilization of fiscal policy are first eliminated.

The M-F model provides a rationale for manipulating domestic interest rates, but it also suggests that the ability to pursue monetary policy independently over time is strictly limited. Thus effective control after the mechanism through which an inconsistent regime is forced to collapse, but they do not change the eventual result.

Krugman (1979) provide models of speculative attacks against the consistent policy regime when capital is internationally mobile. In order to finance the fiscal deficit a govt. might set a rate of growth for the domestic asset of the central bank that is consistent with the fixed nominal exchange rate and the growth in them demand for money. With perfect capital mobility and purchasing power parity, the demand for real money balances is predominant so that the increase in the domestic part of the monetary base is instantly offset by changes in the international reserves. The key feature of the speculative attack models is that the private sector can no longer adjust its money holding by trading private debit for foreign exchange or in turn trade the foreign exchange for doestic money. With capital control, the private sector can adjust its money holding only through net sales or purchase of goods and services with the rest of the world. Thus the evaluation of capital control requires a model of current account, because the private sector's willingness to distort its consumption over time is probably limited. Effective capital control might considerably extend the life of an inconsistent regime.

Delbecque (1993) develops a model of dual exchange rate system. In this model all private capital transactions are effectively limited to the financial foreign exchange markets. As govt. does not participate in this market, the net private capital flows are necessarily zero. Current account transactions are permitted in the commercial exchange market. The govt. intervenes to fix the exchange rate in this market. An important implication of this model is that private net intertemporal trade is matched by a secular change in govt. net international reserves. I.e. govt. acts as a financial intermediary in a system with capital control. The inconsistent policy setting causes deterioration in the current account that eventually exhausts govt. stock of international reserves.

Gross (1992) points out that while cap. Control can limit private sector speculation in most cases, govt. is forced to augment cap. Control program with domestic interest rates that are much higher or lower than would be the case in the absence of speculative pressure. In this set up govt.'s commitment to maintain the peg can easily be monitored by the private sector as it is revealed in the interest rate policy. When the govt. reveals that it unwilling to sacrifice control over domestic interest rates, the private sector will know that a small speculative attack (with low cost of avoiding the capital control) will be successful. The welfare effect on control is not well defined.

Wyplosz (1986) argues that capital control that is only temporarily effective, make an adjustable peg regime viable. Capital control plays a vital role in this system. The crisis in this model comes when non-residents believe that selling off all their holdings of domestic money will trigger a devaluation or revaluation of nominal exchange rate. At this point the central bank announces a discrete change in the parity. He does not assess the optimality of this model.

Calvo (19870 develops a model with the issue of the behavior of private sector where it is known that the regime is inconsistent and will be abandoned when the govt. exhausts its international reserves. The model predicts that in cases in which successful speculative attacks are expected, public will increase its consumption, i.e. a current account deficit, until the regime changes and then decrease consumption thereafter. The key of this result is that, after the attack, revenue from inflation must rise to balance the fiscal budget. With higher rate of actual and expected inflation, optimum real money demand falls, and so the marginal utility of consumption just before the crisis must be less than the marginal utility of consumption just after the crisis. It makes clear that as a distortion in the time profile of consumption is suboptimal, there must be some offsetting benefit of extending the life of the inconsistent regime.

According to Park (1994) if the domestic real interest rate is initially below the world rate, the initial result of liberalization is an incipient net capital outflow and a rise in the domestic real interest rate. It assumes that the increase in the debt service cost of the govt.'s domestic debt will be met by an increase in the growth in the domestic asset in order to finance the resulting fiscal deficit. If the liberalization is a surprise, foreign and domestic yields equalizes immediately. If a speculative attack is to be successful, the private sector reduces the demand for real money balances because of the higher rate of inflation, which follows the successful attack.

Adams and Greenwood (1985) summarize the effect of capital control in flexible price system. They said that, dual exchange regime is equivalent to a program of taxation of capital movements, and a restriction on capital movement is equivalent to a system of taxes or dual exchange markets. They show that any effective capital control program can be manipulated to attain govt.'s target for the current account balance. Finally, the govt.'s manipulation of the current account balance generates

Welfare loses that are analogous to those associated with restriction on temporal international trade. Distortion of relative prices are necessarily welfare reducing. Optimal second best control programs are possible only in cases where there are some pre-existing distortions to interest rate or prices.

A stylized fact associated with liberalization of control over capital flows among developing countries is that the resulting adjustments include suboptimal

appreciation of the real exchange rate. This appreciation may be an undesirable feature of an open capital market if temporary relative price changes and allocation of resources are welfare reducing. Krugman argues that temporary appreciation of the real exchange rate may permanently injure the export industries. Thus capital mobility should be limited until policies designed to offset the real exchange rate changes are in place. The obvious choice to combat the effect of capital inflow would be a reduction in govt. spending.

Sussman (1992) uses the version of Dornbusch to explain the unsuccessful liberalization of capital account in Israel in 1977. Liberalization here takes the form of eliminating controls supporting a tax on domestic asset yields and domestic bank loans. He presents evidence that the controls in place generated large differentials between onshore and offshore lending and deposit rates in Israel, both before and after liberalization. The lesson from this model is that the liberalization itself generates inflationary shock to the economy and a temporary distortion of the prices. An appropriate fiscal policy could minimize this damage. But if the fiscal system is unable to respond (due to elimination of subsidy) the liberalization will involve short-run cost.

Edwards (1989) considers a model with an export, import and a non-traded good. In such a model, capital flows related to liberalization of capital account can generate real exchange rate changes because excess demand for the home non-traded good can increase its nominal price while the price of the traded goods is determined in the world market. He also shows that capital account liberalization in the face of trade distortions can be welfare reducing. The intuition is that tariff can distort investment decision and capital control can offset this distortion.

Calvo (1988) develops the idea that any govt. policy that affects relative prices and is expected to be temporary is equivalent to a distortion of intertemporal relative prices. e.g. temporary tariff reform implies that the relative price of traded goods will change when the liberalization is abandoned. In general liberalization of capital account is not a good idea if the govt. really has reformed but the private sector does not find its commitment credible.

Rezin and Sadaka (1991) argue that empirical estimates of capital flight from developing countries suggests that govt. cannot tax its residents' income from foreign capital at the same rate at which it taxes domestic capital income. In their model it is optimal for the govt. to restrict capital outflows if it cannot tax foreign assets. Dooly and Keltzer (1994) argue that simultaneous gross capital inflows and outflows are frequently the response of private investors to a variety of govt. guarantees and subsidies. If it is not possible for the govt. to credibly refuse to grant subsidies, quantitative restriction on some capital outflow and inflow can be welfare improving. It is necessary to limit offsetting private capital outflows through a capital control program. They suggest that, because investment growth

benefits future generation the present generation might invest at a sub-optimal rate. But, if the govt. has the tool and wisdom, it might be able to attain a superior equilibrium by borrowing on ICM. During the transition it is necessary to prevent private capital outflows which the current generation finds optimal.

Frankell and Rose (1996) present evidence that successful speculative attack is less likely to occur in countries with a relatively high share of direct investment inflows. One interpretation is that, in countries where foreign investors bypass domestic financial markets (particularly banks) foreign savings are more likely to be transformed into productive capital. It tends to support the view that imperfections in domestic financial markets justify measures that discourage portfolio capital flows.

The role of capital control is also problematic because self-financing attacks can go in opposite direction. E.g. a spontaneous decline in private inflationary expectations could set in motion a sequence of falling interest rates and fiscal deficit that generates a good equilibrium. Laban and Larrain (1993) argue that removing control on capital outflows generates capital inflows, because control on outflows makes investment irreversible. Thus, by altering expectations concerning terms on which investment can be reversed, the decontrol of capital flows helps to generate welfare-improving capital inflows.

Gross (1987) reports spread between euro-currency and domestic deposits for Italy and France from 1997—1986. He says these differentials (nearly 24 %points) predict that controls are temporarily effective in restraining large changes in investors positions. i.e. in time of turbulence in the ERM , private speculators were not able to adjust their position without cost. Nevertheless, the interest differentials rapidly returned over longer horizons to very low levels. Similar evidence for 5 industrial countries from 1982—1992, given by Obstfeld (1995), showed that then link between offshore and onshore markets are very close but the data also show that actual govt. intervention remain a significant factor in time of turbulence. These data rejects the view that capital controls are always ineffective. However, the data also suggests that either the govt. involved quickly removed the incentives for speculation through policy changes or speculators retreated to await another attack.

Melvin and Schlagenhauf (1994) find that in the early 1980s controls had a significant effect on capital flows in Mexico. In considering the same point Spiegel (1990) also finds that political risk was important but estimates it to have the opposite sign of that reported in the M&S. Both papers indicate that the controls in place were effective.

Edwards (1989c) provides a qualitative evaluation of capital control programs leading up to 34 devaluations in developing countries. He concludes that govt. typically intensified their control programs in the year before devaluation. In most cases the financial rate premiums in most cases increased sharply in the one or

three months before the exchange crisis led to devaluation. Nevertheless, the data for these same episodes show that current account weakened and reserve asset declined despite the controls. During the episodes of capital outflows in response to increased risk from inflation and default risk, countries with capital control did not did not prevent capital flight. At the same time the private sectors' reaction to a deterioration of the fundamentals was delayed.

The findings of Alesina, Grilli and Milesi-Ferretti (1994) suggest that countries with strong govt. dependent central banks are likely to utilize controls, presumably to generate revenue from inflation and to reduce real debt service.

The important point is that direct investment and other international capital transactions might be welfare improving even if no capital flow is associated with free trade in financial services. Obstfeld develops the idea that closed international credit markets might be very unlikely to finance high-risk investments because of risk aversion among domestic savers and the inability to diversify within the domestic markets. If high risk investment projects also have relatively large payoffs in term of endogenous economic growth, the closed capital market implies that the growth rate of the country is limited. Opening the capital account in this model allows non-resident investors with lower levels of risk aversion to hold high- return investments in the country while residents hold relatively safe foreign assets. Thus, with no net capital flow, domestic savings are channeled into investments that generate a higher growth rate. The welfare benefit of a higher growth path can be very large.

Partial Equilibrium. Models of the potential benefits for the investors of greater access to equity markets in developing countries also suggests that significant welfare gains are available. These models employ an international capital asset pricing model to evaluate the possibility that opening equity markets would improve the risk return trade-off faced by an investor currently limited to industrial country equities. Several analyses suggest that existing controls have had significant effects on yield of equities and that removal of such restrictions would benefit investors.

Capital flight is usually a symptom rather than a cause of financial crisis. Occasionally, however, rumors of a devaluation can trigger capital outflows. Expectations of devaluation can become self-fulfilling, as depletion of the central bank's reserves for to devalue. In these cases capital flight becomes a source of financial instability, much as withdrawals by worried depositors can cause an otherwise sound bank to fail.

Not surprisingly, episodes of capital flight are most frequent when exchange rates are unstable. In the twenties and thirties demise of the gold standard led to numerous speculative attacks on the French franc and German mark. When the Bretton Woods system of fixed exchange rates began to break apart in the late

sixties, the United States tried to defend the dollar with capital controls and by refusing foreign banks' demands to convert dollars to gold. (U.S. citizens were already barred from owning gold.)

After exchange rates were set free in 1973, the U.S. dollar replaced gold as the flight vehicle of choice. Convertible to most currencies, dollars also earn interest in convenient offshore or Eurodollar account. Since the Third World debt crisis in the eighties, the term "capital flight" has been applied more broadly to capital outflows from residents of developing countries. One reason that capital fled the debtor countries is that domestic investors felt their government would give precedence to its foreign rather than its domestic debt obligations. This situation contrasts with the earlier experience with direct foreign investment, when domestically owned assets were considered safe from expropriation while foreign-owned assets were at risk.

Offshore holdings are notoriously difficult to measure, so economists simply subtract foreign currency payments for imports, debt service, and additions to official reserves from total sources of foreign exchange (exports, borrowing, investment by multinationals, etc.). The difference—unaccounted-for dollars—is called capital flight.

Using this broad measure, the International Monetary Fund estimates that citizens of developing countries amassed about $250 billion worth of foreign assets between 1975 and 1985 (compared to a total foreign debt of $800 billion). Although Mexico had the largest dollar total ($40 to $50 billion), Venezuela's and Argentina's holdings were a larger proportion of national income (nearly equal to their foreign debt). Indonesia, Nigeria, the Philippines, and even South Korea also had substantial capital outflows during this period.

This second type of capital flight superficially resembles the classic variety of currency speculation. It is often most intense during periods of currency overvaluation or just after an exchange rate crisis, for example. But unlike "hot money" these funds tend to remain abroad after the currency crisis ends. The driving force behind these outflows is generally a perceived decline in the return, or an increase in the riskiness, on long-term assets held in the country. A loss of confidence may be caused by an excessively large foreign debt burden, large fluctuations in commodity export prices, or chronic government mismanagement of the domestic economy. Interestingly, though, nationalization was not a major cause of rapid capital outflows. The reason is probably that most nationalization was of foreign-owned assets rather than assets held by the country's residents.

This flight capital is held offshore until conditions improve or until the source of uncertainty is resolved. The tens of billions of dollars that fled Mexico in the early eighties, for example, did not begin to return until 1990, after Mexico got debt relief under the Brady Plan, committed itself to liberalizing trade and finance, and announced it would sell the banks it nationalized in 1982. All of these measures

helped to restore confidence in domestic financial markets and reduce fears of recurrent external debt crises.

While exporting countries often exaggerate the harmful consequences of capital flight, there are some legitimate areas of concern. Unlike movements of capital from Texas to New York, rapid international capital flows can disrupt financial markets and raise interest rates by causing unanticipated exchange rate movements, especially in small countries. Also, an unknown fraction of international funds transfers is due to tax evasion or to efforts to conceal illicit gains or embezzlement of public funds. The foreign holdings of the Philippines' Marcos family fall into this category. The use of offshore banks and Swiss accounts for tax evasion and money laundering taints all international capital flows to some degree.

Legitimate or not, once it starts there is no easy cure for capital flight, and preventive measures often having unpleasant side effects. Following the financial instability of the interwar period, currency speculation was reduced by fixing exchange rates and changing them very infrequently. The International Monetary Fund was set up to assist countries that ran into foreign exchange problems. This system fell apart in the early seventies, but some countries are still trying to return to fixed rates on a more modest scale (those joining the European Monetary System, for example).

When fixed exchange rates fail, governments often resort to capital controls, as the United States did in the sixties. Imposing controls during or just after a capital flight episode, however, is a little worse than closing the barn door after the horse has fled. Controls further reduce confidence in local financial markets and make capital that has flown less likely to return. Capital controls encourage black markets for foreign currency and other costly methods of evasion. Those who import or export goods can also export money by simply overstating the value of the goods they import or by understating their export earnings. Even the most draconian measures to limit capital flight often fail. Capital flight from the Weimar Republic continued in 1931, despite the fact that capital expatriation was made an offense punishable by death.

Another strategy that governments can use to limit capital flight is to make holding domestic currency more attractive by keeping it undervalued relative to other currencies or by keeping local interest rates high. The drawback to this approach is that raising interest rates and making imported equipment more expensive can reduce domestic investment. A more sophisticated defense against hot money flows, but one that is harder to execute, is for the central bank to occasionally turn the tables on speculators.

A classic "squeeze" of this type was engineered by Lazard Frères for the French government in 1924. Using a $100 million loan from J. P. Morgan, they bid the franc from 124 to 61 per dollar in a few weeks. Speculators who had sold the

franc short in the expectation that its value would fall were hit by big losses. Italy, the United States, and Sweden have also used this unexpected intervention tactic from time to time.

Yet another option is to reduce the tax benefits of capital flight by having rich and poor countries adopt new tax treaties and exchange data on income paid to foreigners. The U.S. Government's termination in 1984 of the 30 percent withholding tax on U.S. portfolio income paid to foreigners and a similar lack of reporting by European governments are often blamed for encouraging capital outflows to those countries. But offshore tax havens and international competition for capital make new tax treaties unlikely.

In the end the most practical strategy for reducing capital flight is for governments to pursue fiscal and monetary policies that minimize the need for large changes in exchange rates. Agreements among countries and central banks can add to the credibility of these commitments. Tax evasion can be reduced by relying more on consumption or sales taxes and less on taxes on interest and profits. Developing countries in particular can also promote the development of domestic financial markets and trade in assets that offer investors a "safe" alternative to foreign assets. Brazil used this strategy with some success before 1988. Small countries with limited domestic financial markets and currencies that are more vulnerable to external shocks can hold a portfolio of foreign assets and try to diversify their exports over the longer term. During the seventies Indonesia, Kuwait, and tiny diamond exporting Botswana, among others, used international financial markets to smooth their volatile revenues from commodity exports.

Overview of empirical studies on the determinants of capital flight

Author(s)	Methodology	Countries	Sample period	Estimation technique	Main determinants tested
Cuddington (1986)	Hot money	Argentina, Brazil, Chile, Korea, Mexico, Peru, Uruguay and Venezuela	1974-82	OLS	*REER* (+/–), *FINC*, *RINTR*, *RINTRF*, *INFL* (
Cuddington (1987)	Hot money	Argentina, Mexico, Uruguay and Venezuela	1974-84	OLS	*REER* (+), *RINTRF*, *INFL*
Dooley (1988)	Dooley	Argentina, Brazil, Chile, Mexico, Peru, Philippines and Venezuela	1977-84	OLS (pooled) with instruments	*INFL* (+), *FINC* (+), *PR* (–)
Kelkar and Kelkar (1989)	Hot money	Argentina, Brazil and Mexico	1977-86	OLS	*RINTR*, *RINTRF*, *INFL* (+), *REER* (+), *DUM* (+), *SPREAD*
Pastor (1990)	Residual	Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay and Venezuela	1973-87	OLS (pooled)	*INFL*, *FINC* (+), *REER* (+), *BUDDEF* (+), *YG* (–), *TAXGDP*
Mikkelsen (1991)	Weighted average of residual and hot money	22 LDCs	1978-85	OLS (pooled)	*YG* (–), *E (FINC)* (+), *BUDDEF* (+)
	Weighted average of residual and hot money	Mexico	1976-85	OLS	*E (FINC)* (+), *RINTR*, *DUMG* (+)
Hermes and Lensink (1992)	Residual and asset	Côte d'Ivoire, Nigeria, Sudan, Tanzania, Uganda and Zaire	1978-88	OLS (pooled)	*DEBTGDP* (+), *REER* (+) *FINC*, *YG*, *RINTI* *AIDGDP*, *SHDGDP*
Muscatelli and Hallet (1992)	Hybrid	4 Latin American countries + Philippines	1976-88	OLS	*INFL* (+), *YG* (–), *BUDDEF* (+), *RINTR* (–), *REER* (+)
Vos (1992)	Residual	Philippines	1971-88	OLS	*DEBTGDP* (+), *REER* (+) *CFS* (+), *SPREAD* (+)
Boyce (1992, 1993)	Residual	Philippines	1962-86	OLS	*DEBTGDP* (+), *RINTR* (+), *BUDDEF* (+), *Yi*
Henry (1996)	Residual	Barbados, Jamaica and Trinidad and Tobago	1971-87	OLS	*BUDDEF*, *YG*, *TAXGDP*, *REER*, *INFL*, *DEBTGDP* (+), *SPREAD*
Murinde *et al.* (1996)	Residual	Côte d'Ivoire, Nigeria, Sudan, Tanzania, Uganda and Zaire	1976-91	SUR	*DEBTGDP* (+), *REER*, *FINC*, *INFL*, *YG*, *RINTRF*, *AIDGDP*
Lensink *et al.* (1998)	Residual	9 African countries	1970-91	SUR	*DEBTGDP* (+), *REER*, *FINC*, *INFL*, *YG*, *RINTRF*, *AIDGDP*
Hermes *et al.* (1999)	Residual	Hungary, Poland and Romania	1982-95	OLS	*DEBTGDP* (+), *REER*, *BUDDEF*, *FINC*, *AIDGDP*
Lensink *et al.* (2000)	Residual, hot money and Dooley	84 LDCs	1971-90	EBA and CDF	*BANKL* (+), *AIDGDP* (+), *FDI*, *PINSTAB*, *WA* *CIVLIB* (+), *PRIGHTS*, *PARCOM* (+)
Ng'eno (2000)	Residual	Kenya	1981-95	OLS	*YG*, *RINTR*, *REER*
Nyoni (2000)	Residual	Tanzania	1973-92	OLS	*YG*, *INFL*, *FINC*, *POLRISK*
Olopoenia (2000)	Residual	Uganda	1971-94	OLS	*YG*, *INFL*, *FINC*
Collier *et al.* (2001)	Residual	39 LDCs	1970-90	LAD	*DEBTGNP* (+), *REER* (+), *CFS* (+)
Hermes and Lensink (2001)	Residual	84 LDCs	1971-91	CDF	*BANKL* (+), *AIDGDP* (+), *PINSTAB* (+), *CIVLIB* (+), *EGOVC* (+), *ETAX* (+), *EBUD* (+; *EINFL* (+), *ERINTR* (+)
Ndikumana and Boyce (2002)	Residual	30 Sub-Saharan African countries	1970-96	OLS	*KF-1* (+), *KF-2* (+), *DEBGDP* (+), *DEBST* (+ *INFL*, *BUDDEF* (–), *FINC*, *VOICE* (–), *FREE* (–), *CORR* (+), *GOVEFF*, *CONT*

In all studies listed in the table the dependent variable is capital flight, measured in different ways, however (see Column [2]).

The estimation techniques mentioned in column [5] are: ordinary least squares (OLS), seemingly unrelated regressions (SUR), quantile regressions using least absolute deviation estimation (LAD; see Collier *et al.* 2001), extreme bound analysis (EBA; see Levine and Renelt 1992), and estimation with cumulative distribution functions (CDF; see Sala-i-Martin 1997).

Column [6], indicating the 'main determinants tested', only shows those variables of interest to the study of capital flight and its determinants. In several cases the specification of the equations estimated also may contain control variables. These variables have been left out of the table. A (+) or (–) behind a variable in

this column indicates that this variable is significantly positive (or negative) related to capital flight, i.e. t-values for this variable are above 1.7 in the majority of the equations estimated in the studies listed.

For abbreviations of variables used in the table, are shown in the following table:

Δ= change in a variable
AIDGDP =development aid as a percentage of GDP
BANKL= bank and trade related lending as a percentage of GDP
BUDDEF= overall budget deficits, including grants as a percentage of GDP
CFS= stock of capital flight
CIVLIB= index measuring civil liberties
CONT= measure of risk of contract repudiation
CORR= index measuring the extent of corruption
CREDITPR= credit to the private sector as a percentage of GDP
DEBTGDP= the external debt to GDP ratio
DEBTS= total external debt service as a percentage of GDP
DEBST= total stock of external debt service as a percentage of GDP
DUMG= dummy variable for regime change
E (.)= expected value of a variable
EBUD= uncertainty with respect to government budget deficit
EGOVC= uncertainty with respect to government consumption expenditures
EINFL= uncertainty with respect to inflation
ERINTR= uncertainty with respect to real interest rate
ETAX= uncertainty with respect to taxes
FDI=foreign direct investment as a percentage of GDP
FINC= difference between domestic and foreign interest rate corrected for changes in the exchange rate
FREE= measure of political freedom
GOVEFF= measure of government effectiveness
INFL= annual domestic inflation rate
KF-1=capital flight one period lagged
KF-2= capital flight two periods lagged
LDCs= developing countries
PARCOM= extent to which non-elites are able to access institutional structures for political expression
PINSTAB= measure of political instability, calculated as 0.5 times the number of assassinations per million population per year plus 0.5 times the number of revolutions per year
POLRISK= measure of political risk
PR= political risk variable (specified in Dooley 1986)
PRIGHTS= index of political rights
REER= real (effective) exchange rate
RINTR= real interest rate (%)
RINTRF= foreign real interest rate (%)
SHDGDP= short term debt to GDP ratio
SPREAD= interest rate spread (i.e. foreign minus domestic real interest rate)
TAXGDP= total taxes as a percentage of GDP
VOICE= measure of voice and accountability
WAR= dummy variable (1 = country participated in at least one external war during 1960-1985; 0 = no participation in external wars)
YG= rate of domestic economic growth

[All these variables are termed as has been shown in different literature studied from different literature.]

In most cases the empirical studies on the determinants of capital flight implicitly use a portfolio model to decide which variables should be taken into account. Almost all studies estimate a reduced form equation. Consequently, this leads to equations of a rather *ad hoc* nature, which in a way is a shortcoming of the empirical literature on capital flight. Only Lensink *et al.* (1998) aim at estimating a full portfolio model, in which capital flight is taken into account as one of the assets, and which allows for investigating the simultaneity of different effects between different variables.

Most studies estimating a reduced form equation apply OLS. In some cases the empirical studies deal with time series, in other cases they use pooled regressions. As was already mentioned, most cases empirical studies implicitly use a portfolio model to decide which variables should be taken into account. If we take the different categories of determinants of capital flight as discussed in the previous section, the following broad picture emerges.

With respect to *macroeconomic instability*, one or more variables such as exchange rate overvaluation, government deficits, the inflation rate, and current account deficits appear in almost all studies. In particular, measures of the degree of exchange rate overvaluation are prominently present in these studies. The results of the empirical investigations indicate that macroeconomic instability causes capital flight. In most specifications variables measuring the extent of macroeconomic instability are statistically significant and positively related to capital flight.

Few studies focus on measures of *political instability* as determinants of capital flight. Several kinds of measures have been used. In some cases, the empirical investigations focus on the regime type as measure of political instability, using different dummy variables that proxy for the degree of democracy of a country. Other studies use dummy variables to measure issues related to the policy regime, such as indexes of civil rights and liberties. Still other studies use more direct measures for political instability, such as the number of assassinations and revolts, dummies for the fact that a country has been involved in a war situation.

In general, the results of the empirical investigations support the view that political instability, measured in various ways, and capital flight are positively related. Proxies of the *interest rate differential* are used in some studies to measure the relative attractiveness of domestic as compared to foreign assets. In most cases, researchers have calculated some kind of exchange rate differential between the domestic interest rate on deposits and a foreign deposit rate, normally the US deposit rate. Another measure proxying for the attractiveness of different assets used is the growth rate of GDP or GNP. Measures of the interest rate differential do not always have a statistically significant relation to capital flight. This may indicate that other determinants, such as macroeconomic and political instability, are more important to explain capital flight.

In many studies, *capital inflow* variables are taken into account. In several cases these capital flows have been split into one or more forms of inflows. In particular, research has focused on investigating the impact of long-term versus short-term foreign debt. A few studies have also investigated the role played by aid flows. Among others, Bauer (1981) argues that development aid would be used to finance capital flight. The table shows that especially long-term debt inflows have a statistically significant influence on capital flight. The hypothesis put forward by Bauer on the relationship between aid and capital flight is supported in some of the studies surveyed.

1.9 OVERVIEW

The total study consists of 7 different chapters (including the initial one) deals with different aspects of the problem stated earlier. Chapter 2 is related to different methods of measurement of capital flight along with the critical assessment of this measuring procedure. Here in this part capital flight is also measured as illegal transaction. Chapter 3 deals with the calculation of capital flight from six selected South Asian nations and their statistical analysis. Here a correlation is also drawn between the proportion of capital flight and openness index if these countries. The six selected countries are India, Pakistan, Bangladesh, Nepal, Bhutan and Sri Lanka. An overall statistical analysis is also shown at the end of this chapter. The next chapter, chapter 4 considers the matter related to International Trade, Finance and Economic crises at the general level and also specifically for these six countries. Different foreign exchange policies, choice of exchange rate regime, international influence on financial stability and the Economic, Social and Trade implications are discussed here. In chapter 5 country wise data on External debt, general Price Index, Overall Balance position and the Growth rate of GDP are presented to draw regression analysis for these data along with Capital Flight and Openness Index. The domestic Macroeconomic issues like Capital Account liberalization and capital outflow are discussed here. The impact of Capital flight on the distribution of income is discussed in Chapter 6 where the openness—growth—inequality link and the empirical study on this nexus is presented. Country specific case study is also presented here. Chapter 7 deals with two different measures of inequality, viz. Gini coefficient and Theil index and their calculation for the selected countries. Reference study on Gini coefficient for the selected countries is presented at five, ten and twenty percentiles. The final chapter, Chapter 8, is the concluding part discussing the question why does the link between inequality and capital flight matter regarding growth and income distribution.